ALAN M. ARAKAWA
Mayor

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COUNTY OF MAUI

DEPARTMENT OF PLANNING

August 18, 2016

Honorable Alan M. Arakawa
Mayor, County of Maui
200 South High Street
Wailuku, Hawaii 96793

For Transmittal to:

Honorable Mike White, Chair
Maui County Council
200 South High Street
Wailuku, Hawaii 96793

APPROVED FOR TRANSMITTAL
8/23/16
Mayor Date

Dear Chair White:

SUBJECT: MAUI ISLAND IMPACT FEE STUDY

Background

As you are aware, in mid-2009, the Department of Planning (Department) hired a consultant team to conduct a variety of studies to propose a development impact fee. These studies included a Level-of-Service Analysis and Alternative Financing Study, and an Infrastructure and Public Facilities Needs Assessment. From these studies, a "Maui Island Impact Fee Study" was prepared to calculate proposed impact fees that could be assessed on new development to cover their costs for police, fire, solid waste and wastewater facilities. These fees are intended to cover the cost of these public service *facilities*, not ongoing or periodic *services*. A draft ordinance to create such fees was also developed.

Alternative Financing

Enclosed is the Level-of-Service Analysis and Alternative Financing Study which discusses supplemental revenue sources the County could consider using to fund infrastructure and provide adequate levels-of-service. (Some of these alternatives were discussed during the deliberations of the Maui Island Plan's Implementation Program.) The Financing Study concludes that the County will continue to experience revenue shortfalls to fully implement capital improvement projects if current revenue sources are maintained at present levels. The Financing Study covers a suite of alternative financing options, including impact fees, that are widely used in other jurisdictions and recommends that the County determine what combination of supplemental revenue sources are most advantageous and feasible to implement.

COUNTY COMMUNICATION NO. 16-211

Impact Fee Summary

Over the past 25 years, impact fees have become an integral part of local government infrastructure financing. Over half of all states have adopted impact fee enabling acts, including Hawaii. The enclosed Maui Island Impact Fee Study notes that "impact fees are one of the most direct ways for local governments to require new developments to pay a larger portion of the costs they impose on the community.... The fees are one-time, up-front charges. Essentially, impact fees require that each developer of a new residential or commercial project pay its pro-rata share of the cost of new infrastructure facilities required to serve that development" much like our current parks assessment and water system development fee. The proposed fee structure can be summarized as follows:

- Impact fees for police and solid waste facilities would apply uniformly to all new development island-wide;

- Fire impact fees would differ among three areas: West Maui, Hana, and Central Maui (includes Wailuku-Kahului, Kihei-Makena, Paia-Haiku and Makawao-Pukalani-Kula community plan areas), with the Hana region being significantly higher than the other two regions; and

- Wastewater impact fees would apply only to new developments that are served by the County system, would replace the current assessment fees for the Wailuku-Kahului and Kihei systems, and would differ among the three systems (Wailuku-Kahului, Kihei and Lahaina).

The Impact Fee Study's Executive Summary on pages 1 – 4 provides an overview of the methodology, options and potential fees. The maximum potential fees were calculated to cover 100 percent of the costs of maintaining existing levels of service for new developments. The County could choose to assess less than the maximum fees and continue to subsidize a portion of these costs to maintain their existing levels of service.

Police, fire and solid waste facilities are considered "non-utility" and are proposed to be assessed by different land use type, such as per single-family unit, multi-family unit, visitor accommodation room, or square footage of commercial, industrial, office and public/institutional space. Wastewater, on the other hand, is a utility, and non-residential uses are assessed based on the size of the water meter rather than by land use type. Additionally, single-family and multi-family rates could also be tiered based on the square footage of the unit.

Impact Fee Example

The table below summarizes the highest potential residential impact fees for single-family and multi-family units in various regions, using a flat rate assessment that is not based on square footage. As previously noted, the County could choose to assess less than the maximum fees, provided that fees are reduced proportionally for all land use types within a

service area. The wastewater component would only be assessed for units that connect to a county wastewater facility.

Region and Housing Type	Wastewater	Police	Fire	Solid Waste	Total
Wailuku-Kahului Single-family	$3,997	$656	$335	$382	**$5,370**
Wailuku-Kahului Multi-family	$3,238	$534	$204	$309	**$4,285**
Kihei Single-family	$3,493	$656	$335	$382	**$4,866**
Kihei Multi-family	$2,829	$534	$204	$309	**$3,876**
West Maui Single-family	$2,328	$656	$143	$382	**$3,509**
West Maui Multi-family	$1,886	$534	$87	$309	**$2,816**
Upcountry Single-family	$0	$656	$335	$382	**$1,373**
Hana Single-family	$0	$656	$1,897	$382	**$2,935**

The Wailuku-Kahului and Kihei wastewater service areas already charge an "assessment fee" for new developments that connect to the County system; this assessment fee is similar to the existing water system development fee, which is a new user's "buy in" into the system to cover the new user's share of the capital asset. The Lahaina wastewater service area does not currently charge an assessment fee. If the County creates the type of impact fee recommended by the Impact Fee Study, to include wastewater facilities, then the assessments for the Wailuku-Kahului and Kihei wastewater service areas could be eliminated, as these assessments would be collected as part of the impact fee.

In addition to the Financing Study and the Impact Fee Study, enclosed please also find a draft ordinance entitled "A BILL FOR AN ORDINANCE AMENDING TITLE 14, MAUI COUNTY CODE, PERTAINING TO IMPACT FEES FOR SOLID WASTE, FIRE, POLICE, AND WASTEWATER IMPROVEMENTS ON MAUI, HAWAII." The draft ordinance would create a new chapter in Title 14 to authorize the establishment of the impact fee and establish an improvement fund into which collected fees would be deposited.

Considerations and Recommendations

Important to note when considering impact fees are the restrictions in Chapter 46, Part VIII, Hawaii Revised Statutes, relating to Impact Fees. The statute requires that impact fees be expended or encumbered within six years of the date of collection. While this restriction limits the number of capital improvement projects impact fees can fund, it is important to clarify that impact fees can help to retire outstanding debt on existing facilities if there is excess capacity in these facilities that will service new customers.

Another important consideration is the potential impact the proposed impact fee could have on the cost of new housing, whether directly or indirectly. The County could address this potential impact by implementing variable rates based on various factors that relate to affordability, such as unit size, number of bedrooms or sales price

As previously noted, there are numerous alternative financing options, including impact fees, which the County can consider implementing to fund capital improvement projects and provide adequate levels-of-service. The County should consider all options to determine what combination of supplemental revenue sources are most advantageous and feasible to implement.

We would be happy to discuss this matter with the relevant committee and provide any further information you may request. Should you have any questions at this time, please do not hesitate to contact me.

Sincerely,

WILLIAM SPENCE
Planning Director

Attachment (3)
- Level-of-Service Analysis and Alternative Financing Study
- Maui Island Impact Fee Study
- Draft Ordinance

xc: Michele McLean, Deputy Planning Director (pdf w/o encl.)
Pamela Eaton, Planning Program Administrator (pdf w/o encl.)
Jennifer Maydan, Planner V (pdf w/o encl.)
Stuart Stant, Director of Environmental Management (pdf w/encl.)
Jeffrey A. Murray, Fire Chief (pdf w/encl.)
Tivoli Faaumu, Police Chief (pdf w/encl.)
Sandy Baz, Budget Director (pdf w/encl.)

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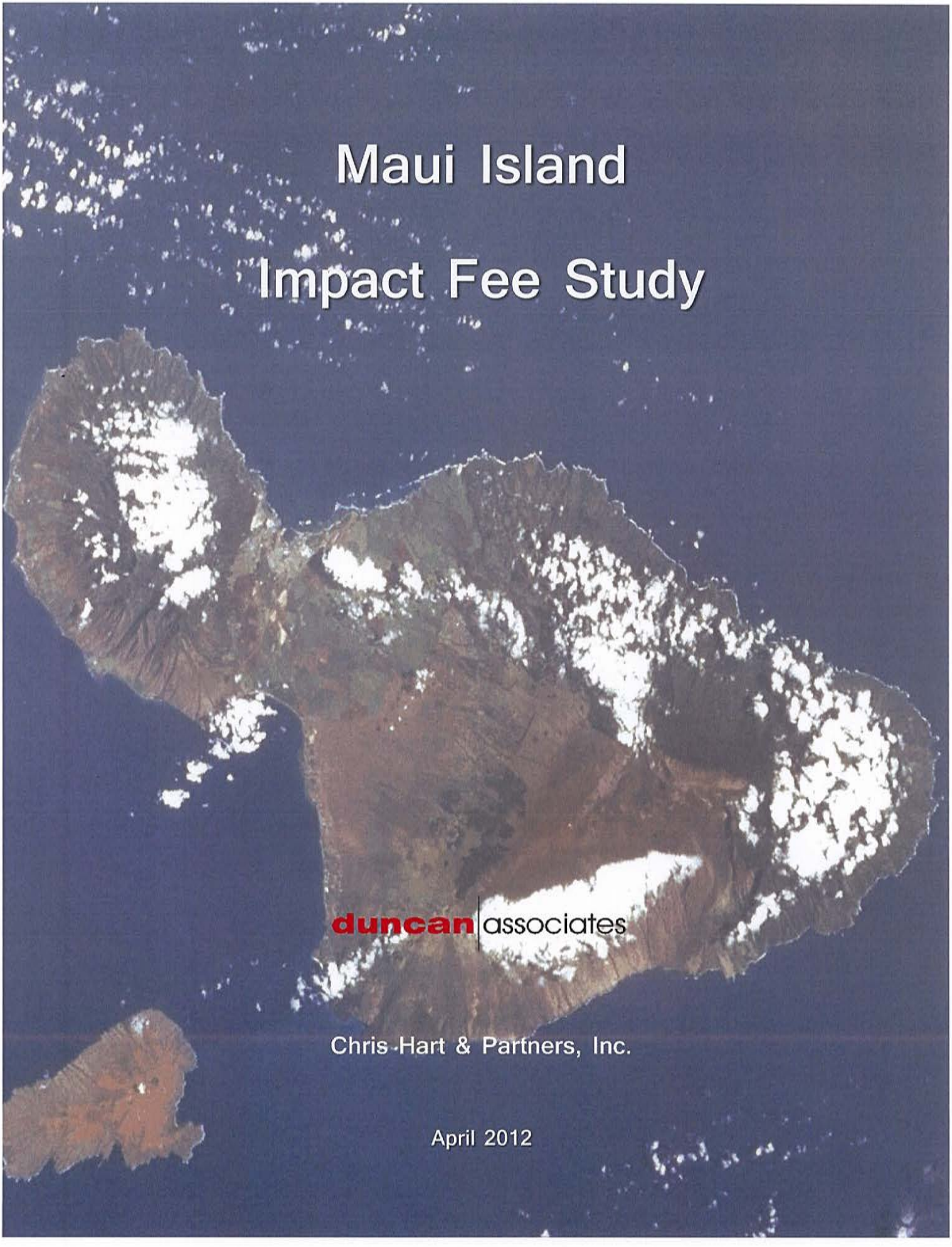

Maui Island Impact Fee Study

duncan associates

Chris Hart & Partners, Inc.

April 2012

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EXECUTIVE SUMMARY

Purpose

This study calculates the maximum impact fees that could be assessed by the County on new development on the island of Maui to cover the costs for wastewater, solid waste, fire and police facilities. The wastewater impact fees would replace the County's current wastewater "assessment fees." The report explains why it is not practical to calculate or impose drainage impact fees at this time.

The County of Maui Planning Department contracted with Chris Hart & Partners, Inc. to conduct an Infrastructure and Public Facilities Needs Assessment (IPFNA) study and draft ordinance. Chris Hart & Partners subcontracted with Duncan Associates, impact fee experts from Austin, Texas, to achieve the project outcomes. Funding was provided by the Maui County Council.

Proposed Impact Fee Structure

The structure of the proposed impact fees can be summarized as follows:

- Fees for solid waste and police facilities would apply uniformly to all new development throughout the island.
- Fire impact fees would differ between three areas, with significantly higher fees in Hāna due to the scattered nature of development and the higher cost to provide service.
- Wastewater impact fees would apply only to new County wastewater customers, and would replace current "assessment" fees for the Wailuku-Kahului and Kihei systems.

Maximum Single-Family Fees

The maximum fees calculated in this study for a single-family detached or duplex housing unit are summarized in Table 1. These represent the highest fees that the County could charge based on this study. The County could choose to assess less than the maximum fees, provided the fees are reduced proportionately for all land use types within a service area. For example, the County could charge fire fees in Hana that are the same as the fees in the Central service area, by adopting Hana's fire fees at 17.7% of the maximum fees calculated in this report.

Table 1. Summary of Fees for Single-Family Units

Facility Type	Area	Max. Fee
Solid Waste	Island-Wide	$382
Police	Island-Wide	$656
Fire	West (Lahaina)	$143
	Central	$335
	East (Hana)	$1,897
Wastewater*	Lahaina System	$2,328
	Kahului System	$3,997
	Kihei System	$3,493

* assessed on new County wastewater customers only
Source: Potential fees from Table 21, Table 32, Table 47 and Table 59.

Non-Utility Fee Summary

The maximum potential fees calculated in this report for non-utility fees (police, fire and solid waste facilities) for all land use types are presented in Table 2. All fees represent the maximum impact fee calculated based on the existing level of service for Maui Island. The County can charge less than 100 percent of the full amount calculated in this report for police, fire and solid waste, provided that the fees are reduced proportionately for all land use types.

Table 2. Potential Non-Utility Impact Fee Summary

Fee Type	Single-Family (Unit)	Multi-Family (Unit)	Visitor Accom. (Room)	Comm., Retail (1000 sf)	Office (1000 sf)	Industrial (1000 sf)	Instit., Public (1000 sf)
Lahaina (West Maui) Community Plan Area							
Solid Waste	$382	$309	$126	$252	$573	$141	$275
Police	$656	$534	$285	$602	$301	$74	$186
Fire	$143	$87	$83	$213	$290	$73	$179
Total, Non-Utility	$1,181	$930	$494	$1,067	$1,164	$288	$640
Wailuku-Kahului, Kihei-Makena and Pa'ia-Ha'iku and Makawao-Pukalani-Kula Community Plan Areas							
Solid Waste	$382	$309	$126	$252	$573	$141	$275
Police	$656	$534	$285	$602	$301	$74	$186
Fire	$335	$204	$194	$499	$680	$171	$419
Total, Non-Utility	$1,373	$1,047	$605	$1,353	$1,554	$386	$880
Hana Community Plan Area							
Solid Waste	$382	$309	$126	$252	$573	$141	$275
Police	$656	$534	$285	$602	$301	$74	$186
Fire	$1,897	$1,157	$1,100	$2,827	$3,851	$967	$2,371
Total, Non-Utility	$2,935	$2,000	$1,511	$3,681	$4,725	$1,182	$2,832

Source: Potential fees from Table 32, Table 47 and Table 59 (note: single-family includes duplex).

Wastewater Fee Comparison

The proposed wastewater impact fees are somewhat different from the non-utility fees shown above in that they would only be assessed on new customers to the County wastewater systems, not on new development that does not connect to the system but relies on private wastewater systems. The

impact fees would replace assessment fees that are currently charged for new customers to the Kahului and Kihei systems.

The proposed wastewater impact fees are summarized in Table 3 for single-family detached/duplex and multi-family housing units. It is difficult to compare fees for nonresidential uses, since nonresidential impact fees would be based on the size of the water meter, rather than on a list of typical daily wastewater generation rates by land use type. The impact fees would be higher than current assessment fees in the Wailuku-Kahalui system by about $2,300 per single-family or duplex unit, and would total about that amount for the Lahaina system, which has no current assessment fee. Since current assessment fees for the Kihei system vary by location, fees would be higher or lower than current fees depending on location.

Table 3. Potential Wastewater Impact Fee Summary

	Single-Family	Multi-Family
Proposed Impact Fee, Lahaina	$2,328	$1,886
Current Assessment Fee, Lahaina	$0	$0
Potential Change, Lahaina	$2,328	$1,886
Proposed Impact Fee, Wailuku-Kahului	$3,997	$3,238
Current Assessment Fee, Wailuku-Kahalui	$1,600	$1,165
Potential Change, Kahului	$2,397	$2,073
Potential Impact Fee, Kihei	$3,493	$2,829
Minimum Current Assessment Fee, Kihei	$1,787	$1,306
Maximum Current Assessment Fee, Kihei	$3,928	$2,929
Potential Change in Average Fee Area, Kihei*	$636	$712

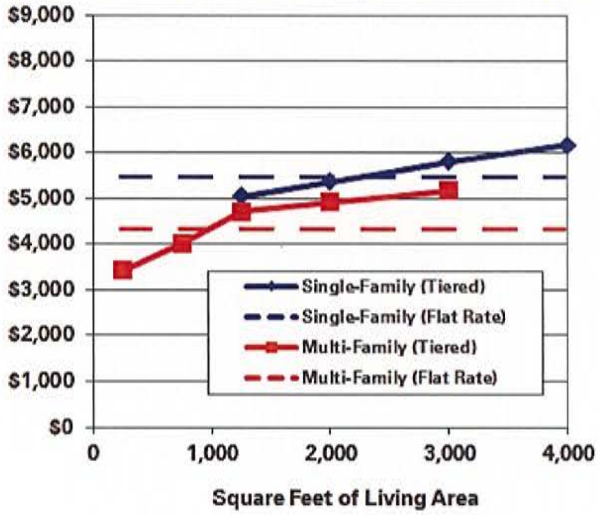
*average current fee is average of lowest and highest fees

Source: Potential impact fees from Table 21; current assessment fees from Maui County Public Works Department.

Optional Tiered Residential Fees

There are two ways to assess residential fees: (1) as a flat rate regardless of unit size, or (2) by square footage. As the County currently does with water development charges, wastewater assessment fees and park fees in-lieu of dedication, the impact fees could be assessed on the basis of a flat rate per dwelling unit for single-family and multi-family units. Alternatively, the fees for each housing type could vary by the square footage of living area in the unit. This "tiered" rate structure is an option for all of the fees under consideration by the County.

Figure 1. Residential Fees, Wailuku-Kahului



An idea of the magnitude of the difference between these approaches can be gleaned from the example of a new single-family or multi-

family development in the Wailuku-Kahului area, which is the most populated part of the island and the place where most new development is projected to occur. It will be assumed that the development is served by County wastewater. The flat rate and tiered fees for this scenario are presented in Table 4. The total residential fees (sum of wastewater, solid waste, fire and police fees) for the Wailuku-Kahului area are illustrated in Figure 1. It should be noted that the largest component of these total fees – the wastewater impact fee – is not entirely new, but would replace the County's current wastewater assessment fees.

Table 4. Potential Residential Impact Fees, Wailuku-Kahului

Housing Type/Unit Size	Waste-Water	Police	Fire	Solid Waste	Total
Single-Family Det./Duplex (Flat Rate)	$3,997	$656	$335	$382	$5,370
Single-Family Det./Duplex (Tiered):					
Less than 1,000 sf	$3,437	$566	$288	$329	$4,620
1,000-1,499 sf	$3,757	$614	$315	$359	$5,045
1,500-2,499 sf	$3,997	$656	$335	$382	$5,370
2,500-3,499 sf	$4,317	$714	$362	$413	$5,806
3,500 sf+	$4,597	$752	$385	$439	$6,173
Multi-Family (Flat Rate)	$3,238	$534	$204	$309	$4,285
Multi-Family (Tiered):					
Less than 500 sf	$2,598	$426	$164	$248	$3,436
500-999 sf	$3,038	$496	$191	$290	$4,015
1,000-1,499 sf	$3,557	$586	$224	$340	$4,707
1,500-2,499 sf	$3,717	$611	$235	$355	$4,918
2,500 sf+	$3,917	$643	$245	$374	$5,179

Source: Potential fees for the Wailuku-Kahului area from Table 21, Table 32, Table 47 and Table 59.

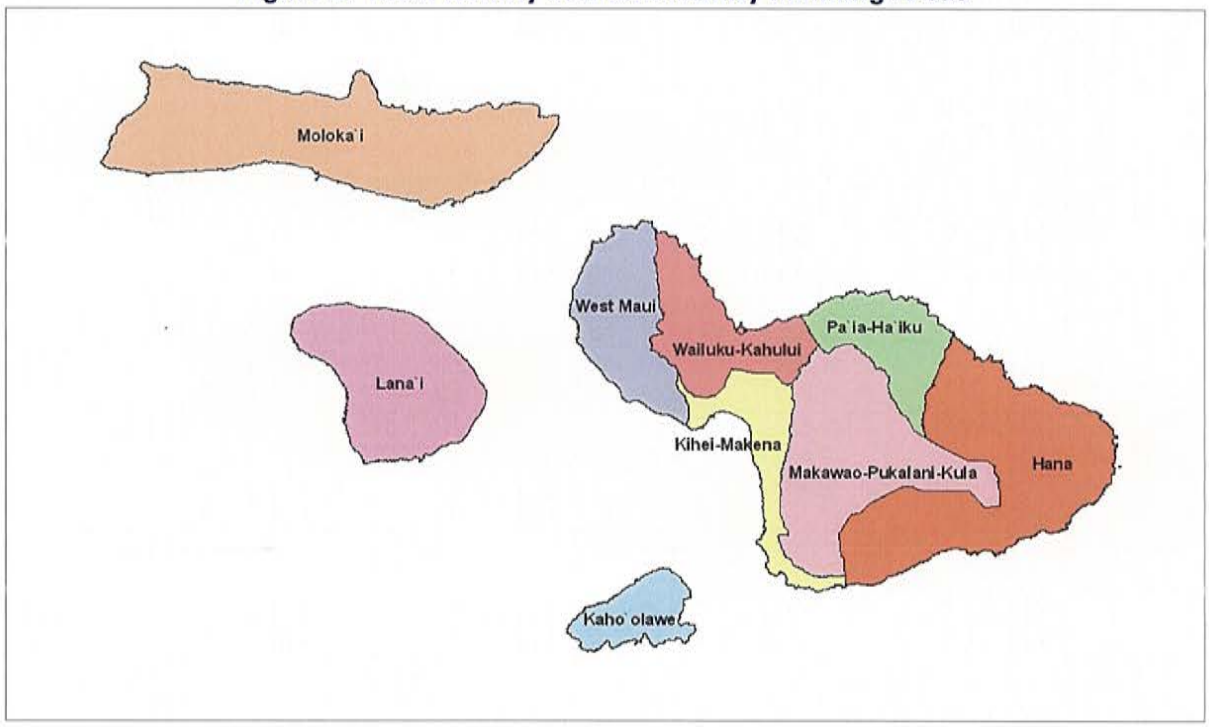
INTRODUCTION

The purpose of this study is to calculate the maximum potential impact fees that Maui County can charge new development on the island of Maui based on the existing levels of service for wastewater, solid waste, police and fire facilities. If adopted, the wastewater impact fees would replace the County's current system of wastewater assessment fees.

Background

Maui County includes the islands of Maui, Moloka'i, Lāna'i and Kaho'olawe. This report calculates fees only for the island of Maui. Maui, the largest and most populated of the four islands, was formed by two volcanoes, which have subsequently eroded into spectacular gorges that give the island its nickname, "The Valley Isle." The island of Maui is further divided into nine separate planning areas, as illustrated in Figure 2.

Figure 2. Maui County and Community Planning Areas



Traditionally, agriculture has played an important role in the county's economy, and much of the county's population growth and development was tied to the growth and employment needs of its agricultural economy. The island's population declined after World War II with the decreasing need for agricultural workers. Since the 1960s, however, tourism has emerged as the primary economic activity. In recent decades, the county has seen substantial population growth beyond what would be expected from economic opportunities in the county's primary industries; such population growth has most likely been due to in-migration of people drawn to the quality of life in the county.

As illustrated in Figure 3, the county's growth slowed somewhat during the last decade, but is projected to grow more rapidly in the future.[1]

Maui Island accounts for more than 90 percent of the county's total resident population, as shown in Table 5. Moloka'i and Lāna'i islands account for about 11,000 of the county's total residents. Wailuku-Kahului is the county's most populated planning area and is projected to add the most residents over the next few decades. Hāna is the smallest planning area. The total island-wide population is projected to grow by 31%, or 1.4% annually, from 151,301 in 2010 to 199,548 in 2030. Of the county's eight planning areas, Lahaina, Kihei-Makena, Wailuku-Kahului and Lāna'i are all forecast to grow more than 30% between 2010 and 2030. Makawao-Pulalani-Kula and Hāna are forecast to grow about 25% during the same period, while Moloka'i and Pa'ia-Ha'iku are forecast to grow less than 15%.

Figure 3. Maui County Population Growth, 1960-2035

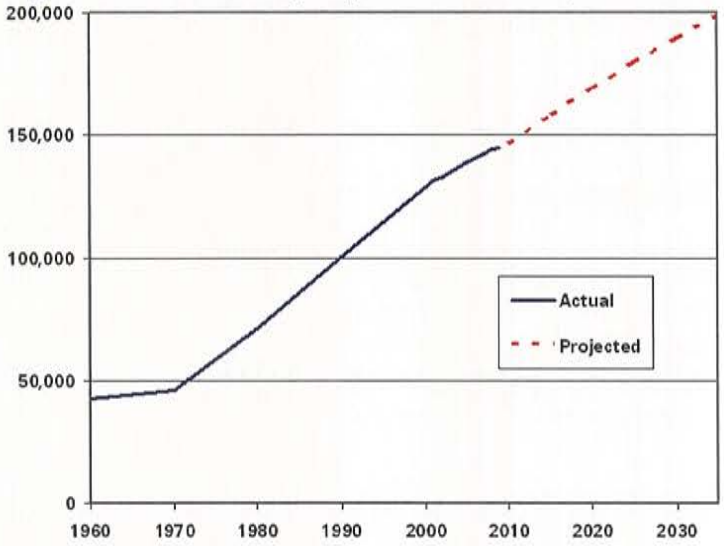


Table 5. Maui County Population Growth by Planning Area, 2000-2030

Planning Area	2000	2005	2010	2015	2020	2025	2030
Lahaina (W. Maui)	17,967	19,852	21,577	23,286	25,096	26,979	28,903
Kihei-Makena	22,870	25,609	28,114	30,597	33,227	35,962	38,757
Wailuku-Kahului	41,503	46,626	51,312	55,957	60,877	65,995	71,223
Makawao-Pukalani-Kula	21,571	23,176	24,644	26,098	27,640	29,243	30,880
Pa'ia-Ha'iku	11,866	12,210	12,525	12,837	13,168	13,512	13,863
Hana	1,867	1,998	2,118	2,236	2,362	2,493	2,626
Subtotal, Maui Island	117,644	129,471	140,290	151,011	162,370	174,184	186,252
Moloka'i	7,404	7,127	7,276	7,542	7,772	8,068	8,395
Lana'i	3,193	3,452	3,735	4,046	4,308	4,598	4,901
Total Maui County	128,241	140,050	151,301	162,599	174,450	186,850	199,548

Source: R.M. Towill Corporation, *Public Facilities Assessment Update, County of Maui*, March 9, 2007, Table 2-1.

In addition to the resident population, Maui County has a significant daily tourist population. Table 6 shows the resident population and visitor industry projections through 2030. Based on data from the Maui County General Plan, there are an estimated 52,000 average daily visitors in the county. The average daily visitor census data illustrate the significance of tourism among the planning areas. Lahaina and Kihei-Makena account for more than 90% of the average daily visitor population. The average daily number of visitors is projected to increase by 1.6% annually, from 51,779 in 2010 to 71,369 in 2030.

[1]Hawai'i State Department of Business, Economic Development & Tourism, Population and Economic Projections for the State of Hawai'i to 2035 - DBEDT 2035 Series, Tables A-1 to A-6, July 2009.

Table 6. Maui Visitor Growth by Planning Area, 2000-2030

Planning Area	2000	2005	2010	2015	2020	2025	2030
Lahaina (W. Maui)	23,118	24,849	26,399	28,364	29,864	31,555	33,281
Kihei-Makena	16,247	19,447	21,621	24,805	27,395	30,241	33,151
Wailuku-Kahului	1,931	1,080	1,147	1,232	1,296	1,369	1,443
Makawao-Pukalani-Kula	24	19	19	20	19	19	19
Pa'ia-Ha'iku	29	46	48	50	51	53	54
Hana	468	235	240	243	243	244	245
Subtotal, Maui Island	41,817	45,676	49,474	54,714	58,868	63,481	68,193
Moloka'i	1,131	1,224	1,325	1,466	1,577	1,700	1,827
Lana'i	905	909	980	1,082	1,166	1,256	1,349
Total Maui County	43,853	47,809	51,779	57,262	61,611	66,437	71,369

Source: R.M. Towill Corporation, *Public Facilities Assessment Update County of Maui*, March 9, 2007, Table 2-1.

County-wide employment growth is forecast to increase at a slightly slower rate than residential and visitor growth rates. As shown in Table 7, county-wide employment is projected to increase by 1.2% annually, from 86,397 in 2005 to 116,712 in 2030. Maui Island has most of the county's employment. While the data series does not include community plan area data, other data suggest that the Wailuku-Kahului community plan area accounts for about half of the Maui Island employment.

Table 7. County Employment Growth, 2005-2030

Planning Area	2005	2030
Maui Island	81,420	109,777
Moloka'i	2,720	3,731
Lana'i	2,257	3,204
Total Maui County	86,397	116,712

Source: County of Maui, Planning Department, *Socio-Economic Forecast: The Economic Projections for the Maui County General Plan 2030*, June 2006, Exhibit 2.

Legal Framework

Impact fees are one of the most direct ways for local governments to require new developments to pay a larger portion of the costs they impose on the community. In contrast to traditional "negotiated" developer exactions, impact fees are charges that are assessed on new development based on a standard formula and objective characteristics, such as the number of dwelling units constructed or vehicle trips generated. The fees are one-time, up-front charges. Essentially, impact fees require that each developer of a new residential or commercial project pay its pro-rata share of the cost of new infrastructure facilities required to serve that development.

General Principles

Since impact fees were pioneered in states that lacked specific enabling legislation, such fees have generally been legally defended as an exercise of local government's broad "police power" to protect the health, safety and welfare of the community. Over time, various state courts have developed guidelines for constitutionally valid impact fees, based on a "rational nexus" that must exist between the regulatory fee or exaction and the activity that is being regulated. The standards set by court cases generally require that an impact fee or other developer exaction meet a two-part test:

1) The need for new facilities must be created by new development (first prong of the dual rational nexus test); and

2) The expenditure of impact fee revenues must provide benefit to the fee-paying development (second prong of the dual rational nexus test).

A Florida district court of appeals described the dual rational nexus test in 1983 as follows, and this language was quoted and followed by the Florida Supreme Court in its 1991 *St. Johns County* decision:[2]

> *In order to satisfy these requirements, the local government must demonstrate a reasonable connection, or rational nexus, between the need for additional capital facilities and the growth in population generated by the subdivision. In addition, the government must show a reasonable connection, or rational nexus, between the expenditures of the funds collected and the benefits accruing to the subdivision. In order to satisfy this latter requirement, the ordinance must specifically earmark the funds collected for use in acquiring capital facilities to benefit the new residents.*

In addition to the dual rational nexus test, impact fees may also need to meet Federal constitutional requirements for developer exactions. The most important recent legal development regarding development exactions is the 1994 decision of the U.S. Supreme Court in *Dolan v. City of Tigard*.[3] In *Dolan*, the Supreme Court expanded upon the rational nexus test, adding to it a requirement that there be a "rough proportionality" between the impact of a proposed development and the burden of the exaction imposed on it. While this case involved an ad hoc land dedication requirement and may not apply to legislatively-adopted fees, impact fees are more likely to comply with this standard than other types of developer exactions.

State Impact Fee Enabling Act for Counties

To date, 28 states, including Hawai'i, have adopted impact fee enabling legislation. Like most other state enabling acts, Hawai'i's impact fee enabling act for counties reflects the constitutional standards enumerated above. Hawai'i's impact fee enabling act, adopted in 1992, authorizes counties to adopt impact fees for any "types of public facility capital improvements specifically identified in a county comprehensive plan or a facility needs assessment study." A copy of the enabling act is provided for reference in Appendix F. The only use of this authority to-date has been the adoption in 2002 of a road impact fee by the City and County of Honolulu for the Ewa region,[4] although Hawai'i County has conducted a study and is considering adopting an impact fee ordinance.

Counties in Hawai'i are authorized by State law to enact impact fee ordinances, provided that they follow the requirements of Chapter 46, Part VIII of Hawai'i Revised Statutes (Section 46-141 through 46-148). This section provides a brief summary of those requirements most relevant to Maui County.

Generally, developers prefer to pay impact fees as late in the development process as possible, and most state acts prohibit the collection of impact fees prior to the time of issuance of a building permit or certificate of occupancy. Hawai'i's act states in Section 46-146 that "Assessment of

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[2] *Hollywood, Inc. v. Broward County*, 431 So. 2d 606, 611_12 (Fla. 4th DCA), review denied, 440 So. 2d 352 (Fla. 1983), quoted and followed in *St. Johns County v. Northeast Florida Builders Ass'n*, 583 So. 2d 635, 637 (Fla. 1991)

[3] *Dolan v. City of Tigard*, 512 U.S. 374, 129 L. Ed. 2d 304, 114 S. Ct. 2309 (1994)

[4] Chapter 33A of the Revised Ordinances of Honolulu (the fee for a single-family unit is $1,836)

impact fees shall be a condition precedent to the issuance of a grading or building permit and shall be collected in full before or upon issuance of the permit." This is generally interpreted as meaning that the County may assess and collect impact fees at the time of subdivision approval or building permit issuance.

A fundamental principle of impact fees is that new development cannot be charged for a higher level of service than is provided to existing development. Section 46-142(b) states that an impact fee study "shall specify the service standards for each type of facility subject to an impact fee; provided that the standards shall apply equally to existing and new public facilities." If, for example, a County currently provides five acres of parkland per 1,000 residents, it cannot base park impact fees for new development on a standard of ten acres of parkland per 1,000 residents, unless certain conditions are met. First, another source of funding other than park impact fees would have to be identified and committed to fund the capacity deficiency created by the higher level of service. Second, the park impact fees must generally be reduced to ensure that new development does not pay twice for the same level of service, once through impact fees and again through general taxes that are used to remedy the capacity deficiency for existing development. Section 46-143(d)(1) requires counties to consider the "means, other than impact fees, by which existing deficiencies will be eliminated within a reasonable period of time..." in formulating an impact fee. One way to avoid these kinds of complications is to base the impact fees on the existing level of service.

A corollary principle is that new development should not have to pay twice for the same level of service. As noted above, if impact fees are based on a higher-than-existing level of service, the fees should be reduced by a credit that accounts for the contribution of new development toward remedying the existing deficiencies. A similar situation arises when the existing level of service has not been fully paid for. Outstanding debt on existing facilities that are counted in the existing level of service will be retired, in part, by revenues generated from new development that will also pay impact fees to maintain the existing level of service. Consequently, impact fees should be reduced to account for future tax payments that will retire outstanding debt on existing facilities. The Hawai'i enabling act addresses this issue in Section 46-143(d)(6), which provides that one of the seven factors that shall be considered in determining "a proportionate share of public facility capital improvement costs" is the "extent to which a developer required to pay impact fees over the next twenty years may reasonably be anticipated to contribute to the cost of existing public facility capital improvements through user fees, debt service payments, or other payments, and any credits that may accrue to a development because of future payments ..."

The State act implies that credit may also be due for other types of revenues besides those used to pay debt service on existing capital facilities. Section 46-143(d)(2) states that another factor that shall be considered is the "availability of other funding for public facility capital improvements, including but not limited to user charges, taxes, bonds, intergovernmental transfers, and special taxation or assessments ..." Also, Section 46-141 defines "proportionate share" to mean "the portion of total public facility capital improvement costs that is reasonably attributable to a development, less: (1) Any credits for past or future payments, adjusted to present value, for public facility capital improvement costs made or reasonably anticipated to be contributed by a developer in the form of user fees, debt service payments, taxes, or other payments..."

Aside from debt service payments, credit against impact fees may not be required for other types of funding that have historically been used for growth-related, capacity-expanding improvements, or which may even be committed to be spent in the future for such purposes. While new development

may contribute toward such funding, so does existing development, and both existing and new development benefit from the higher level of service that the additional funding makes possible. To insist that historical capacity funding patterns must be continued after the adoption of impact fees, and that new development is entitled to a credit for its contribution to those funding sources, would be to argue that local governments cannot require "growth to pay for growth" unless they have always done so. Local funding that is committed to be used for capacity expansion in the future needs to be taken into account only in cases where there is no reasonable need for or benefit from higher levels of service than the existing level of service embodied in the impact fee calculations. As long as the fees are based on new development paying to maintain existing levels of service that have been paid for in full by existing development, and additional funding can reasonably be used to raise the level of service for existing and new development alike, no additional revenue credits are warranted. Nevertheless, credit will be provided in this study for dedicated revenue and State and Federal grants.

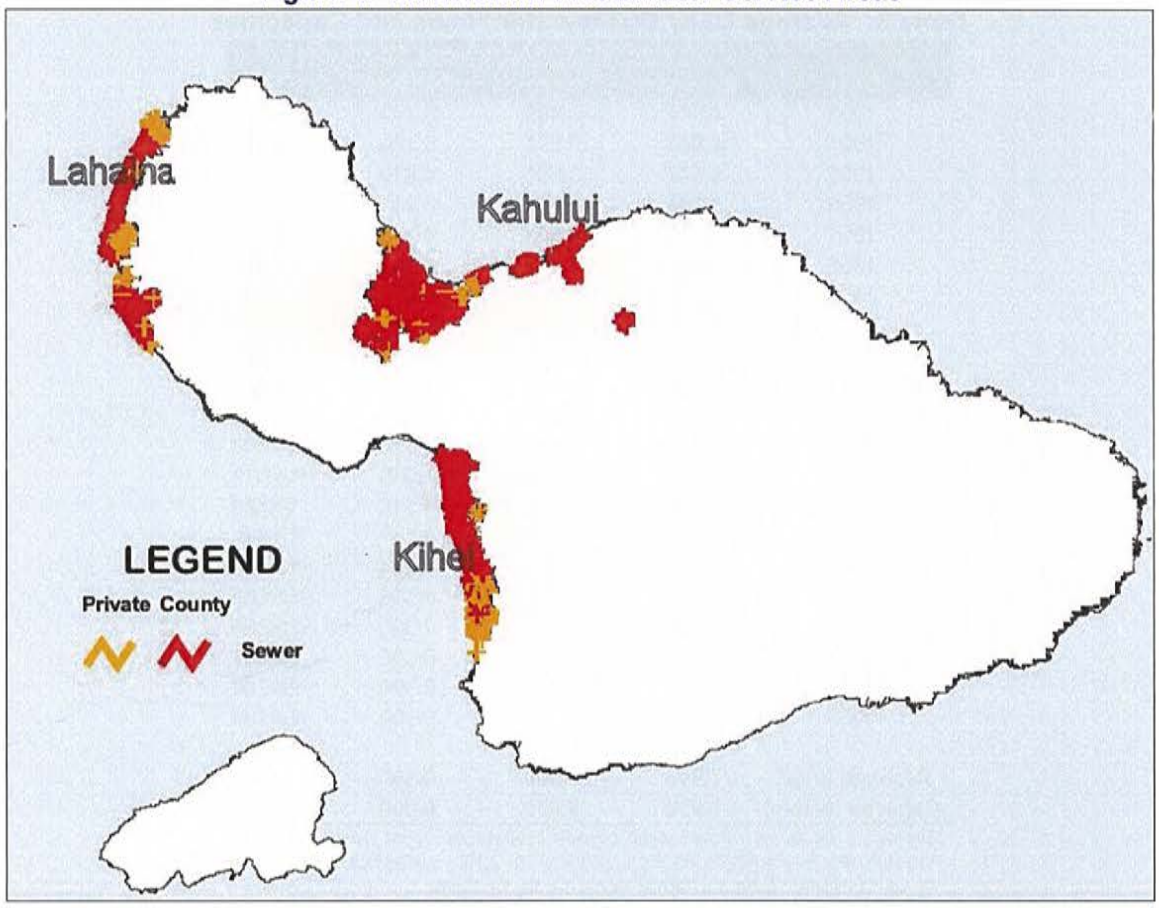
Hawai'i's statute is one of only a handful of state enabling acts that require credit for past property tax payments. Section 46-143(d)(5) states that the "extent to which a developer required to pay impact fees has contributed in the previous five years to the cost of existing public facility capital improvements and received no reasonable benefit therefrom, and any credits that may be due to a development because of such contributions" shall be taken into consideration in the impact fee calculation. And the definition of "proportionate share" cited above makes clear that this refers not just to developer exactions, but also to past property tax payments. Prior to development, the owners of a vacant parcel of land paid property taxes that may have been used, in part, to construct capital facilities of the type for which impact fees are being assessed. Consequently, it will be necessary to reduce impact fees by the present value of past property tax payments that were used to construct existing capital facilities of the type for which the fees are being charged.

WASTEWATER

The Maui County Department of Public Works and Environmental Management operates and maintains three municipal wastewater systems on the Island of Maui: Lahaina, Kihei and Wailuku-Kahului. The Wailuku-Kahului system serves Wailuku, Kahului, Kuau, Waiehu, Waikapū, Kuau, Pa'ia and Spreckelsville; the Kihei system serves Kihei, Wailea and Makena; and the Lahaina system serves west Maui from Kapalua to Puamana. The private and public sewer lines that feed into each wastewater facility are illustrated in Figure 4. The rest of the island is served by private wastewater treatment facilities, or individual facilities such as cesspools or septic tanks.

The County currently charges a wastewater connection fee, called an "assessment fee," to cover the capital costs of wastewater infrastructure in the area served by the Wailuku-Kahului and Kihei wastewater treatment plants. The impact fee calculated in this study would replace the existing fee structure for these two wastewater facilities. This study will also calculate a potential fee for the area served by the Lahaina treatment plant. In Kihei, the assessment fee is currently $1,628 per single-family home related to historic plant upgrade costs, plus $159-$2,300 per unit for collection line upgrade costs in eight sub-districts. In Wailuku-Kahului, the assessment fee is $1,600 per home, a figure developed on the basis of funding a plant upgrade. There are currently no assessment fees for the Lahaina system.

Figure 4. Maui Island Wastewater Service Areas



Current plant capacities and historical and projected wastewater flows are summarized in Table 8 and illustrated in Figure 5. Flows to each of the three treatment plants have declined in recent years as the County has made improvements to reduce infiltration and inflow into wastewater lines. However, a recent study by the County projects that flows will increase substantially in the future, and treatment plant expansions will be required in two of the service areas by 2030. Even without the need for future expansions, however, new customers could be required to pay for the capacity they will consume in the treatment plants and collection systems, because this capacity has been built to serve future growth.

Figure 5. Wastewater Flows, 1993-2030

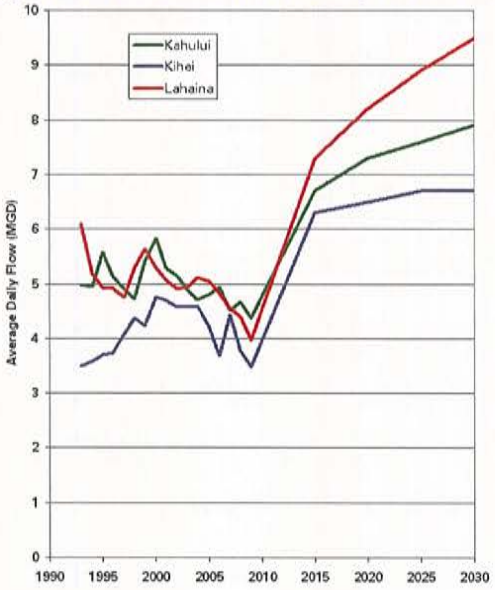


Table 8. Average Daily Wastewater Flows and Capacities

	Average Daily Wastewater Flows (mgd)			
Year	Kahului	Kihei	Lahaina	Total
1993	4.974	3.489	6.106	14.569
1994	4.944	3.591	5.180	13.715
1995	5.572	3.691	4.910	14.172
1996	5.132	3.728	4.912	13.773
1997	4.896	4.065	4.753	13.715
1998	4.723	4.363	5.289	14.375
1999	5.394	4.248	5.629	15.272
2000	5.813	4.755	5.281	15.849
2001	5.295	4.688	5.067	15.050
2002	5.137	4.580	4.890	14.607
2003	4.869	4.584	4.958	14.411
2004	4.700	4.590	5.110	14.400
2005	4.810	4.220	5.040	14.070
2006	4.928	3.673	4.818	13.420
2007	4.515	4.420	4.547	13.483
2008	4.677	3.778	4.384	12.839
2009	4.363	3.475	3.963	11.802
2015	6.700	6.300	7.300	20.300
2020	7.300	6.500	8.200	22.000
2025	7.600	6.700	8.900	23.200
2030	7.900	6.700	9.500	24.100
Capacity (total)	7.900	8.000	9.000	24.900
Capacity (active)	7.900	8.000	6.000	21.900

Source: Historical flows and current capacities from Maui County Wastewater Reclamation division, January 15, 2010; projected 2015-2030 flows from *Maui County Wastewater Flow Study*, 2006.

Service Areas

The County provides wastewater service to customers located in the vicinity of the three existing wastewater treatment facilities. The three existing facilities that serve Maui Island are illustrated in Figure 4. Since the three systems are independent of each other, a separate fee will be developed for each system. It is recommended that the wastewater impact fee service areas should be limited to areas currently served by a wastewater treatment plant. For this study, a separate level of service will be calculated for each area served by the existing treatment plants based on existing facilities and costs. A benefit district will be established for each area served by the existing wastewater treatment plants. The wastewater impact fees will only be assessed on new customers when they connect to one of the County's wastewater systems.

Service Unit

To calculate wastewater impact fees, the wastewater demand associated with different types of customers must be expressed in a common unit of measurement, called a "service unit." The County's assessment fees use a gallon per day (gpd) of average daily wastewater generation as the service unit, and the fees are assessed using a table of standard flows for various types of uses, unless other supporting data is provided to show differently. The County's flow standards are shown in Table 9.

Table 9. Current Wastewater Flow Standards

Land Use Type	Unit	gpd/Unit
Residence, Subdivsion	Dwelling Unit	350
Apartment/Condominium	Dwelling Unit	255
Cottage/Ohana (600 sf max.)	Dwelling Unit	180
Hotel, Resort (with laundry)	Room	350
Hotel, Average (with laundry)	Room	300
Hotel, Average (w/o laundry)	Room	250
Retail Store	1,000 sq. ft.	43
Restaurant, Average	Seat	80
Restaurant, Fast Food	Seat	100
Theater	Seat	5
Laundry, Coin-Operated	Machine	300
Office	1,000 sq. ft.	100
Industrial Shop	1,000 sq. ft.	50
Factory	1,000 sq. ft.	60
Storage (with offices)	1,000 sq. ft.	30
Storage (with offices & showers)	1,000 sq. ft.	60
Church, Large	Seat	6
Church, Small	Seat	4
Day Care Center	Child	10
Golf Clubhouse	Golf Round	25
Hospital	Bed	200
Rest Home	Patient	100
School, Elementary	Student	15
School, High	Student	25

Source: County of Maui, Wastewater Reclamation Division, *Wastewater Flow Standards*, February 2, 2006.

While some other utilities also assess wastewater impact fees based on a table of typical flows by land use type, most utilities assess impact fees based on the size of the water meter. This is feasible for Maui County, since most County wastewater customers are also County water customers. The County's system development fees for water are based on water meter size. It is recommended that the wastewater impact fees for nonresidential uses be based on the size of the water meter (excluding meters used only for irrigation or fire protection). Impact fees for non-water customers could be assessed based on a gallon-per-day basis using flow standards or other information on projected flows.

Water and wastewater impact fees that are based on the size of the water meter typically use a service unit called a "single-family equivalent" or SFE. An SFE is the demand associated with a typical single-family residence, which generally uses the smallest water meter size.

Wastewater impact fees for new residential customers will be charged on a per unit basis, with the fee based on the anticipated wastewater demand compared to a typical single-family dwelling. Based on current wastewater service accounts and flow data, the average wastewater flow among existing single-family customers is approximately 350 gallons per day, as shown in Table 10. For other housing types, or for fees that vary by the size of the housing unit, residential SFEs will be based on the ratio of average household size to the average household size of a typical single-family unit. This reflects the fact that residential wastewater generation is largely a function of the number of residents in the housing unit.

Table 10. Single-Family Wastewater Demand

Estimated Flows, FY 2009 (1,000 gallons)	2,879,091
÷ Single-Family Units, FY 2009	22,296
Average Daily Demand (gpd)	354
Rounded Down	**350**

Source: Number of single-family sewer accounts from Maui County, "Sewer Accounts Tabulation," January 15, 2010; estimated flows from Maui County, "Water Consumption by Class," February 5, 2010.

For nonresidential uses, wastewater impact fees are almost universally charged based on the size of the water meter, irrespective of land use. The smallest meter, the one typically used for single-family dwelling units, has an SFE factor of 1.00. The SFEs associated with larger meters are based on the relative meter capacity compared with the smallest meter. Table 11 is the recommended equivalency table, showing the capacity of water meters of various sizes and the equivalency factors.

Table 11. Water Meter Equivalency Factors

Meter Size	Capacity (gpm)	SFEs/ Meter
5/8" x 3/4" Meter	10	**1.00**
3/4" Meter	15	**1.50**
1" Meter	25	**2.50**
1 1/2" Meter	50	**5.00**
2" Meter	80	**8.00**
3" Meter	160	**16.00**
4" Meter	250	**25.00**
6" Meter	500	**50.00**
8" Meter	800	**80.00**
10" Meter	1,150	**115.00**
12" Meter	1,550	**155.00**

Source: Midrange of normal operating flow rates in gallons per minute for simple (less than 3"), compound (3-8") and turbine (10-12") meters from American Water Works Association, AWWA Standards C700-95, C702-01 and C701-88.

System Capacity

As mentioned in the introduction, Maui County presently operates municipal wastewater systems in Wailuku-Kahului, Kihei and Lahaina. Each system's capacity is based on the average wastewater flow that the treatment plant is designed for, plus an allowance for inflow and infiltration. As shown in Table 12, current average daily flows are well below each treatment plant's capacity. However, this is partially a reflection of current depressed economic conditions (fewer visitors) as well as recent drought conditions, which result in unusually low levels of inflow and infiltration in the sewer system.

Table 12. Wastewater System Capacity

Wastewater System	2009 Flows (mgd)	Capacity (mgd)
Wailuku-Kahului	4.363	7.900
Kihei	3.475	8.000
Lahaina	3.963	9.000
Total	11.801	24.900

Source: Average daily flows from Maui County Wastewater Reclamation Division, January 15, 2010.

Cost per Service Unit

The wastewater facilities considered in determining the impact fee include wastewater treatment plants, gravity mains, force mains and pump stations. The replacement costs for the wastewater lines and pump stations are adjusted to reflect utilized capacity.

The most recent wastewater treatment plant cost data are available from the County's plant expansions. The County completed wastewater treatment plant expansions for Wailuku-Kahului and Lahaina in 1993, and Kihei in 1989. The original expansion costs are adjusted to reflect

increases in the construction cost index to reflect current costs. As shown in Table 13, the plant expansion costs show that treatment costs per gallon per day vary from $6.19 in Lahaina to $8.23 in Wailuku-Kahului. Because the Lahaina plant expansion cost was shared with a private developer, the cost used in this study is based only on the County's share of the original project cost.

Table 13. Wastewater Treatment Plant Cost

	Wailuku-Kahului	Kihei	Lahaina
Year of Expansion	1993	1989	1993
Original Expansion Cost	$8,673,523	$8,621,793	$8,422,580
x Cost Inflation Factor	1.690	1.908	1.690
Adjusted Current Cost	$14,658,254	$16,450,381	$14,234,160
÷ Capacity Added (gpd)	1,900,000	2,000,000	2,300,000
Plant Cost per gpd	**$7.71**	**$8.23**	**$6.19**

Source: Maui County Wastewater Reclamation Division of Department of Environmental Management, January 15, 2010; cost inflation factor based on *Engineering News Record* (ENR), Construction Cost Index, June 2010.

The County's wastewater facilities include gravity sewers that feed into wastewater lift stations where the wastewater is transferred to force mains for transport to the treatment plants. This study includes gravity sewers that are 12 inches or greater in diameter. In Maui County, developers are generally required to install collection facilities such as laterals and collector sewers that are less than 12 inches in diameter. The replacement cost of the existing gravity sewer lines that feed into each treatment plant are shown in Table 14.

Table 14. Wastewater Gravity Sewers

Line Size	Length (feet)				Replacement Cost		
(Inches)	Kahului	Kihei	Lahaina	Cost/Ft.	Kahului	Kihei	Lahaina
36	-	1,756	559	$1,400	$0	$2,458,400	$782,600
30	5,747	5,522	5,215	$1,100	$6,321,700	$6,074,200	$5,736,500
27	-	2,317	4,710	$1,000	$0	$2,317,000	$4,710,000
24	1,665	7,917	4,818	$950	$1,581,750	$7,521,150	$4,577,100
21	-	5,994	13,343	$900	$0	$5,394,600	$12,008,700
18	22,128	9,208	9,387	$800	$17,702,400	$7,366,400	$7,509,600
16	2,165	-	-	$750	$1,623,750	$0	$0
15	18,684	3,374	6,027	$750	$14,013,000	$2,530,500	$4,520,250
12	47,085	7,701	14,137	$700	$32,959,500	$5,390,700	$9,895,900
Total	97,474	43,789	58,196		**$74,202,100**	**$39,052,950**	**$49,740,650**

Source: Maui County Wastewater Reclamation Division of Department of Environmental Management, January 15, 2010.

In addition to the gravity sewers, the County maintains a system of force mains and pump stations. The force mains associated with each treatment plant service area are presented in Table 68, Appendix C. The County's pump stations for each treatment plant service area are presented in Table 69, Appendix C. The collection system level of capacity is based on the pump station capacity estimate for each pump currently in service. The total capacity-adjusted collection system cost is then divided by the existing wastewater demand flows for each treatment plant to determine the collection system cost per gallon per day, as shown in Table 15.

Table 15. Wastewater Collection System Cost

	Wailuku-Kahului	Kihei	Lahaina
Gravity Main Cost	$74,202,100	$39,052,950	$49,740,650
Force Main Cost	$45,777,000	$24,287,000	$31,189,000
Pump Station Cost	$29,600,000	$29,700,000	$46,500,000
Total Collection System Cost	$149,579,100	$93,039,950	$127,429,650
x % of Collection Capacity Used	28.3%	28.6%	19.2%
Used Collection System Cost	$42,357,639	$26,648,048	$24,457,168
÷ Existing Flow (gpd)	4,363,000	3,475,000	3,963,000
Collection System Cost/gpd	**$9.71**	**$7.67**	**$6.17**

Source: Gravity main costs from Table 14; force main replacement cost from Table 68, Appendix C; pump station cost and collection capacity used from Table 69; Appendix C; existing flow from Table 12.

The wastewater cost per SFE is determined based on the system's replacement cost per gpd and wastewater demand per SFE. As shown in Table 16, the total cost per SFE ranges from $4,326 on Lahaina to $6,097 for areas served by the Wailuku-Kahului treatment plant.

Table 16. Wastewater Cost per Service Unit

	Wailuku-Kahului	Kihei	Lahaina
Treatment Cost per gpd	$7.71	$8.23	$6.19
Collection Cost per gpd	$9.71	$7.67	$6.17
Total Cost per gpd	$17.42	$15.90	$12.36
x gpd per SFE	350	350	350
Cost per SFE	**$6,097**	**$5,565**	**$4,326**

Source: Treatment cost from Table 13; collection cost from Table 15; gpd per SFE from Table 10.

Net Cost per Service Unit

While the impact fees are based on the existing level of service, those existing facilities have not necessarily been fully paid for. New development will be paying impact fees to cover the cost of the facilities that will serve it, while also helping to retire outstanding debt on existing facilities that are serving existing development. To prevent double-charging, a credit is required for future funding that will be generated by new development and used to retire outstanding debt on existing wastewater facilities that are serving existing customers. The County primarily utilizes general obligation (GO) debt to fund wastewater capital projects. The County also has outstanding State Revolving Fund (SRF) loans from the State of Hawai'i that have been used to fund wastewater capital projects. In addition to the outstanding debt, cash from the Wastewater Fund and developer exactions are the other funding sources typically used for wastewater capital projects.

The outstanding GO bonds and available expenditure data for each issue are presented in Table 70, Appendix D. As summarized in Table 17, available disbursement and expenditure data show that $16.3 million was expended on wastewater projects, which account for 8.4% of total disbursements. Based on the analysis of GO bond issues and the current outstanding debt, the total GO bond outstanding balance for wastewater projects is $19.1 million.

A simple method that ensures that new development is not required to pay for existing facilities, through the property tax or other funds used for debt retirement, as well as new facilities through impact fees, is to calculate the credit by dividing the outstanding debt by total current county-wide

flows. This puts new customers on the same footing as existing customers in terms of the amount of facility cost that is funded through debt.

Table 17. Wastewater General Obligation Debt

Bond Expenditure Item	Bond Issue	Amount
Napili-Honokawai Sewer Project	1982	$1,500,000
Wai-Kah WWRF Headwork	1993G/2001B/2002B	$86,539
Lahaine WW Modification Stage 1	1993G/2001B/2002B	$6,605
Kihei Reclaimed Water	1993G/2001B/2002B	$335,351
Wailuku WWPS Modification	1993G/2001B/2002B	$206,491
Kihei SPS Upgrade	1993G/2001B/2002B	$3,352,395
Kihei WWRF Expansion	1993G/2001B/2002B	$2,930,055
Lahaina WWPS 1 & 2	1993G/2001B/2002B	$1,146,574
Kualapuu WWS Upgrade	1993G/2001B/2002B	$148,761
Lanai WWRF Bar Screen	1993G/2001B/2002B	$199,509
Moloka'i WWRF Upgrade	1993G/2001B/2002B	$393,283
Napili WW Pump Station	1993G/2001B/2002B	$656,704
Wai-Kah WWRF Headwork	2000/2001C	$250,000
Wai-Kah WWRF Headwork	2001A	$353,372
Recycled Waterline Extension-Kihei	2002A	$424,945
Kihei Reclaimed Water Ph2	2002A	$117,960
Lahaina WWPS No. 4 Mod.	2005A,B & C	$50,783
Lahaina WWPS No. 4 Mod.	2006	$124,217
Lahaina WWRF Mod. Stage 1A	2006	$49,996
Kaunakakai Sewer Line	2006	$999,800
Lahaina WWRF Mod. Stage 1A	2008	$99,720
Lahaina WWRF Mod. Stage 1A	2008	$2,385,185
Lahaina WWRF Tsunami Prot.	2008	$468,800
Total Available WW GO Bond Expenditures		$16,287,045
÷ Total Available GO Bond Disbursement		$194,659,064
WW Share of Total Disbursements		8.4%
x Total Outstanding GO Bond Balance		$226,953,500
Total Estimated WW Share of Outstanding GO Bonds		$19,064,094
÷ Wastewater Flow (gpd), 2009		11,802,000
General Obligation Debt Credit per gpd		**$1.62**

Source: Disbursement data compiled from information provided by the Maui County Department of Finance, April 30, 2010; total available GO bond disbursement data and outstanding GO bond balance from Table 70, Appendix D; 2009 total wastewater system flows from Table 8.

As shown in Table 18, the County has $40.0 million in outstanding State Revolving Fund (SRF) debt principal for wastewater facilities. Based on system-wide wastewater flows, the SRF debt credit is $3.39 per gpd.

Table 18. Wastewater State Revolving Fund Debt Credit

Year	Project Description	Outstanding Balance
1992	Lahaina WW Design	$76,938
1994	Wailuku-Kahului	$1,437,084
1995	Lahaina Construction	$1,949,715
1997	Lahaina Pump Station #3	$1,106,678
1997	Kihei Phase IIB	$3,801,384
1998	Kihei Reuse Core Distribution	$1,626,435
1999	Lahaina Pump Station #17	$314,578
2002	Lahaina Solids	$895,834
2003	Wailuku-Kahului Phase II	$8,960,291
2004	Lahaina Pump Station 5 & 6	$2,927,976
2004	Kahului Pump Staton Mod	$2,353,202
2006	Lahaina Pump Station	$1,514,868
2008	Wailuku Pump Station	$7,279,482
2009	Wailuku-Kahului Wastewater	$2,000,000
2009	Lahaina Wastewater Pump	$3,731,097
Total State Revolving Loan Fund Debt		$39,975,562
÷ Wastewater Flow (gpd), 2009		11,802,000
State Revolving Fund Debt Credit per gpd		**$3.39**

Source: Outstanding debt and current balance from Maui County, *Consolidated Annual Financial Report* (CAFR), 2009, p. 62; 2009 total wastewater system flows from Table 8.

The State impact fee enabling act for counties requires that credit be provided for the contribution made by a developer over the previous five years toward the cost of existing capital improvements. Since vacant land that is now being developed has paid some property taxes that have gone toward funding existing capital facilities, a credit should be provided for those past property tax payments. However, it is very difficult to determine how much vacant land has contributed in the form of property tax payments toward the cost of existing facilities for the last five years. An alternative is simply to give credit for the percentage of general fund revenues that come from vacant land. This percentage will be multiplied by the cost per gpd or per service unit to determine the past property tax credit, based on the generous assumption that general fund revenues have paid for all existing capital facilities. As shown in Table 19, property taxes paid by vacant land accounts for 5.7% of general fund revenues.

Table 19. Vacant Land Property Tax Percentage of General Fund

Percent of General Fund from Property Taxes, FY 2009-2010	48.4%
x Percent of Property Taxes from Vacant/Ag. Land, 2009	11.8%
Percent of General Fund from Vacant Land Property Taxes	**5.7%**

Source: Percent of general fund from property taxes derived from Maui County the Maui County *Comprehensive Annual Financial Report*, 2009, p. 23; percent of property taxes from vacant/agricultural land based on agriculture, conservation and unimproved residential property classes and related taxable value from supporting documents for Maui County 2008 GO bond issue;

The wastewater net cost per service unit reflects the wastewater cost for each service area, the system-wide debt credits for outstanding GO and SFR debt, and a past property tax credit that is a percentage of the capital cost. As shown in Table 20, the potential impact fees per single-family equivalent range from $2,328 in Lahaina to $3,997 in Wailuku-Kahului.

Table 20. Wastewater Net Cost per Service Unit

	Kahului	Kihei	Lahaina
Capital Cost per gpd	$17.42	$15.90	$12.36
– GO Debt Credit per gpd	-$1.62	-$1.62	-$1.62
– SFR Debt Credit per gpd	-$3.39	-$3.39	-$3.39
– Past Property Tax Credit per gpd	-$0.99	-$0.91	-$0.70
Net Cost per gpd	$11.42	$9.98	$6.65
x gpd per Single-Family Equivalent (SFE)	350	350	350
Net Cost per Single-Family Equivalent	**$3,997**	**$3,493**	**$2,328**

Source: Cost per gpd from Table 16; GO credit from Table 17; SFR credit from Table 18; past property tax credit is cost per gpd times vacant land general fund percentage from Table 19; gpd per SFE from Table 10.

Potential Fee Schedule

The maximum wastewater impact fees that may be charged by Maui County in the three areas served by existing treatment plants, based on the methodology, data and assumptions used in this report, are shown in Table 21. The potential fee schedule provides the option of charging residential fees on the basis of a flat rate by housing type, or on the basis of housing type and dwelling unit size.

Table 21. Potential Wastewater Impact Fee Schedule

		Wailuku-Kahului		Kihei		Lahaina	
Housing Type/ Meter Size	SFEs per Unit/Meter	Net Cost per SFE	Net Cost/ Unit/Meter	Net Cost per SFE	Net Cost/ Unit/Meter	Net Cost per SFE	Net Cost/ Unit/Meter
Single-Family (Flat Rate)	1.00	$3,997	**$3,997**	$3,493	**$3,493**	$2,328	**$2,328**
Single-Family (Tiered):							
Less than 1,000 sf	0.86	$3,997	**$3,437**	$3,493	**$3,004**	$2,328	**$2,002**
1,000-1,499 sf	0.94	$3,997	**$3,757**	$3,493	**$3,283**	$2,328	**$2,188**
1,500-2,499 sf	1.00	$3,997	**$3,997**	$3,493	**$3,493**	$2,328	**$2,328**
2,500-3,499 sf	1.08	$3,997	**$4,317**	$3,493	**$3,772**	$2,328	**$2,514**
3,500 sf+	1.15	$3,997	**$4,597**	$3,493	**$4,017**	$2,328	**$2,677**
Multi-Family (Flat Rate)	0.81	$3,997	**$3,238**	$3,493	**$2,829**	$2,328	**$1,886**
Multi-Family (Tiered):							
Less than 500 sf	0.65	$3,997	**$2,598**	$3,493	**$2,270**	$2,328	**$1,513**
500-999 sf	0.76	$3,997	**$3,038**	$3,493	**$2,655**	$2,328	**$1,769**
1,000-1,499 sf	0.89	$3,997	**$3,557**	$3,493	**$3,109**	$2,328	**$2,072**
1,500-2,499 sf	0.93	$3,997	**$3,717**	$3,493	**$3,248**	$2,328	**$2,165**
2,500 sf +	0.98	$3,997	**$3,917**	$3,493	**$3,423**	$2,328	**$2,281**
Nonresidential							
5/8" x 3/4" Meter	1.00	$3,997	**$3,997**	$3,493	**$3,493**	$2,328	**$2,328**
3/4" Meter	1.50	$3,997	**$5,996**	$3,493	**$5,240**	$2,328	**$3,492**
1" Meter	2.50	$3,997	**$9,993**	$3,493	**$8,733**	$2,328	**$5,820**
1 1/2" Meter	5.00	$3,997	**$19,985**	$3,493	**$17,465**	$2,328	**$11,640**
2" Meter	8.00	$3,997	**$31,976**	$3,493	**$27,944**	$2,328	**$18,624**
3" Meter	16.00	$3,997	**$63,952**	$3,493	**$55,888**	$2,328	**$37,248**
4" Meter	25.00	$3,997	**$99,925**	$3,493	**$87,325**	$2,328	**$58,200**
6" Meter	50.00	$3,997	**$199,850**	$3,493	**$174,650**	$2,328	**$116,400**
8" Meter	80.00	$3,997	**$319,760**	$3,493	**$279,440**	$2,328	**$186,240**
10" Meter	115.00	$3,997	**$459,655**	$3,493	**$401,695**	$2,328	**$267,720**
12" Meter	155.00	$3,997	**$619,535**	$3,493	**$541,415**	$2,328	**$360,840**

Note: Single-family category includes single-family detached and duplex units
Source: Residential SFEs per unit from Table 67; nonresidential SFEs per meter from Table 11; net cost per SFE from Table 20.

Capital Improvement Plan

Substantial funding is proposed for wastewater infrastructure improvements in the County's 2010/11-2015/16 capital improvements program (CIP). However, impact fees may only be used for capacity-expanding improvements, such as treatment plant improvements that add capacity and new wastewater sewer gravity mains, force mains and pumps. The projects that may be eligible for impact fee funding are identified in Table 22.

While there are only limited planned capacity improvements over the next six years, there is excess capacity in existing facilities that can be used to provide service to new customers anticipated over the planning period. Outstanding debt related to this excess capacity can also be retired with wastewater impact fees.

Table 22. Wastewater Capital Improvement Program

Project	Total Cost	Impact Fee Eligible
Pa'ia Force Main Replacement	$5,660,000	
Alamaha Force Main Replacement	$1,260,000	
Alamaha WW Pump Station Modifications	$6,000,000	
EPA Consent Decree Sewer Rehab	$3,500,000	
Hawai'ian Homes Force Main Replacement	$3,080,000	
Hoo Hui Ana Force Main Replacement	$600,000	
Kahului Force Main Replacement	$2,790,000	
Leisure Estates Force Main Replacement	$140,000	
Leisure Estates WW Pump Station Modifications	$2,000,000	
Maluhia Beach Lots Wastewater Line	$300,000	
Naska Force Main Replacmenet	$2,660,000	
Waiko Road Gravity Wastewater Line Extension	$1,350,000	$1,350,000
Wailuku Force Main Replacement	$1,500,000	
Wailuku-Kahului WWRF Modifications	$6,000,000	
Wailuku-Kahului WWRD Shoreline Erosion Protection	$20,000,000	
Wailuku-Kahului WWRF Upgrade to R-1	$700,000	
Wailuku WW Pump Station Building Renovation	$1,000,000	
Total, Wailuku-Kahului System	**$58,540,000**	**$1,350,000**
EPA Consent Decree Sewer Rehab	$500,000	
Kihei Force Main No. 2 Replacement	$1,710,000	
Kihei Force Main No. 9 Replacement	$560,000	
Kihei Force Main No. 10 Replacement	$1,800,000	
Kihei Force Main No. 16 Replacement	$4,930,000	
Kihei WW Pump Station No. 6 Rehab	$1,200,000	
Kihei WW Pump Station No. 10 Mod/Upgrade	$300,000	

Continued on next page

Table 22 Continued

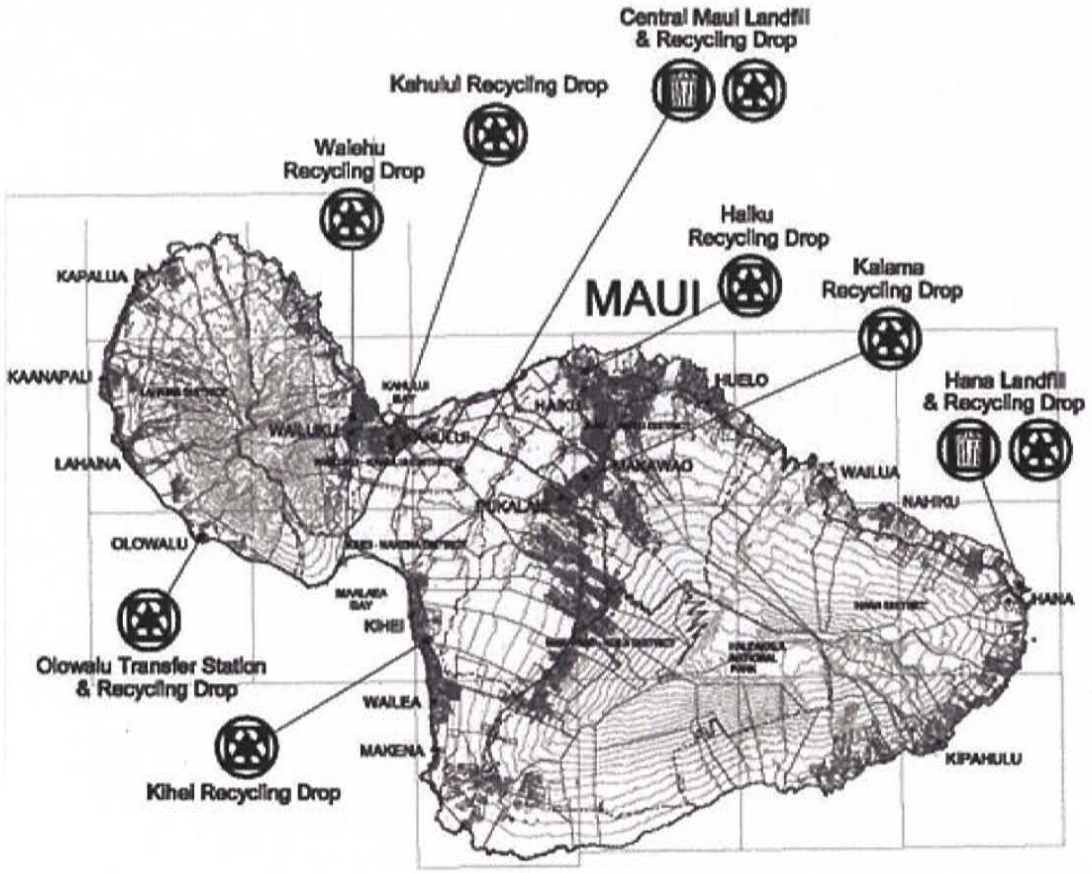
Project	Total Cost	Impact Fee Eligible
Kihei WWRF Effluent Filter Upgrade	$1,100,000	
Kihei WWRF Grit System Replacement	$1,150,000	
Kihei WWRF Modifications	$6,000,000	
Kihei WWRF UV Channel 2 Upgrade	$400,000	
Maui Meadows Sewer System	$1,500,000	$1,500,000
Total, Kihei System	**$21,150,000**	**$1,500,000**
EPA Consent Decree Sewer Rehab	$1,250,000	
Kaanapali WW Pump Station Modifications	$5,000,000	
Lahaina Force Main No. 2 Replacmeent	$2,160,000	
Lahaina Force Main No. 3 Replacmeent	$7,560,000	
Lahaina Force Main No. 4 Replacmeent	$1,110,000	
Lahaina Force Main No. 7 Replacmeent	$320,000	
Lahaina WW Pump Station No. 2 Modifications	$5,650,000	
Lahaina WW Pump Station No. 2 Odor Control Mod.	$650,000	
Lahaina WWRF Effluent Filter Upgrade	$1,600,000	
Lahaina WWRF Modifications	$6,000,000	
Lahaina WWRF Modifications, Stage IA	$25,000,000	$25,000,000
Lahaina WWRF Odor Control	$11,000,000	
Lahaina WWRF UV Expansion/Upgrade	$250,000	
Napil No. 1 Force Main Replacement	$290,000	
Napil No. 2 Force Main Replacement	$100,000	
Napil No. 3 Force Main Replacement	$200,000	
Napil No. 5 Force Main Replacement	$180,000	
Napil WW Pump Station No. 1-6 Modifications	$500,000	
Sheraton WW Lift Station Modifications	$300,000	
Wahikuli Gravity Sewer	$4,350,000	$4,350,000
Total, Lahaina System	**$73,470,000**	**$29,350,000**

Source: County of Maui, Six Year Capital Program, FY 2011-FY 2016, Ordinance 3750, effective July 1, 2010.

SOLID WASTE

The County currently has two landfill sites that serve Maui Island: the Central Maui Landfill (CML) and the Hāna Landfill. The existing solid waste and recycling facilities for Maui Island as illustrated in the County's *Public Facilities Assessment Update* are shown in Figure 6.[5]

Figure 6. Maui Island Solid Waste and Recycling Facilities



The County provides curb-side solid waste collection to residential customers that are located on collection routes. Residential customers that are not in areas accessible by the collection trucks must self-haul their solid waste to either the landfill or one of the County's four Maui Island solid waste transfer stations. Residential customers pay an $18 monthly fee to cover the operating costs related to solid waste collection and recycling. The County requires that multi-family dwellings and nonresidential land uses utilize private solid waste hauling services, which are charged a tipping fee of $53 per ton, plus $10 recycling surcharge. The tipping fee only covers a portion of the cost of operating the landfill. Since residential collection services are only provided to single-family units located on collection routes, the solid waste impact fee will exclude costs related to the residential collection services, such as collection vehicles.

[5] R.M. Towill Corporation, *Public Facilities Assessment Update, County of Maui*, March 9, 2007.

Service Areas

All of the Maui Island planning areas aside from Hāna are served by the Central Maui Landfill and a network of recycling centers. The Hāna planning area is primarily served by the Hāna Landfill and the Hāna recycling center located on the same site as the landfill. However, the County's solid waste master plan proposes building a transfer station in Hāna to convey waste to the Central Maui Landfill, and putting the Hāna Landfill on reserve status. Moloka'i and Lāna'i are served by separate landfill and recycling facilities specific to each island. The proposed impact fee would be charged on Maui Island. Given that most future facilities will serve all of Maui Island, it is recommended that the fee should be calculated island-wide.

Service Unit

A reasonable measure of solid waste generation is tons per year. The County's 2009 *Integrated Solid Waste Management Plan* calculates residential waste generation for the island of Maui to be 2.30 tons per household per year. Since residential solid waste generation should be generally proportional to the number of persons residing in the unit, generation rates can be derived for single-family and multi-family housing types, as shown in Table 23.

Table 23. Residential Solid Waste Generation

Tons per Household per Year	2.30
÷ Average Household Size	2.91
Tons per Person per Year	0.79
Tons per Person per Year	0.79
x Single-Family Avg. Household Size	3.08
Tons per Single-Family Household/Year	**2.43**
Tons per Person per Year	0.79
x Multi-Family Avg. Household Size	2.51
Tons per Multi-Family Household/Year	**1.98**

Source: Tons per household per year for island of Maui from Gershman, Brickner & Bratton, Inc., *Integrated Solid Waste Management Plan*, February 17, 2009, Table 2-7; average household sizes from Table 64.

The County's 2009 *Integrated Solid Waste Management Plan* calculates nonresidential waste generation for the island of Maui to be 1.58 tons per year per employee. This can be converted into tons per year per 1,000 square feet based on the typical number of employees per 1,000 square feet for different land use types. Tons per year for different land use types can then be converted into single-family equivalent (SFE) service units based on the solid waste generation of a typical single-family unit, as shown in Table 24.

Table 24. Solid Waste Service Unit Multipliers

Land Use	Unit	Employees/ Unit	Tons/Yr/ Employee	Tons/Yr/ Unit	SFEs/ Unit
Single-Family	Dwelling	na	na	2.43	**1.00**
Multi-Family	Dwelling	na	na	1.98	**0.81**
Commercial, Retail	1,000 sq. ft.	1.02	1.58	1.61	**0.66**
Office	1,000 sq. ft.	2.31	1.58	3.65	**1.50**
Industrial	1,000 sq. ft.	0.57	1.58	0.90	**0.37**
Institutional, Public	1,000 sq. ft.	1.11	1.58	1.75	**0.72**

Source: Employees/unit from U.S. Department of Energy, *Commercial Buildings Energy Consumption Survey*, 2003; tons per year per employee for island of Maui from Gershman, Brickner & Bratton, Inc., *Integrated Solid Waste Management Plan*, February 17, 2009, Table 2-7; SFEs/unit is ratio of tons/year/unit for each land use to tons/year/unit for single-family.

In order to determine the existing level of service, it is necessary to estimate the total number of service units served by the County's solid waste facilities. While the focus of this study is to calculate impact fees for the island of Maui, some solid waste facilities on the island serve a county-wide function, and outstanding debt on existing facilities is paid by all development in the county. As shown in Table 25, the estimated total number of solid waste service units is 54,602 SFEs for the island of Maui and 58,768 SFEs for the entire county.

Table 25. Existing Solid Waste Service Units

	Maui Island	Total County
Existing Single-Family Units	37,364	40,297
Existing Multi-Family Units	12,702	13,699
Existing Commercial (1,000 sf. ft.)	7,161	7,599
Existing Office (1,000 sf. ft.)	3,015	3,199
Existing Industrial (1,000 sf. ft.)	6,009	6,376
SFEs per Single-Family Unit	1.000	1.000
SFEs per Multi-Family Unit	0.810	0.810
SFEs per 1,000 sq. ft. of Commercial	0.660	0.660
SFEs per 1,000 sq. ft. of Office	1.110	1.110
SFEs per 1,000 sq. ft. of Industrial	0.370	0.370
Total Existing Solid Waste SFEs	**54,602**	**58,768**

Source: Existing residential development from Table 61, Appendix A; existing nonresidential development from Table 63, Appendix A; SFEs per unit from Table 24 (office is average of office and public/institutional; industrial is average of industrial, warehouse and mini-warehouse).

Cost per Service Unit

The replacement value of the County's existing solid waste capital equipment and facilities are used to determine the cost per service unit. Residential collection vehicles are excluded from the calculations, because they do not serve all types of development (they serve only single-family units located on collection routes) and because developments that are served pay a fee that covers at least part of the costs.

The replacement cost of existing solid waste facility land is based on the net site area of solid waste facilities. The net site area excludes phases of the Central Maui Landfill that are closed or substantially utilized, since this land area will not be able to accommodate additional waste for disposal. Also excluded from the land inventory are the portions of the Wailuku and Makawao baseyards used by the Solid Waste Division to dispatch residential collection vehicles. While the Hāna Landfill site and several of the smaller sites are owned by the State of Hawai'i, the County may use the land for solid waste services in perpetuity for no cost, and this land is treated as an asset in calculating the impact fee. As shown in Table 26, the replacement cost of County solid waste sites that have remaining capacity is $18.2 million.

Table 26. Solid Waste Land Replacement Cost

Central Maui Landfill Acres	158.90
Hana Landfill Acres	34.38
Total Landfill Acres	193.28
– 100% of Central Maui Landfill Ph. I & II	-49.60
– 85% of Central Maui Landfill Ph. IV	-24.91
Net Landfill Acres with Remaining Capacity	118.77
Makawao Recycling & Redemption Center	0.37
Hiaku Recycling Center	0.27
Kihei Recycling and RedemptionCenter	1.60
Waiehu Recycling Center	0.13
Olowalu Recycling Center & Transfer Station	0.50
Total Net Acres	121.64
x Cost/Acre	$150,000
Total Land Cost	**$18,246,000**

Source: Landfill acres from R.M. Towill Corp., *Public Facilities Assessment Update*, March 9, 2007, Table 13-4; utilization of landfill phases and acres for non-landfill facilities from Maui County Department of Public Works and Environmental Management, January 20, 2010; land cost per acre from GBB, *Integrated Solid Waste Management Plan*, February 17, 2009.

In addition to the landfill sites, the County owns a number of heavy vehicles and other equipment that is used to operate the landfills. The current replacement value of the existing equipment is $4.1 million, as shown in Table 27.

Table 27. Existing Landfill Equipment

Landfill	Equipment	Year	Inflation Factor	Original Cost	Current Cost
Central Maui	Alijon compactor	2007	1.052	$421,647	$443,573
Central Maui	Cat 826H Compactor	2005	1.117	$557,547	$622,780
Central Maui	Intersol Rand Air Compressor	2002	1.206	$18,000	$21,708
Central Maui	Cat D8R Dozer	2001	1.232	453,262	$558,419
Central Maui	Cat D8R Dozer	2004	1.155	$479,000	$553,245
Central Maui	Cat 950E Loader	1991	1.602	$140,557	$225,172
Central Maui	Cat D5M Dozer	2002	1.206	$154,166	$185,924
Central Maui	International Water Truck	1994	1.472	$129,177	$190,149
Central Maui	Jeep Cherokee	1995	1.432	$23,500	$33,652
Central Maui	Ford Ranger	1994	1.472	$19,000	$27,968
Central Maui	International Dump Truck	2002	1.206	$100,006	$120,607
Central Maui	Autocar Roll Off	2004	1.155	$133,991	$154,760
Central Maui	Autocar Roll Off	2004	1.155	$133,991	$154,760
Central Maui	Light Plant #1	2007	1.052	$8,877	$9,339
Central Maui	Light Plant #2	2007	1.052	$8,877	$9,339
Central Maui	6" Godwin Pump	2007	1.052	$37,286	$39,225
Central Maui	ATV Kawasaki Mule	2007	1.052	$12,769	$13,433
Hana	Cat 953 Track Loader	2004	1.155	$182,000	$210,210
Hana	Cat D6H Dozer	1991	1.602	$300,000	$480,600
Total					**$4,054,863**

Source: Equipment description, year and original cost from Gershman, Brickner & Bratton, Inc., *Integrated Solid Waste Management Plan*, February 17, 2009, Appendix F-8; inflation factor is US Bureau of Labor Statistics, Consumer Price Index, All Urban Customers, U.S. City Average, 1982-84=100, based on May 2010 index.

The Solid Waste Division has constructed buildings and other permanent improvements at many of the landfill and recycling sites, as summarized in Table 28. The operations building for the Central Maui Landfill houses some functions that are county-wide, and the costs of this facility will be allocated to county-wide service units.

Table 28. Solid Waste Improvements

Central Maui Landfill Operations Building	$591,800
Total County-Wide Improvements	**$591,800**
Central Maui Landfill Wind Barrier	$479,000
Central Maui Landfill Litter Screen	$700,000
Hana Landfill Operations Building	$53,800
Hana Landfill Recycling Center	$12,000
Kihei Recycling Center	$1,070,000
Olowalu Recycling Center	$500,000
Total Maui Island Improvements	**$2,814,800**

Source: Department of Environmental Management, January 20, 2010; landfill operations building costs based on square feet (2,200 CML and 200 Hāna) and cost per sq. ft. of $269, based on *ENR Square Foot Costbook*, 2010, pp. 27, 181 ($173 per sq. ft. for office building and 1.35 Honolulu adjustment factor) and Hawai'i Department of Accounting and General Services, Regional Cost Factors, January 1, 1982 (1.15 adjustment factor for Wailuku).

As shown in Table 29, the replacement value for the County's existing land, equipment and improvements providing continuing solid waste services to the island of Maui, excluding residential solid waste collection, is an estimated $25.1 million. Dividing this figure by the number of existing service units on the island, and adding the additional cost per service unit for county-wide facilities, yields a total cost per service unit of $470 per SFE.

Table 29. Solid Waste Cost per Service Unit

Land (Excluding Closed Landfill Phases)	$18,246,000
Landfill Equipment	$4,054,863
Maui Island Improvements	$2,814,800
Total Maui Island Solid Waste Facility Cost	$25,115,663
÷ Existing Maui Island SFEs	54,602
Maui Island Cost per SFE	**$460**
Central Maui Landfill Operations Building	$591,800
÷ Existing County-Wide SFEs	58,768
County-Wide Cost per SFE	**$10**
Total Solid Waste Cost per SFE	**$470**

Source: Land cost from Table 26; landfill equipment cost from Table 27; Maui Island and county-wide improvement costs from Table 28; solid waste SFEs from Table 25.

Net Cost per Service Unit

While the impact fees are based on the existing level of service, those existing facilities have not necessarily been fully paid for. New development will be paying impact fees to cover the cost of the facilities that will serve it, while also helping to retire outstanding debt on existing facilities that are serving existing development. To prevent double-charging, a credit is required for future funding to be generated by new development and used to help retire outstanding debt on existing solid waste facilities that are serving existing development. The County has utilized both General Obligation (GO) debt and State Revolving Fund (SRF) loans from the State of Hawai'i to finance solid waste capital projects. The solid waste fund is the primary funding source for the County's solid waste division's operation and maintenance expenditures and has not been a major source of revenue for capital projects.

Many of the capital improvements related to solid waste disposal, including the construction and closing of cells, are not treated as capacity-expanding in this analysis, because the capacity of those improvements will be consumed by both existing and new development. Existing development has not paid for all of the future costs of disposing of its wastes, so new development should not be charged for a higher level of service. These costs should be borne by all development, and paid through broader revenue sources than impact fees, such as tipping fees and property taxes.

By the same token, new development should not receive a credit against the impact fees for future payment to retire debt on past non-capacity improvements. Outstanding SFR debt is related to two such non-capacity improvements, namely the installation of a methane gas collection system for the Central Maui Landfill and improvements to the Moloka'i landfill. Consequently, no credit is due for the $4.4 million in outstanding SFR debt.

The available solid waste expenditure data for outstanding GO bond issues are presented in Table 17. Only 22.2% of these expenditures have been for capacity improvements that go beyond landfill operations. Thus, of the estimated $16.1 million in outstanding solid waste debt, credit needs to be provided for only $3.6 million.

A simple method that ensures that new development is not required to pay for existing facilities, through the property tax or other funds used for debt retirement, as well as new facilities through impact fees, is to calculate the credit by dividing the outstanding debt by existing service units. Dividing the outstanding solid waste GO debt used for capacity improvements by the existing number of county-wide solid waste service units yields an outstanding debt credit of $61 per SFE.

Table 30. Solid Waste Debt Credit

Bond Expenditure Item	Bond Issue	Capacity Amount	Total Amount
Lanai Integrated SW Faclity	1993G/2001B/2002B	$250,000	$250,000
Moloka'i Integrated SW Facility	1993G/2001B/2002B	$165,042	$165,042
Moloka'i Landfill Cell 3	1998A/2005B	$0	$49,840
Central Maui Landfill Ph IV	2000/2001C	$0	$661,558
Central Maui Landfill Ph IV Facility	2001A	$0	$18,396
Central Maui Landfill Ph IV Groundwater	2001A	$0	$399,253
Central Maui Landfill Ph IV/Equip.	2002A	$0	$2,500,000
Central Maui Landfill Stormwater Pond	2002A	$0	$50,120
Central Maui Landfill Ph IV/Equip.	2002	$0	$1,033,380
Olowalu Landfill Gas	2002	$0	$26,304
Hana Landfill	2002	$0	$49,445
Lanai Landfill Improvements	2002	$0	$150,000
Central Maui Landfill Ph IV/Equip.	2005	$0	$479,147
Central Maui Landfill Entry Fac.	2005	$350,000	$350,000
Central Maui Landfill Ph. IV-B	2005	$0	$149,989
Central Maui Landfill Ph. IV-A	2005	$0	$268,150
Central Maui Land Acquisition	2006	$1,881,106	$1,881,106
Central Maui Landfill Phase Improvements	2006	$0	$2,569,210
Central Maui Landfill Ph. IV-A	2006	$0	$514,469
Kihei Recycling Center	2006	$439,605	$439,605
Lanai Landfill Storm Water System	2006	$0	$1,900,000
Total Available SW GO Bond Expenditures		$3,085,753	$13,905,014
÷ Total Available GO Bond Disbursement			$194,659,064
Solid Waste Share of Total Disbursements			7.1%
x Total Outstanding GO Bond Balance			$226,953,500
Total Estimated Solid Waste Share of Outstanding GO Bonds			$16,113,699
x Percent of GO Bond Expenditures for Capacity			22.2%
Outstanding Solid Waste GO Debt for Capacity			$3,577,241
÷ County-Wide Solid Waste SFEs			58,768
Solid Waste Debt Credit per SFE			**$61**

Source: Disbursement data compiled from information provided by the Maui County Department of Finance, April 30, 2010; total available GO bond disbursement data and outstanding GO bond balance from Table 70, Appendix D; percent of solid waste GO bond expenditures for capacity is ratio of total capacity expenditures to total expenditures; county-wide solid waste SFEs from Table 25.

The State impact fee enabling act for counties requires that credit be provided for the contribution made by a developer over the previous five years toward the cost of existing capital improvements. Since vacant land that is now being developed has paid some property taxes that have gone toward funding existing capital facilities, a credit should be provided for those past property tax payments. However, it is very difficult to determine how much vacant land has contributed in the form of

property tax payments toward the cost of existing facilities for the last five years. An alternative is simply to give credit for the percentage of general fund revenues that come from vacant land. This percent was calculated in the wastewater section to be 5.7%.

The net cost per service unit reflects a reduction for outstanding debt and past property tax payments paid by vacant or agricultural land. As shown in Table 31, the net cost per service unit is $382 per single-family equivalent.

Table 31. Solid Waste Net Cost per Service Unit

Cost per SFE	$470
– GO Debt Credit per SFE	-$61
– Past Property Tax Credit per SFE	-$27
Net Cost per SFE	**$382**

Source: Cost per SFE from Table 29; GO debt credit from Table 30; past property tax credit is cost per SFE times vacant land general fund percentage from Table 19.

Potential Fee Schedule

The potential solid waste impact fee for each unit of development of the various land use types is the product of the single-family equivalent multipliers and the net cost per SFE. The resulting potential impact fee schedule is displayed in Table 32. The potential fee schedule provides the option of charging residential units on the basis of a flat rate by housing type or a tiered rate based on the size of the dwelling unit.

Table 32. Potential Solid Waste Impact Fee Schedule

Land Use	Unit	SFEs/ Unit	Net Cost/ SFE	Net Cost/ Unit
Single-Family Det./Duplex (Flat Rate)	Dwelling	1.00	$382	**$382**
Single-Family Det./Duplex (Tiered):				
Less than 1,000 sf	Dwelling	0.86	$382	**$329**
1,000-1,499 sf	Dwelling	0.94	$382	**$359**
1,500-2,499 sf	Dwelling	1.00	$382	**$382**
2,500-3,499 sf	Dwelling	1.08	$382	**$413**
3,500 sf+	Dwelling	1.15	$382	**$439**
Multi-Family (Flat Rate)	Dwelling	0.81	$382	**$309**
Multi-Family (Tiered):				
Less than 500 sf	Dwelling	0.65	$382	**$248**
500-999 sf	Dwelling	0.76	$382	**$290**
1,000-1,499 sf	Dwelling	0.89	$382	**$340**
1,500-2,499 sf	Dwelling	0.93	$382	**$355**
2,500 sf +	Dwelling	0.98	$382	**$374**
Visitor Accommodation	Room/Unit	0.33	$382	**$126**
Commercial, Retail	1,000 sq. ft.	0.66	$382	**$252**
Office	1,000 sq. ft.	1.50	$382	**$573**
Industrial	1,000 sq. ft.	0.37	$382	**$141**
Institutional, Public	1,000 sq. ft.	0.72	$382	**$275**

Source: SFEs per unit from Table 24 (hotel/motel based on retail and 500 sq. ft. per room; industrial/warehouse is average of industrial, warehouse and mini-warehouse; SFEs by dwelling unit size based on relative household sizes from Table 67); net cost per SFE from Table 31.

Capital Improvement Plan

Funding of $39.4 million is proposed for solid waste infrastructure improvements in the County's 2010/11-2015/16 CIP. Impact fees may only be used for capacity-expanding improvements for facilities or equipment that expand the current capacity of solid waste collection or potentially for recycling activities that reduce the volume of solid waste entering the County's landfill facilities. A detailed breakdown of each project component cost was not available; consequently, the identification of eligible projects presented is preliminary and subject to verification. However, most of the planned capital improvements appear to be eligible for impact fee funding, as shown in Table 33.

Table 33. Solid Waste Capital Improvement Program

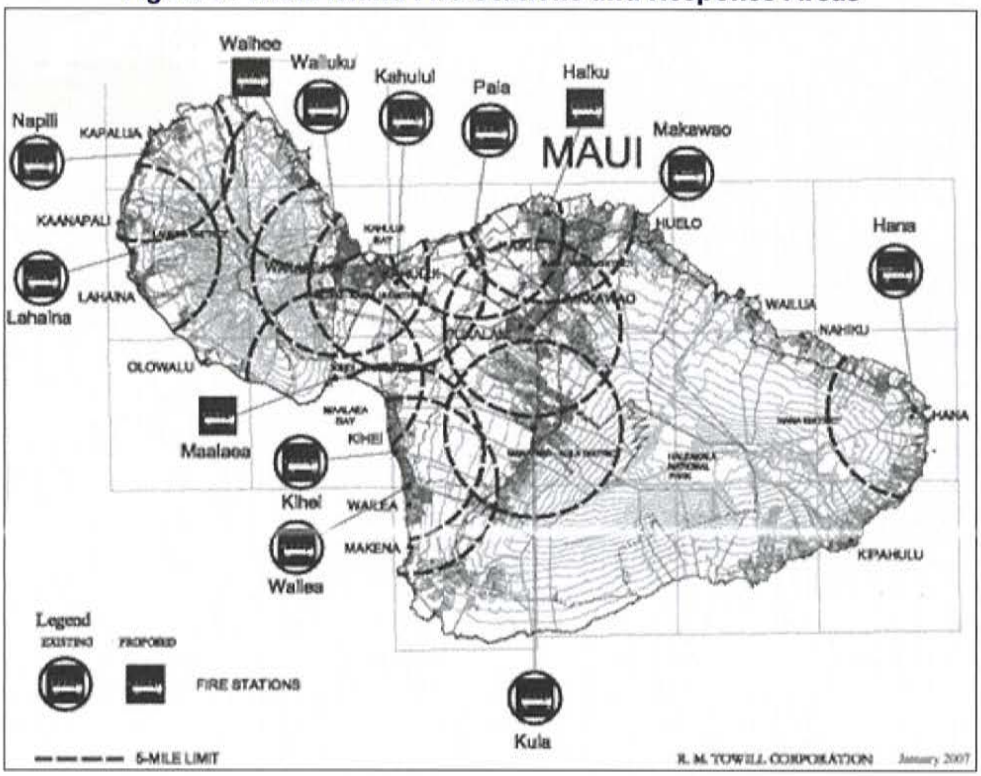
Project	Total Cost	Impact Fee Eligible
Hana Landfill Detention Pond	$600,000	
Hana Landfill Groundwater Monitoring Well	$200,000	
Hana Landfill Transfer Station	$550,000	$550,000
Central Maui Landfill Gulch Crossing	$2,000,000	$2,000,000
Central Maui Landfill Maintenance Facility	$5,500,000	$5,500,000
Central Maui Landfill Nonpotable Water Tank Syster	$300,000	$300,000
Centrla Maui Landfill Ph IV Final Closure	$2,250,000	
Central Maui Landfill Ph VI	$2,350,000	
Central Maui Landfill Potable Water Line	$650,000	$650,000
C&D Materials Recovery Facility	$10,500,000	$10,500,000
Landfill Gas Monitoring Wells	$350,000	
Material Recovery Facility Construction	$5,000,000	$5,000,000
Renewable Power	$4,700,000	$4,700,000
Waste to Energy	$4,450,000	$4,450,000
Total	$39,400,000	$33,650,000

Source: County of Maui, Six Year Capital Program, FY 2011-FY 2016, Ordinance 3750, effective July 1, 2010 (cost for materials recovery facility updated with *Draft Maui Island Plan*, Chapter 9: Long-Range Implementation Plan, May 2010).

FIRE

Fire protection on Maui Island is provided by the Maui County Department of Fire and Public Safety. The Department maintains 10 fire stations on Maui Island. The existing and proposed fire stations for Maui Island as illustrated in the County's *Public Facilities Assessment Update* are shown in Figure 7.[6] The fire impact fee excludes EMS services, which are currently contracted out to a private vendor. This study calculates a potential fire impact fee for Maui Island.

Figure 7. Maui Island Fire Stations and Response Areas



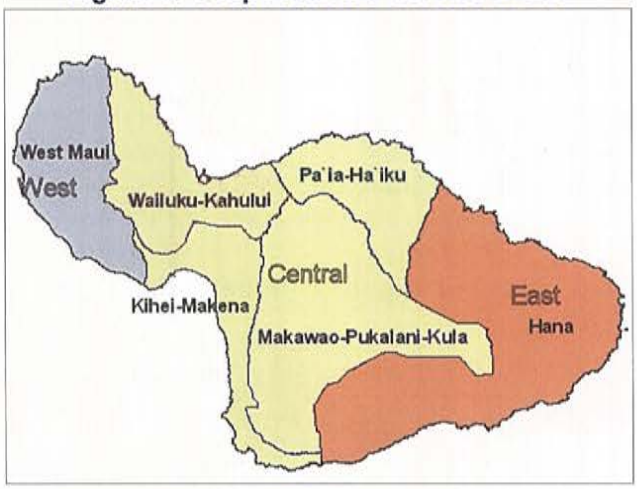
Service Areas

While fire-fighting apparatus and ambulances are generally dispatched from a station to calls within that station's primary response area, these units may also respond to calls in neighboring response areas if needed. In addition, the headquarters and training facilities are centralized. Fire facilities generally constitute an interrelated system that provides service throughout the jurisdiction. In the case of Maui County, fire stations and equipment on the island of Maui serve only the island, but central fire facilities, such as the administrative headquarters, shop facilities and warehouse, will be allocated county-wide.

[6] R.M. Towill Corporation, *Public Facilities Assessment Update, County of Maui*, March 9, 2007.

While fire stations generally form an integrated system, the western and eastern portions of the island have little response area overlap with the central portion of the island. Given the physical geography and development patterns of the island, it is recommended that the island be divided into three service areas based on the existing community plan district boundaries: a West service area that includes all of the West Maui community plan district; an East service area for the Hāna community plan district on the eastern side of the island; and a Central service area that includes Wailuku-Kahului, Kihei-Makena, Pa'ia-Ha'iku and Makawao-Pukalani-Kula. The proposed service areas are illustrated in Figure 8.

Figure 8. Proposed Fire Service Areas



Service Unit

Disparate types of development must be translated into a common unit of measurement that reflects the impact of new development on the demand for fire service. This common unit of measurement is referred to as a "service unit." Service units create the link between the supply of fire capital facilities and the demand for such facilities generated by new development.

The two most common methodologies used in calculating fire/EMS impact fees are the "calls-for-service" approach and the "functional population" approach. The calls-for-service approach uses historical data on emergency calls by land use type to make the connection between land use type and demand for fire facilities. Since records based on the land use type where fire department calls originate are available, the fire impact fee uses the calls-for-service methodology. County-wide call data from the past five years are summarized in Table 34. Some of the calls are not directly related to existing land uses, but typically occur on streets or in parking lots and are related to movement between land uses. Unattributed incidents account for approximately of all responses.

Table 34. County-Wide Fire Call Data, 2005-2009

Land Use Type	2005-2009 Incidents	Avg. Annual Incidents
Single-Family Detached/Duplex	11,476	**2,295**
Multi-Family	1,809	**362**
Visitor Accomodation	2,820	**564**
Commercial, Retail	2,487	**497**
Office	2,029	**406**
Industrial	203	**41**
Subtotal, Attributed Calls	20,824	4,165
Other/Non-Attributed/Traffic	16,215	**3,243**
Total Calls, 2004-2009	37,039	7,408

Source: Maui County Fire Department, January 21, 2010.

The non-attributed fire responses are allocated according to the percentage of daily vehicular trips generated by each land use category, as shown in Table 35. Existing county-wide land use data are weighted based on the relative vehicle trips generated for each land use. The relative weight attached to each land use was determined by multiplying the total units in each land use by the daily trips associated with each land use.

Table 35. Allocated Fire Calls by Land Use

Land Use Type	Units	Existing Units	Trips/ Unit	Total Trips	Percent of Trips	Allocated Calls
Single-Family Det./Duplex	Dwelling	42,234	4.785	202,090	47.1%	**1,530**
Multi-Family	Dwelling	12,080	3.325	40,166	9.4%	**305**
Visitor Accommodation	Room/Unit	21,636	3.450	74,644	17.4%	**564**
Commercial, Retail	1,000 sq. ft.	7,599	9.232	70,154	16.3%	**529**
Office	1,000 sq. ft.	3,199	2.755	8,813	2.1%	**68**
Industrial	1,000 sq. ft.	6,376	5.270	33,602	7.8%	**253**
Total				429,469		3,249

Source: Existing residential units from Table 61, Appendix A; existing hotel/motel units from Table 62, Appendix A; nonresidential units from Table 63, Appendix A; trips per unit based on ½ of weekday trip rates from ITE, *Trip* Generation, 8th ed., 2008 (commercial is average of shopping center rate multiplied by 0.43 primary trip factor from ITE, *Trip Generation Handbook*, March 2001; industrial is average of general light industrial and warehouse); allocated calls total is non-attributed calls from Table 34.

The combination of the existing land use and fire call distribution data sets yields the fire service calls per development unit for various land use categories. These are then converted to single-family equivalents (SFEs), as shown in Table 36.

Table 36. Fire Service Units by Land Use

Land Use Type	Units	Existing Units	Attributed Fire Calls			Total Calls/Unit	SFEs/ Unit
			Direct	Alloc.	Total		
Single-Family Det./Duplex	Dwelling	42,234	2,295	1,530	3,825	0.0906	**1.00**
Multi-Family	Dwelling	12,080	362	305	667	0.0552	**0.61**
Visitor Accomodation	Room/Unit	21,636	564	564	1,128	0.0521	**0.58**
Commercial, Retail	1,000 sq. ft.	7,599	497	529	1,026	0.1350	**1.49**
Office	1,000 sq. ft.	3,199	406	68	474	0.1482	**1.64**
Industrial	1,000 sq. ft.	6,376	41	253	294	0.0461	**0.51**

Source: Existing residential units from Table 61, Appendix A; existing hotel/motel units from Table 62, Appendix A; nonresidential units from Table 63, Appendix A; allocated fire calls from Table 34; other calls from Table 35.

In order to determine the total number of existing fire service units, the data on total existing county-wide development was multiplied by the SFEs per development unit calculated above. The county-wide data is used for county-wide facilities. In addition, the data for the three proposed service areas is calculated in order to determine the level of service for each service area, as shown in Table 37.

Table 37. Fire Service Units

Land Use Type	Units	Existing Units	SFEs/ Unit	Total SFEs
Single-Family Det./Duplex	Dwelling	883	1.00	883
Multi-Family	Dwelling	35	0.61	21
Visitor Accomodation	Room/Unit	69	0.58	40
Commercial, Retail	1,000 sq. ft.	65	1.49	97
Office	1,000 sq. ft.	10	1.64	16
Industrial	1,000 sq. ft.	1	0.51	1
Total, East Service Area				**1,058**
Single-Family Det./Duplex	Dwelling	4,344	1.00	4,344
Multi-Family	Dwelling	4,202	0.61	2,563
Visitor Accomodation	Room/Unit	12,500	0.58	7,250
Commercial, Retail	1,000 sq. ft.	1,658	1.49	2,470
Office	1,000 sq. ft.	496	1.64	813
Industrial	1,000 sq. ft.	575	0.51	293
Total, West Service Area				**17,733**
Single-Family Det./Duplex	Dwelling	32,137	1.00	32,137
Multi-Family	Dwelling	8,465	0.61	5,164
Visitor Accomodation	Room/Unit	8,659	0.58	5,022
Commercial, Retail	1,000 sq. ft.	5,439	1.49	8,104
Office	1,000 sq. ft.	2,509	1.64	4,115
Industrial	1,000 sq. ft.	5,432	0.51	2,770
Total, Central Service Area				**57,312**
Single-Family Det./Duplex	Dwelling	42,234	1.00	42,234
Multi-Family	Dwelling	12,080	0.61	7,369
Visitor Accomodation	Room/Unit	21,636	0.58	12,549
Commercial, Retail	1,000 sq. ft.	7,599	1.49	11,323
Office	1,000 sq. ft.	3,199	1.64	5,246
Industrial	1,000 sq. ft.	6,376	0.51	3,252
Total, County-Wide				**81,973**

Source: Existing residential units from Table 61, Appendix A; existing hotel/motel units from Table 62, Appendix A; nonresidential units from Table 63, Appendix A; Central Maui includes Kihei-Makena, Wailuku-Kahului, Makawao-Pukalani-Kula and Pa'ia-Ha'iku planning areas; SFEs per unit from Table 36.

Because of the limited nature of the call data and existing land use information, SFE multipliers have only been calculated for two broad categories: single-family/duplex and multi-family. However, the relative magnitudes of average household sizes by size of dwelling unit developed for this study can be used to refine the fire call-based multipliers for more detailed residential land use categories, as shown in Table 38.

Table 38. Detailed Residential Fire Service Unit Multipliers

Housing Type/Unit Size	Untiered SFEs/Unit	Average HH Size	Tiered SFEs/Unit
Single-Family Det./Duplex (Flat Rate)	1.00	3.08	1.00
Single-Family Det./Duplex (Tiered):			
Less than 1,000 sf		2.65	**0.86**
1,000-1,499 sf		2.88	**0.94**
1,500-2,499 sf		3.07	**1.00**
2,500-3,499 sf		3.34	**1.08**
3,500 sf+		3.53	**1.15**
Multi-Family (Flat Rate)	0.61	2.51	0.61
Multi-Family (Tiered):			
Less than 500 sf		2.00	**0.49**
500-999 sf		2.33	**0.57**
1,000-1,499 sf		2.74	**0.67**
1,500-2,499 sf		2.87	**0.70**
2,500 sf +		3.02	**0.73**

Source: Untiered solid waste SFEs per unit from Table 36; average household sizes from Table 67; tiered SFEs per unit is product of ratio of category household size to average household size for the housing type and the untiered SFEs per unit.

Similarly, because of the limited nature of the nonresidential call data and existing land use information, SFE multipliers have only been calculated for three broad categories: commercial, office and industrial. However, the relative magnitudes of functional population multipliers developed for the police impact fees can be used to refine the fire call-based multipliers for more detailed nonresidential land use categories, as shown in Table 39.

Table 39. Detailed Nonresidential Fire Service Unit Multipliers

Land Use Type	Units	Func. Pop/ Unit	SFEs/ Unit
Office	1,000 sq. ft.	0.94	**2.03**
Institutional, Public	1,000 sq. ft.	0.58	**1.25**
Average Office/Institutional	1,000 sq. ft.		1.64

Source: Office/institutional SFEs/unit from Table 36; office and public/institutional functional population multipliers from Table 51; SFEs/unit for detailed categories derived by weighting functional population multipliers proportionately.

Cost per Service Unit

The fire impact fee calculated in this study is designed to charge new development the cost of providing the same level of service that is provided to existing development. The existing level of service for fire facilities is based on the replacement cost of existing facilities and equipment. The fire facilities include fire stations and central training and administrative facilities; facilities that serve all Maui County residents are allocated based on the county-wide SFEs calculated in the preceding section. The fire impact fee also includes the replacement cost of firefighting equipment.

The Maui Fire Department operates out of ten fire stations on Maui Island. All but four of the Department's fire station sites are County-owned, with Wailuku, Pa'ia, Lahaina and Kihei located on State-owned land that is leased to the County for a nominal sum. The land and station replacement costs for most stations are based on the assessed value from the County's Property Appraiser records. The Kahului and Wailea stations are based on the construction cost data provided by the

Maui Fire Department. In addition to the fire station facilities, the County has three central facilities that serve the entire county; these include the administrative headquarters and shop facilities co-located with the Kahului Fire Station and a leased fire prevention site. The inventory of the existing Maui Island fire stations for each proposed service area and central facilities and related land are summarized in Table 40.

Table 40. Existing Fire Facility Costs

Station	Year Built	Acres	Building Sq. Ft.	Land Value	Building Value
Hana	1994	1.000	4,116	$272,000	$842,100
Total, East Service Area				**$272,000**	**$842,100**
Lahaina	1972	2.000	5,835	$375,748	$1,239,447
Napili	1991	1.900	5,418	$354,300	$744,200
Total, West Service Area				**$730,048**	**$1,983,647**
Wailuku	1954	0.714	4,500	$1,763,500	$206,100
Pa'ia	1954	0.514	4,133	$1,161,200	$601,800
Makawao	1971	0.500	2,546	$112,500	$251,400
Kihei	1971	1.000	3,159	$1,881,800	$188,800
Kahului	1991	0.840	5,782	$1,358,700	$1,709,800
Kula	1994	1.000	3,876	$133,324	$797,800
Wailea	2005	2.600	13,750	$4,205,500	$4,060,350
Total, Central Service Area				**$10,616,524**	**$7,816,050**
Kahului Administration Office	1991	1.160	8,000	$1,876,300	$2,360,000
Waikapu Fire Prevention Office	2009	0.921	24,527	leased	leased
Total, County-Wide Facilities				**$1,876,300**	**$2,360,000**

Source: Maui County Department Fire & Public Safety, January 21, 2010; land and building values based on Maui County Property Appraiser records, January 2010.

The estimated replacement cost of the Maui County Fire Department's existing fire-fighting apparatus and other vehicles is summarized for each of the three proposed service areas in Table 41.

Table 41. Existing Fire Apparatus

Station	Vehicle	Year	Replacement Cost
Hana	Engine 7	2007	$750,000
Hana	Mini 7	2004	$250,000
Hana	Utility 7	2002	$65,000
Total, East Service Area			**$1,065,000**
Lahaina	Engine 3	2009	$750,000
Lahaina	Ladder 3	2003	$900,000
Lahaina	Utility 3	2003	$65,000
Lahaina	RB 3	na	$250,000
Napili	Engine 11	2006	$750,000
Total, West Service Area			**$2,715,000**
Wailuku	Engine 1	2007	$750,000
Wailuku	Mini 1	2007	$250,000
Pa'ia	Engine 2	2009	$750,000
Pa'ia	Mini 2	2009	$250,000
Makawao	Engine 5	2002	$750,000
Kihei	Engine 6	2005	$750,000
Kahului	Engine 10	2005	$750,000
Kahului	Rescue 10	2009	$850,000
Kahului	Hazmat 10	2007	$850,000
Kahului	Tanker 10	2002	$700,000
Kahului	R10 Utility	2004	$65,000
Kahului	HM10 Utility	2006	$65,000
Kahului	RB 10	na	$250,000
Kula	Engine 13	2009	$750,000
Wailea	Engine 14	2002	$750,000
Wailea	Ladder 14	2002	$900,000
Wailea	Tanker 14	2005	$700,000
Total, Central Service Area			**$10,130,000**

Source: Maui County Department of Fire & Public Safety, Support Services, March 4, 2010.

The cost per service unit based on the existing level of service can be determined by dividing the replacement cost of the existing facilities and equipment by the existing number of fire service units for each service area. The county-wide facilities are divided by the existing county-wide fire service units. As shown in Table 42, the cost per service unit for county-wide facilities is $52, and the cost per service area for non-county-wide facilities varies from $306 per SFE in the West area to $2,060 per SFE in the East area.

Table 42. Fire Cost per Service Unit

	East	West	Central	County-Wide
Fire Station Replacement Value	$842,100	$1,983,647	$7,816,050	$2,360,000
Land Value	$272,000	$730,048	$10,616,524	$1,876,300
Fire Equipment Replacement Value	$1,065,000	$2,715,000	$10,130,000	$0
Total Replacement Cost	$2,179,100	$5,428,695	$28,562,574	$4,236,300
÷ Existing SFEs	1,058	17,733	57,312	81,973
Cost per SFE	**$2,060**	**$306**	**$498**	**$52**

Source: Fire station and land value from Table 40; fire equipment replacement value from Table 41; fire SFEs from Table 37.

Net Cost per Service Unit

As with the other facilities, the fire impact fees in this study are reduced to account for outstanding debt, for the portion of past property taxes from vacant land used to fund capital facilities and State and Federal grant funding. The outstanding GO bonds and available expenditure data for each issue are presented in Table 70, Appendix D. As shown in Table 43, available disbursement and expenditure data show that $8.1 million was expended on capacity expanding fire facilities and equipment, which account for 4.2% of total disbursements. Based on the analysis of GO bond issues and the current outstanding debt, the total GO bond outstanding balance attributable to the Fire Department is $9.5 million.

A simple method that ensures that new development is not required to pay for existing facilities, through the property tax or other funds used for debt retirement, as well as new facilities through impact fees, is to calculate the credit by dividing the outstanding debt by existing service units. County-wide service units are used in calculating the debt credit, since all county taxpayers fund the fire-related debt payments through their property tax. Dividing the outstanding fire GO debt by the existing number of county-wide fire service units yields an outstanding debt credit of $116 per SFE.

Table 43. Fire Debt Credit

Bond Expenditure Item	Bond Issue	Amount
Hana Fire Station	1993G/2001B/2002B	$1,200,000
Wailea Fire Station	1999/2005C	$95,357
County-wide Fire Facilities	2000/2001C	$75,081
County-wide Fire Facilities	2001A	$97,595
County-wide Fire Facilities	2002A	$147,391
Wailea Fire Station & Equip.	2002A	$6,211,487
New Kaunakakai Fire Station	2005	$22,598
New Kaunakakai Fire Station	2006	$277,353
Total Available Fire GO Bond Expenditures		$8,126,862
÷ Total Available GO Bond Disbursement		$194,659,064
Share of Total Disbursements		4.2%
x Total Outstanding GO Bond Balance		$226,953,500
Total Estimated Fire Share of Outstanding GO Bonds		$9,532,047
÷ County-Wide Fire SFEs		81,973
Fire Debt Credit per SFE		**$116**

Source: Disbursement data compiled from information provided by the Maui County Department of Finance, April 30, 2010; total available GO bond disbursement data and outstanding GO bond balance from Table 70, Appendix D; county-wide fire SFEs from Table 37.

The State impact fee enabling act for counties requires that credit be provided for the contribution made by a developer over the previous five years toward the cost of existing capital improvements. Since vacant land that is now being developed has paid some property taxes that have gone toward funding existing capital facilities, a credit should be provided for those past property tax payments. However, it is very difficult to determine how much vacant land has contributed in the form of property tax payments toward the cost of existing facilities for the last five years. An alternative is simply to give credit for the percentage of general fund revenues that come from vacant land. This percent was calculated in the wastewater section to be 5.7%. The calculation of the past property tax credit should be done on a county-wide basis, rather than individually for each service area, since property taxes are uniform throughout the county. As shown in Table 44, the past property tax credit for fire facilities is $30 per SFE.

Table 44. Fire Past Property Tax Credit

Total Maui Island Replacement Costs	$36,170,369
÷ Maui Island Fire SFEs	76,103
Average Maui Island Fire Cost per SFE	$475
County-Wide Fire Cost per SFE	$52
Average Maui Island Total Fire Cost per SFE	$527
x % of General Fund Expenditures from Property Taxes from Vacant/Ag. Land	5.7%
Past Property Tax Credit per SFE	**$30**

Source: Total Maui Island replacement costs, Maui Island fire SFEs and county-wide fire cost per SFE from Table 42; % of general fund expenditures from property taxes on vacant land from Table 19.

Another factor that is often considered in determining fire impact fees is the degree to which outside funding has been used to cover a portion of the capital equipment and facility costs. While there is no guarantee that the past level of funding will be indicative of future outside funding support, to be conservative, the cost per service unit will be reduced to account for the likelihood that some growth-related costs can be paid with Federal and State grants. Over the past six years, the County has received an average of $388,107 annually in grants for fire equipment, as summarized in Table 45. Dividing the average annual grant funding by existing service units yields annual grant funding per service unit. Multiplying that by the present value factor results in the current lump sum amount that is the equivalent of the future stream of outside funding that the County may receive over the next 25 years to help fund Fire Department facilities and equipment. The resulting credit for potential grant funding is $69 per service unit.

Table 45. Fire Grant Credit

Grant Funded Equipment	Year	Value
Pierce Pumper (Hana)	2007	$465,291
Pierce 4 x 4 Pumper (Napili)	2006	$390,338
Pierce 4 x 4 Pumper (Hoolehua)	2006	$390,338
Pierce 4 x 4 Pumper (Lanai)	2006	$390,338
Kenworth 4 x 4 Pumper (Pukoo)	2004	$390,338
Ford Mini Pumper (Hana)	2004	$172,000
Wildland Trailer (Kahului)	2007	$65,000
Wildland Trailer (Hoolehua)	2007	$65,000
Total Grants, 2004-2009		$2,328,641
÷ Years		6
Average Annual Grants		$388,107
÷ County-Wide Fire SFEs		81,973
Average Annual Grant/SFE		$4.73
x Present Value Factor (25 years at 4.65%)		14.60
Fire Grant Credit per SFE		**$69**

Source: Maui County Department of Fire & Public Safety, Support Services, January 21, 2010; county-wide fire SFEs from Table 37; present value factor based on 25 years at 4.65% discount rate based on three month average interest rate on state and local bonds (January through March 2010) from the Federal Reserve at http://www.federalreserve.gov/releases/h15/data/monthly.

The total fire facility cost per service unit for each fire service area includes the uniform county-wide facility cost. As show in Table 46, reducing the cost per service unit by the debt credit, past property tax credit and grant credit leaves a net cost per service unit that ranges from $143 for the West service area to $1,897 for the East service area. The net cost per service unit represents the amount of impact fee necessary to maintain the existing level of service attributable to new development for each service area. These calculations indicate that it is very expensive to serve development in the East service area, due to the sparse, scattered development in this area. They also indicate that the West service area has a somewhat lower level of service than the central part of the island.

Table 46. Fire Net Cost per Service Unit

	East	West	Central
Impact Fee Area Fire Cost per SFE	$2,060	$306	$498
County-Wide Facility Cost per SFE	$52	$52	$52
Total Fire Facility Cost per SFE	$2,112	$358	$550
– GO Debt Credit per SFE	-$116	-$116	-$116
– Past Property Tax Credit per SFE	-$30	-$30	-$30
– Grant Credit per SFE	-$69	-$69	-$69
Net Cost per SFE	**$1,897**	**$143**	**$335**

Source: Service area and county-wide fire costs per SFE from Table 42; GO debt credit from Table 43; past property tax credit from Table 44; grant credit from Table 45.

Potential Fee Schedule

The maximum potential fire impact fees, based on the information, analysis and assumptions described in this report are calculated in Table 47. The potential impact fees schedule provides the option of basing the residential fees on a flat rate per housing type, or by the size of the housing unit.

The County could charge less than 100% of the full net cost per unit for one or more service areas. Alternatively, the County could charge a uniform island-wide fee based on the lowest net cost per unit, which is that for the West service area.

Table 47. Potential Fire Impact Fee Schedule

			East		West		Central	
Land Use Type	Units	SFEs/ Unit	Net Cost/ SFE	Fee/ Unit	Net Cost/ SFE	Fee/ Unit	Net Cost/ SFE	Fee/ Unit
Single-Family (Flat Rate)	Dwelling	1.00	$1,897	$1,897	$143	$143	$335	$335
Single-Family (Tiered):								
Less than 1,000 sf	Dwelling	0.86	$1,897	$1,631	$143	$123	$335	$288
1,000-1,499 sf	Dwelling	0.94	$1,897	$1,783	$143	$134	$335	$315
1,500-2,499 sf	Dwelling	1.00	$1,897	$1,897	$143	$143	$335	$335
2,500-3,499 sf	Dwelling	1.08	$1,897	$2,049	$143	$154	$335	$362
3,500 sf+	Dwelling	1.15	$1,897	$2,182	$143	$164	$335	$385
Multi-Family (Flat Rate)	Dwelling	0.61	$1,897	$1,157	$143	$87	$335	$204
Multi-Family (Tiered):								
Less than 500 sf	Dwelling	0.49	$1,897	$930	$143	$70	$335	$164
500-999 sf	Dwelling	0.57	$1,897	$1,081	$143	$82	$335	$191
1,000-1,499 sf	Dwelling	0.67	$1,897	$1,271	$143	$96	$335	$224
1,500-2,499 sf	Dwelling	0.70	$1,897	$1,328	$143	$100	$335	$235
2,500 sf +	Dwelling	0.73	$1,897	$1,385	$143	$104	$335	$245
Visitor Accomodation	Room/Unit	0.58	$1,897	$1,100	$143	$83	$335	$194
Commercial, Retail	1,000 sq. ft.	1.49	$1,897	$2,827	$143	$213	$335	$499
Office	1,000 sq. ft.	2.03	$1,897	$3,851	$143	$290	$335	$680
Industrial	1,000 sq. ft.	0.51	$1,897	$967	$143	$73	$335	$171
Institutional, Public	1,000 sq. ft.	1.25	$1,897	$2,371	$143	$179	$335	$419

Note: Single-family category includes single-family detached and duplex units; industrial includes warehousing
Source: SFEs per unit from Table 36, Table 38 and Table 39; net cost per service unit from Table 46.

Capital Improvement Plan

Funding of $44.4 million is proposed for fire infrastructure improvements in the County's 2010/2011-2015/16 CIP. Impact fees may only be used for capacity-expanding improvements such as new fire stations, additional equipment and facility expansions that provide capabilities beyond the current level of service. For example, a portion of the warehouse improvement project may be eligible for impact fee funding to the extent that it adds new space beyond what is provided in the existing facility. Since detailed project descriptions were not available, the identification of eligible projects is preliminary and subject to verification. As shown in Table 48, an estimated $36.0 million is eligible for impact fee funding. There are impact fee eligible projects in each of the three proposed fire service areas.

Table 48. Fire Capital Improvement Program

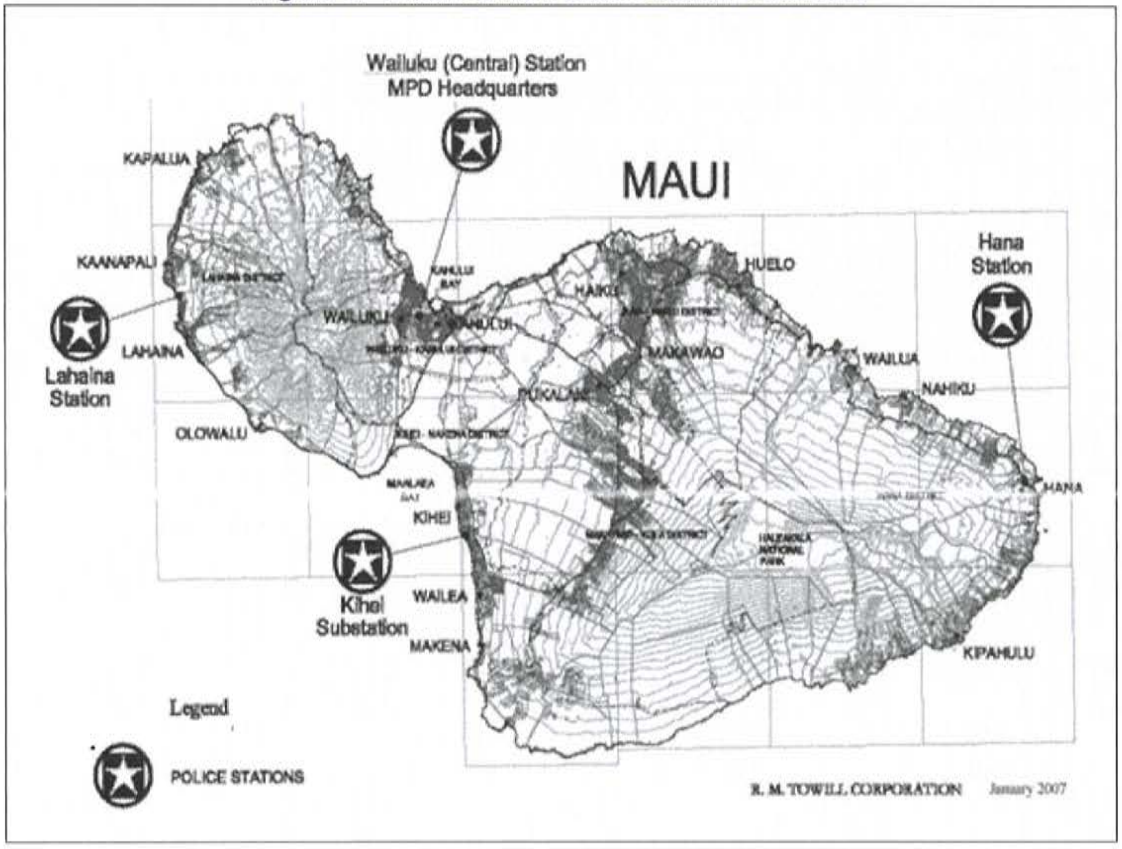
Project	Area	Cost	Impact Fee Eligible
Waikapu Fire Station	Wailuku-Kahului	$23,200,000	$23,200,000
Haʻiku Fire Station	Paʻia-Haʻiku	$10,300,000	$10,300,000
Hana Fire Station Addition	Hana	$1,050,000	$1,050,000
Lahaina Fire Station Addition	West Maui	$1,454,000	$1,454,000
Waikapu Warehouse	Wailuku-Kahului	$5,575,000	Part
County-Wide Fire Facilities	County-Wide	$2,800,000	Part
Total Six-Year CIP		$44,379,000	$36,004,000

Source: County of Maui, Six Year Capital Program, FY 2011-FY 2016, Ordinance 3750, effective July 1, 2010.

POLICE

This section calculates a potential police impact fee for the island of Maui. The Maui Police Department (MPD) is responsible for providing police service to the entire county. The island of Maui is divided into four police districts (Wailuku, Lahaina, Hāna and Kihei), each served by a police station or substation. The Wailuku Station also serves as the MPD headquarters for the entire county. The existing police stations on the island as illustrated in the County's *Public Facilities Assessment Update* are shown in Figure 9.[7]

Figure 9. Maui Island Police Station Locations



Service Areas

Most police impact fees are assessed at the jurisdiction level. Central facilities serve the entire island, and officers may patrol or respond to calls beyond their station's primary response area. Thus, a single service area for the island of Maui is recommended.

[7] R.M. Towill Corporation, *Public Facilities Assessment Update, County of Maui*, March 9, 2007.

Service Unit

Disparate types of development must be translated into a common unit of measurement that reflects the impact of new development on the demand for police service. This common unit of measurement is referred to as a "service unit." Service units create the link between the supply of police capital facilities and the demand for such facilities generated by new development.

The two most common methodologies used in calculating police impact fees are the "calls-for-service" approach and the "functional population" approach. The calls-for-service approach uses historical data on emergency calls by land use type to make the connection between land use type and demand for police facilities. Unlike the fire impact fee, records of the police calls for service by land use are unavailable; thus an alternative approach was required for determining demand for police services.

An alternative approach for estimating the public safety service demands of various land use types is known as "functional population." To a large extent, the demand for police services is proportional to the presence of people. Functional population is analogous to the concept of "full-time equivalent" employees. It represents the number of "full-time equivalent" people present at the site of a land use, and it is used for the purpose of determining the impact of a particular development on the need for police facilities.

Residential Functional Population

For residential land uses, the impact of a dwelling unit on the need for capital facilities is generally proportional to the number of persons residing in the dwelling unit. This can be measured for different housing types in terms of either average household size (average number of persons per occupied dwelling unit) or persons per unit (average number of persons per dwelling unit, including vacant as well as occupied units). In this analysis, average household size is used to develop the functional population multipliers, as it avoids the need to make assumptions about occupancy rates.

The average household size associated with each general housing category is shown in Appendix B. As mentioned above, the average household size is based on the occupied units and household population. Determining residential functional population multipliers is considerably simpler than the nonresidential component. It is generally estimated that people spend one-half to two-thirds of their time at home and the rest of each 24-hour day away from their place of residence. In developing the residential component of 24-hour functional population, people are estimated, on average, to spend 16 hours, or 67 percent, of each 24-hour day at their place of residence and the other 33 percent away from home. A similar approach is used for the hotel/motel category. The functional population per unit for these uses is shown in Table 49.

Table 49. Residential Functional Population Multipliers

Housing Type	Unit	Average HH Size	Occupancy	Func. Pop./Unit
Single-Family Det./Duplex (Flat Rate)	Dwelling	3.08	0.67	**2.050**
Single-Family Det./Duplex (Tiered):				
Less than 1,000 sf	Dwelling	2.65	0.67	**1.770**
1,000-1,499 sf	Dwelling	2.88	0.67	**1.920**
1,500-2,499 sf	Dwelling	3.07	0.67	**2.050**
2,500-3,499 sf	Dwelling	3.34	0.67	**2.230**
3,500 sf+	Dwelling	3.53	0.67	**2.350**
Multi-Family (Flat Rate)	Dwelling	2.51	0.67	**1.670**
Multi-Family (Tiered):				
Less than 500 sf	Dwelling	2.00	0.67	**1.330**
500-999 sf	Dwelling	2.33	0.67	**1.550**
1,000-1,499 sf	Dwelling	2.74	0.67	**1.830**
1,500-2,499 sf	Dwelling	2.87	0.67	**1.910**
2,500 sf +	Dwelling	3.02	0.67	**2.010**
Visitor Accomodation	Room/Unit	1.34	0.67	**0.890**

Source: Average household size from Table 67, Appendix B; residential occupancy factor assumed; hotel/motel room occupancy based on one-half of average vehicle occupancy on vacation trips from U.S. Department of Transportation, *National Household Travel Survey*, 2001.

Nonresidential Functional Population

The functional population methodology for nonresidential uses is based on trip generation data. Functional population per 1,000 square feet is derived by dividing the total number of hours spent by employees and visitors during a typical week day by 24 hours. Employees are estimated to spend eight hours per day at their place of employment; and visitors are estimated to spend an hour per visit. The formula used to derive the nonresidential functional population estimates is summarized in Figure 10.

Figure 10. Nonresidential Functional Population Formula

Functional population/1000 sf = (employee hours/1000 sf + visitor hours/1000 sf) ÷ 24 hours/day

Where:

Employee hours/1000 sf = employees/1000 sf x 8 hours/day

Visitor hours/1000 sf = visitors/1000 sf x 1 hour/visit

Visitors/1000 sf = weekday ADT/1000 sf x avg. vehicle occupancy employees/1000 sf

Weekday ADT/1000 sf = one way average daily trips (total trip ends ÷ 2)

Using this formula and information on trip generation rates from the Institute of Transportation Engineers (ITE), vehicle occupancy rates from the *National Household Travel Survey* and other sources and assumptions, nonresidential functional population estimates per 1,000 square feet of gross floor area are calculated. Table 50 presents the results of these calculations for a number of nonresidential land use categories.

Table 50. Nonresidential Functional Population Multipliers

Land Use	Unit	Trip Rate	Persons/ Trip	Employee/ Unit	Visitors/ Unit	Functional Pop./Unit
Commercial, Retail	1,000 sq. ft.	21.47	1.77	1.02	36.98	**1.88**
Office	1,000 sq. ft.	5.51	1.14	2.31	3.97	**0.94**
Industrial	1,000 sq. ft.	2.17	1.14	0.57	0.95	**0.23**
Institutional, Public	1,000 sq. ft.	3.79	1.63	1.11	5.07	**0.58**

Source: Trips per unit based on ½ of weekday trip rates from ITE, *Trip* Generation, 8th ed., 2008 (using rates for shopping center, general office, general light industrial, warehousing, mini-warehouse and nursing home); persons/trip is average vehicle occupancy from Federal Highway Administration, *Nationwide Household Travel Survey*, 2001; employees/unit from U.S. Department of Energy, *Commercial Buildings Energy Consumption Survey*, 2003; visitors/unit is trips times persons/trip minus employees/unit; functional population/unit calculated based on formula from Figure 10.

Functional Population Summary

The functional population multipliers for the recommended residential and nonresidential land use categories are summarized in Table 51.

Table 51. Functional Population Multipliers

Land Use	Unit	Func. Pop./Unit
Single-Family Detached/Duplex	Dwelling	**2.05**
Multi-Family	Dwelling	**1.67**
Visitor Accomodation	Room/Unit	**0.89**
Commercial, Retail	1,000 sq. ft.	**1.88**
Office	1,000 sq. ft.	**0.94**
Industrial	1,000 sq. ft.	**0.23**
Institutional, Public	1,000 sq. ft.	**0.58**

Source: Residential dwelling unit functional population per unit from Table 49; nonresidential functional population per unit from Table 50.

In order to determine the current functional population for Maui County, the data on total existing county-wide development was multiplied by the functional population per development unit calculated above. The county-wide data is used for county-wide facilities. In addition, the data for the island of Maui is calculated in order to determine the level of service for non-county-wide facilities, as shown in Table 52.

Table 52. Maui County Functional Population

Land Use Type	Units	Existing Units	Func. Pop./Unit	Total Func. Pop.
Single-Family Detached/Duplex	Dwelling	42,234	2.05	86,580
Multi-Family	Dwelling	12,080	1.67	20,174
Visitor Accomodation	Room/Unit	21,636	0.89	19,256
Commercial, Retail	1,000 sq. ft.	7,599	1.88	14,286
Office	1,000 sq. ft.	3,199	0.76	2,431
Industrial	1,000 sq. ft.	6,376	0.23	1,466
Total County-Wide Functional Population				**144,193**
Single-Family Detached/Duplex	Dwelling	37,364	2.05	76,596
Multi-Family	Dwelling	12,702	1.67	21,212
Visitor Accomodation	Room/Unit	21,228	0.89	18,893
Commercial, Retail	1,000 sq. ft.	7,161	1.88	13,463
Office	1,000 sq. ft.	3,015	0.76	2,291
Industrial	1,000 sq. ft.	6,009	0.23	1,382
Total, Maui Island Functional Population				**133,837**

Source: Existing residential units from Table 61, Appendix A; existing hotel/motel units from Table 62, Appendix A; nonresidential units from Table 63, Appendix A; functional population per unit from Table 51 (office is average of office and public/institutional).

Cost per Service Unit

The cost per service unit based on the existing level of service can be determined by dividing the replacement cost of existing police and law enforcement facilities, equipment, and vehicles by the existing number of police service units. The service level for facilities and equipment that serve the entire County are based on the county-wide service units, while the level of service for Maui Island facilities and equipment is based on island-wide service units.

The existing police facilities are summarized in Table 53. The Central Station in Wailuku and the motor pool and evidence annex are both allocated to the county-wide service units in this study, since the facility serves as the County's police headquarters and provides space for county-wide administration, special operations and investigative units. Maui Island facilities include the police stations at Hāna and Lahaina and substations at Kihei and Wailuku as well as a radio tower for police communications. The Kihei facility is currently rented; however, a new County-owned facility is planned for this area. The Lahaina Station is located on State-owned land. The total land value is $15.3 million based on comparable site costs for the Wailuku and Hāna fire stations. The total building value of police facilities is $20.6 million, based on the County's asset values.

Table 53. Police Facilities

Facility	Address	Acres	Bldg sf	Land Value	Bldg Value
Central Station	55 Mahalani St	6.00	na	$14,819,328	$17,600,000
Wailuku Motor Pool/Evidence	55 Mahalani St	na	na	na	$716,000
Subtotal, County-Wide Facilities				**$14,819,328**	**$18,316,000**
Hana Station	4611 Hana Hwy	1.67	6,606	$454,240	$787,950
Kihei Substation	1891 S Kihei Rd	4.34	21,040	leased	leased
Lahaina Station	1830 Honoapilani Hwy	16.78	60,177	na	$1,267,775
Wailuku Satelite Police Station	70 Market St	na	na	na	$182,785
Maui Telecom. Tower	Puu Nana	na	na	na	$84,048
Subtotal, Maui Island Facilities				**$454,240**	**$2,322,558**
Total Police Facilities				**$15,273,568**	**$20,638,558**

Source: Building value and inventory from Maui County Police Property Schedule, April 26, 2010; acres and building square feet from Maui Police Department, December 29, 2009; land value for the central station based on Wailuku fire station site cost from Table 40; Hāna police station land cost based on cost per acre for Hāna fire station site from Table 40.

The Police Department's current inventory of law enforcement vehicles is listed by division in Table 54. The fleet consists mostly of Ford Crown Victoria sedans along with SUVs, trucks and specialty vehicles. The county-wide uniform services vehicles includes a special response team (SRT) vehicle and clandestine labs.

Table 54. Police Vehicles

Division	Vehicles	Value
Administration	6	$118,714
Investigative	11	$232,824
Uniform Services–County-Wide	7	$960,078
Subtotal, County–Wide Vehicles		$1,311,616
Support Services–Maui Island	189	$5,167,548
Uniform Services–Maui Island	137	$3,648,201
Subtotal, Maui Island Vehicles		$8,815,749
Total		**$11,438,981**

Source: Maui County Fixed Assets—Vehicles, April 15, 2010; support services and uniform services vehicles exclude vehicles located at Lāna'i and Moloka'i police stations.

In addition to the vehicles, the impact fee level of service includes major capital equipment. A summary of the capital equipment inventory allocated for county-wide activities is shown in Table 71, Appendix E. County-wide equipment includes communications, computers, safety, laboratory and other specialized equipment used in the Administrative, Investigative and Support Services divisions. The Maui Island equipment for the Uniform Services Division for each Maui Island police station facility is summarized in Table 72, Appendix E.

The cost per service unit based on the existing level of service can be determined by dividing the replacement cost of the existing facilities and equipment by the existing number of police service units for Maui Island, while the county-wide facilities and equipment are divided by the existing county-wide police service units. As shown in Table 55, the cost per service unit for county-wide facilities is $310, and the cost per service unit for Maui Island-specific facilities is $94 per service unit.

Table 55. Police Cost per Service Unit

	Maui Island	County-Wide
Police Station and Facility Value	$2,322,558	$18,316,000
Land Value	$454,240	$14,819,328
Police Vehicles Value	$8,815,749	$1,311,616
Police Capital Equipment Value	$933,911	$10,182,496
Total Replacement Cost	$12,526,458	$44,629,440
÷ Existing Functional Population	133,837	144,193
Cost per Functional Population	**$94**	**$310**

Source: Police station facility and land value from Table 53; police vehicles value from Table 54; county-wide police capital equipment value from Table 71, Appendix E; Maui Island equipment valued from Table 72, Appendix E; existing functional population from Table 52.

Net Cost per Service Unit

As with the other facilities, the police impact fees in this study are reduced to account for outstanding debt. In addition, a separate credit is provided to account for the portion of past property taxes from vacant land used to fund capital facilities. Finally, credit is provided for State and Federal grant funding.

The outstanding GO Bonds and available expenditure data for each issue are presented in Table 70, Appendix D. As shown in Table 56, available disbursement and expenditure data show that $4.9 million was expended on capacity expanding police facilities and equipment, which account for 2.5% of total disbursements. Based on the analysis of GO bond issues and the current outstanding debt, the total GO bond outstanding balance attributable to the Police Department is $5.7 million.

A simple method that ensures that new development is not required to pay for existing facilities, through the property tax or other funds used for debt retirement, as well as new facilities through impact fees, is to calculate the credit by dividing the outstanding debt by existing service units. County-wide service units are used in calculating the debt credit, since all county taxpayers fund the police-related debt payments through their property tax. Dividing the outstanding police GO debt by the existing number of county-wide police service units yields an outstanding debt credit of $39 per functional population.

Table 56. Police Debt Credit

Bond Expenditure Item	Bond Issue	Amount
New Lana'i Police Station	1998A/2005B	$197,768
MHZ 800 Emergency Radio System	2000/2001C	$408,731
County-Wide Police Facilities	2000/2001C	$124,180
Wailuku Police Station Improvement	2001A	$175,000
County-Wide Police Facilities	2001A	$71,088
County-Wide Police Facilities	2002A	$46,719
New Lana'i Police Station	2002A	$3,599,819
Wailuku Police Station AC	2002	$250,000
Total Available Police GO Bond Expenditures		$4,873,305
÷ Total Available GO Bond Disbursement		$194,659,064
Share of Total Disbursements		2.5%
x Total Outstanding GO Bond Balance		$226,953,500
Total Estimated Share of Outstanding GO Bonds		$5,673,838
÷ County-Wide Police Functional Population		144,193
Police Debt per Functional Population		**$39**

Source: Disbursement data compiled from information provided by the Maui County Department of Finance, April 30, 2010; total available GO bond disbursement data and outstanding GO bond balance from Table 70, Appendix D; county-wide police functional population from Table 52.

The State impact fee enabling act for counties requires that credit be provided for the contribution made by a developer over the previous five years toward the cost of existing capital improvements. Since vacant land that is now being developed has paid some property taxes that have gone toward funding existing capital facilities, a credit should be provided for those past property tax payments. However, it is very difficult to determine how much vacant land has contributed in the form of property tax payments toward the cost of existing facilities for the last five years. An alternative is simply to give credit for the percentage of general fund revenues that come from vacant land. This percent was calculated in the wastewater section to be 5.7%. The cost per service unit will be reduced by this percentage to provide credit for past property tax payments.

Another factor that is often considered in determining police impact fees is the degree to which outside funding has been used to cover a portion of the capital equipment and facility costs. While there is no guarantee that the past level of funding will be indicative of future outside funding support, to be conservative, the cost per service unit will be reduced to account for the likelihood that some growth-related costs can be paid with Federal and State grants. Over the past five years, the County received an average of $216,537 annually in grants for police equipment. Dividing the average annual grant funding by existing service units yields annual grant funding per service unit. Multiplying that by the present value factor results in the current lump sum amount that is the equivalent of the future stream of outside funding that the County may receive over the next 25 years to help fund Police Department facilities and equipment. Based on these calculations, the appropriate credit for potential grant funding is $22 per service unit, as shown in Table 57.

Table 57. Police Grant Funding Credit

Homeland Security Grant, 2008	$902,175
Hawaii Comm. Foundation Grant, 2006	$28,600
Data Records Grant, 2006	$78,795
Pass Grant, 2005	$2,316
Community Dev. Block Grant, 2005	$15,747
Invest Grant, 2005	$55,050
Total Grants, 2005-2009	$1,082,683
÷ Years	5
Average Annual Grant Funding	$216,537
÷ County-Wide Police Functional Population	144,193
Average Annual Grant Funding per Functional Population	$1.50
x Present Value Factor (25 years at 4.65%)	14.60
Police Grant Credit per Functional Population	**$22**

Source: Annual grant data based on analysis of County's fixed asset listing for police; county-wide police functional populations from Table 37; present value factor based on 25 years at 4.65% discount rate based on three month average interest rate on state and local bonds (January through March 2010) from the Federal Reserve at http://www. federalreserve.gov/releases/h15/data/monthly.

The total police facility cost per service unit includes the uniform county-wide facility cost along with the costs associated with facilities and equipment solely used for police activity on Maui Island. As show in Table 46, reducing the cost per service unit by the debt credit, past property tax credit and grant credit leaves a net cost per service unit of $320 to maintain the level of service for police facilities and equipment that serve Maui Island.

Table 58. Police Net Cost per Service Unit

Maui Island Police Cost per Functional Population	$94
County-Wide Facility Cost per Functional Population	$310
Total Police Facility Cost per Functional Population	$404
– GO Debt Credit per Functional Population	-$39
– Past Property Tax Credit per Functional Population	-$23
– Grant Credit per Functional Population	-$22
Police Net Cost per Functional Population	**$320**

Source: County-wide and Maui Island police cost per functional population from Table 55; GO debt credit from Table 56; past property tax credit is total cost per functional population times % of general fund revenues from property taxes from vacant land from Table 19; grant credit from Table 57.

Potential Fee Schedule

The maximum potential police impact fees, based on the information, analysis and assumptions described in this report, are calculated in Table 59. The potential impact fee schedule provides the County with the option of charging residential uses a flat rate per unit by housing type, or a fee that varies by both housing type and unit size.

Table 59. Potential Police Impact Fee Schedule

Land Use Type	Units	Func. Pop./Unit	Net Cost/ Func. Pop.	Net Cost/ Unit
Single-Family Det./Duplex (Flat Rate)	Dwelling	2.05	$320	$656
Single-Family Det./Duplex (Tiered):				
Less than 1,000 sf	Dwelling	1.77	$320	$566
1,000-1,499 sf	Dwelling	1.92	$320	$614
1,500-2,499 sf	Dwelling	2.05	$320	$656
2,500-3,499 sf	Dwelling	2.23	$320	$714
3,500 sf+	Dwelling	2.35	$320	$752
Multi-Family (Flat Rate)	Dwelling	1.67	$320	$534
Multi-Family (Tiered):				
Less than 500 sf	Dwelling	1.33	$320	$426
500-999 sf	Dwelling	1.55	$320	$496
1,000-1,499 sf	Dwelling	1.83	$320	$586
1,500-2,499 sf	Dwelling	1.91	$320	$611
2,500 sf +	Dwelling	2.01	$320	$643
Visitor Accomodation	Room/Unit	0.89	$320	$285
Commercial, Retail	1,000 sq. ft.	1.88	$320	$602
Office	1,000 sq. ft.	0.94	$320	$301
Industrial	1,000 sq. ft.	0.23	$320	$74
Institutional, Public	1,000 sq. ft.	0.58	$320	$186

Source: Functional population per unit from Table 51; net cost per functional population from Table 58.

Capital Improvement Plan

The County's adopted FY 2011-FY 2006 capital improvements program contains $20 million for the first phase of construction of a County-owned police station in Kihei. This would be eligible for impact fee funding.

Table 60. Police Capital Improvement Program

Project	Cost	Impact Fee Eligible
Kihei Police Station (part)	$20,000,000	$20,000,000
Countywide Police Facilities	$1,300,000	Part
Total Six-Year CIP	$21,300,000	$20,000,000

Source: County of Maui, Six Year Capital Program, FY 2011-FY 2016, Ordinance 3750, effective July 1, 2010.

DRAINAGE

The development of drainage impact fees for the island of Maui does not appear to be feasible at this time due to significant data limitations. The ideal situation would be for there to be a recent, comprehensive drainage master plan for the area that is to be subject to the fee. Failing that, a complete inventory of existing facilities could allow fees to be developed based on the existing level of service and an incremental expansion approach. The County does have an assessment of existing drainage infrastructure that was prepared in 2003,[8] but it focused on existing problems rather than future needs due to growth, and did not provide an inventory of existing facilities. Maui County Department of Public Works and Environmental Management reports that there is no complete inventory of existing drainage facilities, although a consultant is currently preparing an inventory of culverts. There is a drainage master plan for Lahaina town, which is completely built out. There is also an old master plan from the 1960s or 1970s for Wailuku town. The Army Corps of Engineers pays for most regional improvements, although the County is responsible for culverts under County roads. Most of the major drainage problems are in tourist areas.

While drainage impact fees do not appear to be feasible at the current time, other funding sources could be explored. One possibility is to use some kind of special taxing or assessment district to put the costs of fixing existing drainage problems on these areas that have them. Another alternative is to develop a stormwater utility fee to address maintenance needs island-wide and to fund a stormwater master plan.

A stormwater utility fee is a user fee similar to a water or wastewater fee, and is typically included on the monthly utility bill. However, since the County does not send utility bills to all residents, another billing mechanism, such as property tax billing, would need to be used. Unlike an impact fee, a utility fee is charged to all existing development, and can be used for either capital or operating expenses. A stormwater utility fee could help fund remedies to existing drainage problems as well as on-going maintenance costs. The studies required to develop a stormwater utility fee would be much simpler and less expensive than those required to support a stormwater drainage impact fee. The main requirement for a utility is that the user fees should be related to the generation of runoff and that the fees should reasonably reflect actual costs to provide the service.

The biggest technical challenge to implementing a stormwater utility fee is developing the database needed to perform the billing. As noted above, stormwater utility fees should be based on the drainage utility customer's stormwater generation. A 1997 survey of stormwater utilities in Florida found that 83 percent based the fee on impervious area.[9] Data on each parcel's impervious area may be available from property tax records. A first step, however, would be to research the legal authority of counties in Hawai'i to create stormwater utilities.

[8] Wilson Okamoto & Associates, Inc., *County of Maui Infrastructure Assessment Update: Drainage Systems*, May 2003

[9] Florida Stormwater Association, *Establishing a Stormwater Utility in Florida*, http://www.florida-stormwater.org/manual.html, accessed May 21, 2003.

APPENDIX A: LAND USE DATA

For the impact fee analysis, it is important to know both the existing amount of residential and nonresidential development. For this study, data on housing units, resort units and nonresidential square footage must be compiled for each of the County's community planning areas.

Data on single family and multi-family units is available for each Maui Island planning area from 2009. The estimated number of residential units in this study for 2010 is based on straight-line interpolation between 2009 estimates and 2020 forecast from the County's General Plan update. The estimates for 2010 through 2020 by planning area are summarized in Table 61.

Table 61. Total Housing Units, 2010-2020

	2009		2010		2020	
Planning Area	SF	MF	SF	MF	SF	MF
Lahaina (W. Maui)	4,323	4,202	4,344	4,202	5,999	5,245
Kihei-Makena	6,402	5,856	6,453	5,916	7,959	8,017
Wailuku-Kahului	11,916	2,107	11,992	2,156	14,746	3,631
Makawao-Pukalani-Kula	8,894	277	8,951	277	10,207	512
Pa'ia-Ha'iku	4,716	116	4,741	116	5,460	133
Hana	877	35	883	35	1,069	35
Subtotal, Maui Island	37,128	12,593	37,364	12,702	45,440	17,573
Moloka'i	1,926	653	1,938	659	2,175	841
Lana'i	988	335	995	338	1,206	466
Total Maui County	40,042	13,581	40,297	13,699	48,821	18,880

Note: Single-family category includes duplex units; multi-family excludes visitor accommodation units
Source: Estimated 2009 and projected 2020 housing units for Maui Island from Maui County Planning Department, April 14, 2011; 2010 estimates for Maui Island based on straight-line interpolation between 2009-2020; Moloka'i and Lana'i units for 2009-2010 estimated based on share of total population for 2010 from Table 5; 2020 housing estimate for Moloka'i and Lanai based on share of total population for 2020 from Table 5.

The estimated number of visitor units between 2009 and 2020 is shown in Table 62. Visitor units include hotel/motel rooms, timeshare units, resort condominiums and licensed bed and breakfast rooms. The units by plan area for Maui Island in 2009 and 2020 are from the General Plan update, with the units derived for 2010 using straight-line interpolation.

Table 62. Visitor Accommodation Units, 2010-2020

Planning Area	2009	2010	2020
Lahaina (W. Maui)	12,463	12,500	12,867
Kihei-Makena	8,079	8,164	9,010
Wailuku-Kahului	381	406	657
Makawao-Pukalani-Kula	9	24	177
Pa'ia-Ha'iku	65	65	65
Hana	69	69	69
Subtotal, Maui Island	21,066	21,228	22,845
Moloka'i	564	569	612
Lana'i	417	420	452
Total Maui County	22,047	22,217	23,909

Source: Estimated 2009 and projected 2020 visitor units for Maui Island from Maui County Planning Department, April 20, 2011; 2010 estimates for Maui Island based on straight-line interpolation; 2009 and 2010 Moloka'i and Lana'i unit totals estimated based on share of total visitors for 2010 from Table 6; 2020 Moloka'i and Lana'i unit totals based on share of total 2020 visitors from Table 6.

Retail, office and industrial square feet by planning area are shown in Table 63. The base data are 2008 estimates and 2020 forecasts from the General Plan update. The estimates for 2010 are based on straight-line interpolation between 2008 and 2020..

Table 63. Nonresidential Square Feet, 2010 to 2020

	2010			2020		
Planning Area	Retail	Office	Indust.	Retail	Office	Indust.
Lahaina (W. Maui)	1,657,786	495,528	575,237	1,690,266	505,235	601,815
Kihei-Makena	1,771,987	307,698	221,846	2,031,684	375,104	309,479
Wailuku-Kahului	2,938,634	2,084,719	5,017,863	3,338,118	2,368,121	5,380,892
Makawao-Pukalani-Kula	490,393	87,976	37,979	582,853	104,563	43,506
Pa'ia-Ha'iku	237,834	28,825	154,612	258,662	36,359	158,927
Hana	64,518	9,757	1,363	69,751	11,213	2,479
Subtotal, Maui Island	7,161,152	3,014,503	6,008,900	7,971,334	3,400,595	6,497,098
Moloka'i	239,233	100,706	200,739	270,922	115,576	220,817
Lana'i	198,510	83,563	166,569	232,655	99,251	189,627
Total Maui County	7,598,895	3,198,772	6,376,208	8,474,911	3,615,422	6,907,542

Source: Estimated square feet for Maui County derived from 2008 estimates and 2020 forecasts from Maui County Planning Department, March 2, 2011; 2010 units based on straight-line interpolation; Moloka'i and Lana'I unit totals based on share of total employment from Table 7.

APPENDIX B: DEMOGRAPHIC DATA

An important input into the impact fee calculations is the number of persons associated with different types of housing types. The best and most complete available data source on average household size in Maui County is the 2000 U.S. Census. As shown in Table 64, average household size is 3.08 persons per single-family unit and 2.51 persons per multi-family unit.

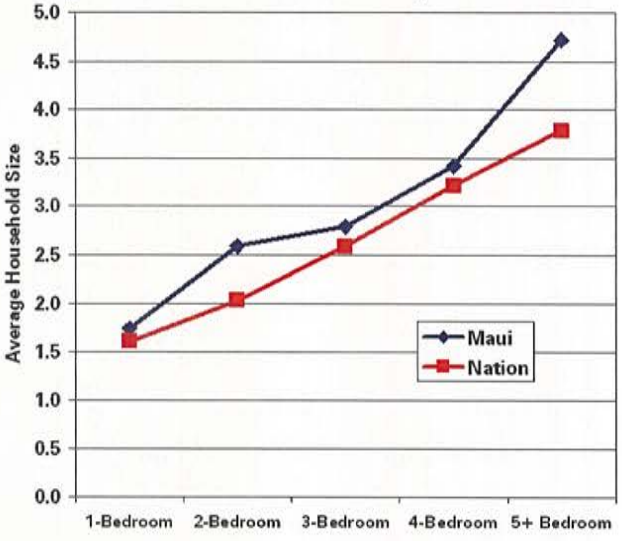
Table 64. Average Household Size by Housing Type, 2000

Housing Type	Total Units	Vacant Units	Occupancy Rate	Occupied Units	Household Population	Avg. HH Size
Single Family	32,629	2,506	**92.3%**	30,123	92,916	**3.08**
Multi-Family	23,597	10,340	56.2%	13,257	33,298	**2.51**
Total	56,226	12,846	77.2%	43,380	126,214	**2.91**

Note: Single-family category includes single-family detached and duplex units, multi-family includes visitor units (which are classified as vacant and do not affect average household size); mobile homes and boars/RV/vans are excluded
Source: U.S. Census Bureau, 2000 Census SF-3 (1-in-6 weighted sample data) for Maui County.

In order to calculate residential impact fees that vary by the size of the dwelling unit, it is necessary to determine how average household size varies according to dwelling unit size. Impact fees that vary by unit size can be assessed based on the number of bedrooms or the square feet of living area. Using bedrooms has the advantage that average household size by bedroom can be derived from U.S. Census microdata; however, using square footage has the advantage of being easier to implement (it is not always clear whether a room will be used as a bedroom). For square footage, the available data is national, not local. However, local data on average household size by bedrooms can be compared to national data to see whether the national data can provide a reasonable guide to housing patterns in Maui.

Figure 11. Household Size by Bedrooms



Note: for occupied single-family dwelling units

National data on average household size by dwelling unit square footage is available from the 2007 American Housing Survey (AHS). To see if the national data by square footage can provide a reasonable guide to conditions on Maui, national data on average household sizes by bedrooms for single-family housing is compared to local data (sample sizes of local data for multi-family were too small). The comparison is shown in Table 65 and is graphically illustrated in Figure 11. As can be seen, single-family units in Maui tend to have slightly larger household than the nation as a whole for each bedroom-size category, but the trend is similar in that housing units with more bedrooms tend to have more residents.

Table 65. Average Household Size by Bedroom, Single-Family, 2007

Unit Size	Sample Size	Weighted Data - Maui			National
		Persons	Households	AHHS	AHHS
1-Bedroom	77	5,095	2,922	1.74	1.61
2-Bedroom	276	24,548	9,481	2.59	2.03
3-Bedroom	964	73,273	26,281	2.79	2.60
4-Bedroom	285	28,630	8,379	3.42	3.21
5+ Bedroom	94	13,210	2,798	4.72	3.79
Total	1,696	144,756	49,861	2.90	2.72

Source: Sample size and weighted data from U.S. Census Bureau, American Community Survey, 2006-2008 3% microdata for Public Use Microdata Area (PUMA) 100 (Maui, Kaua'i and Kalawao Counties); national data from U.S. Department of Housing and Urban Development, *2007 American Housing Survey*.

National data on average household size by square feet of living area for both single-family detached and multi-family units are presented in Table 66. On average, single-family units in the smallest size category (less than 1,000 square feet) have 14% fewer residents than the average single-family unit, while homes of 3,500 square feet or more have 15% more residents. For multi-family, the smallest units (less than 500 square feet) have 20% fewer residents than the average multi-family unit, while units of 2,500 square feet or more have 20% more residents than average.

Table 66. Average Household Size by Unit Size, U.S., 2007

Unit Size (Living Area)	Household Residents	Occupied Units	Avg. HH Size	Ratio to All Units
Less than 1,000 sf	9,906,496	4,237,116	2.34	**0.860**
1,000-1,499 sf	33,360,254	13,113,594	2.54	**0.934**
1,500-2,499 sf	67,365,076	24,903,442	2.71	**0.996**
2,500-3,499 sf	27,372,003	9,263,069	2.95	**1.085**
3,500 sf+	15,311,303	4,914,872	3.12	**1.147**
All Single-Family Units	153,315,131	56,432,092	2.72	1.000
Less than 500 sf	3,430,723	2,064,387	1.66	**0.798**
500-999 sf	20,510,830	10,630,057	1.93	**0.928**
1,000-1,499 sf	14,482,255	6,386,900	2.27	**1.091**
1,500-2,499 sf	7,045,275	2,960,760	2.38	**1.144**
2,500 sf +	2,411,518	963,728	2.50	**1.202**
All Multi-Family Units	47,880,601	23,005,832	2.08	1.000

Source: U.S. Department of Housing and Urban Development, *2007 American Housing Survey*; "ratio to all units" is ratio of average household size of the square footage category to average household size for all single-family or all multi-family units.

These ratios derived from national data can be used to develop "tiered" average household sizes for the square footage categories by multiplying the ratios by the untiered average household sizes for single-family and multi-family units. This is shown in Table 67. Average household sizes are converted into single-family equivalents (SFEs) by taking the ratio to the untiered average household size for single-family.

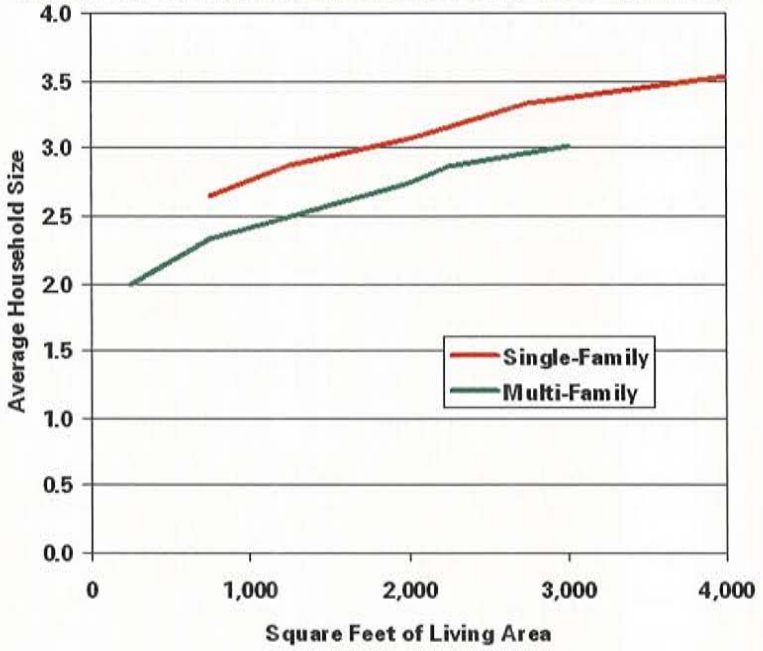
Table 67. Average Household Size by Unit Size, Maui

Housing Type/Unit Size	Untiered AHHS	Ratio to All Units	Tiered AHHS	SFEs
Single-Family Det./Duplex (Flat Rate)	3.08	1.000		**1.00**
Single-Family Det./Duplex (Tiered):				
Less than 1,000 sf		0.860	2.65	**0.86**
1,000-1,499 sf		0.934	2.88	**0.94**
1,500-2,499 sf		0.996	3.07	**1.00**
2,500-3,499 sf		1.085	3.34	**1.08**
3,500 sf+		1.147	3.53	**1.15**
Multi-Family (Flat Rate)	2.51	1.000		**0.81**
Multi-Family (Tiered):				
Less than 500 sf		0.798	2.00	**0.65**
500-999 sf		0.928	2.33	**0.76**
1,000-1,499 sf		1.091	2.74	**0.89**
1,500-2,499 sf		1.144	2.87	**0.93**
2,500 sf +		1.202	3.02	**0.98**

Source: Untiered average household sizes for Maui County from Table 64; ratio of average household size for square footage category to average household size for all single-family or multi-family units from Table 66; tiered average household size is product of untiered and ratio.

The tiered household sizes can be graphically illustrated by plotting the average household size by the midpoint of the square footage category (Figure 12).

Figure 12. Average Household Size by Unit Size, Maui



APPENDIX C: WASTEWATER COLLECTION SYSTEM

Table 68. Wastewater Force Mains

Force Main	Size (in.)	Length (ft.)	Location	Estimated Cost
Waiehu Kou	6	6,535	Major Rd	$4,954,000
Leisure Estates	6	2,870	Minor Rd	$2,175,000
Hoo Hui Ana	4	770	Minor Rd	$584,000
Hawaiian Homes	10	3,640	Major Rd	$2,759,000
Wailuku	21	12,119	Major Rd	$11,477,000
Kahului	20	3,123	Major Rd	$2,957,000
Alamaha	8	1,838	Major Rd	$1,393,000
Naska	8	4,120	Unimprvd	$2,575,000
Kaa	12	4,653	Minor Rd	$3,527,000
Spreckelsville	12	7,557	Minor Rd	$5,728,000
Pa'ia	10	7,283	Major Rd	$5,521,000
Kuau No. 4	8	766	Major Rd	$581,000
Kuau No. 3	6	830	Major Rd	$629,000
Kuau No. 2	6	560	Major Rd	$424,000
Kuau No. 1	6	650	Major Rd	$493,000
Total, Kahului		**57,314**		**$45,777,000**
Kihei No. 2	8	2,480	Major Rd	$1,880,000
Kihei No. 3	12	2,040	Major Rd	$1,546,000
Kihei No. 4	16	2,566	Major Rd	$2,430,000
Kihei No. 5	12	30	Major Rd	$23,000
Kihei No. 6	Dual 20	8,578	Minor Rd	$6,502,000
Kihei No. 7	20	1,573	Major Rd	$1,490,000
Kihei No. 8	18	2,013	Major Rd	$1,906,000
Kihei No. 9	10	775	Minor Rd	$587,000
Kihei No. 10 (1978)	12	2,693	Minor Rd	$2,041,000
Kihei No. 10 (1990)	12	2,687	Minor Rd	$2,037,000
Kihei No. 16	6	5,073	Major Rd	$3,845,000
Total, Kihei		**30,508**		**$24,287,000**
Napili No. 6	10	2,290	Major Rd	$1,736,000
Napili No. 5	14	1,875	Major Rd	$1,776,000
Napili No. 4	14	2,040	Major Rd	$1,932,000
Napili No. 3	16	2,074	Major Rd	$1,964,000
Napili No. 2	16	980	Major Rd	$928,000
Napili No. 1	20	3,000	Major Rd	$2,841,000
Hyatt	12	1,544	Unimprvd	$965,000
Kaanapali	12	1,450	Unimprvd	$906,000
Lahaina No. 1	20	1,709	Major Rd	$1,618,000
Lahaina No. 2	20	2,490	Major Rd	$2,358,000
Lahaina No. 3	20	8,774	Major Rd	$8,309,000
Lahaina No. 4	14	1,736	Unimprvd	$1,085,000
Lahaina No. 5	16	4,340	Major Rd	$4,110,000
Lahaina No. 6	10	544	Minor Rd	$412,000
Lahaina No. 7	6	328	Minor Rd	$249,000
Total, Lahaina		**96,190**		**$31,189,000**

Source: Maui County Wastewater Reclamation Division of Department of Environmental Management, January 15, 2010.

Table 69. Wastewater Pump Stations

Pump Station	# of Pumps	Capacity (MGD)	Flow (MGD)	% of Capacity	Replacement Cost
A & B	3	1.296	0.19	14.7%	$2,500,000
Hawaiian Homes	2	2.240	1.09	48.6%	$2,500,000
Kaa	2	1.728	0.33	19.2%	$2,000,000
Kahului	3	6.048	1.74	28.8%	$4,500,000
Kuau 1	2	0.360	0.03	8.3%	$650,000
Kuau 2	2	0.504	0.04	7.7%	$650,000
Kuau 3	2	0.620	0.04	6.9%	$650,000
Kuau 4	2	0.792	0.07	8.3%	$650,000
Naska	2	1.152	0.18	16.0%	$1,500,000
Sprecklesville	2	1.440	0.37	25.5%	$1,500,000
Wailuku	3	10.000	3.54	35.4%	$6,000,000
Pa'ia	2	1.080	0.30	27.5%	$3,000,000
Waiehu	2	0.403	0.05	11.2%	$1,000,000
Waiehu Kou	2	0.850	0.12	14.2%	$1,500,000
Hoo Hui Ana	2	0.144	0.04	25.7%	$1,000,000
Total, Wailuku/Kahului	33	28.657	8.115	28.3%	$29,600,000
Kihei 2	2	0.950	0.30	31.1%	$1,800,000
Kihei 3	2	2.900	0.62	21.3%	$2,100,000
Kihei 4	2	4.399	1.60	36.3%	$2,500,000
Kihei 5	2	4.700	1.21	25.7%	$3,200,000
Kihei 6	4	11.000	3.89	35.4%	$6,000,000
Kihei 7	3	7.402	1.88	25.4%	$4,800,000
Kihei 8	2	4.176	1.15	27.5%	$3,200,000
Kihei 9	2	1.224	0.02	1.8%	$1,500,000
Kihei 10	3	4.030	1.09	27.0%	$3,500,000
Kihei 16	2	0.288	0.02	7.3%	$1,100,000
Total, Kihei	24	41.070	11.763	28.6%	$29,700,000
Kaanapali G.C.	2	2.160	0.82	38.1%	$2,500,000
Lahaina 1	3	5.400	2.66	49.2%	$6,000,000
Lahaina 2	3	8.640	2.32	26.9%	$4,000,000
Lahaina 3	4	11.370	1.36	12.0%	$5,000,000
Lahaina 4	2	2.160	0.09	4.1%	$3,000,000
Lahaina 5	2	1.728	0.38	22.0%	$2,500,000
Lahaina 6	2	0.965	0.27	28.0%	$2,000,000
Napili 1	3	8.200	1.90	23.2%	$4,000,000
Napili 2	2	5.760	0.90	15.7%	$3,000,000
Napili 3	2	5.256	0.50	9.6%	$3,000,000
Napili 4	2	4.608	0.42	9.0%	$2,500,000
Napili 5	2	1.526	0.16	10.7%	$1,500,000
Kapalua	3	3.024	0.13	4.3%	$2,000,000
Sheraton	2	0.576	0.07	12.0%	$1,500,000
Hyatt	3	2.016	0.22	10.9%	$2,500,000
Puamana	2	0.432	0.05	11.6%	$1,500,000
Total, Lahaina	39	63.821	12.249	19.2%	$46,500,000

Source: Maui County Wastewater Reclamation Division of Department of Environmental Management, January 15, 2010; Replacement cost from Wastewater Reclamation Division, March 22, 2010.

APPENDIX D: GENERAL OBLIGATION DEBT

The County has approximately $227.0 million of outstanding principal for General Obligation bond issues, as shown in Table 70. The GO bonds have been issued for a variety of projects, either directly funding capital expenditures, or indirectly funding capital expenditures through refunds of prior issues. Of the outstanding issues, data is available on total disbursement of funds for about half of the outstanding debt. The debt analysis used in this study for each proposed impact fee facility type assumes that all outstanding debt was disbursed proportionately among facilities based on available disbursement data.

Table 70. Outstanding General Obligation Debt

Outstanding GO Bond Issue	Notes	Original Issue Amount	Total Disbursements	Current Balance
Series 1982	Napili-Honokawai sewer	$1,500,000	$1,500,000	$543,500
1993 Series F	Refund 1991A	$35,785,000	NA	$2,685,000
1998 Series A	Refunded with 2005B	$39,285,000	$22,632,587	$6,740,000
1998 Series B	Affordable Housing	$4,255,000	NA	$1,610,000
2001 Series A	Part refunded with 2006B,C	$23,485,000	$10,971,123	$9,720,000
2001 Series B	Refund 1993G	$14,105,000	NA	$6,925,000
2001 Series C	Refund 2000A	$15,775,000	$14,771,366	$10,935,000
2002 Series A	Refunded with 2006B,C	$25,000,000	$25,112,177	$2,305,000
2002 Series B	Refund of 1993G/2001B	$13,550,000	$21,106,677	$6,875,000
2002 Series C	Partially refunded 92A	$12,715,000	$10,528,727	$9,605,000
2003 Series A,B,C & D	Refund of various prior issues	$41,125,000	NA	$6,680,000
2004 Series A	Refund of 97A and 93F	$7,945,000	NA	$4,900,000
2004 Series B	Refund of 97A and 93F	$15,165,000	NA	$10,415,000
2005 Series A,B,C	Refund 98A and 99A	$59,300,000	$30,882,602	$52,900,000
2006 Series A	New Bond Issue	$29,425,000	$29,211,405	$29,425,000
2006 Series B,C	Refund 2001A and 2002A	$25,190,000	NA	$25,190,000
2008 Series A	Issue not fully expended	$39,500,000	$27,942,400	$39,500,000
Total Outstanding GO Bonds		$403,105,000	$194,659,064	$226,953,500

Source: Outstanding debt and current balance from Maui County, Consolidated Annual Financial Report (CAFR), 2009, p. 62; disbursement data compiled from information provided by the Maui County Department of Finance, April 30, 2010.

APPENDIX E: POLICE EQUIPMENT INVENTORY

Table 71. County-Wide Police Equipment

Divison	Unit	Equipment Type	Value
Administration	Administration	Communications	$23,250
Administration	Administration	Computers	$13,860
Administration	Administration	Safety	$16,667
Administration	Criminal Investigation	Scientific	$55,519
Administration	Internal Affairs	Computers	$3,166
Administration	Inteligence	Communications	$8,857
Administration	Inteligence	Computers	$2,840
Administration	Inteligence	Office Equipment	$16,506
Administration	Inteligence	Safety	$4,581
Administration	Asst. Chief	Computers	$4,119
Administration	Asst. Chief	Office Equipment	$13,646
Administration	Federal Programs	Misc. Equipment	$12,992
Investigative	Criminal Investigation	Computers	$104,195
Investigative	Criminal Investigation	Misc. Equipment	$20,985
Investigative	Criminal Investigation	Safety	$5,007
Investigative	Criminal Investigation	Scientific	$62,103
Investigative	Juvenile	Computers	$40,153
Investigative	Juvenile	Misc. Equipment	$16,413
Investigative	Juvenile	Safety	$3,930
Investigative	Juvenile	Scientific	$3,304
Investigative	Radio	Communications	$5,202
Investigative	Special Response	Safety	$154,438
Investigative	Special Response	Scientific	$1,000
Investigative	Vice	Communications	$39,131
Investigative	Vice	Computers	$115,798
Investigative	Vice	Misc. Equipment	$45,430
Investigative	Vice	Safety	$474,705
Investigative	Vice	Scientific	$2,492
Investigative	Vice	Software	$50,225
Support Services	Administration	Computers	$3,582
Support Services	Administration	Communications	$4,419,992
Support Services	Communications	Communications	$281,682
Support Services	Communications	Computers	$236,142
Support Services	Communications	Misc. Equipment	$9,974
Support Services	Communications	Safety	$2,523
Support Services	Computers	Computers	$1,089,171
Support Services	Computers	Communications	$5,282
Support Services	Community Relations	Computers	$6,222
Support Services	Community Relations	Misc. Equipment	$3,166
Support Services	Community Relations	Safety	$10,936
Support Services	Plans and Training	Communications	$1,138
Support Services	Plans and Training	Computers	$127,450
Support Services	Plans and Training	Misc. Equipment	$84,467
Support Services	Plans and Training	Safety	$59,058

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Table 71 Continued.

Divison	Unit	Equipment Type	Value
Support Services	Radio	Communications	$1,276,300
Support Services	Radio	Computers	$94,433
Support Services	Radio	Safety	$3,935
Support Services	Radio	Scientific	$39,516
Support Services	Records/ID	Communications	$67,077
Support Services	Records/ID	Computers	$20,762
Support Services	Records/ID	Laboratory	$137,143
Support Services	Records/ID	Office Equipment	$66,644
Support Services	Records/ID	Scientific	$276,579
Support Services	Technical Services	Computers	$538,808
Total, County-Wide Equpment			**$10,182,496**

Source: Maui County Fixed Assets—Furniture, Fixtures and Equipment (excludes vehicles), April 15, 2010.

Table 72. Maui Island Police Equipment

Divison	Unit	Equipment Type	Value
Uniform Services	Hana	Safety	$1,795
Uniform Services	Moloka'i	Safety	$1,795
Uniform Services	Criminal Invest.	Scientific	$1,158
Uniform Services	Motorpool	Computer	$1,080
Uniform Services	Patrol-Hana	Communications	$1,532
Uniform Services	Patrol-Hana	Computer	$3,410
Uniform Services	Patrol-Hana	Misc. Equipment	$7,945
Uniform Services	Patrol-Hana	Safety	$25,167
Uniform Services	Patrol-Kihei	Computer	$1,152
Uniform Services	Patrol-Kihei	Misc. Equipment	$11,643
Uniform Services	Patrol-Kihei	Safety	$22,874
Uniform Services	Patrol-Lahaina	Computer	$4,222
Uniform Services	Patrol-Lahaina	Misc. Equipment	$43,001
Uniform Services	Patrol-Lahaina	Safety	$48,260
Uniform Services	Patrol-Lahaina	Scientific	$22,315
Uniform Services	Patrol-Wailuku	Communications	$1,988
Uniform Services	Patrol-Wailuku	Computer	$25,135
Uniform Services	Patrol-Wailuku	Misc. Equipment	$11,368
Uniform Services	Patrol-Wailuku	Safety	$84,622
Uniform Services	Patrol-Wailuku	Scientific	$3,472
Uniform Services	Traffic-Wailuku	Computer	$204,379
Uniform Services	Traffic-Wailuku	Misc. Equipment	$26,910
Uniform Services	Traffic-Wailuku	Safety	$308,561
Uniform Services	Traffic-Wailuku	Scientific	$29,609
Uniform Services	Hana	Misc. Equipment	$5,982
Uniform Services	Hana	Safety	$14,372
Uniform Services	Kihei	Computer	$7,640
Uniform Services	Lahaina	Computer	$3,385
Uniform Services	Lahaina	Safety	$7,640
Uniform Services	Wailuku	Scientific	$1,499
Total, Maui Island Equipment			**$933,911**

Source: Maui County Fixed Assets—Furniture, Fixtures and Equipment (excludes vehicles), April 15, 2010.

APPENDIX F: HAWAI'I IMPACT FEE LEGISLATION

Title 6. County Organization and Administration
Subtitle 1. Provisions Common to All Counties
Chapter 46. General Provisions

[Part VIII.] IMPACT FEES

§46-141 Definitions.

As used in this part, unless the context requires otherwise:

"Board" means the board of water supply or water board of any county.

"Capital improvements" means the acquisition of real property, improvements to expand capacity and serviceability of existing public facilities, and the development of new public facilities.

"Comprehensive plan" means a coordinated land use plan for the development of public facilities within the jurisdiction of a county based on existing and anticipated needs, showing existing and proposed developments, stating principles to which future development should conform, such as the county's general plans, development plans, or community plans, and the manner in which development should be controlled. In the case of the city and county of Honolulu, public facility maps shall be equivalent to the comprehensive plan required in this part.

"County" or "counties" means the city and county of Honolulu, the county of Hawai'i, the county of Kaua'i, and the county of Maui.

"Credits" means the present value of past or future payments or contributions, including, but not limited to, the dedication of land or construction of a public facility made by a developer toward the cost of existing or future public facility capital improvements, except for contributions or payments made under a development agreement pursuant to section 46-123.

"Developer" means a person, corporation, organization, partnership, association, or other legal entity constructing, erecting, enlarging, altering, or engaging in any development activity.

"Development" means any artificial change to real property that requires a grading or building permit as appropriate, including, but not limited to, construction, expansion, enlargement, alteration, or erection of buildings or structures.

"Discount rate" means the interest rate, expressed in terms of an annual percentage, that is used to adjust past or future financial or monetary payments to present value.

"Impact fees" means the charges imposed upon a developer by a county or board to fund all or a portion of the public facility capital improvement costs required by the development from which it is collected, or to recoup the cost of existing public facility capital improvements made in anticipation of the needs of a development.

"Needs assessment study" means a study required under an impact fee ordinance that determines the need for a public facility, the cost of development, and the level of service standards, and that projects future public facility capital improvement needs; provided that the study shall take into consideration and incorporate any relevant county general plan, development plan, or community plan.

"Non-site related improvements" means land dedications or the provision of public facility capital improvements that are not for the exclusive use or benefit of a development and are not site-related improvements.

"Offset" means a reduction in impact fees designed to fairly reflect the value of non-site related public facility capital improvements provided by a developer pursuant to county land use provisions.

"Present value" means the value of past or future payments adjusted to a base period by a discount rate.

"Proportionate share" means the portion of total public facility capital improvement costs that is reasonably attributable to a development, less:

(1) Any credits for past or future payments, adjusted to present value, for public facility capital improvement costs made or reasonably anticipated to be contributed by a developer in the form of user fees, debt service payments, taxes, or other payments; or

(2) Offsets for non-site related public facility capital improvements provided by a developer pursuant to county land use provisions.

"Public facility capital improvement costs" means costs of land acquisition, construction, planning and engineering, administration, and legal and financial consulting fees associated with construction, expansion, or improvement of a public facility. Public facility capital improvement costs do not include expenditures for required affordable housing, routine and periodic maintenance, personnel, training, or other operating costs.

"Reasonable benefit" means a benefit received by a development from a public facility capital improvement that is greater than the benefit afforded the general public in the jurisdiction imposing the impact fees. Incidental benefit to other developments shall not negate a "reasonable" benefit to a development.

"Recoupment" means the proportionate share of the public facility capital improvement costs of excess capacity in existing capital facilities where excess capacity has been provided in anticipation of the needs of a development.

"Site-related improvements" means land dedications or the provision of public facility capital improvements for the exclusive use or benefit of a development or for the provision of safe and adequate public facilities related to a particular development. [L 1992, c 282, pt of §2; am L 2001, c 235, §1]

§46-142 Authority to impose impact fees; enactment of ordinances required.

(a) Impact fees may be assessed, imposed, levied, and collected by:

(1) Any county for any development, or portion thereof, not involving water supply or service; or

(2) Any board for any development, or portion thereof, involving water supply or service; provided that the county enacts appropriate impact fee ordinances or the board adopts rules to effectuate the imposition and collection of the fees within their respective jurisdictions.

(b) Except for any ordinance governing impact fees enacted before July 1, 1993, impact fees may be imposed only for those types of public facility capital improvements specifically identified in a county comprehensive plan or a facility needs assessment study. The plan or study shall specify the service standards for each type of facility subject to an impact fee; provided that the standards shall apply equally to existing and new public facilities. [L 1992, c 282, pt of §2; am L 1996, c 175, §1; am L 2001, c 235, §2]

§46-142.5 School impact districts; new building permit requirements.

No new residential development in a designated school impact district under chapter 302A shall be issued a residential building permit or condominium property regime building permit until the department of education provides written confirmation that the permit applicant has fulfilled its school impact fee requirements. This section shall only apply to new dwelling units. [L 2007, c 245, §3]

§46-143 Impact fee calculation.

(a) A county council or board considering the enactment or adoption of impact fees shall first approve a needs assessment study that shall identify the kinds of public facilities for which the fees shall be imposed. The study shall be prepared by an engineer, architect, or other qualified professional and shall identify service standard levels, project public facility capital improvement needs, and differentiate between existing and future needs.

(b) The data sources and methodology upon which needs assessments and impact fees are based shall be set forth in the needs assessment study.

(c) [2004 amendment retroactive to October 1, 2002. L 2004, c 155, §6.] The pro rata amount of each impact fee shall be based upon the development and actual capital cost of public facility expansion, or a reasonable estimate thereof, to be incurred.

(d) [2004 amendment retroactive to October 1, 2002. L 2004, c 155, §6.] An impact fee shall be substantially related to the needs arising from the development and shall not exceed a proportionate share of the costs incurred or to be incurred in accommodating the development. The following seven factors shall be considered in determining a proportionate share of public facility capital improvement costs:

> (1) The level of public facility capital improvements required to appropriately serve a development, based on a needs assessment study that identifies:

(A) Deficiencies in existing public facilities;

(B) The means, other than impact fees, by which existing deficiencies will be eliminated within a reasonable period of time; and

(C) Additional demands anticipated to be placed on specified public facilities by a development;

(2) The availability of other funding for public facility capital improvements, including but not limited to user charges, taxes, bonds, intergovernmental transfers, and special taxation or assessments;

(3) The cost of existing public facility capital improvements;

(4) The methods by which existing public facility capital improvements were financed;

(5) The extent to which a developer required to pay impact fees has contributed in the previous five years to the cost of existing public facility capital improvements and received no reasonable benefit therefrom, and any credits that may be due to a development because of such contributions;

(6) The extent to which a developer required to pay impact fees over the next twenty years may reasonably be anticipated to contribute to the cost of existing public facility capital improvements through user fees, debt service payments, or other payments, and any credits that may accrue to a development because of future payments; and

(7) The extent to which a developer is required to pay impact fees as a condition precedent to the development of non-site related public facility capital improvements, and any offsets payable to a developer because of this provision.

(e) The impact fee ordinance shall contain a provision setting forth the process by which a developer may contest the amount of the impact fee assessed. [L 1992, c 282, pt of §2; am L 2001, c 235, §3; am L 2001, c 235, §3; am L 2004, c 155, §3]

§46-144 Collection and expenditure of impact fees.

Collection and expenditure of impact fees assessed, imposed, levied, and collected for development shall be reasonably related to the benefits accruing to the development. To determine whether the fees are reasonably related, the impact fee ordinance or board rule shall provide that:

(1) Upon collection, the fees shall be deposited in a special trust fund or interest-bearing account. The portion that constitutes recoupment may be transferred to any appropriate fund;

(2) Collection and expenditure shall be localized to provide a reasonable benefit to the development. A county or board shall establish geographically limited benefit zones for this purpose; provided that zones shall not be required if a reasonable benefit can be otherwise derived. Benefit zones shall be

appropriate to the particular public facility and the county or board. A county or board shall explain in writing and disclose at a public hearing reasons for establishing or not establishing benefit zones;

(3) Except for recoupment, impact fees shall not be collected from a developer until approval of a needs assessment study that sets out planned expenditures bearing a substantial relationship to the needs or anticipated needs created by the development;

(4) Impact fees shall be expended for public facilities of the type for which they are collected and of reasonable benefit to the development; and

(5) Within six years of the date of collection, the impact fees shall be expended or encumbered for the construction of public facility capital improvements that are consistent with the needs assessment study and of reasonable benefit to the development. [L 1992, c 282, pt of §2; am L 2001, c 235, §4]

§46-145 Refund of impact fees.

(a) If impact fees are not expended or encumbered within the period established in section 46-144, the county or the board shall refund to the developer or the developer's successor in title the amount of fees paid and any accrued interest. Application for a refund shall be submitted to the county or the board within one year of the date on which the right to claim arises. Any unclaimed refund shall be retained in the special trust fund or interest bearing account and be expended as provided in section 46-144.

(b) If a county or board seeks to terminate impact fee requirements, all unexpended or unencumbered funds shall be refunded as provided in subsection (a) and the county or board shall give public notice of termination and availability of refunds at least two times. All funds available for refund shall be retained for a period of one year at the end of which any remaining funds may be transferred to:

> (1) The county's general fund and expended for any public purpose not involving water supply or service as determined by the county council; or
>
> (2) The board's general fund and expended for any public purpose involving water supply or service as determined by the board.

(c) Recoupment shall be exempt from subsections (a) and (b). [L 1992, c 282, pt of §2; am L 1998, c 2, §14; am L 2001, c 235, §5]

§46-146 Time of assessment and collection of impact fees.

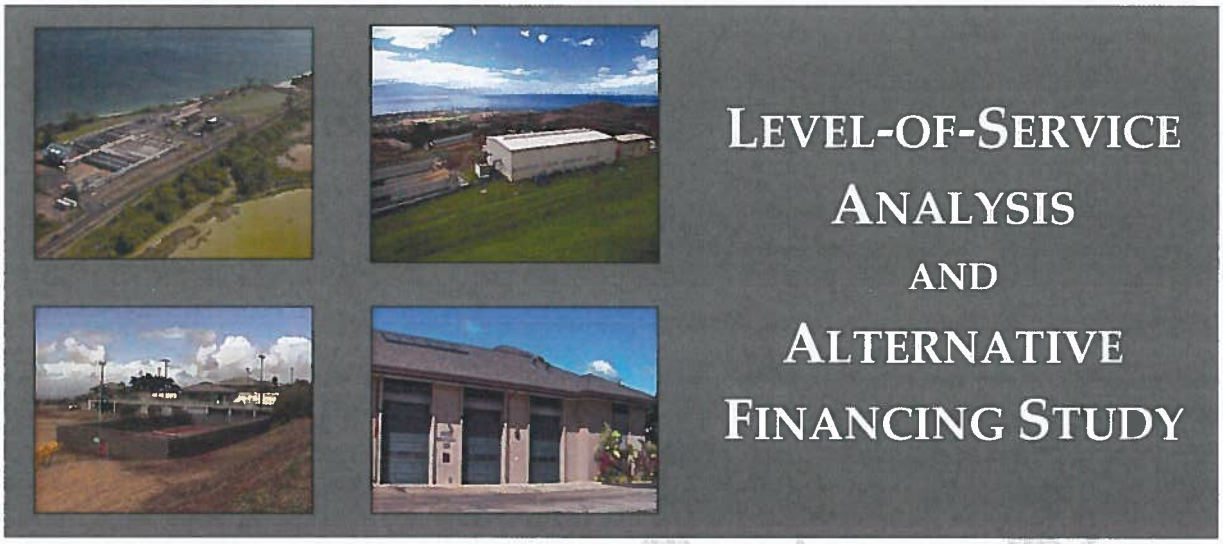
Assessment of impact fees shall be a condition precedent to the issuance of a grading or building permit and shall be collected in full before or upon issuance of the permit. [L 1992, c 282, pt of §2]

§46-147 Effect on existing ordinances.

This part shall not invalidate any impact fee ordinance existing on June 19, 1992. [L 1992, c 282, pt of §2]

§46-148 Transitions.

Any county requiring impact fees or imposing development exactions, in order to fund public facilities, shall incorporate fee requirements into their broader system of development and land use regulations in such a manner that developments, either collectively or individually, are not required to pay or otherwise contribute more than a proportionate share of public facility capital improvements. Development contributions or payments made under a development agreement, pursuant to section 46-123, are exempted from this requirement. [L 1992, c 282, pt of §2]



LEVEL-OF-SERVICE ANALYSIS AND ALTERNATIVE FINANCING STUDY

√Fire

√Police

√Solid Waste

√Drainage

√Wastewater

√Parks

Prepared for:
County of Maui
Long-Range Planning Division

Prepared by:
Chris Hart & Partners, Inc.

CHRIS HART & PARTNERS, INC.
LANDSCAPE ARCHITECTURE & LAND USE PLANNING

April, 2011

LEVEL-OF-SERVICE ANALYSIS
AND
ALTERNATIVE FINANCING STUDY

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Executive Summary

On June 10, 2009, the County of Maui contracted with Chris Hart & Partners, Inc. and Duncan Associates to prepare a Level-of-Service Analysis and Alternative Financing Study and Maui Island Impact Fee Study to develop a rational basis for the development of an Impact Fee Ordinance for the Island of Maui. These studies were initiated in response to community concerns about the state of the County's infrastructure, projections for future population growth, and the desire to improve the County's planning processes. It was determined that to maintain an acceptable level-of-service and to maintain the quality of life within the County of Maui, a system of financing improvements was needed to assess, on a pro-rata share basis, the reasonably anticipated costs of improving or expanding the County's infrastructure and public facilities systems necessitated by new land development activity.

The Level-of-Service Analysis and Alternative Financing Study identifies existing and desired levels-of-service, conducts order-of-magnitude revenue and expenditure analysis and identifies supplemental infrastructure financing opportunities to address deficiencies. Infrastructure and public facility systems included in this study include fire, police, solid waste, drainage, wastewater and parks.

According to the revenue and expenditure analysis, each of the six systems studied will experience a deficit of funding to fully implement its six-year capital improvement plan for fiscal years 2011 through 2015. The projected total deficits for the five-year span for each system or facility are as follows: fire $44 million; police $56 million; solid waste $6.8 million; drainage $51 million; wastewater $84 million. The projected deficit for parks over a six-year span is $43 million.

To balance the County's annual Capital Improvement Plan (CIP) budgets, each department or division will need to curtail CIP expenditures, increase revenues, or do both. Curtailing expenditures may be possible for some systems or facilities; however deep expenditure reductions over a protracted period will produce a negative impact upon level-of-service conditions. Additionally, due to the need to adhere to environmental regulations and ensure public health and safety, infrastructure expenditures for systems such as solid waste and wastewater may not be able to be reduced. Therefore securing supplemental revenue sources for each system may be necessary to ensure adequate levels-of-service.

Potential supplemental revenue sources are listed below.

- Increase Existing Fees
- Drainage Utility Fee
- Community Facilities Districts
- Tax Increment Financing

- Benefit Assessment Districts
- Business Improvement Districts
- Impact Fees
- Real Estate Excise Tax
- Strategic Budget Allocations
- Public-Private Partnerships
- State and Federal Grants and Loans

Some of these sources are currently available to the County while others would require enabling legislation or voter approval before they could be utilized. The information provided in this study is intended to be a first step to aid the County in developing alternative financing strategies for infrastructure and public facility improvements. The County will need to determine what combinations of supplemental revenue sources are most advantageous and feasible to implement and when.

I. Introduction

Purpose and Background

The Level-of-Service Analysis and Alternative Financing Study was prepared to support the development of an Impact Fee Ordinance for the Island of Maui. The study was developed in response to community concerns about the state of the County's infrastructure, projections for future population growth, and the desire to improve the County's planning processes. This study identifies existing and desired levels-of-service, conducts order-of-magnitude revenue and expenditure analysis and identifies supplemental infrastructure financing opportunities. Infrastructure and public facility systems included in this study include fire, police, solid waste, drainage, wastewater and parks.

Level-of-service (LOS) standards are typically quantitative measures expressed as ratios of facility capacity to demand by existing and projected future users. LOS standards help a community plan and budget for the demands of a growing and changing population. They serve multiple purposes including providing a benchmark for evaluating service deficiencies in existing neighborhoods, defining what new public facilities and services will be needed to support new development, and providing a basis for assuring that existing services are maintained as new development is served. LOS standards are discussed in more detail later in this study as they pertain to individual public facilities and infrastructure systems.

The order-of-magnitude revenue-cost analysis conducted for each infrastructure system in this study reveals a shortage of funding to fully implement the County's capital improvement plans for fiscal years 2011 to 2015. In order to ensure the provision of adequate levels-of-service supplemental revenue sources will need to be secured. The supplemental revenue sources discussed in this study include increasing existing fees and implementing a combination of the following: a drainage utility fee, special taxing districts, tax increment financing, benefit assessment districts, business improvement districts, impact fees, real estate excise tax, strategic budget allocations, public-private partnerships and/or State and Federal grants and loans.

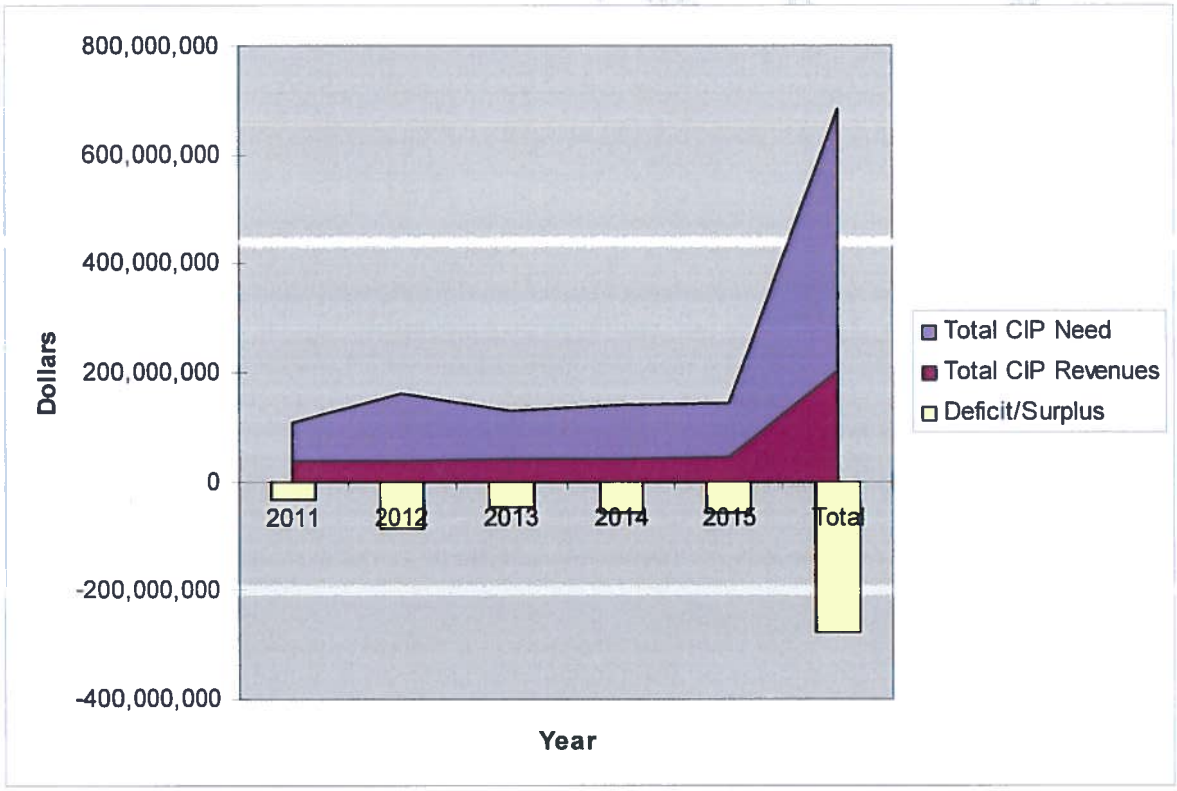
Report Structure and Data Sources

This report begins with a discussion of alternative revenue sources which the County could utilize to supplement CIP financing. The remainder of the report is divided by infrastructure system and addresses LOS standards, funding needs and existing capital revenues pertaining to each system. A revenue and expenditure analysis is provided for each system as well as further discussion of the potential supplemental revenue sources that are suitable to each system or public facility. Agency six-year CIP budgets and 20-year CIP budgets (if available) were used as the primary data sources for this study.

II. Supplemental Revenue Sources

According to the revenue and expenditure analysis conducted for the six infrastructure systems included in this study, each system will experience a shortage of funding for fiscal years 2011 through 2015, based on historical revenues versus each Department's six-year CIP plan. The projected total deficits for the five year span for each system or facility are as follows: fire $44 million; police $56 million; solid waste $6.8 million; drainage $51 million; wastewater $84 million. The projected deficit over a six-year span for parks is $43 million. Figure 1 compares the total five-year CIP plan request for fire, police, solid waste, drainage, wastewater and six-year CIP request for parks to projected CIP revenues. County agencies acknowledge that revenues are rarely sufficient to pay for all projects identified in the six-year CIP. Agencies expect many projects to be funded in subsequent years, or not at all depending upon County priorities.

Figure 1: CIP Request Vs Projected Revenues



To balance the County's CIP budgets, each department or division will need to curtail expenditures, resulting in deferred maintenance and capital improvements, increase revenues, or do both. Curtailing expenditures may be possible for some systems or facilities, however it is unlikely that expenses could be reduced enough to account for the large imbalances many of the departments and divisions will experience in the coming years. Additionally, due to the need to adhere to environmental regulations, adequately maintain the operability of systems

and ensure public health and safety, long-term expenditures for systems such as solid waste and wastewater may not be able to be reduced. Therefore securing supplemental revenue sources for each system may be necessary to balance CIP budgets and provide adequate levels-of-service.

The following discussion provides an analysis of supplemental revenue sources the County could utilize to balance CIP budgets. For each supplemental revenue source, the following information is provided: description of the source, applicable infrastructure systems, implementation process, advantages and disadvantages, and identification of communities where it has been used. The information provided is intended to aid the County in developing alternative financing strategies for infrastructure and public facility improvements. The County will need to determine what combination of supplemental revenue sources are most advantageous and feasible to implement and when.

Table 1: Supplemental Revenue Sources / Infrastructure System Matrix

		Infrastructure Systems / Public Facilities					
		Fire	Police	Solid Waste	Drainage	Waste-water	Parks
Supplemental Revenue Sources	Increase Existing Fees			√		√	
	Establish New Utility Fees				√		
	Special District Financing	√	√	√	√	√	√
	Impact Fees	√	√	√		√	√
	Real Estate Excise Tax (REET)	√	√	√	√	√	√
	Strategic Budget Allocations	√	√	√	√	√	√
	Public-Private Partnerships	√	√	√		√	√
	State & Federal Grants & Loans	√	√	√	√	√	√

Table 1 is a matrix identifying the supplemental revenues sources and applicable infrastructure systems. Appendix A also provides a summary table of all supplemental revenue sources. Additional information on the supplemental revenue sources as they pertain to specific systems or facilities are provided in the individual systems sections of this study.

Increase Existing Fees

Perhaps the most obvious option to boost revenues for some infrastructure systems is to increase existing fees charged to customers. Existing fees for service for infrastructure systems included in this study include the Division of Solid Waste's landfill disposal fees and refuse collection fee, and the Division of Wastewater's sewer and cesspool fee.

Compared to the other supplemental revenue sources discussed below, implementation of fee increases is fairly easy since the fee structures and mechanisms are already in place. For the County of Maui, all fee rate increases must be approved by the County Council through the budget process. Increasing existing user fees is a logical way to help communities keep pace with escalating construction, equipment and land costs and provide necessary capital improvements. Some utility providers across the U.S., particularly for wastewater and water

services, are considering implementing "full-cost pricing". "Full-cost pricing", according to the EPA, is defined as "factoring in all costs – past, present, and future operations, maintenance, and capital costs – into prices and rate structures"[1]. More often then not, utility and public facility customers, be it for water, wastewater or other infrastructure systems, are not paying for the full cost to operate and maintain the utility or public facility. Capital stock investments and necessary upkeep are generally not figured into rate structures, resulting in user fees that are not representative of the actual needs of the infrastructure system or public facility.

Marin Municipal Water District, California, Full-Cost Pricing[2]

Background

The Marin Municipal Water District (MMWD) is a publicly owned water system serving 190,000 people in south and central Marin County, California. Water rates and fees paid by MMWD customers cover the entire cost of providing drinking water. Involving customers in demand management practices and charging them for the full cost of their water service has resulted in a customer base that is aware of the true value of its water supply and a sustainable pricing structure for MMWD.

Cost Allocation

MMWD's operating costs include source, treatment, storage and distribution of water as well as maintenance of a 21,250 acre watershed. Operating costs are covered by monthly service and usage charges. MMWD also assesses connection fees to cover past and future capital costs related to providing water and increasing system water production capacity. The District's large-scale CIP projects have been funded by bond issues and certificates of participation. Using its Long-Range Capital Plan, the system includes the debt service on these bonds and certificates when it develops the cost models used in determining its rates.

To achieve "full-cost pricing" for solid waste and wastewater for the County of Maui, major rate increases would need to be implemented. The County could attain a more balanced CIP budget for these systems by conducting a thorough revenue and expenditure analysis and increasing fees accordingly. The feasibility and potential revenue boosts of increasing each of these existing fees is further discussed in the Solid Waste and Wastewater sections of this study.

Establish Utility Fees

Establishing new utility fees for existing services is another logical supplemental source of revenue for financing County CIP projects. Transportation and storm water utility fees are commonly used in the mainland to fund these infrastructure systems.

[1] *Sustaining Our Nation's Water Infrastructure.* United States Environmental Protection Agency. Available at www.epa.gov/waterinfrastructure/index.html (last visited 14 June 2010).

[2] United States Environmental Protection Agency. December 2005. *Case Studies of Sustainable Water and Wastewater Pricing.* Available at www.epa.gov/safewater (last visited 28 July 2010).

The County could establish a drainage utility fee to help fund drainage improvement projects. Voter approval by referendum would be required to establish the fee. The fee could be assessed to commercial lots based on the amount of impervious cover and to improved residential lots at a flat rate. A billing system would need to be developed to collect the fees and a Drainage Fund would need to be created to deposit revenues collected.

City of Hewitt, Texas, Drainage Utility Fee[3]

Land Use	*Monthly Fee*
Single and Two-Family Residential	*$2.75*
Non-Residential (sq. ft. of impermeable surface)	
1 to 10,000	*$6.50*
10,001 to 20,000	*$19.50*
20,001 to 40,000	*$32.50*
40,001 to 60,000	*$65.00*
60,001 to 100,000	*$104.00*
100,001 to 150,000	*$162.50*
150,001 and more	*$260.00*

Many municipalities and counties throughout the United States, especially in California, Oregon, Washington, Colorado and Florida have established drainage utility fees to finance drainage capital projects. According to a study conducted in 2007 surveying 71 utilities in 22 states, 64% of the drainage capital improvement needs were financed through user fees.[4] Within the study, monthly residential stormwater utility fees ranged from a low of $0.75 in Auburnville, Florida to a high of $16.82 in Portland, Oregon.

Advantages of establishing a drainage utility fee are that it provides the local government with a new source of revenue for operational and capital costs and promotes fiscal accountability. One disadvantage of the fee is the potential community resistance to additional charges for County services. The potential of establishing a drainage utility fee for Maui is further explored in the Drainage section of this report.

Special District Financing

Special district financing, i.e. Community Facilities Districts, Tax Increment Financing Districts, Benefit Assessment Districts, and Business Improvement Districts, can be established to help fund major upgrades to utility services and public facilities within a designated area. The establishment of these districts often requires the approval of area landowners affected by the improvements. Revenues are typically generated through special levies, assessments, or tax increment financing. Special district financing has been used by communities throughout the United States and is applicable to all of the infrastructure systems and facilities covered in this study.

This method of funding is equitable since those most likely to benefit from the public investment are those paying for the services. Special district financing is a commonly accepted and proven method of financing and the issuance of these bonds requires little or no capital

[3] City of Hewitt Texas webpage www.cityofhewitt.com

[4] Black & Veatch. 2007. *2007 Stormwater Utility Survey.* Overland Park, KS.

from the issuing government entity. One disadvantage of special district financing is that it can be a lengthy process to implement since the special district must be created and the citizens within the district must vote on the proposed levy or bond. Additionally, since special assessment bonds are not backed by the full faith and credit of the issuing government like G.O. bonds, they represent a greater investment risk and thus generally are issued at a higher interest rate than other types of bonds. The following discussion provides a more detailed description of various special district financing options:

Community Facilities Districts: Within a community facilities district (CFD) the district may issue tax-exempt municipal bonds to finance the construction of roads, sewers and other public infrastructure. These bonds are then repaid through a special tax imposed on the properties benefiting from the improvements. The tax is based on the amount of principal and interest required to pay for the bond along with any administration costs. These taxes may be allocated on a unit or acre basis and as a flat or variable charge. The tax is generally collected with property taxes and failure to pay the tax can result in legal action or foreclosure on the property.

CFDs have been established to finance needed infrastructure throughout the United States, predominantly in western states and Florida. California first created CFD (a.k.a. Mello-Roos districts) in the late 1970's and since then many other states have followed suit. CFDs provide an alternative mechanism for governments to raise revenue for capital improvements without having to rely on raising property taxes. In California, where increasing property taxes is prohibited by State law, Mello-Roos districts have become a critical means for financing public infrastructure and facility systems.

West Germantown Development District

"West Germantown Development District" in Montgomery County, Maryland, was established to fund certain road, sewer and water, and public park improvements for the community. The County issued $16 million in special revenue bonds to fund the improvements which will be paid back through special taxes added to the yearly tax bills of the residents within the district.[5]

Hawaii Revised Statutes (HRS) §46-80.1 authorizes the counties to enact procedural ordinances to establish CFD to finance special improvements in the counties (see Appendix B: Hawaii Improvement District Legislation). To establish the district the county must first define the boundaries of the district and specify the types of special improvements that may be undertaken and financed. Public notice and an opportunity to be heard must be provided to the property owners within the district. According to the statute, each issuance of a bond to fund infrastructure improvements on behalf of the district must be authorized by ordinance separate from the foregoing procedural ordinance.

CFDs offer many advantages to communities and local governments including that they generate revenue that would otherwise not be available to a local government and create the opportunity for coordinated facilities planning. In addition, for the development community, CFDs provide access to tax exempt bond financing for large-scale infrastructure projects. These

[5] Orrick, John R. Jr. 2007. *Special Taxing Districts – A Public/Private Development Tool for the New Millennium.* Linowes and Blocher LLP

improvements often extend beyond a single project's boundaries and CFDs provide a mechanism for landowners to coordinate regional infrastructure planning. Unlike conventional financing where infrastructure costs are typically passed onto home buyers through higher real property prices, CFDs may result in a lower up-front land cost to the land buyer. While the buyer will be subject to an additional monthly cost to pay for the bond, the rate paid for bond financing may be less than a conventional mortgage.

Using CFDs to finance needed capital improvements is an equitable form of financing and may present less up-front risk to the County than some other funding mechanisms since the bonds issued will be paid in full by the landowners benefiting from the improvements. However, CFDs are not without risk. If a landowner defaults on the bond prior to build-out, the County may be forced to step in and assume the capital and operational costs as was recently the case on Molokai. This risk may be somewhat mitigated if the County agrees to take ownership of the facilities once the community has been developed.

CFDs are most often established in growth areas where new development generates the need for new roadways, water and wastewater improvements, parks, police and fire stations and other capital improvements. They may also be used in established communities where the local government desires to make investments in existing aging systems to maintain their reliability.

Tax Increment Financing: Tax increment financing (TIF) is an economic development / public financing tool used by municipalities to generate revenues to help pay for targeted infrastructure and public facility improvements designed to stimulate private development and increase land values in a designated area. TIF captures the marginal increase in property tax revenues resulting from targeted public improvements. The tax revenues captured are used to pay for the improvements that enabled development to occur.

The primary difference between a community facilities district and a TIF district is that a TIF does not require the levying of an additional tax on top of existing property taxes. TIF enables a local government to use the expected future benefits of a development or redevelopment to pay for specified current public expenditures.

The first state to authorize tax increment financing was California in 1952 and currently there are only one or two states that have not authorized the use of TIF.[6] Tax increment financing is authorized in Hawaii by the Hawaii Tax Increment Financing Act, HRS §46-102 through 46-112 (see Appendix C: Hawaii Tax Increment Financing Act). As authorized by the Hawaii TIF Act, to utilize tax increment financing a county must first approve a TIF plan and adopt an ordinance establishing the tax increment district. The ordinance must describe the boundaries of the tax increment district, identify the date of commencement and date of termination of the district, and provide for the establishment of a tax increment fund for the district.

[6] Bond, Kenneth W. September 2004. *Tax Increment Financing – Can You? Should You?* Squire, Sanders & Dempsey L.L.P.

The primary benefit of TIF is that no new taxes are necessary to finance infrastructure improvements. Rather, the increase in property taxes generated by the improvements, by virtue of increased land values or the occurrence of new development, are pledged to the payment of the obligation needed for the infrastructure within the district.

Atlantic Station Steel Mill

Redevelopment of the 132-acre Atlantic Station Steel Mill, in Atlanta, Georgia, is the largest urban brownfield redevelopment in the United States. Environmental cleanup costs and infrastructure development were estimated to cost $187 million for the site, of which a substantial portion will be financed by TIF revenue. TIF funds are designated for use for environmental remediation, general site work, utilities, and transportation infrastructure. The TIF district was established in 2001, and generated over $8 million in revenue in 2006.[7]

Benefit Assessment Districts: Benefit Assessment Districts have become an increasingly popular financing tool used by local governments across the United States to help fund park, library, fire, flood control, and other capital projects. Properties within a benefit assessment district have an annual assessment placed on their properties to help fund projects within the district.

A benefit assessment can be applied to a neighborhood, special district, or larger areas such as a Community Plan District, or the entire island. These funds are used to fund capital improvements, land acquisition and related long-term debt service, as well as the costs of on-going maintenance. The amount of an assessment on a particular property is related to the amount of benefit that property receives.

Monterey Peninsula Regional Park

Voters living within Monterey Peninsula Regional Park District, California, approved a 15-year assessment that will generate between $800,000 and $1 million annually for improvements to existing park facilities and acquisition of land adjacent to current parks.[8]

Benefit assessment districts are similar to community facility districts and TIF districts in that the cost of public improvements are paid for by those properties which receive a specific benefit from those improvements. However, benefit improvement districts are different from the previous two types of special districts in that the affected properties are charged an annual assessment rather than tax to pay for the improvements. Benefit assessment districts create a new source of funding for municipalities tied to specific projects in specific locations.

Business Improvement Districts: Business improvement districts operate like other special financing districts but are directed towards improving the business climate within a defined area. Maui's various commercial districts, including downtown Wailuku and the surrounding Redevelopment Area, downtown Kahului, Paia, and Kihei could benefit from the establishment

[7] *Tax Increment Financing.* Montana Department of Transportation webpage. Available at www.mdt.mt.gov (last visited 30 July, 2010).

[8] Westrup, Laura. November 2006. *Crafting a New Benefit Assessment.* California State Parks, Planning Division.

of business improvement districts. Business improvement districts commonly fund activities such as streetscape beautification, park maintenance, and public safety. Hawaii Revised Statutes (HRS) § 46-80.5 authorizes the counties to establish improvement districts to issue and sell bonds to finance projects that benefit the stated public purpose and which will restore or promote business activity within the district (see Appendix B: Hawaii Improvement District Legislation).

> ***Kailua Village Business Improvement District[9]***
>
> *The KVBID is a collaborative effort between business, government and area residents to develop and implement creative solutions to improve the cleanliness, attractiveness, community and economic vibrancy of Historic Kailua Village on the Island of Hawaii. KVBID operations are overseen by a 17 member board of directors.*
>
> ***Assessments:***
> *Zone 1* *$1.75 per $1,000 of assessed value*
> *Zone 2* *$0.58 per $1,000 of assessed value*
>
> ***Use of funds include:*** *Public Space Management & Security; Streetscape Cleaning and Maintenance; Capital Improvements; and Operation Support/Administration.*

Impact Fees for Regional Improvements

An impact fee is a one-time fee payment by new development for off-site capital facilities needed by the new development. Impact fees are an effective method to pay for infrastructure expansion needs to address new growth, however the fees cannot be use to fund existing infrastructure deficits or pay non-capital costs. Impact fees are an equitable form of infrastructure funding because they ensure that growth only pays for its fair share of new facilities.

Legal cases throughout the nation have established that impact fees are a legitimate method to pay for infrastructure needed for growth as long as the fees adhere to the principle known as the *rational nexus test*. The rational nexus test ensures that a fee is fair by outlining the following two requirements:

1. The infrastructure improvement must be necessary and the need must be as a result of the new development; and
2. The funds earned must be earmarked for the specific infrastructure project and spent within a reasonable amount of time.[10]

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[9] *Kailua Village Business Improvement District Strategic Plan*. July 2009. Available from http://www.kvbid.org (last visited 20 July 2010).

[10] Maine State Planning Office. January 2003. Financing Infrastructure Improvements through Impact Fees: A Manual for Maine Municipalities on the Design and Calculation of Development Impact Fees. Augusta, ME.

In addition, the United States Supreme Court in *Dolan v. City of Tigard*[11], expanded upon the rational nexus test, adding to it a requirement that there be a "rough proportionality" between the impact of a proposed development and the burden of the exaction imposed upon it. Impact fee statutes typically comply with this standard as well.

The 1992 Hawaii Impact Fee Law, HRS § 46-141 to 148, authorizes the counties to adopt impact fees. To implement an impact fee a county must first identify existing levels-of-service and capital improvement needs for the targeted infrastructure systems. Service areas are then defined for each infrastructure system and impact fees are calculated. Funds received from the impact fees must be segregated from the county's general fund and may be used only for the infrastructure project for which they were collected. The funds must be encumbered or spent within six years of collection or they must be refunded.

Impact fees have been established in communities across the United States to fund infrastructure projects needed to address growth, with the highest concentration of impact fees in Washington, Oregon, California, Arizona, Colorado and Florida.[12]

Maui County Assessment Fees

While not strictly an impact fee, Maui County has established assessment fees for parks. Assessment fees have also been established for water and wastewater services in South and Central Maui.

There are numerous advantages to impact fees. They establish a direct and equitable benefit between who is paying for an improvement and who is receiving the services. Once established, impact fees are an efficient method of collecting funds and they can reduce a local government's borrowing and debt costs. Disadvantages of impact fees include that fee revenues depend on the rate of new development which can be unpredictable, making the annual total of fees collected also unpredictable. Another concern of impact fees is their potential effect on the affordability of housing for low- and moderate-income families since impact fees may increase housing prices.

Real Estate Excise Tax (REET)

A real estate excise tax, also know as real estate transfer tax or deed recordation tax, is imposed on the sale or transfer of real property. It is levied on the total selling price of the property and is generally paid by the seller. Funds collected through a REET can be placed in a special fund to help fund CIP operations, maintenance and expansion projects. REET is applicable to each of the infrastructure systems covered in this study.

[11] Dolan v. City of Tigard, 512 U.S. 374, 129 L. Ed. 2d 304, 114 S. Ct. 2309 (1994)
[12] Duncan Associates. December 2009. *National Impact Fee Survey: 2009.* Austin, TX.

As of 2005, thirty-five states plus the District of Columbia impose a REET on the sale of real property. The tax rates range form a low of 0.01 percent in Colorado to a high of 2.2 percent in D.C.[13] The tax can be imposed at the state level, local level, or both depending on individual state law. Hawaii has a state REET of 0.10%, however no county imposed taxes are levied on the sale of real property. The establishment of a REET at the county level would require voter approval.

Washington REET Levy Rates:[14]	
State REET	*1.28%*
Local REET	
for general capital purposes	*0.25%*
for growth-related capital projects	*0.25%*
Conservation purchases	*1.00%*
In lieu of sales tax	*0.50%*
Total authorized	*3.28%*

Use of REET financing is often justified on the basis that population growth creates a demand for additional infrastructure capacity and since buyers of land are often new residents or create the demand for new residents by creating new employment, they should contribute to the cost of growth.

The primary disadvantage of REET is that revenues will fluctuate with the local real estate market, which affects the amount of money collected annually from this source, making receipts difficult to forecast for CIP planning purposes. Another potential disadvantage of REET is that even though the tax is assessed on the seller of the property, the burden of the tax is generally passed to the purchaser, thus increasing the selling price of the property and impacting housing affordability.

Strategic Budget Allocations

Strategic budget allocations are when a designated portion of a tax bill or a rate bill, such as a sewer bill, is deposited into a special fund. The fund is invested, and the interest earned re-invested, with the funds being earmarked for specific future CIP projects. Similar to strategic budget allocations, monies in trust funds are generally provided from a percentage of tax revenues that are dedicated to a specific investment area. Trust funds provide a dedicated funding source and are less expensive in the long-term than bonds or loans. These funds could be established to help pay for major upgrades and repair of existing systems.

Maui Open Space Preservation Fund

A local example of a strategic budget allocation implemented by the County of Maui is the Maui Open Space Preservation Fund. In 2002 seventy-three percent of voters in Maui County approved a Charter Amendment mandating that a minimum of one percent of annual property tax revenues be placed into a special fund for the protection of open space, natural and cultural resources and the preservation of public access to coastal lands. In 2010 approximately $2.32 million was placed into the Maui Open Space Preservation Fund, which was established to collect these monies.

[13] Federation of Tax Administrators. February 2006. *State Real Estate Transfer Taxes.* FTA Bulletin. B-03/06. Washington, D.C.

[14] *Washington's Real Estate Excise Tax: High Rate, Volatile Stream.* November 20, 2000. Washington Research Council ePolicy Brief 00-32. Available at www.remi.com/uploads/File/Articles/articles_139g.pdf (last visited 30 June 2010).

Advantages of utilizing strategic budget allocations and trust funds to fund CIP projects include that they are relatively easy to implement, create a dedicated funding source for projects, are less expensive than bonds and loans in the long-term, and do not require an increase of existing taxes or fees. However, strategic budget allocations may reduce the amount of monies available for competing public purposes. Moreover, during depressed economic times, returns on investments can be minimal due to low interest rates.

Public-Private Partnerships (PPP)

Joining with private partners to design, finance, build and/or operate infrastructure systems and public facilities may be an appropriate and cost-effective alternative to more traditional revenue sources. A PPP is a service contract between the public and private sectors where the government pays the private sector to deliver infrastructure and related services over the long-term. The contract allocates responsibilities and business risks among the partners involved. The goal of a PPP is to combine the best capabilities of the public and private sectors for mutual benefit. Public-private partnerships come in many different forms including Build Operate and Own (BOO), Build Operate and Transfer (BOT), and Private Finance Initiatives (PFI). Depending upon the circumstances, private sector involvement can vary from minimal to extensive.

PPPs have been widely used internationally and throughout the United States as an alternative method to finance a wide variety of public infrastructure projects. Of the infrastructure systems included in this study, wastewater and solid waste are the most appropriate systems for utilizing PPPs, with fire, police and parks also being potential candidates.

City of Chicago

In October 2008, the City of Chicago entered into a $2.5 billion long-term lease agreement with Midway Investment and Development Company, a private investment group, which will operate and maintain Midway Airport for a term of 99 years.[15]

The chief advantage of PPPs is that infrastructure can often times be brought to the community faster, and at a significantly lower cost, than projects implemented solely by the public sector. Such partnerships allow the cost of the investment to be spread over the lifetime of the asset and encourage a "life cycle" approach to planning and budgeting through the use of long-term contracts. PPPs transfer certain risks to the private partner and provide incentives for the assets to be properly maintained. PPPs can improve cost-effectiveness by taking advantage of private sector innovation, experience and flexibility.

The primary disadvantage of public-private partnerships is that the procurement process can be complicated, lengthy and costly. Also, given the long time-span of most contracts, unforeseen circumstances are likely to arise, necessitating contract renegotiation. Some communities

[15] McBrady, Stephen J. March 2009. *Funding America's Infrastructure Needs: Public Private Partnerships May Help Close Infrastructure Gap*. Construction Briefings, No. 2009-03.

express concern that PPP projects will have a higher cost because of higher private sector borrowing costs. While it is true that governments are able to borrow at a lower interest rate than the private sector, looking at the overall costs of a project, PPP are consistently able to provide better cost-effectiveness than public financing.[16]

State and Federal Grants and Loans

Although State and Federal funding have declined in the last decade, the County should continue to explore these governmental funding sources to help finance major CIP projects. The primary State source relied upon by the County is the State Revolving Fund (SRF) for water and wastewater CIP projects. Potential Federal funding sources also include the U.S. Environmental Protection Agency (EPA), U.S. Department of Agriculture (USDA), U.S. Department of Housing and Urban Development (HUD), and the U.S. Department of Commerce, Economic Development Agency, among others.

Government grants and loans have been used throughout the U.S. to help finance a wide variety of infrastructure projects. Government grants and loans are a beneficial funding source since they either do not need to be paid back, in the case of grants, or are paid back at a comparatively low interest rate, in the case of loans.

Wailuku Municipal Parking Lot

A recent local example of a federal grant awarded to the County of Maui for infrastructure improvements is the $1.2 million grant provided from the United States Economic Development Administration for the design and required environmental studies for the development of the Wailuku municipal parking structure.

Disadvantages of government loans are that they rarely are capable of covering the full cost of a CIP project and there exists a large amount of competition for these limited funds. State and Federal grants and loans are discussed in more detail in the infrastructure systems sections of this study.

[16] *Common Questions and Answers about PPPs.* New Zealand Council for Infrastructure Development. Available at www.nzcid.org.nz/publicprivatepartnerships.html (last visited 6 July 2010).

III. Fire

Level-of-Service Standards

Fire service performance is typically measured by one, or a combination, of the following three general types of standards: 1) response time/station location; 2) staffing level; and 3) fire flow. These LOS standards are further discussed below:

Response Time / Station Location: A quick response time is critical to fire fighting in order to minimize damage to property and prevent injury and loss of life. Response time measures the time from when a dispatch call is first received to the time of arrival of the first fire fighting company. Response time to a particular locale is dependent upon local traffic conditions, the density of the given area and its proximity to the nearest fire station. Generally, response times are shorter in higher density commercial and residential areas and longer in more dispersed rural and agricultural areas. Response time and station location are the most frequently used and most reliable standard for measuring adequacy of fire protection coverage.

Staffing Level: Although less frequently used as a fire service performance standard, staffing level is also an important component of providing adequate fire protection services. This is a more complex measure due to several factors including varying staffing needs depending on level of training, available equipment and efficiency scheduling. Staffing levels tend to vary with jurisdiction size.

Fire Flow: An adequate water supply, rate and pressure are all necessary for fire suppression. Fire flow is the measure of gallons of water per minute that the water supply is capable of delivering.

For the purposes of CIP planning, response time and station location are the most appropriate LOS standards to evaluate fire service performance and are therefore the standards utilized in this LOS analysis.

The Maui County Department of Fire and Public Safety does not have established LOS standards to evaluate service performance and guide facility planning. In the *County of Maui Public Facilities Assessment Update* (March 2007) prepared by R.M. Towill Corporation for the County of Maui Planning Department, LOS standards are used to evaluate the adequacy of fire protection coverage. These standards were derived from *Urban Planning and Design Criteria* by Dechiara and Koppelman (1982), and for the purposes of this LOS analysis are considered the Department's desired LOS standards. Table 2 provides a comparison of fire protection LOS Standards for Maui County, other Hawaii counties and regions on the mainland.

Table 2: Fire Protection LOS Standards

Community	Response Time (minutes)			Station Distance (miles)		
	High-Value	Residential	Low Den.	High-Value	Residential	Low Den.
Maui County, HI	7	7	n/a	1.5(EC) 2(LC)	2(EC) 3(LC)	3(EC) 5(LC)
Honolulu (C&C), HI	Not Available			Not Available		
Hawaii County, HI	5			N/A		
Kauai County, HI	Not Available			Not Available		
Bremerton, WA	5			N/A		
Douglas County, CO	6		12	5		10
Spotsylvania County, VA	6 for 90% of calls		8 for 90% of calls	n/a		

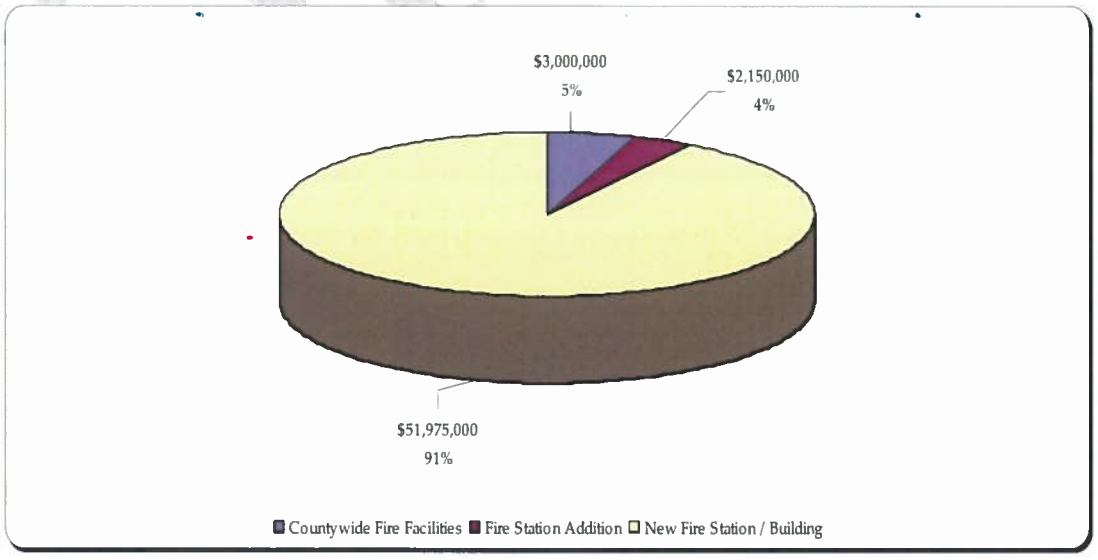
N/A = Not available
EC = Engine Company
LC = Ladder Company

Funding Needs

The following information on future fire infrastructure needs and corresponding capital costs were derived from the Department of Fire and Public Safety's FY2010 CIP budget and six-year CIP plan for fiscal years 2011 through 2016. Implementation costs provided below are estimates and have not been adjusted for inflation. In conversations with the Department, it was stated that the Department's six-year CIP request would likely exceed available funding and that many projects would therefore be funded over a longer time horizon.

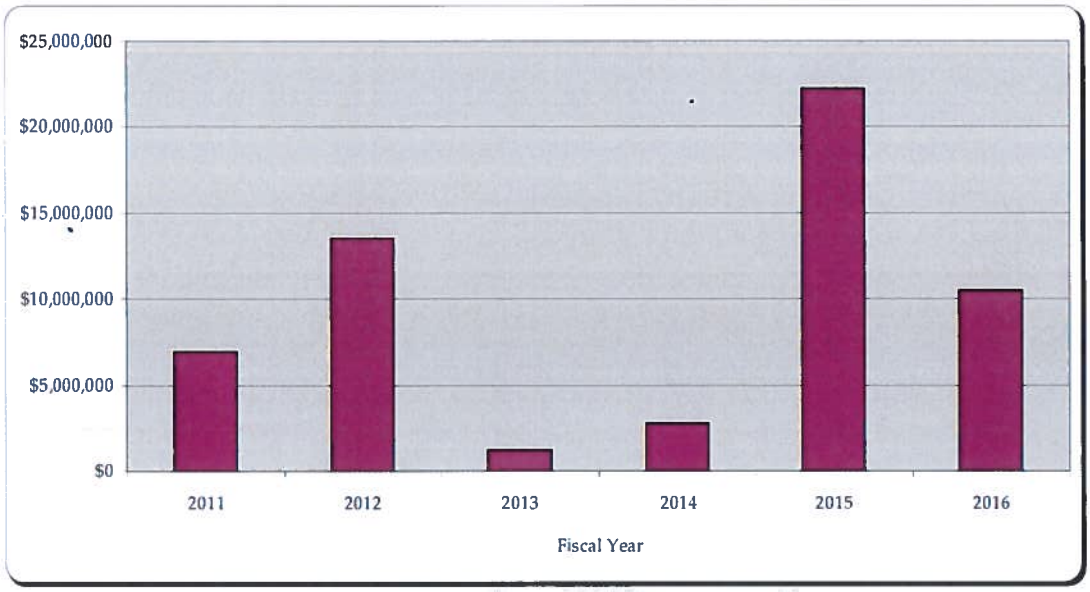
The Department's total six-year CIP budget is approximately $57.1 million. Major projected capital costs for the Department will be the construction of new fire stations to improve services and increase the Department's capacity to service expanding urban areas. Figure 2 breaks-down the Department's six-year CIP budget by project type, with the development of new fire stations accounting for over 90% of the funding needs.

Figure 2: Fire CIP Costs by Project Type FY 2011 - 2016



Funds are budgeted for a new fire station or building each fiscal year to FY 2016 except for FY 2013 which is the smallest budget year (see Figure 3). FY 2015 is the largest budget year at $22.2 million accounting for approximately 39% of the total six-year CIP budget.

Figure 3: Fire CIP Expenditures FY 2011 - 2016



Revenue Cost Analysis

The following analysis of the Fire Department's anticipated CIP costs and projected revenues indicates that the Department will likely experience a funding gap of approximately $43.6 million to FY 2015.

Fire CIP revenue forecasts to FY 2015 were derived from the previous CIP budget data for fiscal years 2004 through 2010. Revenue projections were calculated by averaging revenues from those years by source and adding five percent each year. Calculating future revenues in this manner makes major assumptions that existing funding sources will continue into the future at or near their current level. While this is a legitimate assumption considering past funding trends, no guarantee can be made of funding or sources of funding. As with estimated future CIP costs, the following revenue projections are in 2010 dollars and do not account for inflation.

Table 3: Fire CIP Revenue Cost Analysis FY 2011 - 2015

Projected Revenues	2011	2012	2013	2014	2015	Total
General Fund	$442,500	$464,625	$487,856	$512,249	$537,862	$2,445,092
G.O. Bonds	$112,500	$118,125	$124,031	$130,233	$136,744	$621,634
Grant Revenue	$0	$0	$0	$0	$0	$0
Total Revenues	$555,000	$582,750	$611,888	$642,482	$674,606	$3,066,725
CIP Need	$6,895,000	$13,480,000	$1,250,000	$2,800,000	$22,200,000	$46,625,000
Deficit / Surplus	-$6,340,000	-$12,897,250	-$638,113	-$2,157,518	-$21,525,394	-$43,558,275

Table 3 displays the Department's CIP budget request and revenues to 2015 and calculates the resulting surplus or deficit (also see Figure 5). Each fiscal year is projected to result in an imbalance ranging from a low of approximately $640,000 in FY 2013 to a high of $21.5 million in FY 2015.

Figure 5 shows the relative size of the Fire Department's CIP request, total CIP need for the six systems addressed in this study, and projected CIP revenues for a five-year period. To balance revenues and expenditures, the County will need to curtail expenditures, find ways to increase revenues, or do both.

Figure 4: Fire Projected CIP Revenues vs. CIP Need FY 2011 - 2015

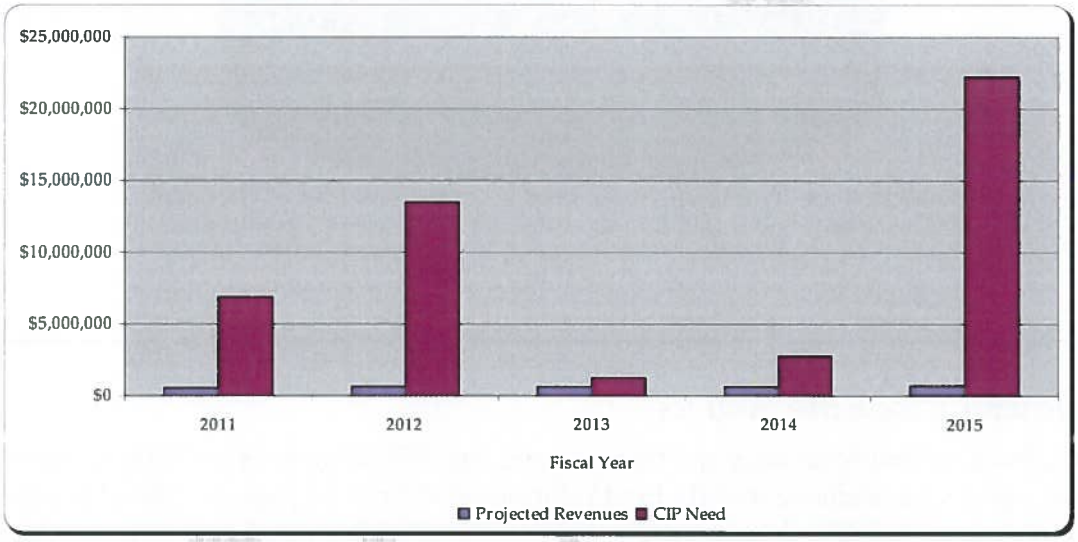
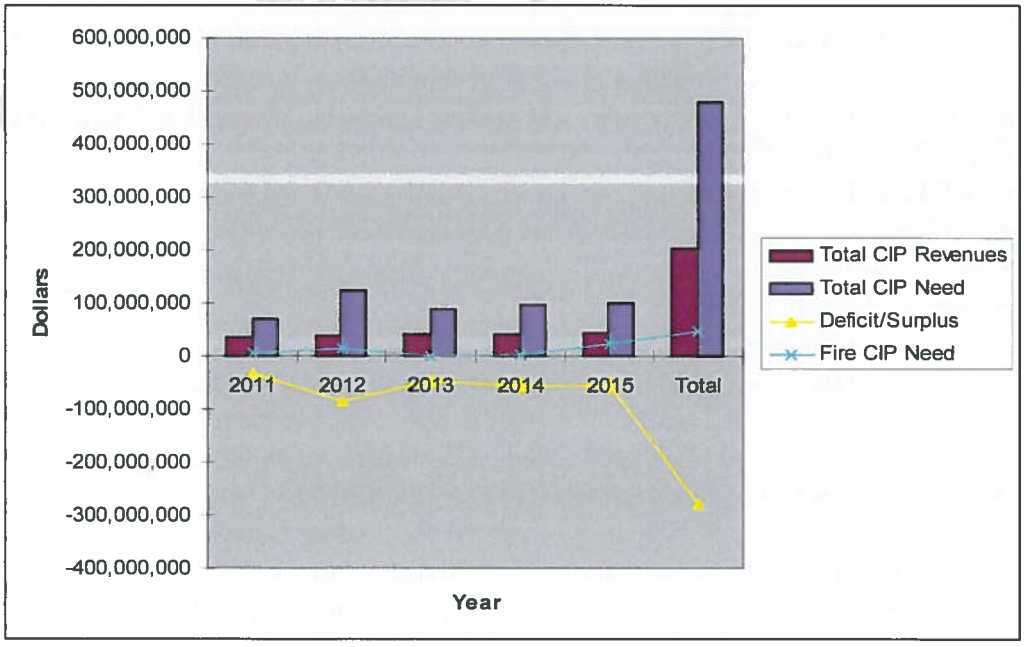
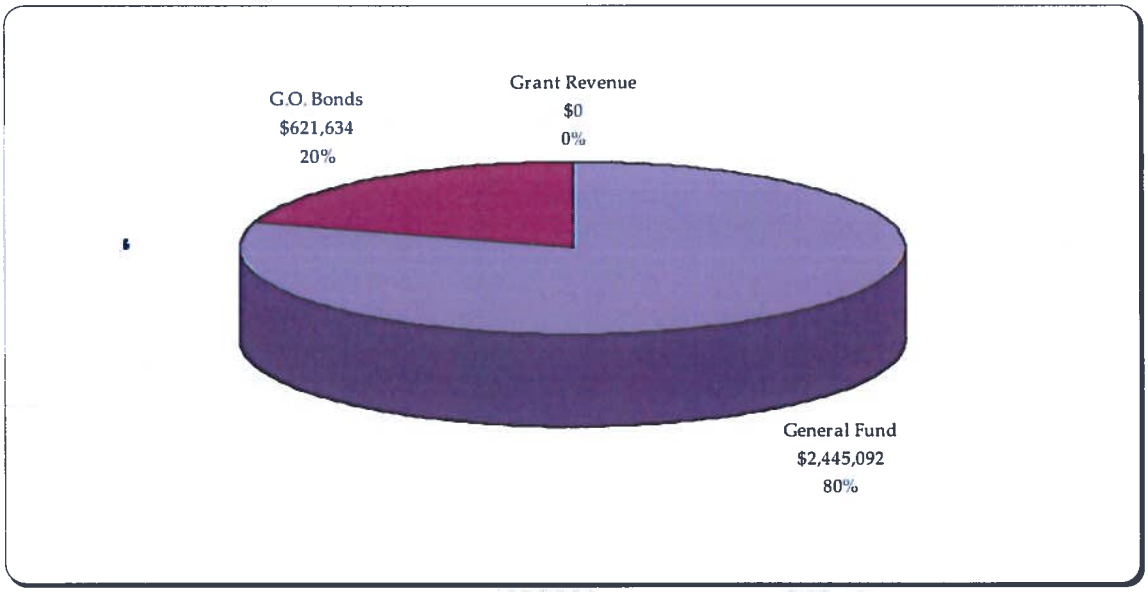


Figure 5: CIP Needs & Resources vs CIP Need for Fire Facilities



Revenue projections indicate that the County General Fund will continue to fund the large majority of fire CIP projects into the future.

Figure 6: Total Projected Fire Revenues FY 2011 - 2015



Supplemental Revenue Sources

As the above revenue/cost analysis demonstrates, the Fire Department's current sources of revenue will not be adequate to fully fund future needed fire CIP projects. The Department's CIP funding strategy will need to be strengthened by augmenting current revenue sources with alternative financing mechanisms in order to address the projected total $43.6 million funding gap for fiscal years 2011 to 2015. Some of the following funding sources are currently available while others would require enabling legislation or voter approval before they could be utilized.

As discussed in Section II of this study, alternative financing mechanisms appropriate for funding fire CIP projects include:

- special district financing,
- impact fees,
- real estate excise tax,
- strategic budget allocations,
- public-private partnerships, and
- Federal and State grants and loans (see: Section II, Supplemental Revenue Sources).

The following analysis looks at the potential revenue impact of three strategies: Community Facilities Districts; Impact Fees; and Real Estate Excise Tax (REET).

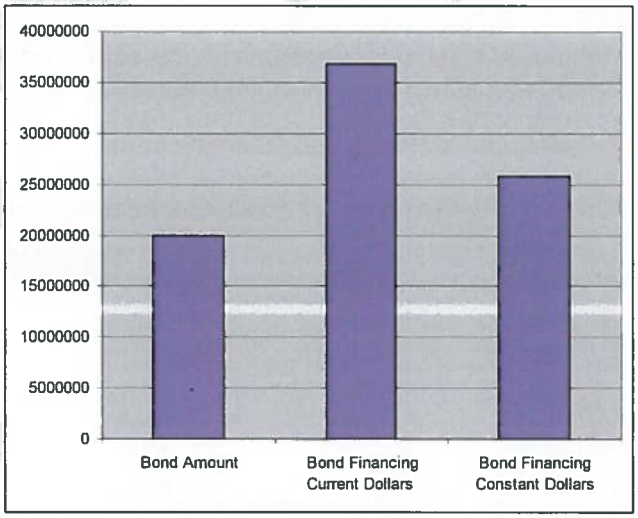
Community Facility Districts: CFDs could be established in existing areas needing major infrastructure improvements as well as areas planned for future growth to fund fire related

capital projects within these districts. A tax would be assessed yearly on all properties within the established district benefiting from the fire improvements. Large ticket items identified on the Department's six-year CIP, such as the Waikapu fire station and Makena fire station, could be potential candidates for funding through special taxing district or benefit assessment district revenues.

Example 1. In this example, the County establishes a Community Facilities District (CFD) encompassing Wailuku-Kahului and Kihei-Makena to pay a portion of capital costs to develop new fire stations in Waikapu and Makena. The CFD issues bonds yielding $20 million for improvement costs at 4.25% and a cost of issuance of $400,000. Assuming the bonds have a 30-year term, the District's property owners would be required to pay $1,227,888 per year in principal and interest. If each residential, hotel and commercial/industrial[17] unit were subject to a flat charge[18] to pay for the cost of bond financing, then each unit would be required to pay about $19 per year for 30 years to retire the bonds.[19]

The cost to the district over 30-years for bond financing would be about $36.8 million for each $20 million borrowed - $20 million for paying the principal and 16.8 million for interest. However, since the repayment occurs over a 30-year period, the cost after adjusting for inflation, assumed to be 3% per year, is significantly less, about $1.3 million for each $1 million borrowed.

Figure 7: The Cost of 30-year Bond Financing for a $20 Million Project



[17]Commercial/Industrial "unit" is assumed to be 1,000 SF.

[18] The tax could be adjusted based on the number of allocated calls by land use. For example, the *Maui Island Impact Fee Study* calculates "Single-Family Equivalents" (SFE) to account for these differences. SFEs for fire range from 0.49 for industrial to 1.47 for commercial, with single-family detached/duplex being 1.0. This means that for every call made by a single-family residence for fire service, there will be 0.47 calls per industrial unit and 1.47 calls per commercial unit.

[19] For existing single-family detached/duplex, multi-family, hotel/motel/resort, commercial, and industrial units see Table 38, Maui Island Impact Fee Study, Duncan Associates and Chris Hart & Partners, August 2010.

Impact Fees: An impact fee is a one-time fee payment by new development for off-site capital facilities needed by the new development. Duncan Associates prepared *The Maui Island Impact Fee Study* (August 2010) for the County of Maui which calculates the maximum impact fees that could be assessed by the County on new development on the island of Maui to cover the costs for wastewater, solid waste, fire and police facilities. For fire, the study divides the island into three service areas based on the existing Community Plan district boundaries: a West service area that includes all of the West Maui Community Plan district; an East service area for the Hana Community Plan district; and a Central service area that includes Wailuku-Kahului, Kihei-Makena, Paia-Haiku and Makawao-Pukalani-Kula.

The study provides an impact fees schedule based on land use type: single-family; multi-family; hotel, motel and resort; retail and commercial; office; industrial and manufacturing; warehouse; mini-warehouse; and public and institutional. The fee schedule also provides the option of basing the residential fees on a flat rate per housing type or by the size of the housing unit. Potential impact fees for residential (flat rate) are provided in Table 4. For a complete potential fire impact fee schedule and description of methodology and analysis see the *Maui Island Impact Fee Study*.

Table 4: Potential Fire Impact Fee Schedule for Residential (flat rate)

	Fee per Unit		
Land Use Type	**East**	**West**	**Central**
Single-Family	$1,897	$143	$335
Multi-Family	$1,157	$87	$204

Assuming that the County adopts the impact fees at the maximum rates calculated in the *Maui Island Impact Fee Study*, estimated annual fire impact fee revenues would be $454,085 as shown in Table 5.

Table 5: Estimated Annual Fire Impact Fee Revenues

West Maui Land Use	**Units**	**New Units**	**Fee/Unit**	**Revenue**
Single-Family (All)	Dwelling	166	$143	$23,738
Multi-Family (All)	Dwelling	104	$87	$9,048
Hotel/Motel	Unit/Room	37	$83	$3,071
Commercial	1,000 sq. ft.	3	$213	$639
Office	1,000 sq. ft.	1	$235	$235
Industrial	1,000 sq. ft.	3	$73	$219
Annual West Maui Fire Revenue, 2011-2015				$36,950
Central Maui				
Single Family (All)	Dwelling	624	$335	$209,040
Multi-Family (All)	Dwelling	384	$204	$78,336
Hotel/Motel	Unit/Room	125	$194	$24,250
Commercial	1,000 sq. ft.	77	$499	$38,423
Office	1,000 sq. ft.	37	$550	$20,350
Industrial	1,000 sq. ft.	46	$171	$7,866

Annual Central Fire Revenue, 2011-2015				$378,265
Hana				
Single-Family (All)	Dwelling	19	$1,897	$36,043
Multi-Family (All)	Dwelling	0	$1,157	$0
Hotel/Motel	Unit/Room	2	$1,100	$0
Commercial	1,000 sq. ft.	1	$2,827	$2,827
Office	1,000 sq. ft.	0	$3,111	$0
Industrial	1,000 sq. ft.	0	$967	$
Annual Hana Fire Revenue, 2011-2015				$38,870
Estimated Annual Total Fire Impact Fee Revenue, 2011-2015				**$454,085**

Real Estate Excise Tax (REET): Several mainland communities currently use REET to help fund various types of capital projects including fire facilities. Set-asides typically range from one-quarter percent to one percent. Assuming Maui County had such a program, in 2009 approximately $2.3 million (1/4%) to $12 million (1%) could have been generated to fund fire projects based on the value of single, multi-family and residential land transactions that year. REET should be considered as a potential funding source to support fire CIP projects.

Revenue/Expenditure Analysis with Supplemental Revenue Sources

Table 6: Fire Revenue/Expenditure Analysis with Supplemental Revenue Sources

Projected Revenues	2011	2012	2013	2014	2015	Total
General Fund	$442,500	$464,625	$487,856	$512,249	$537,862	$2,445,092
G.O. Bonds	$112,500	$118,125	$124,031	$130,233	$136,744	$621,634
Grant Revenue	$0	$0	$0	$0	$0	$0
Supplemental Revenue Sources:						
Impact Fees	$454,085	$454,085	$454,085	$454,085	$454,085	$2,270,425
Community Facilities District	$0	$0	$0	$0	$20,000,000	$20,000,000
REET[20]	$3,299,248	$3,464,210	$3,637,421	$3,819,292	$4,010,256	$18,230,427
Total Revenues	$4,308,333	$4,501,045	$4,703,393	$4,915,859	$25,138,947	$43,567,577
CIP Need	$6,895,000	$13,480,000	$1,250,000	$2,800,000	$22,200,000	$46,625,000
Deficit / Surplus	($2,586,667)	($8,978,955)	$3,453,393	$2,115,859	$2,938,947	($3,057,423)

[20] Based on a ¼ percent rate on the value of land transactions for single, multi-family, and residential land transactions. Revenues are increased each year at a 5% escalator from a 2009 base year.

By adopting impact fees, establishing a community facilities district, and adopting REET the County can reduce a potential $43.56 million shortfall to just $3.06 million.

Supplemental Revenue Sources	
Impact Fees	Adopting impact fees at the maximum rates generates approximately $2,270,425 between 2011 and 2015.
Community Facilities District	The establishment of a community facilities district generates $20 million in supplemental revenue for fire facilities.
REET	Setting aside ¼ percent of the value of real estate transactions (single, multi-family, and land) generates approximately $18.23 million between 2011 and 2015.

IV. Police

Level-of-Service Standards

A police department's effectiveness is a function of a number of factors including the number of police officers, the area that they can cover, resources available, response time, and the frequency of calls distributed within an area. As a result, criteria for planning new police facilities can be complex and difficult to quantify. Traditional standards for measuring a police force's level of service include response time, crime rates and staffing level. These LOS standards are further discussed below:

Response Time: Response time is the amount of lapsed time between when a call is received and when the first officer arrives on the scene. Although a quick response is critical for some types of police calls, response time is not considered a very reliable measure of overall police performance nor an appropriate standard for determining police facility needs.

Crime Rates: Crime rates are often considered the most obvious indicator of police performance. However crime rates only address one aspect of police duties and do not take into account other important police functions such as medical emergencies, traffic control, or public safety programs.

Staffing Level: Police staffing levels are typically represented as the number of police officers and total police employees per 1,000 population. There is no established ideal staffing level for local police departments. Staffing needs vary depending on the size of the city, the geographic region, city type, as well as other factors such as demographics, socio-economic characteristics and climate. However, staffing level is the most commonly used standard for determining a police department's existing level of service and planning for future facility needs.

The Maui County Police Department does not have established LOS standards to evaluate service performance or guide facility planning. In the *County of Maui Public Facilities Assessment Update* (March 2007) prepared by R.M. Towill Corporation for the County of Maui Planning Department, LOS standards are used to evaluate future police needs. The report notes that Maui County's crime rates and vehicle accident rates have decreased in the past decade indicating that existing crime levels represent a satisfactory level of police service. Therefore the report uses historical average ratio of police officers per head of defacto population as the standard of service. Table 7 provides a comparison of police LOS standards for Maui County, other Hawaii counties and communities on the mainland.

Table 7: Police LOS Standards

Community	Officers / 1,000 Population
Maui County, HI	1.96
Honolulu (C&C), HI	2.30
Hawaii County, HI	2.50
Kauai County, HI	2.50
Bremerton, WA	1.80
Spotsylvania County, VA	0.66

The R.M. Towill study concludes that based on the established staffing standards and future population projections, Maui County will need an additional 215 officers by 2030 which represents an increase of approximately 70 percent. Translating officer needs into facility needs, the report calls for a new police station in Kihei, expansion of the existing Lahaina Station and either expansion of the existing Wailuku Station or new substations in the Paia-Haiku region and Upcountry.

Funding Needs

The following information on future police infrastructure needs and corresponding capital costs were derived from the Police Department's six-year CIP plan for fiscal years 2011 through 2016. Implementation costs provided below are estimates and have not been adjusted for inflation. In conversations with the Department, it was acknowledged that the six-year CIP projects proposed would likely exceed available funding and that many projects would therefore be funded over a longer time horizon or revenues would need to be increased.

The Police Department's total estimated six-year CIP costs are approximately $88.4 million. Figure 8 illustrates the Department's estimated annual CIP budgets to FY 2016.

Figure 8: Police CIP Expenditures FY 2011 - 2016

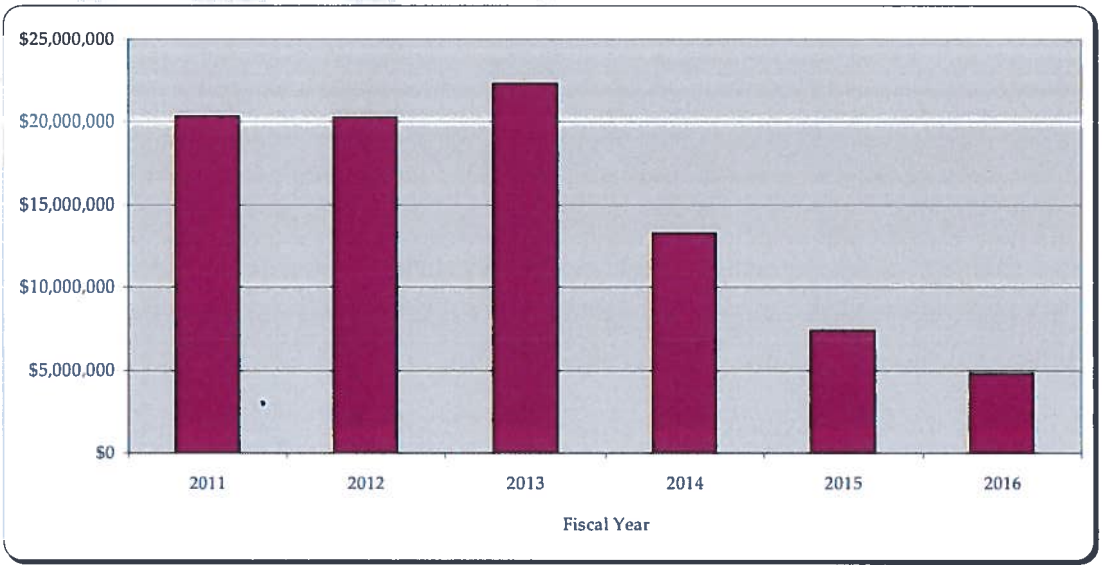
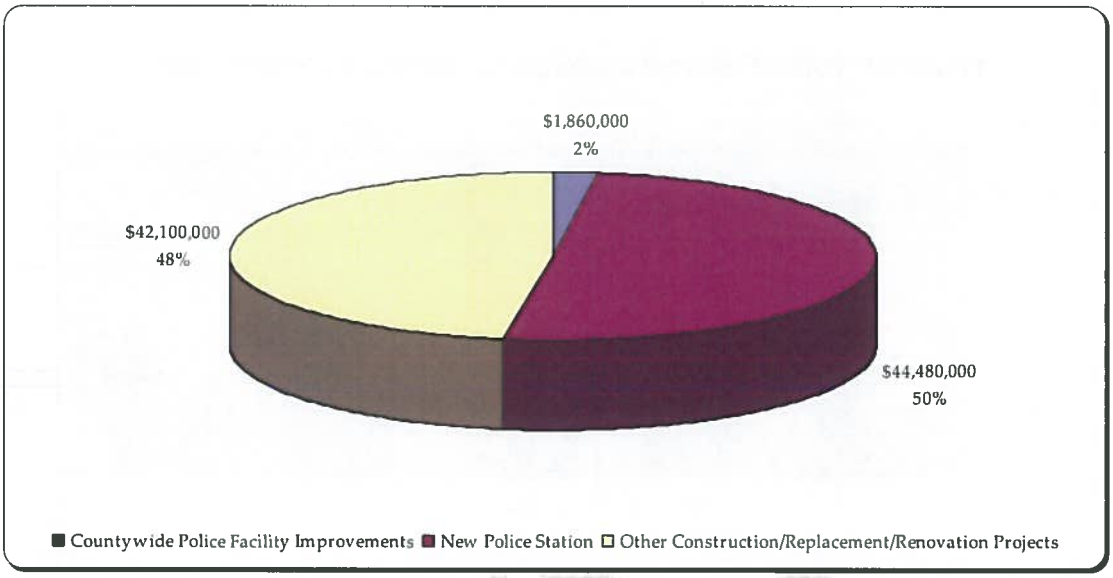


Figure 9 breaks down the Police Department's six-year CIP costs by project type. The construction of new police stations accounts for 50% of the Department's six-year CIP costs at approximately $44.5 million.

Figure 9: Police CIP Expenditures by Project Type FY 2011 - 2016



Revenue Cost Analysis

The following analysis of the Police Department's anticipated CIP needs and projected revenues indicates that the Department will likely experience a funding gap of approximately $56 million to FY 2015.

Police CIP revenue forecasts to FY 2015 were derived from the previous CIP budget data for fiscal years 2004 through 2010. Revenue projections were calculated by averaging revenues from those years by source and adding five percent each year. Calculating future revenues in this manner makes major assumptions that existing funding sources will continue into the future at or near their current level. While this is a legitimate assumption considering past funding trends, no guarantee can be made of funding or sources of funding. As with estimated future CIP costs, the following revenue projections are in 2010 dollars and do not account for inflation.

Table 8: Police CIP Revenue Cost Analysis FY 2011 - 2015

Projected Revenues	2011	2012	2013	2014	2015	Total
General Fund	$1,439,250	$1,511,213	$1,586,773	$1,666,112	$1,749,417	$7,952,765
G.O. Bonds	$3,195,000	$3,354,750	$3,522,488	$3,698,612	$3,883,542	$17,654,392
Lapsed Bond Proceeds	$325,500	$341,775	$358,864	$376,807	$395,647	$1,798,593
Grant Revenue	$0	$0	$0	$0	$0	$0
Total Revenues	$4,959,750	$5,207,738	$5,468,124	$5,741,531	$6,028,607	$27,405,750
CIP Need/Request	$20,340,000	$20,300,000	$22,300,000	$13,300,000	$7,400,000	$83,640,000
Deficit / Surplus	-$15,380,250	-$15,092,263	-$16,831,876	-$7,558,469	-$1,371,393	-$56,234,250

Table 8 displays projected CIP costs and revenues to 2015 and calculates the resulting surplus or deficit (also see 10). According to the revenue cost analysis, all five years are projected to result in a revenue shortfall. The projected imbalance ranges from a low in FY 2015 of approximately $1.4 million to a high in FY 2013 of approximately $16.8 million.

Figure 10: Police Projected Revenues vs. CIP Costs FY 2011 - 2015

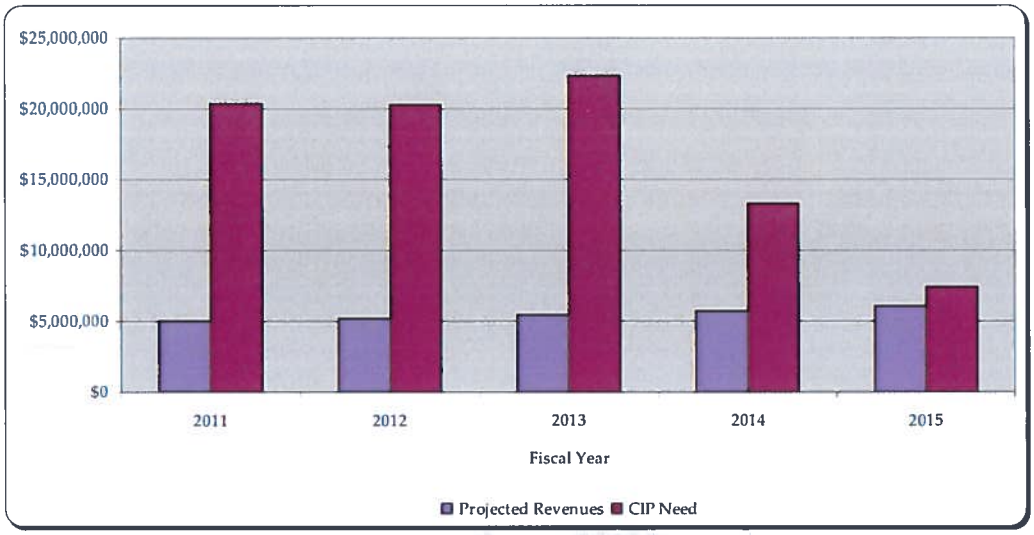
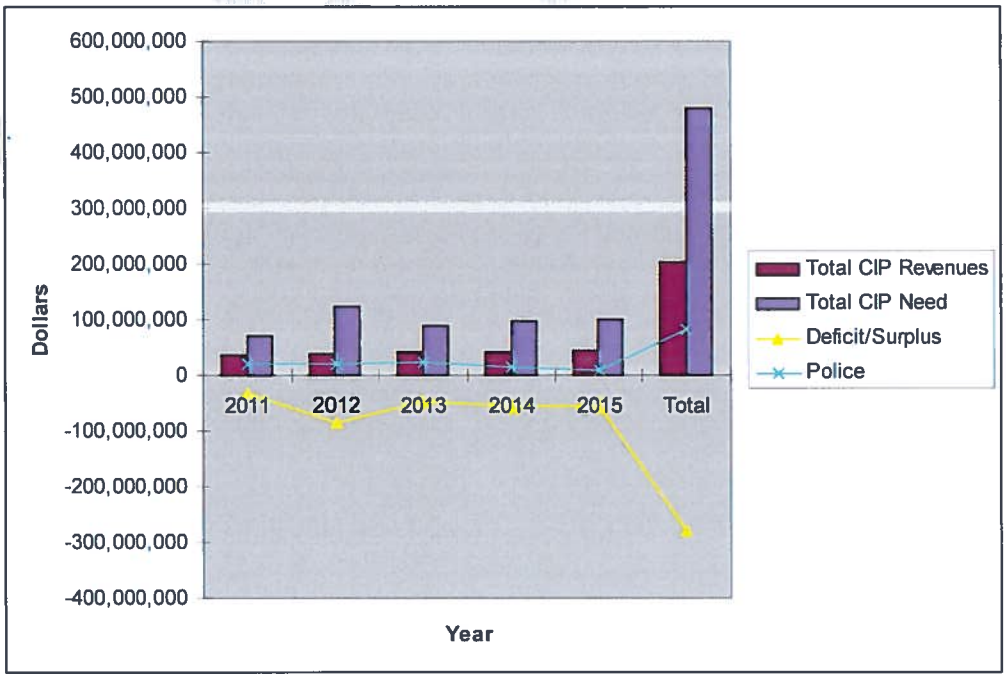


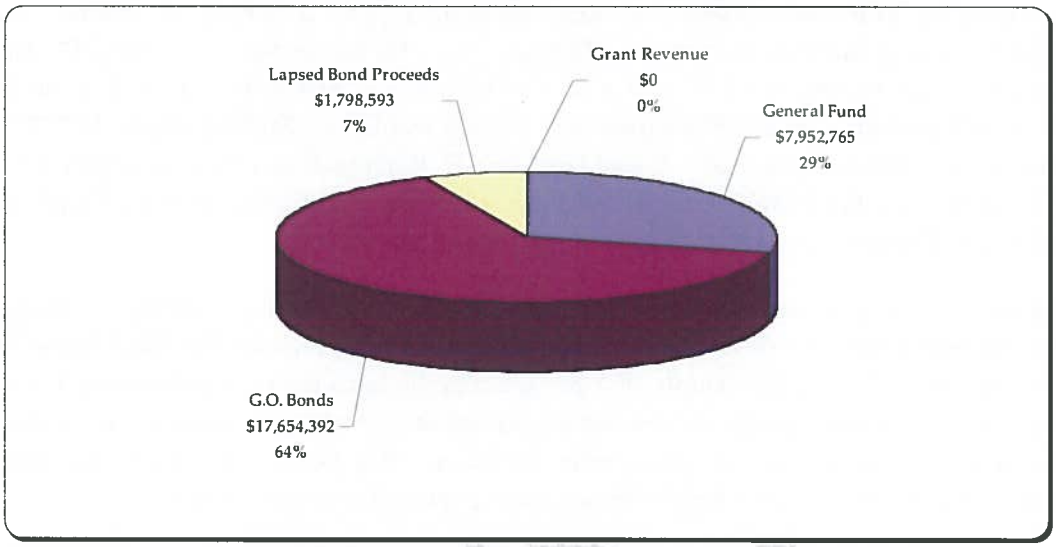
Figure 11 shows the relative size of the Police Department's CIP request, total CIP request for the six systems addressed in this study, and projected CIP revenues for a five-year period.

Figure 11: CIP Needs & Resources vs CIP Need Police Facilities



General obligation bonds are projected to remain the primary funding source for future CIP projects. Cash from the County's General Fund is also expected to continue to be an important component of funding Police capital improvements in the future (see Figure 11).

Figure 12: Projected Police Revenues by Funding Source FY 2011 - 2015



Supplemental Revenue Sources

As the above revenue/cost analysis demonstrates, the Police Department's current sources of revenue will not be adequate to fully fund future needed police CIP projects. The Department's CIP funding strategy will need to be strengthened by augmenting current revenue sources with alternative financing mechanisms in order to address the projected total $56.2 million funding gap for fiscal years 2011 to 2015. Some of the following funding sources are currently available while others would require enabling legislation or voter approval before they could be utilized.

As discussed in Section II of this study, alternative financing mechanisms appropriate for funding police CIP projects include:

- special district financing,
- impact fees,
- real estate excise tax,
- strategic budget allocations,
- public-private partnerships, and
- Federal and State grants and loans (see: Section II, Supplemental Revenue Sources).

The following analysis looks at the potential revenue impact of three strategies: Community Facilities Districts; Impact Fees; and Real Estate Excise Tax (REET).

Community Facility Districts: CFDs could be established in existing areas needing major facility improvements or in areas planned for future growth where substantial investment into

police facilities is required. A tax would be assessed yearly on all properties within the established district benefiting from the police improvements. Large ticket items identified on the Department's six-year CIP, such as the South Maui police station and Upcountry police station, could be potential candidates for funding through CFD revenues.

> ***Example 1.*** In this example, the County establishes a Community Facilities District (CFD) encompassing Wailuku-Kahului and Kihei-Makena to pay a portion of capital costs to develop a new police station in Kihei-Makena. The CFD issues bonds yielding $20 million for improvement costs at 4.25% and a cost of issuance of $400,000. Assuming the bonds have a 30-year term, the District's property owners would be required to pay $1,227,888 in principal and interest per year. If each residential, hotel and commercial/industrial[21] unit were subject to a flat charge[22] to pay for the cost of bond financing, then each unit would need to pay about $19 per year for 30 years to retire the bonds.[23]

Impact Fees: An impact fee is a one-time fee payment by new development for off-site capital facilities needed by the new development. Duncan Associates prepared *The Maui Island Impact Fee Study* (August 2010) for the County of Maui which calculates the maximum impact fees that could be assessed by the County on new development on the island of Maui to cover the costs for wastewater, solid waste, fire and police facilities. For police, the study recommends assessing impact fees based on a single service area covering the whole island.

The study provides a potential impact fees schedule based on land use type: single-family; multi-family; hotel, motel and resort; retail and commercial; office; industrial and manufacturing; warehouse; mini-warehouse; and public and institutional. The fee schedule also provides the option of basing the residential fees on a flat rate per housing type or by the size of the housing unit. Potential impact fees for residential (flat rate) are as follows: single-family $656 per unit; and multi-family $534 per unit. Assuming that the County adopts the impact fees at the maximum rates calculated in *The Maui Island Impact Fee Study*, estimated annual police impact fee revenues would be $899,370 as shown in Table 9.

Table 9: Estimated Annual Police Impact Fee Revenues, FY 2011 - 2015

Land Use	Units	New Units	Fee/Unit	Revenue
Single-Family (All)	Dwelling	809	$656	$530,704
Multi-Family (All)	Dwelling	488	$534	$260,592
Hotel/Motel	Unit/Room	162	$285	$46,170
Commercial	1,000 sq. ft	81	$602	$48,762
Office	1,000 sq. ft.	39	$244	$9,516
Industrial	1,000 sq. ft.	49	$74	$3,626
Annual Police Revenue, 2011-2015				**$899,370**

[21] Commercial/Industrial "unit" is assumed to be 1,000 SF.

[22] The tax could be adjusted based by land use based on allocated calls. For example, Table 38, Maui Island Impact Fee Study, Duncan Associates and Chris Hart & Partners, August 2010, show that Single-Family Equivalents per unit ranges from 0.49 for industrial to 1.47 for commercial, with single-family detached/duplex being 1.0.

[23] For existing single-family detached/duplex, multi-family, hotel/motel/resort, commercial, and industrial units see Table 38, Maui Island Impact Fee Study, Duncan Associates and Chris Hart & Partners, August 2010.

Real Estate Excise Tax (REET): Several mainland communities currently use REET to help fund various types of capital projects including police facilities. Set-asides typically range from one-quarter percent to one percent. Assuming Maui County had such a program, in 2009 approximately $2.3 million (1/4%) to $12 million (1%) could have been generated to fund police projects based on the value of residential land transactions that year. REET should be considered as a potential funding source to support police CIP projects.

Revenue/Expenditure Analysis with Supplemental Revenue Sources

Table 10: Police Revenue/Expenditure Analysis with Supplemental Revenue Sources

Projected Revenues	2011	2012	2013	2014	2015	Total
General Fund	$1,439,250	$1,511,213	$1,586,773	$1,666,112	$1,749,417	$7,952,765
G.O. Bonds	$3,195,000	$3,354,750	$3,522,488	$3,698,612	$3,883,542	$17,654,392
Lapsed Bond Proceeds	$325,500	$341,775	$358,864	$376,807	$395,647	$1,798,593
Grant Revenue	$0	$0	$0	$0	$0	$0
Supplemental Revenue Sources:						
Community Facilities District	$0	$20,000,000	$0	$0	$0	$20,000,000
Impact Fees	$899,370	$899,370	$899,370	$899,370	$899,370	$4,496,850
REET[24]	$3,299,248	$3,464,210	$3,637,421	$3,819,292	$4,010,256	$18,230,427
Total Revenues	$9,158,368	$29,571,318	$10,004,916	$10,460,193	$10,938,232	$70,133,027
CIP Need	$20,340,000	$20,300,000	$22,300,000	$13,300,000	$7,400,000	$83,640,000
Deficit / Surplus	($11,181,632)	$9,271,318	($12,295,084)	($2,839,807)	$3,538,232	($13,506,973)

By adopting impact fees, establishing a community facilities district, and adopting REET the County can reduce a potential $56.23 million shortfall a shortfall of just $13.5 million.

Supplemental Revenue Sources	
Impact Fees	Adopting impact fees at the maximum rates generates approximately $4.5 million between 2011 and 2015.
Community Facilities District	The establishment of a community facilities district generates $20 million in supplemental revenue for police facilities.
REET	Setting aside ¼ percent of the value of real estate transactions (single, multi-family, and land) generates approximately $18.23 million between 2011 and 2015.

[24] Based on a ¼ percent rate on the value of land transactions for single, multi-family, and residential land transactions. Revenues are increased each year at a 5% escalator from a 2009 base year.

V. Solid Waste

Level-of-Service Standards

Level of service standards for solid waste are measured as either tons of waste per capita per year or pounds of waste per capita per day. Waste generation is generally measured as disposal plus diversion (i.e. recycling). Comparing waste generation data for communities nationwide can be difficult because many states measure waste generation and diversion differently. The EPA has developed national methodologies for waste characterization and measurement of recycling rates; however not all states follow the EPA's methodologies, including Hawaii. The primary difference between the EPA's and Hawaii's methods is the definition of what constitutes municipal solid waste (MSW). Hawaii's definition of MSW is much broader than the EPA's, including such materials as construction and demolition (C&D) debris, auto bodies, petroleum contaminated soils, and motor oil, none of which are included in the EPA's definition of MSW. C&D debris in Hawaii can account for between 20 and 40 percent of waste generation, depending on individual communities and the level of new building activity; therefore Hawaii waste generation rates appear to be much larger than if they were calculated using the EPA's method.[25] This difference in methods is important to note when comparing Hawaii's waste generation rates to communities on the mainland.

Table 11 provides a comparison of solid waste generation rates for Maui County, other Hawaii counties and various communities on the mainland.

Table 11: Solid Waste Per Capita Generation Comparison

Community	Standard (pounds/capita/day)
Maui County, HI	14.30
Honolulu (C&C), HI	9.50
Hawaii County, HI	9.40
Kauai County, HI	10.00
Durham County, NC	6.30
Auburndale, FL	6.20
Pinellas, FL	5.81
Hernando, FL	4.75
Seminole, FL	4.20
National Average[26]	4.50

[25] Belt Collins Hawaii. July 2000. The Hawaii 2000 Plan for Integrated Solid Waste Management. Prepared for the State of Hawaii, Department of Health, Office of Solid Waste Management. Honolulu, HI.

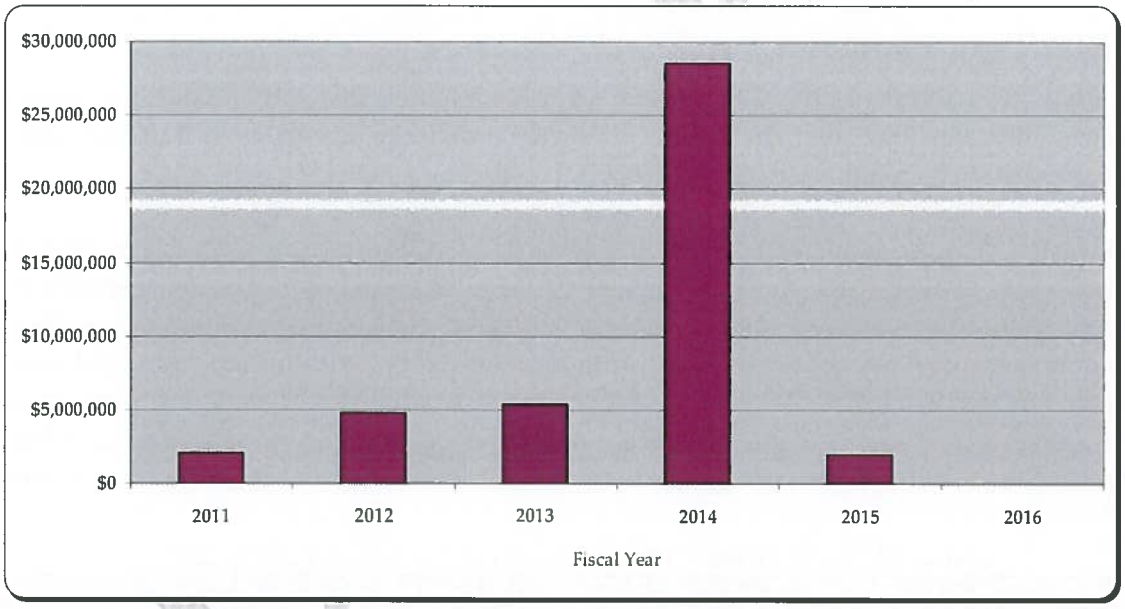
[26] Municipal Solid Waste Generation, Recycling, and Disposal in the United States: Facts and Figures for 2008, USEPA.

Funding Needs

The following information on future solid waste infrastructure needs and corresponding capital costs were derived from the Solid Waste Division's six-year CIP plan for fiscal years 2011 through 2016. Implementation costs provided below are estimates and have not been adjusted for inflation. In conversations with the Department, it was acknowledged that the six-year CIP projects proposed would likely exceed available funding and that many projects would therefore be funded over a longer time horizon or new revenues would be required.

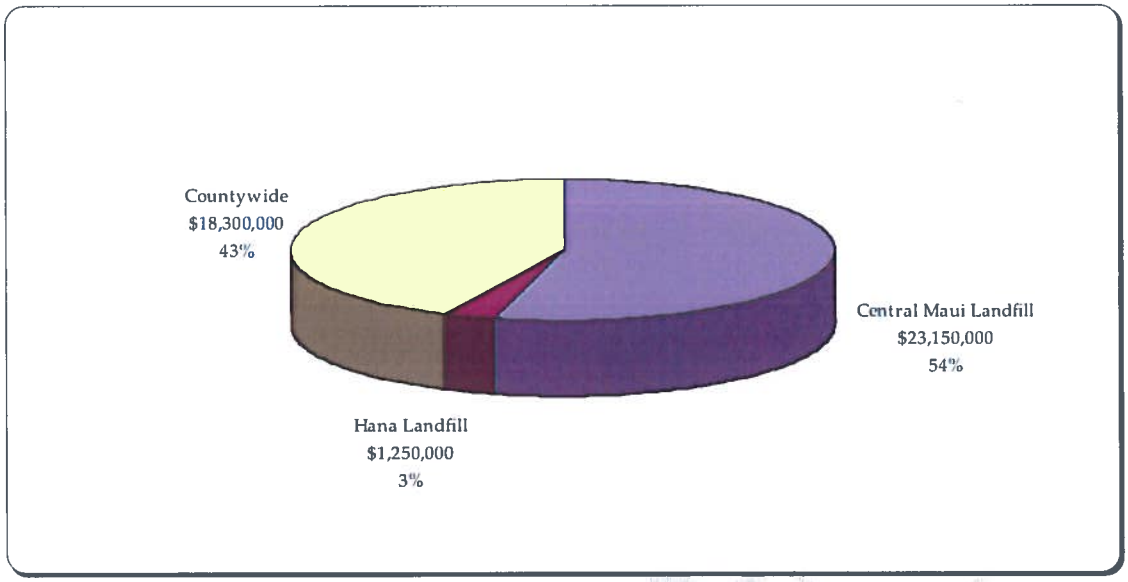
The Division's total six-year CIP budget is approximately $42.7 million. For the majority of the fiscal years, the CIP budget is near or below $5 million except for FY 2014 which is $28.5 million, accounting for approximately 67 percent of the total six-year CIP budget. No capital projects are budgeted for FY 2016 (see Figure 13). The construction of the materials recovery facility (MRF) accounts for the large FY 2014 CIP budget, totaling $28 million, with $10 million budgeted as Central Maui Landfill and $18 million budgeted as countywide.

Figure 13: Solid Waste CIP Expenditures FY 2011 - 2016



Approximately 54 % of future capital needs are anticipated at the Central Maui Landfill, only three percent at the Hana Landfill, and the remaining 43 % of CIP expenditures are attributable to countywide projects (see Figure 14).

Figure 14: Solid Waste CIP Expenditures by Project Type FY 2011 - 2016



Revenue Cost Analysis

The following analysis of the Solid Waste Division's anticipated CIP needs and projected revenues indicates that the Division will likely experience a moderate funding gap of approximately $6.8 million to fiscal year 2015.

Solid waste CIP revenue forecasts to FY 2015 were derived from the previous CIP budget data for fiscal years 2004 to 2010. Revenue projections were calculated by averaging revenues from those years by source and adding five percent each year. Calculating future revenues in this manner makes major assumptions that existing funding sources will continue into the future at or near their current level. While this is a legitimate assumption considering past funding trends, no guarantee can be made of funding or sources of funding. As with estimated future CIP costs, the following revenue projections are in 2010 dollars and do not account for inflation.

Table 12: Solid Waste CIP Revenue Cost Analysis FY 2011 - 2015

Projected Revenues	2011	2012	2013	2014	2015	Total
General Fund	$60,000	$63,000	$66,150	$69,458	$72,930	$331,538
G.O. Bonds	$5,878,500	$6,172,425	$6,481,046	$6,805,099	$7,145,353	$32,482,423
Lapsed Bond Proceeds	$86,250	$90,563	$95,091	$99,845	$104,837	$476,586
Grant Revenue	$0	$0	$0	$0	$0	$0
Solid Waste Fund	$465,000	$488,250	$512,663	$538,296	$565,210	$2,569,419
Total Revenues	$6,489,750	$6,814,238	$7,154,949	$7,512,697	$7,888,332	$35,859,965
CIP Need/Request	$2,050,000	$4,800,000	$5,350,000	$28,500,000	$2,000,000	$42,700,000
Deficit / Surplus	$4,439,750	$2,014,238	$1,804,949	-$20,987,303	$5,888,332	-$6,840,035

Table 12 displays projected CIP needs and revenues to 2015 and calculates the resulting budget surplus or deficit (also see Figure 15). Fiscal years 2011 through 2013 and 2015 are all projected

to result in surplus revenues ranging from approximately $2 million to $ 5.9 million annually. However, FY 2014 results in a shortfall of more than $20 million, equating to an overall shortfall of $6.8 million for the five year period.

Figure 15: Solid Waste Projected Revenues vs. CIP Need FY 2011 - 2015

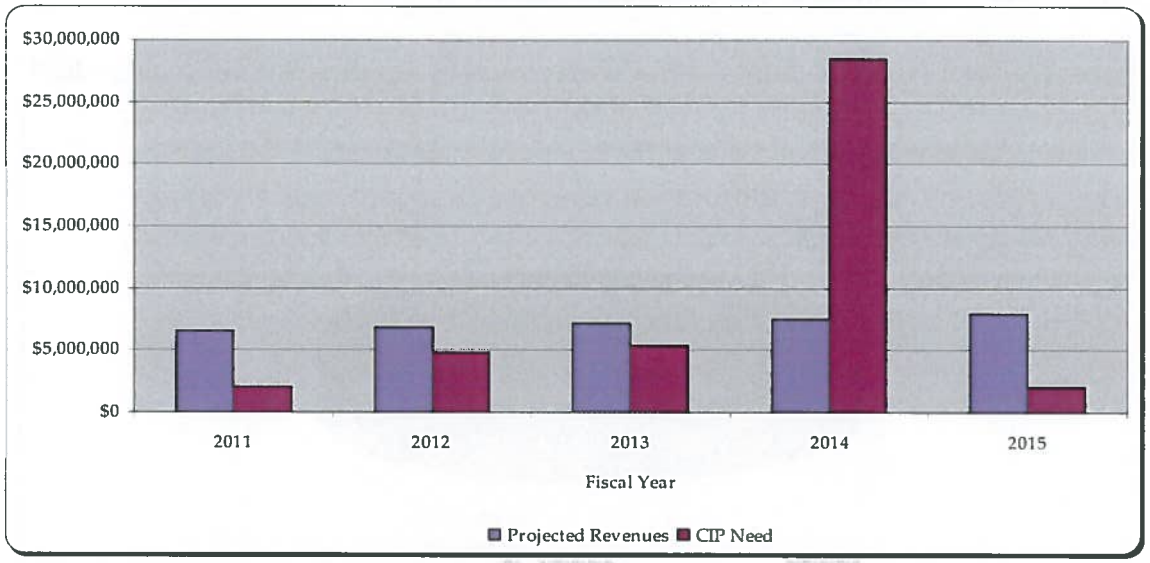


Figure 16: Solid Waste Projected Revenues vs. CIP Need FY 2011 - 2015

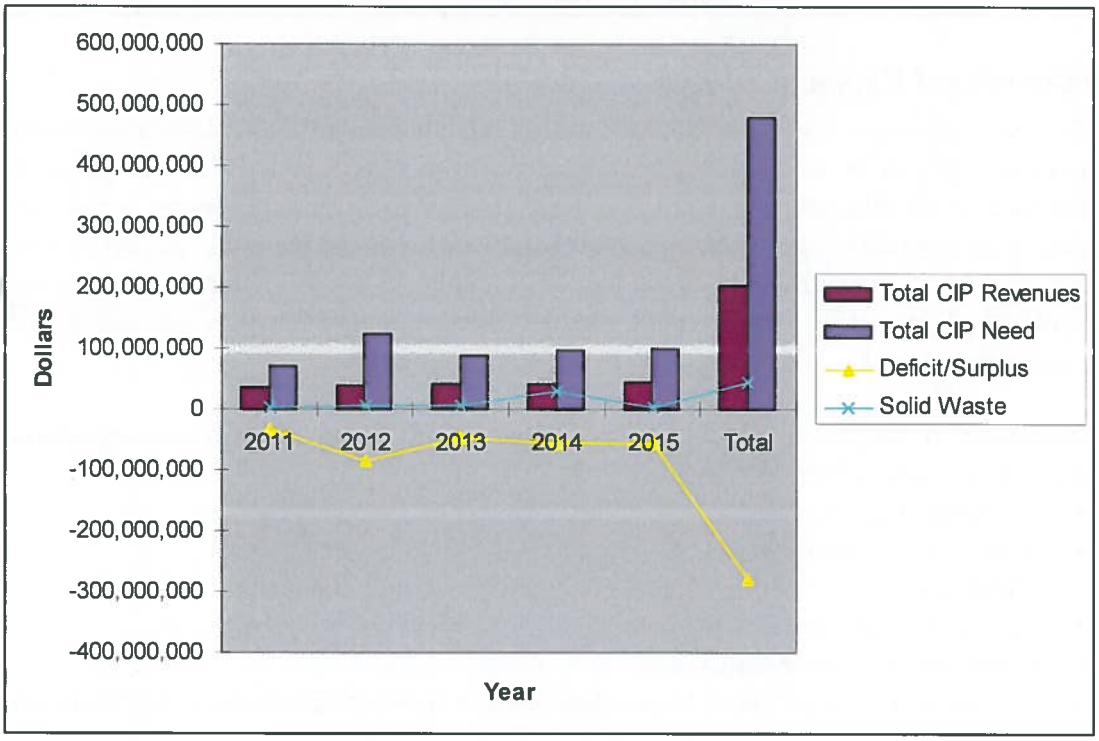
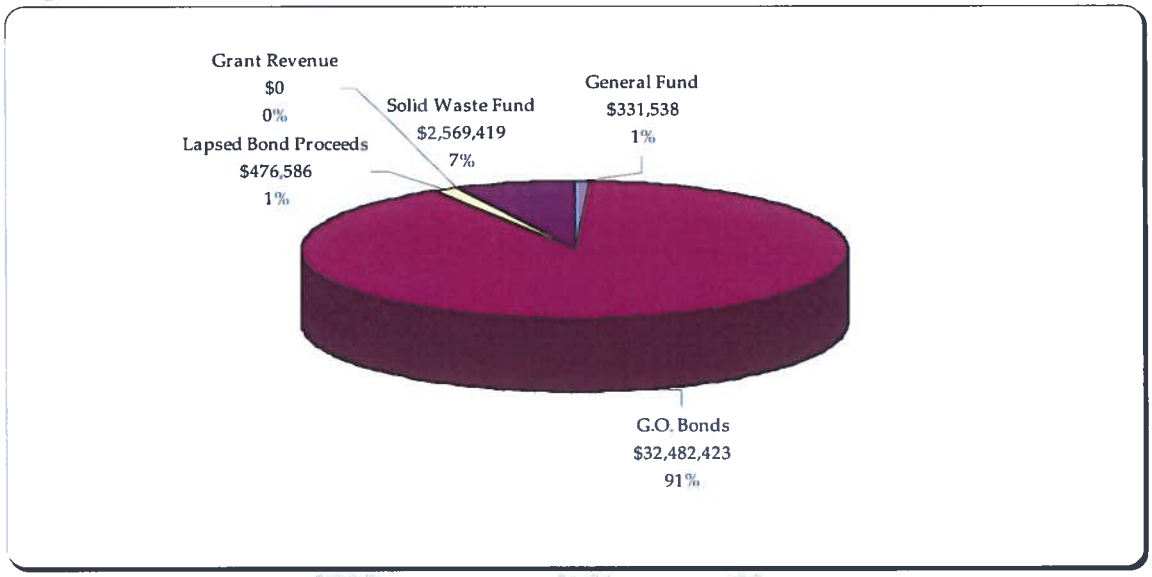


Figure 16 shows the relative size of the Solid Waste Division's CIP request, total CIP request for the six systems addressed in this study, and projected CIP revenues for a five-year period.

According to revenue projections, G.O. bonds will remain the primary funding source for solid waste CIP projects in the future (see Figure 17).

Figure 17: Total Projected Solid Waste CIP Revenues by Funding Source FY 2011 - 2015



Supplemental Revenue Sources

As the above revenue/cost analysis demonstrates, the Division of Solid Waste's current sources of revenue will not be adequate to fully fund future needed solid waste CIP projects. The Division's CIP funding strategy will need to be strengthened by augmenting current revenue sources with alternative financing mechanisms in order to address the projected total $6.8 million funding gap for fiscal years 2011 to 2015. Some of the following funding sources are currently available while others would require enabling legislation or voter approval before they could be utilized.

As discussed in Section II of this study, alternative financing mechanisms appropriate for funding solid waste CIP projects include:

- increasing existing fees,
- special district financing,
- impact fees,
- real estate excise tax,
- public-private partnerships, and
- Federal and State grants and loans (see: Section II, Supplemental Revenue Sources).

The following analysis looks at the potential revenue impact of four strategies: increasing existing fees; Community Facilities Districts; Impact Fees; and Real Estate Excise Tax (REET).

Increase Existing Fees: Revenues deposited into the Solid Waste Fund are generated by the County's refuse collection fees and landfill disposal fees. Refuse collection fees are charged to residential customers for weekly curbside collection. The current fee is $216 per year ($18 per month); however according to the Division of Solid Waste the actual cost of providing the service is $432 per year per customer. Therefore the County is currently subsidizing 50% of the cost of the service to customers. In order to establish a more equitable cost recovery for solid waste services the Division should consider initiating substantial rate increases in the coming years. For fiscal year 2010 the County Council approved a 28.5% refuse collection rate increase from $14 per month to the current $18 per month, resulting in a projected revenue increase of approximately $0.4 million. Had the rate increase been 50% or 75%, the resulting revenue increase could have been approximately $1.3 million (50%) to $2.3 million (75%) for FY 2010. The Division could also implement rate increases for landfill disposal fees. Although the Solid Waste Fund is not the primary funding source for solid waste CIP projects, establishing rate increases to achieve greater cost recovery is an important step toward closing the Division's infrastructure gap, when implemented with other supplemental funding sources.

Community Facility Districts: A CFD could be established to encompass those areas of the island serviced by the Central Maui Landfill. A tax would be assessed yearly on all properties within the established district benefiting from landfill improvements. Large ticket items identified on the Department's six-year CIP, such as land acquisition and improvements for Phase II of the Central Maui Landfill, could be a potential candidate for funding through CFD revenues.

> ***Example 1.*** In this example, the County establishes a Community Facilities District (CFD) encompassing central, south, west and upcountry Maui to pay a portion of capital costs to acquire land and develop Phase VII of the Central Maui Landfill. The CFD issues bonds yielding $10 million for improvement costs at 4.25% and a cost of issuance of $400,000. Assuming the bonds have a 30-year term, the District's property owners would be required to pay $613,941 in principal and interest per year. If each residential, hotel and commercial/industrial[27] unit were subject to a flat charge[28] to pay for the cost of bond financing, then each unit would need to pay about $6.6 per year for 30 years to retire the bonds.[29]

Impact Fees: An impact fee is a one-time fee payment by new development for off-site capital facilities needed by the new development. Duncan Associates prepared *The Maui Island Impact*

[27]Commercial/Industrial "unit" is assumed to be 1,000 SF.

[28] The tax could be adjusted based by land use based on allocated calls. For example, Table 38, Maui Island Impact Fee Study, Duncan Associates and Chris Hart & Partners, August 2010, show that Single-Family Equivalents per unit ranges from 0.49 for industrial to 1.47 for commercial, with single-family detached/duplex being 1.0.

[29] For existing single-family detached/duplex, multi-family, hotel/motel/resort, commercial, and industrial units see Table 38, Maui Island Impact Fee Study, Duncan Associates and Chris Hart & Partners, August 2010.

Fee Study (August 2010) for the County of Maui which calculates the maximum impact fees that could be assessed by the County on new development on the island of Maui to cover the costs for wastewater, solid waste, fire and police facilities. For solid waste, the study recommends assessing impact fees based on a single service area covering the whole island.

The study provides a potential impact fees schedule based on land use type: single-family; multi-family; hotel, motel and resort; retail and commercial; office; industrial and manufacturing; warehouse; mini-warehouse; and public and institutional. The fee schedule also provides the option of basing the residential fees on a flat rate per housing type or by the size of the housing unit. Potential impact fees for residential (flat rate) are as follows: single-family $382 per unit; and multi-family $309 per unit.

Assuming that the County adopts the impact fees at the maximum rates calculated in *The Maui Island Impact Fee Study*, estimated annual solid waste impact fee revenues would be $524,050 as shown in Table 13.

Table 13: Estimated Annual Solid Waste Impact Fee Revenues, FY 2011 - 2015

Land Use	Units	New Units	Fee/Unit	Revenue
Single-Family (All)	Dwelling	809	$382	$309,038
Multi-Family (All)	Dwelling	488	$309	$150,792
Hotel/Motel	Unit/Room	162	$126	$20,412
Commercial	1,000 sq. ft	81	$252	$20,412
Office	1,000 sq. ft.	39	$424	$16,536
Industrial	1,000 sq. ft.	49	$140	$6,860
Annual Solid Waste Revenue, 2011-2015				**$524,050**

Real Estate Excise Tax (REET): Several mainland communities currently use REET to help fund various types of capital projects including solid waste facilities. Set-asides typically range from one-quarter percent to one percent. Assuming Maui County had such a program, in 2009 approximately $2.3 million (1/4%) to $12 million (1%) could have been generated to fund solid waste projects based on the value of residential land transactions that year. REET should be considered as a potential funding source to support solid waste CIP projects.

Revenue/Expenditure Analysis with Supplemental Revenue Sources

Table 14: Solid Waste Revenue/Expenditure Analysis with Supplemental Revenue Sources

Projected Revenues	2011	2012	2013	2014	2015	Total
General Fund	$60,000	$63,000	$66,150	$69,458	$72,930	$331,538
G.O. Bonds	$5,878,500	$6,172,425	$6,481,046	$6,805,099	$7,145,353	$32,482,423
Lapsed Bond Proceeds	$86,250	$90,563	$95,091	$99,845	$104,837	$476,586
Grant Revenue	$0	$0	$0	$0	$0	$0
Solid Waste Fund	$465,000	$488,250	$512,663	$538,296	$565,210	$2,569,419

Supplemental Revenue Sources:						
Increase Fees[30]	$26,000	$27,300	$28,665	$30,098	$31,603	$143,666
Community Facilities District				$10,000,000		
REET[31]	$3,299,248	$3,464,210	$3,637,421	$3,819,292	$4,010,256	$18,230,427
Impact Fees	$524,050	$524,050	$524,050	$524,050	$524,050	$2,620,250
Total Revenues	$10,339,048	$10,829,798	$11,345,086	$21,886,138	$12,454,239	$66,854,309
CIP Need	$2,050,000	$4,800,000	$5,350,000	$28,500,000	$2,000,000	$42,700,000
Deficit / Surplus	$8,289,048	$6,029,798	$5,995,086	($6,613,862)	$10,454,239	$24,154,309

By increasing existing fees along with adopting impact fees, establishing a community facilities district, and adopting REET the County can reduce a potential $6.84 million shortfall to a surplus of $24.2 million.

Supplemental Revenue Sources	
Increasing Fees	Increasing refuse collection fees 50% and directing 2% of the increase to the CIP budget results in an increase in revenues of $143,000 for CIP projects through 2015.
Impact Fees	Adopting impact fees at the maximum rates generates approximately $2,620,250 between 2011 and 2015.
Community Facilities District	The establishment of a community facilities district generates $10 million in supplemental revenue for solid waste facilities.
REET	Setting aside ¼ percent of the value of real estate transactions (single, multi-family, and land) generates approximately $18.23 million between 2011 and 2015.

[30] Based on a 50% rate increase for Refuse Collection Fees. Assumes CIP budget receives 2% of Solid Waste Fund revenues per year based on revenue distribution from FY 2009. Assumes an escalator of 5% per year from base year 2010.

[31] Based on a ¼ percent rate on the value of land transactions for single, multi-family, and residential land transactions. Revenues are increased each year at a 5% escalator from a 2009 base year.

VI. Drainage

Level-of-Service Standards

Level of service standards for drainage systems specify design storm reoccurrence frequencies for storm events which the stormwater facility is designed to handle. Drainage standards are generally expressed as the degree of flooding resulting from a 10, 25 or 100 year storm event during a 24 hour period. The larger the design storm, the more water a stormwater facility must be able to handle, resulting in greater cost. In selecting a design storm, local jurisdictions establish an acceptable level of risk to that community. In doing so they must balance the costs of large facilities with the inconvenience and risk of damage from infrequently occurring large storms.

Table 15 provides a comparison of Maui County's drainage standards to other Hawaii counties and communities on the mainland.

Table 15: Drainage LOS Standards

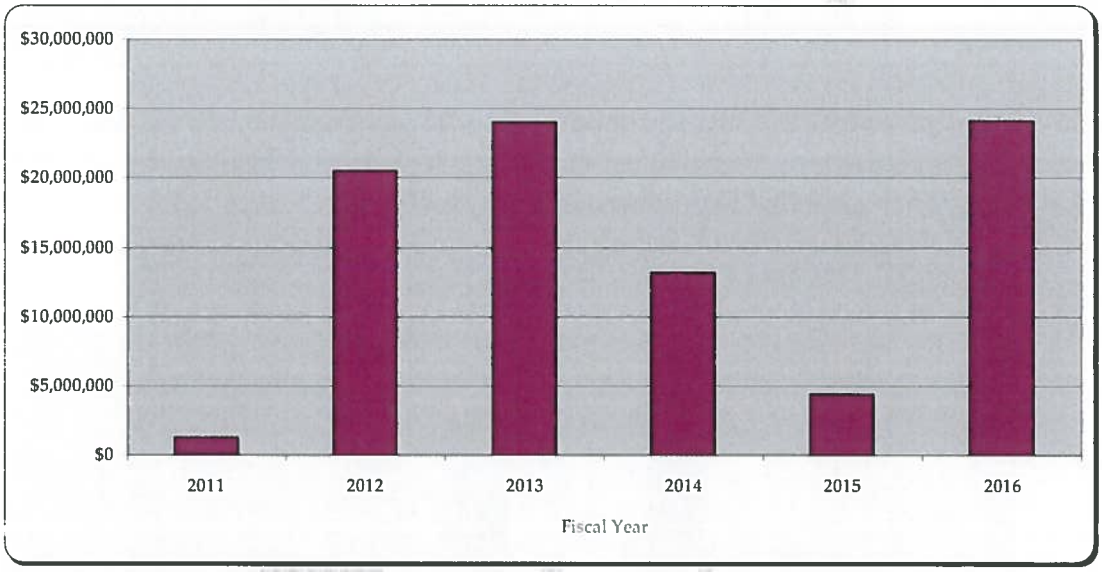
Community	Standard
Maui County, HI	50 yr / 24 hr storm event
Honolulu (C&C), HI	50 yr / 24 hr storm event for areas 100 acres or less 100 yr / 24 hr storm event for areas over 100 acres
Hawaii County, HI	50 yr / 24 hr storm event for areas 100 acres or less 100 yr / 24 hr storm event for areas over 100 acres
Kauai County, HI	Not Available
City of Coral Gables, FL	10 yr / 24 hr storm event
City of Auburndale, FL	25 yr / 24 hr storm event
Marion County, FL	25 yr / 24 hr storm event for open basins 100 yr / 24 hr storm event for closed basins
City of Port St. Joe, FL	25 yr / 24 hr storm event
Hernando County, FL	25 yr / 24 hr storm event
Madison County, FL	100 yr / 24 hr storm event

Funding Needs

The following information on future drainage infrastructure needs and corresponding capital costs were derived from the Department of Public Works' six-year CIP plan. Implementation costs provided below are estimates and have not been adjusted for inflation. In conversations with the Department, it was acknowledged that the six-year CIP projects proposed would likely exceed available funding and that many projects would therefore be funded over a longer time horizon or new revenues would be required.

Capital costs for drainage for the six-year period total approximately $87.5 million. Anticipated CIP budgets vary from year to year depending on the magnitude of projects scheduled each year (see Figure 18). Large ticket items include Iao Stream improvements ($10.5 million), Kahului drainage improvement ($14.1 million) and Lahaina Town drainage improvements ($30.4 million). The remainder of the projects range from $100,000 to $5.5 million over the six year period.

Figure 18: Drainage CIP Expenditures FY 2011 - 2016



Revenue Cost Analysis

The following analysis of the anticipated drainage CIP needs and projected revenues indicates that the Department will likely experience a funding gap of approximately $51.2 million in the next five years. In conversations with the Department, it was acknowledged that funding would likely be insufficient to pay for all projects requested in the six-year CIP. Therefore, to balance revenues and expenditures, the County will need to curtail expenditures, find ways to increase revenues, or do both.

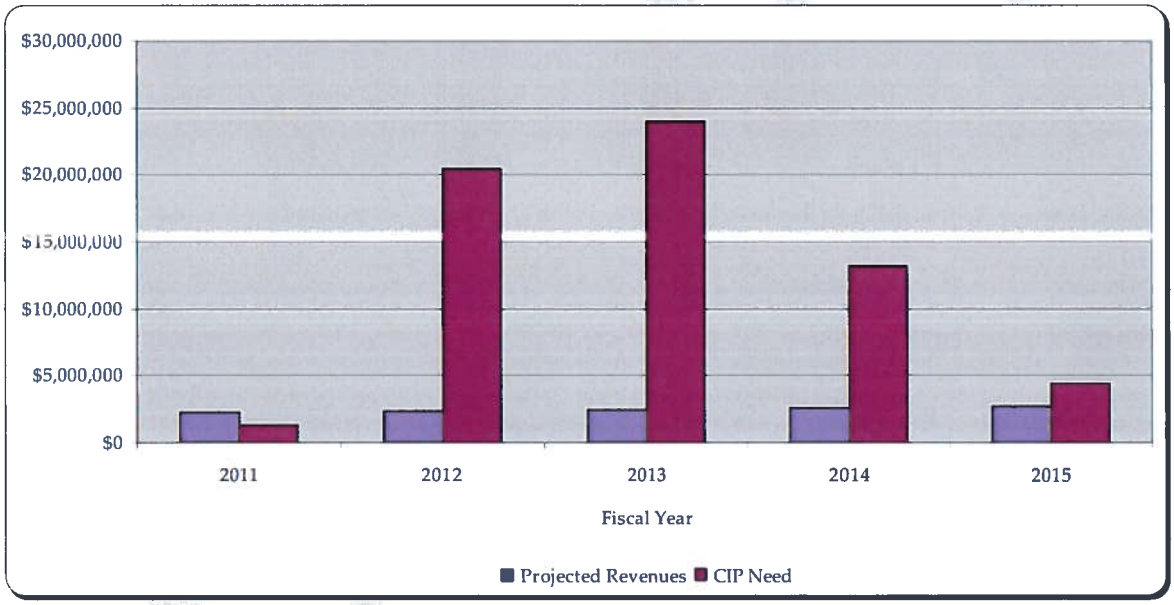
Drainage CIP revenue forecasts to FY 2015 were derived from the previous CIP budget data for fiscal years 2004 to 2010. Revenue projections were calculated by averaging revenues from those years by source and adding five percent each year. Calculating future revenues in this manner makes major assumptions that existing funding sources will continue into the future at or near their current level. While this is a legitimate assumption considering past funding trends, no guarantee can be made of funding or sources of funding. As with estimated future CIP costs, the following revenue projections are in 2010 dollars and do not account for inflation.

Table 16: Drainage CIP Revenue Cost Analysis FY 2011 - 2015

Projected Revenues	2011	2012	2013	2014	2015	Total
General Fund	$45,000	$47,250	$49,613	$52,093	$54,698	$248,653
G.O. Bonds	$2,081,250	$2,185,313	$2,294,578	$2,409,307	$2,529,772	$11,500,220
Lapsed Bond Proceeds	$75,000	$78,750	$82,688	$86,822	$91,163	$414,422
Grant Revenue	$0	$0	$0	$0	$0	$0
Highway Fund	$472,500	$496,125	$520,931	$546,978	$574,327	$2,610,861
Total Revenues	$2,201,250	$2,311,313	$2,426,878	$2,548,222	$2,675,633	$12,163,296
CIP Need	$1,250,000	$20,500,000	$24,000,000	$13,200,000	$4,400,000	$63,350,000
Deficit / Surplus	$951,250	-$18,188,688	-$21,573,122	-$10,651,778	-$1,724,367	-$51,186,704

Table 16 displays projected CIP costs and revenues to 2015 and calculates the resulting surplus or deficit (also see Figure 19). According to the revenue cost analysis each fiscal year, with the exception of FY 2011, is projected to result in a revenue shortfall.

Figure 19: Drainage Projected Revenues vs. CIP Need FY 2011 - 2015



According to the revenue projections, G.O. bonds will continue to fund the majority of future drainage CIP projects (see Figure 21).

Figure 20 shows the relative size of the Department of Public Works CIP request for drainage facilities, total CIP request for the six systems addressed in this study, and projected CIP revenues for the six-year period.

Figure 20: CIP Needs & Resources Vs CIP Needs for Drainage Facilities

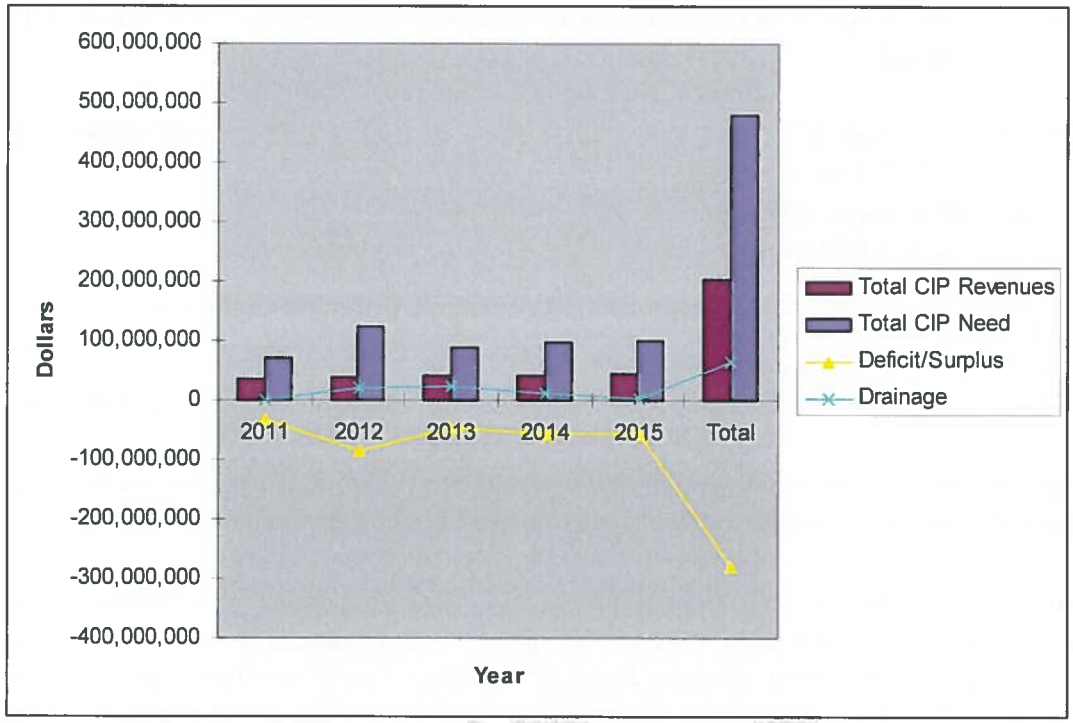
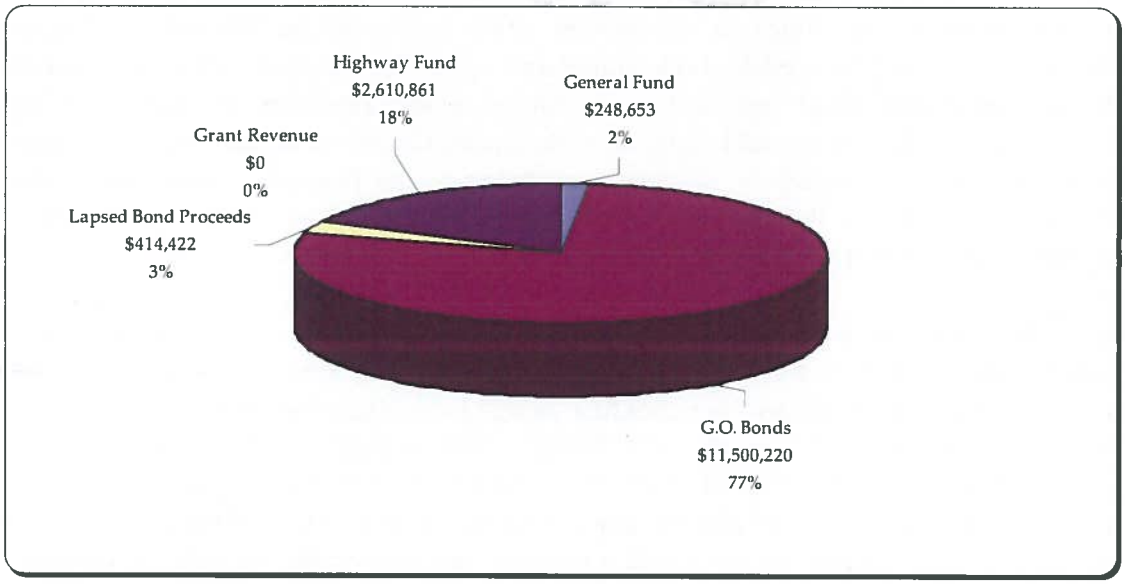


Figure 21: Drainage Projected CIP Revenues by Funding Source FY 2011 - 2015



Supplemental Revenue Sources

As the above revenue/cost analysis demonstrates, the County's current sources of revenue for drainage CIP projects will not be adequate to fully fund future drainage CIP needs. The County's CIP funding strategy will need to be strengthened by augmenting current revenue sources with alternative financing mechanisms in order to address the projected total $51.2

million funding gap for fiscal years 2011 to 2015. Some of the following funding sources are currently available while others would require enabling legislation or voter approval before they could be utilized.

As discussed in Section II of this study, alternative financing mechanisms appropriate for funding drainage CIP projects include:

- establishing a new utility fee,
- special district financing,
- real estate excise tax,
- strategic budget allocations,
- public-private partnerships, and
- Federal and State grants and loans (see: Section II, Supplemental Revenue Sources).

The following analysis looks at the potential revenue impact of four strategies: establishing a drainage utility fee; Community Facilities Districts; and Real Estate Excise Tax (REET).

Establish Drainage Utility Fee: The County should consider establishing a stormwater utility fee (i.e. drainage fee) to help fund drainage CIP projects. Many public agencies throughout the U.S. are shifting to fee-based funding as an alternative to tax-based funding as a means of addressing stormwater management. A stormwater utility fee is a user fee similar to a water or wastewater fee, and is typically included on the monthly utility bill. However, since the County does not send utility bills to all residents, another billing mechanism, such as property tax billing, would need to be used. A stormwater utility fee would be charged to all existing development and could be used for both capital and operating expenses. Revenues generated by the fee could help fund remedies to existing drainage problems as well as on-going maintenance costs. The fee would be related to the generation of runoff and should reasonably reflect actual costs to provide the service. According to the Black & Veatch (2007) survey referenced previously in the *Supplemental Revenue Sources* section of this study, 65% of respondents reported that the basis for their user fee is impervious area.[32]

Table 17 provides a breakdown of stormwater utility characteristics of seven communities throughout the United States. The table summarizes how these communities conduct stormwater utility billing, the average monthly charge for a single-family residence (SFR) and the annual income received from the user charges. The average monthly charges for a SFR range from a low of $2.95 to a high of $7.44. The annual income from user charges range from a low of $72,000 to a high of $13.9 million, depending on the population of the community and the fee rate. If Maui County implemented a monthly drainage utility fee of $4.62 (average of monthly charges from Table 17) for single- and multi-family residences, hotel units, and commercial and industrial units,[33] the annual income for 2009 would be approximately $4,583,391.[34]

[32] Black & Veatch. 2007. *2007 Stormwater Utility Survey*. Overland Park, KS.

[33] A commercial and industrial unit is assumed to be 1,000 sq. ft.

[34] See Appendix ---- for the land use data used to determine the number of units on Maui Island in 2009.

Table 17: Characteristics of Stormwater Utilities[35]

Community Name	Population Served	Program Start	Organization	Billing System	Average Monthly Charge for SFR	Annual Income from User Charges
Fort Collins, Co	108,000	1980	Part of Utilities Department	Sent with utility bill	$7.44	$5.6 million
Griffin, GA	23,500	1999	Stormwater Department	Sent with utility bill	$2.95	$1.2 million
Louisville, KY	600,000	1987	Part of Metro Sewer District	Sent with sewer bill	$3.31	$17.3 million
Olympia, WA	45,000	1986	Part of Dept. of Public Works	Sent with water and sewer bill	$6.00	$2.5 million
Sarasota, FL	300,000	1989	Part of Dept. of Public Works	Sent with county property tax bill	$6.70	$13.9 million
Union, OH	6,400	1987	Part of Dept. of Public Works	Sent with water and sewer bill	$3.00	$72,000
Valparaiso, IN	25,000	1998	Dept. of Storm - water Mgmt.	Sent with water bill	$3.00	$520,000

Establishing a stormwater utility fee would create a new source of revenue for funding drainage CIP projects that is assured and predictable in amount. Another key advantage of fee-based funding is the equity of charges. Under the County's current tax-based system tax-exempt organizations, such as churches and schools, do not pay for stormwater management; however such organizations have large areas of impervious surface area including buildings and parking lots. With fee-based funding these types of land uses, along with all other land uses, would pay their fair share to address stormwater management.

Hawaii lacks state-enabling legislation to authorize counties to charge a stormwater utility fee; therefore voter approval by referendum would be required. To gain public support the County will need to conduct a thorough public information program explaining the advantages of establishing the utility fee and the process and assumptions used to develop the fee structure. To develop a legal and equitable stormwater utility fee schedule the County would need to conduct a study including needs assessment, rate structure, adopting legislation, management policies and operating procedures. Implementing a stormwater utility fee will likely be a lengthy and in-depth process for the County but it will offer the County an entirely new source of revenue for funding drainage operations and capital projects that is reliable and equitable and utilized successfully in many communities across the United States.

Community Facility Districts: CFDs could be established in existing areas needing major infrastructure improvements as well as areas planned for future growth to fund drainage related capital projects within these districts. A tax would be assessed yearly on all properties within the established district benefiting from the drainage improvements. Large ticket drainage items identified on the Department of Public Works' six-year CIP, such as Lahaina Town drainage improvements, could be potential candidates for funding through CFD revenues.

[35] Center for Urban Policy and the Environment. *Characteristics of Case Study Communities.* Available at www.stormwaterfinance.urbancenter.iupui.edu (last visited 23 July 2010)

Example 1. In this example, the County establishes a Community Facilities District (CFD) encompassing the West Maui Community Plan area to pay a portion of capital costs to develop drainage facilities in the district. The CFD issues bonds yielding $10 million for improvement costs at 4.25% and a cost of issuance of $400,000. Assuming the bonds have a 30-year term, the District's property owners would be required to pay $613,941 in principal and interest per year. If each residential, hotel and commercial/industrial[36] unit were subject to a flat charge to pay for the cost of bond financing, then each unit would need to pay about $37 per year for 30 years to retire the bonds.[37]

Real Estate Excise Tax (REET): Several mainland communities currently use REET to help fund various types of capital projects including drainage facilities. Set-asides typically range from one-quarter percent to one percent. Assuming Maui County had such a program, in 2009 approximately $2.3 million (1/4%) to $12 million (1%) could have been generated to fund drainage projects based on the value of single, multi-family and residential land transactions that year. REET should be considered as a potential funding source to support drainage CIP projects.

Revenue/Expenditure Analysis with Supplemental Revenue Sources

Table 18: Drainage Revenue/Expenditure Analysis with Supplemental Revenue Sources

Projected Revenues	2011	2012	2013	2014	2015	Total
General Fund	$45,000	$47,250	$49,613	$52,093	$54,698	$248,654
G.O. Bonds	$2,081,250	$2,185,313	$2,294,578	$2,409,307	$2,529,772	$11,500,220
Lapsed Bond Proceeds	$75,000	$78,750	$82,688	$86,822	$91,163	$414,423
Grant Revenue	$0	$0	$0	$0	$0	$0
Highway Fund	$472,500	$496,125	$520,931	$546,978	$574,327	$2,610,861
Supplemental Revenue Sources:						
Drainage Utility Fee	$4,583,391	$4,583,391	$4,583,391	$4,583,391	$4,583,391	$22,916,955
Community Facilities District	$0	$0	$10,000,000[38]	$0	$0	$10,000,000
REET[39]	$3,299,248	$3,464,210	$3,637,421	$3,819,292	$4,010,256	$18,230,427
Total Revenues	$10,556,389	$10,855,039	$21,168,622	$11,497,883	$11,843,607	$65,921,540
CIP Need/Request	$1,250,000	$20,500,000	$24,000,000	$13,200,000	$4,400,000	$63,350,000
Deficit / Surplus	$9,306,389	($9,644,961)	($2,831,378)	($1,702,117)	$7,443,607	$2,571,540

[36] Commercial/Industrial "unit" is assumed to be 1,000 SF.

[37] For existing single-family detached/duplex, multi-family, hotel/motel/resort, commercial, and industrial units see Table 38, Maui Island Impact Fee Study, Duncan Associates and Chris Hart & Partners, August 2010.

[38] This is a one-time lump sum payment through bond financing.

[39] Based on a ¼ percent rate on the value of land transactions for single, multi-family, and residential land transactions. Revenues are increased each year at a 5% escalator from a 2009 base year.

By adopting a drainage utility fee, establishing a community facilities district, and adopting REET the County can reduce a potential $51.1 million shortfall to just $2.6 million.

Supplemental Revenue Sources	
Drainage Utility Fee	Implementing a monthly drainage utility fee of $4.62 for single- and multi-family residences, hotel units, and commercial and industrial generates $22.9 million through 2015.
Community Facilities District	The establishment of a community facilities district generates $10 million in supplemental revenue for drainage facilities.
REET	Setting aside ¼ percent of the value of real estate transactions (single, multi-family, and land) generates approximately $18.23 million between 2010 and 2015.

VII. Wastewater

Level-of-Service Standards

Measuring level of service for wastewater facilities is relatively straightforward due to the nature of the service the facility provides. Either the wastewater reclamation facility has the needed capacity or it does not. LOS measures for wastewater facilities are expressed as a measure of gallons of wastewater produced per unit per day (gal/unit/day). The most commonly used wastewater LOS standards are either gallons per capita per day or gallons per household per day. Wastewater LOS standards provide quantifiable measures to evaluate adequacy of wastewater facilities. Wastewater flow standards can also be expressed by type of use; such as office, school, hotel, residential, etc.; which provides a more use specific measure of wastewater flow. The County of Maui, Wastewater Reclamation Division utilizes use specific wastewater flow standards to project wastewater flows. The Division's existing LOS standards are provided in Table 19.

Table 19: Wastewater Flow Standards

Type of Use	Unit	(Gal/Unit/Day)
Apartment / Condo	Unit	255
Bar	Seat	15
Church, large	Seat	6
Church, small	Seat	4
Cottage or Ohana (600 sf max)	Unit	180
Day-care Center	Child	10
Factory	Employee	30
Golf Clubhouse	Golf Rounds	25
Hotel, resort with laundry	Room	350
Hotel, average with laundry	Room	300
Hotel, average without laundry	Room	250
Hospital	Bed	200
Industrial Shop	Employee	25
Laundry (coin operated)	Machine	300
Office	Employee	20
Residence, subdivision	Home	350
Restaurant, average	Seat	80
Restaurant, fast food	Seat	100
Rest Home	Patient	100
Retail Store	Employee	15
School, elementary	Student	15
School, high	Student	25
Storage, w/offices	Employee	15
Storage, w/office and showers	Employee	30
Store Customer bathroom usage	Use	5
Theater	Seat	5

Source: *Wastewater Flow Standards.* February 2, 2006. County of Maui, Wastewater Reclamation Division.

The following standards are used by the Wastewater Reclamation Division to compute the number of units required to make wastewater calculations:

Table 20: Unit Standards Calculations

Unit	Standard
Residential Occupancy	4 persons per unit
Apartment/Condo Occupancy	2.5 persons per unit
Hotel Occupancy	2.25 persons per unit
Hotel Employees	1 per hotel room
Office Employees	1 per 200 square feet of floor area
Retail Warehouse Employees	1 per 350 square feet of floor area
Storage/Industrial Employees	1 per 500 square feet of floor area

Source: *Wastewater Flow Standards.* February 2, 2006. County of Maui, Wastewater Reclamation Division.

Maui County's wastewater flow standards were compared to standards used by other communities both in Hawaii and on the mainland (see Table 21). Only single-family residential flow standards were compared and are expressed as gallons per household per day (g/hh/d).

Table 21: Wastewater Flow Standards for Residential Use

Jurisdiction	Standard (g/hh/d)[40]
Maui County, HI	350
Honolulu (C&C), HI	320
Hawaii County, HI	320
Kauai County, HI	400
Douglas County, CO	242
City of Vacaville, CA	240
City of Bremerton, WA	400

The above wastewater flow standards range from a low of 240 g/hh/d for the City of Vacaville to a high of 400 g/hh/d for the City of Bremerton and Kauai County. The County of Maui's standard of 350 g/hh/d is the third highest flow standard and is comparable to the City and County of Honolulu and Hawaii County's standard of 320 g/hh/d. Differences in the above jurisdictions' wastewater flow standards may be due to a number of factors including differences in historical wastewater flows and the extent to which system improvements have been installed to reduce groundwater infiltration and separate stormwater from sewer systems. Wastewater flow standards can be adjusted over time to respond to actual flow changes resulting from system improvements and/or changing consumer behaviors.

[40] The City and County of Honolulu and the County of Hawaii use per capita measures. In these instances, per capita standards were multiplied by 4 to convert to a household measure based on the standards used by both Maui County and Kauai County of 4 persons per single-family residence.

The County's existing LOS standards provide a sufficient quantifiable measure to evaluate the adequacy of wastewater facilities; therefore the existing standards can be considered the desired level of service for the purpose of this analysis.

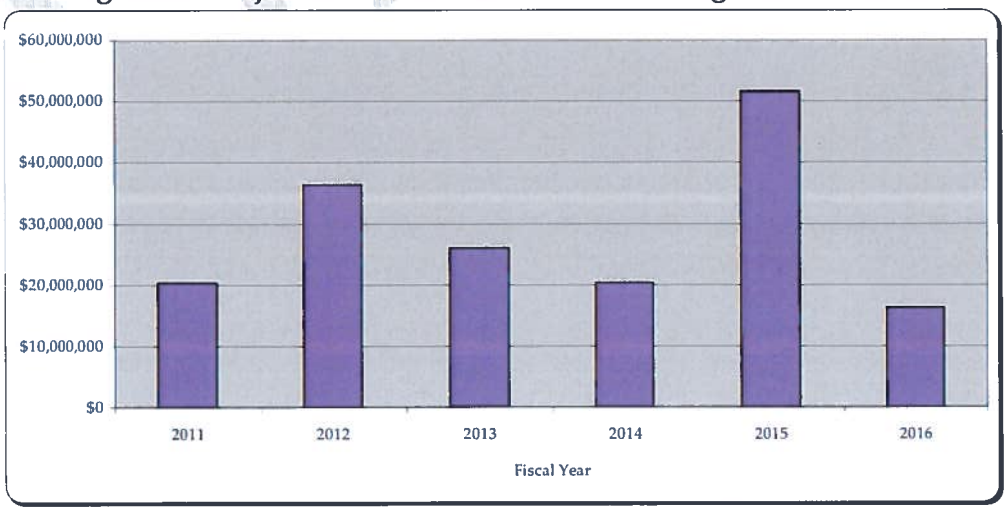
Funding Needs

The following information on future wastewater infrastructure needs and corresponding capital costs were derived from the Wastewater Reclamation Division's six-year CIP plan. Implementation costs provided below are estimates and have not been adjusted for inflation. In conversations with the Department, it was acknowledged that the six-year CIP projects proposed would likely exceed available funding and that many projects would therefore be funded over a longer time horizon.

Major projected capital cost to 2030 will be in the following areas: 1) Repair and upgrades to the existing aging plant and collection systems; 2) Compliance with Environmental Protection Agency (EPA) Consent Decree Requirements for continuing investigations and replacement of aging/leaking transmission lines; 3) Expansion of wastewater reuse and distribution in Central, South, and West Maui; 4) Tsunami and shoreline erosion protection; and 5) Major repair, upgrades, and plant expansion to the Lahaina Wastewater Reclamation Facility. All County treatment plants have adequate capacity to accommodate current and projected flows to 2030. The majority of the Division's capital needs are related to maintenance and replacement of existing infrastructure. Although the County's exiting wastewater infrastructure was largely constructed during the 1970s and 1980s, the Division believes that with ongoing maintenance and upgrades the existing physical plant, collection, and transmission systems can be maintained in fair to good condition.

The Division's total estimated six-year CIP request is approximately $170.8 million. Figure 22 provides estimated CIP costs by fiscal year with FY 2015 being the highest cost year at $51.62 million.

Figure 22: Projected Annual Wastewater CIP Budget FY 2011 - 2016



Revenue Cost Analysis

The following analysis of the Wastewater Division's anticipated CIP costs and projected revenues indicates that the Division will likely experience a funding gap of approximately $84.3 million to FY 2015.

The Division's funding challenges, which are not unique to Maui County or wastewater infrastructure systems, are a product of several converging factors. The federal government played a significant role in funding wastewater infrastructure projects in Maui County in the 1960's and 1970's. Following this initial investment period, federal funding for wastewater CIP projects has declined, placing more of the financial burden of maintaining and expanding infrastructure on the State and County. As previously stated, due to the age of much of the Division's infrastructure, large investments in repair and maintenance projects are needed to ensure the safety and reliability of the County's wastewater systems. Additionally, rising construction costs have contributed to the Division's infrastructure funding challenges.

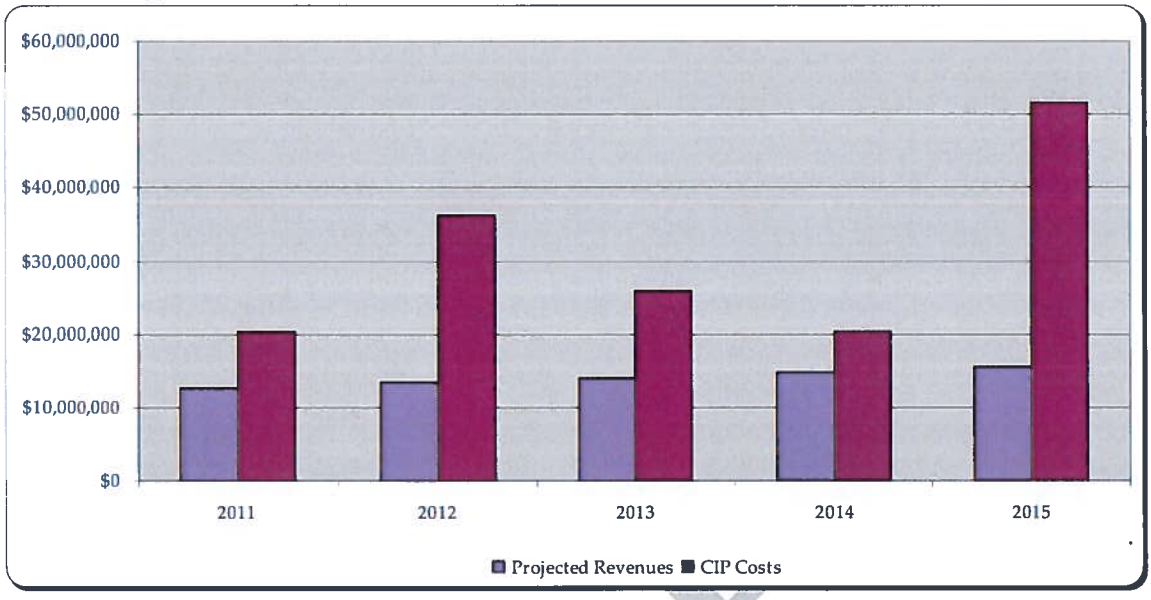
Wastewater CIP revenue forecasts to FY2030 were derived from the previous CIP budget data for fiscal years 2000 to 2009. Revenue projections were calculated by averaging revenues from 2000 to 2009 by source and adding five percent each year. Calculating future revenues in this manner makes major assumptions that existing funding sources will continue into the future at or near their current level. While this is a legitimate assumption considering past funding trends, no guarantee can be made of funding or sources of funding. As with estimated future CIP costs, the following revenue projections are in 2010 dollars and do not account for inflation.

Table 22: Wastewater CIP Revenue Cost Analysis FY 2011 - 2015

Projected Revenues	2011	2012	2013	2014	2015	Total
G.O. Bonds	$4,781,655	$5,020,738	$5,271,775	$5,535,363	$5,812,132	$26,421,663
Lapsed Bond Proceeds	$332,030	$348,632	$366,063	$384,367	$403,585	$1,834,677
SRF Loan	$5,730,889	$6,017,434	$6,318,305	$6,634,221	$6,965,932	$31,666,781
Wastewater Fund	$1,860,648	$1,953,681	$2,051,365	$2,153,933	$2,261,630	$10,281,256
Total Revenues	$12,705,223	$13,340,484	$14,007,508	$14,707,884	$15,443,278	$70,204,377
CIP Need/Request	$20,300,000	$36,290,000	$25,960,000	$20,310,000	$51,620,000	$154,480,000
Deficit / Surplus	-$7,594,777	-$22,949,516	-$11,952,492	-$5,602,116	-$36,176,722	-$84,275,623

Table 22 displays projected CIP costs and revenues to 2015 and calculates the resulting surplus or deficit (also see: Figure 23 and Figure 24). The analysis of each fiscal year and the total five-year planning horizon results in a shortfall.

Figure 23: Wastewater Projected Revenues vs. CIP Need FY 2011 - 2015



As expected, SFR loans and G.O. bonds are projected to remain the primary sources of funding for CIP projects (see Figure 24). However, considering that Congressional appropriations to the Clean Water SRF Loan Program have steadily decreased over the last decade, caution should be taken when assuming that current funding levels will continue into the future. Additionally, revenue projections for the Wastewater Fund do not necessarily take into account future sewer rate increases which will be necessary to address increasing costs to operate and upgrade wastewater systems.

Figure 24: Total Projected Wastewater Revenues by Funding Source FY 2011 - 2015

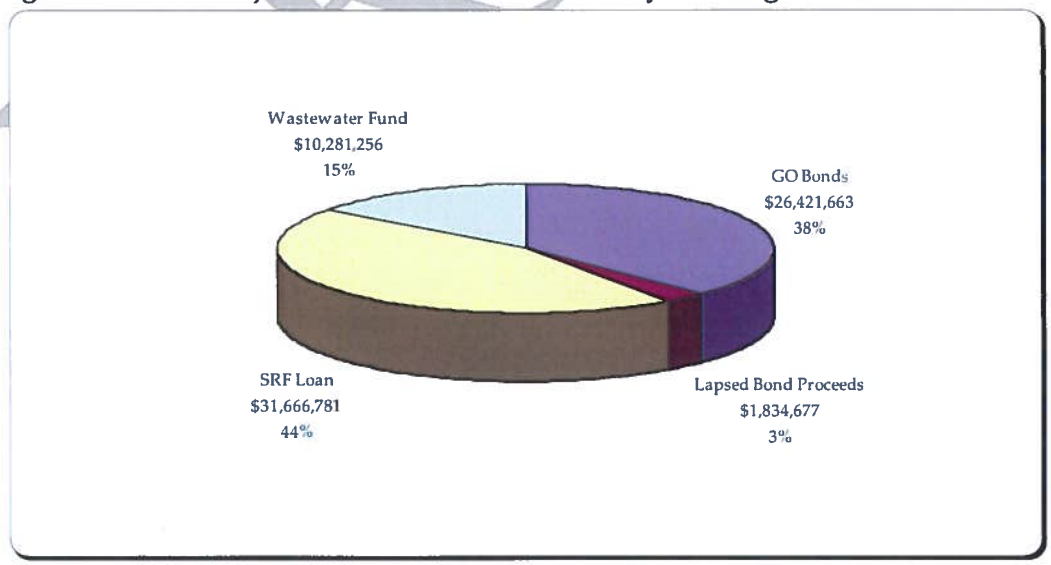
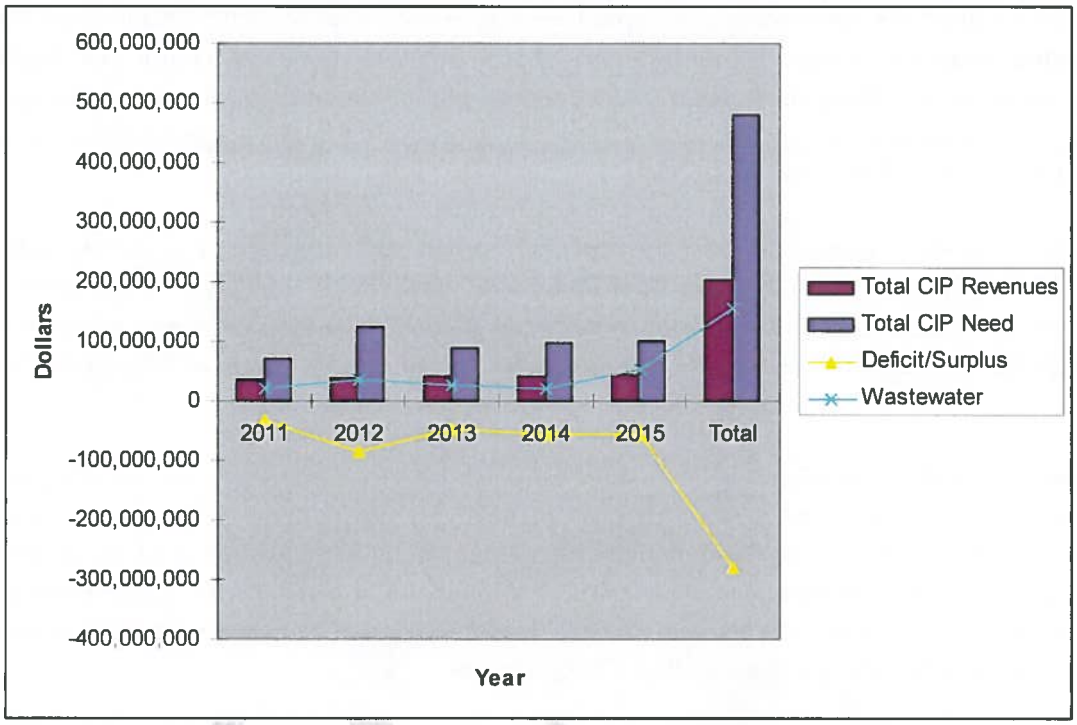


Figure 25 shows the relative size of the Department of Environmental Management's Waste Water Division's CIP request for drainage facilities, total CIP request for the six systems addressed in this study, and projected CIP revenues for the six-year period.

Figure 25: Total Projected Wastewater Revenues by Funding Source FY 2011 - 2015



Supplemental Revenue Sources

As the above revenue/cost analysis demonstrates, the County's current sources of revenue for wastewater CIP projects will not be adequate to fund future needed infrastructure repair and maintenance and plant and collection system expansion. The Division's CIP funding strategy will need to be strengthened by augmenting current revenue sources with alternative financing mechanisms in order to address the projected total $61.3 million funding gap for fiscal years 2011 to 2030. Some of the following funding sources are currently available while others would require enabling legislation or voter approval before they could be utilized.

As discussed in Section II of this study, alternative financing mechanisms appropriate for funding wastewater CIP projects include:

- increase existing fees,
- special district financing,
- impact fees,
- real estate excise tax,
- strategic budget allocations,
- public-private partnerships, and
- Federal and State grants and loans (see: Section II, Supplemental Revenue Sources).

The following analysis looks at the potential revenue impact of four strategies: increase existing fees; Community Facilities Districts; Impact Fees; and Real Estate Excise Tax (REET).

Increase Existing Fees: The sewer and cesspool fees are collected as charges for current services and used to fund the operations and capital improvement projects of the Wastewater Fund. Residential users are charged a monthly base charge and a water usage charge per dwelling unit in accordance with amounts set in the annual budget. Non-residential wastewater system service charges are also charged a monthly base charge plus a variable charge based on the total amount of water used each billing period.

To meet the needs of rising costs and infrastructure repair and improvements, the Department proposed a 10% rate increase in sewer user fees in the FY 2010 budget. To promote self-sufficiency for operations and capital improvement projects and help close the infrastructure funding gap the Department may need to consider larger rate increases in the coming fiscal years.

Community Facility Districts: CFDs could be established in existing areas needing major infrastructure improvements as well as areas planned for future growth to fund wastewater related capital projects within these districts. A tax would be assessed yearly on all properties within the established district benefiting from the wastewater improvements. Large ticket items identified on the Department's six-year CIP, such as the upgrades to existing treatment plants, could be potential candidates for funding CFD revenues.

Example 1. In this example, the County of Maui establishes a Community Facilities District (CFD) to pay for capital costs required to maintain the aging Central Maui system. Extensive repairs are required to repair and replace sewer lines, force mains, pump stations, laterals and treatment facilities to ensure long-term reliability during the next 20-years. The CFD issues bonds yielding $20 million for the necessary improvement costs at 4.25% and a cost of issuance of $400,000. Assuming the bonds have a 30-year term, each year Wailuku-Kahului property owners would be required to pay $1,227,888 per year in principal and interest. Assuming 90% of the 12,569 residential units within the Wailuku-Kahului community plan area connect to the system, and that these units generate 82% of the average daily wastewater flows in that year, each residential unit would need to pay about $89 per year for 30 years to pay principal and interest.[41]

Example 2. Developers in Central Maui decide to jointly construct a wastewater collection and treatment system to service two large proximate master planned communities comprising 600 acres. A CFD is formed to accommodate the boundaries of the two projects. Tax Free Bonds are issued by the CFD yielding $30 million to be repaid in 30 years at 4.25% and a cost of issuance of $400,000. The resultant annual taxes to be paid by the developers

[41] The wastewater generation rate per residential unit is assumed to be 350 gpd. Residential users are assumed to be paying for 82% of the cost of bond financing.

would be $4,092 per acre per year. Assuming the total development comprises 3,650 residential units generating about 1.5 million gallons per day in wastewater, the annual cost per residential unit would be about $505 per year.

Impact Fees: An impact fee is a one-time fee payment by new development for off-site capital facilities needed by the new development. Duncan Associates prepared *The Maui Island Impact Fee Study* (August 2010) for the County of Maui which calculates the maximum impact fees that could be assessed by the County on new development on the island of Maui to cover the costs for wastewater, solid waste, fire and police facilities. The County currently charges a wastewater connection fee, or assessment fee, to cover the capital costs of wastewater infrastructure in the area served by the Wailuku-Kahului and Kihei wastewater treatment plants. The impact fee calculated by Duncan Associates would replace the existing fee structure for these two wastewater facilities. Additionally, the study calculated a potential impact fee for the area served by the Lahaina treatment plant.

The study provides a potential impact fees schedule based on land use type: single-family; multi-family; hotel, motel and resort; retail and commercial; office; industrial and manufacturing; warehouse; mini-warehouse; and public and institutional. The fee schedule also provides the option of basing the residential fees on a flat rate per housing type or by the size of the housing unit. Potential impact fees for residential (flat rate) are provided in Table 23. For a complete potential wastewater impact fee schedule and description of methodology and analysis see *The Maui Island Impact Fee Study*.

Table 23: Potential Wastewater Impact Fee Schedule for Residential (flat rate)

	Fee per Unit		
Land Use Type	**Wailuku-Kahului**	**Kihei**	**Lahaina**
Single-Family	$3,997	$3,493	$2,328
Multi-Family	$3,238	$2,829	$1,886

Unlike the other facilities, the County currently charges wastewater assessment fees that serve the same purpose as impact fees for two of the three systems. In addition, not all development in the vicinity of the plants will necessarily connect to the County's system (if interceptor or collector mains have insufficient capacity, the County will encourage developers to install private treatment plants). For the purpose of the revenue and expenditure analysis with supplemental revenue sources, the assumption has been made that only half of new developments will connect to the County system. The revenue estimates are for net revenue, which is based on the net fee (the difference between the potential impact fee and the current assessment fee).

Table 24: Estimated Annual Wastewater Impact Fee Revenues, FY 2011 - 2015

Land Use	Units	New Units	Net Fee/Unit	Revenue
Single-Family (All)	Dwelling	83	$2,328	$193,224
Multi-Family (All)	Dwelling	52	$1,886	$98,072
Nonresidential*				$97,099
Annual WW Revenue, Lahaina System, 2011-2015				$388,395
Single Family (All)	Dwelling	138	$2,397	$330,786
Multi-Family (All)	Dwelling	74	$2,073	$153,402
Nonresidential*				$161,396
Annual WW Revenue, Kahului System, 2011-2015				$645,584
Single-Family (All)	Dwelling	76	$636	$48,336
Multi-Family (All)	Dwelling	105	$712	$74,760
Nonresidential*				$41,032
Annual WW Revenue, Kihei System, 2011-2015				$164,128
Annual Total Wastewater Net Additional Revenue, 2011-2015				**$1,198,107**

* nonresidential revenue assumed to be 1/3 of residential revenue, roughly the share of island-wide.

Source: New units are one-half of total new units from Table 2 (assuming that only one-half of new units will be County wastewater customers); net fees are potential fees from Duncan Associates, *The Maui Island Impact Fee Study*, August 2010 less existing assessment fees (average of highest and lowest fees for Kihei).

Real Estate Excise Tax (REET): Several mainland communities currently use REET to help fund various types of capital projects including wastewater infrastructure. Set-asides typically range from one-quarter percent to one percent. Assuming Maui County had such a program, in 2009 approximately $2.3 million (1/4%) to $12 million (1%) could have been generated to fund wastewater projects based on the value of single, multi-family and residential land transactions that year.

Revenue/Expenditure Analysis with Supplemental Revenue Sources

Table 25: Wastewater Revenue/Expenditure Analysis with Supplemental Revenue Sources

Projected Revenues	2011	2012	2013	2014	2015	Total
G.O. Bonds	$4,781,655	$5,020,738	$5,271,775	$5,535,363	$5,812,132	$26,421,663
Lapsed Bond Proceeds	$332,030	$348,632	$366,063	$384,367	$403,585	$1,834,677
SRF Loan	$5,730,889	$6,017,434	$6,318,305	$6,634,221	$6,965,932	$31,666,781
Wastewater Fund	$1,860,648	$1,953,681	$2,051,365	$2,153,933	$2,261,630	$10,281,256
Supplemental Revenue Sources:						

Increase Fees[42]	$7,717,437	$8,103,309	$8,508,474	$8,933,898	$9,380,593	$42,643,711
CFD Financing	0	20,000,000	0	0	0	$20,000,000
Impact Fees	$1,198,107	$1,198,107	$1,198,107	$1,198,107	$1,198,107	$5,990,535
REET[43]	$3,299,248	$3,464,210	$3,637,421	$3,819,292	$4,010,256	$18,230,427
Total Revenues	$24,920,014	$46,106,111	$27,351,510	$28,659,181	$30,032,235	$157,069,050
CIP Need	$20,300,000	$36,290,000	$25,960,000	$20,310,000	$51,620,000	$154,480,000
Deficit / Surplus	$4,620,014	$9,816,111	$1,391,510	$8,349,181	($21,587,765)	$2,589,050

By increasing fees and adopting impact fees, establishing a community facilities district, and adopting REET the County can reduce a potential $84.3 million shortfall to a create a surplus of $2.6 million.

Supplemental Revenue Sources	
Increase Fees	A 30% increase in wastewater fees with 15% of the additional fees directed to the CIP budget generates $42.6 million in supplemental revenues.
Impact Fees	Adopting impact fees at the maximum rates generates approximately $5.6 million between 2011 and 2015.
Community Facilities District	The establishment of a community facilities district generates $20 million in supplemental revenue for wastewater facilities.
REET	Setting aside ¼ percent of the value of real estate transactions (single, multi-family, and land) generates approximately $18.23 million between 2010 and 2015.

[42] Based on a 30% rate increase for Sewer and Cesspool Fees. Assumes CIP budget receives 15% of Wastewater Fund revenues per year based on revenue distribution from FY 2009. Assumes an escalator of 5% per year from base year 2010.

[43] Based on a ¼ percent rate on the value of land transactions for single, multi-family, and residential land transactions. Revenues are increased each year at a 5% escalator from a 2009 base year.

VIII. Parks

Level-of-Service Standards

There are many measures park planners use to gauge the need for park land and recreation facilities. These measures, or level-of-service standards, help planners make informed decisions about the most appropriate location, type and extent of facilities warranted today and in the future. Such standards create a basis from which a capital improvement plan is prepared and justified. The most commonly used level-of-service (LOS) standards include:

Population Based Ratios: The National Park and Recreation Association (NRPA) developed a comprehensive list of ratios in 1983 that have been broadly used by park and recreation departments across the country. The NRPA standards measure park land and facility demand as a ratio of park land and facilities to population. For example, the 1983 standards recommend between 6.25 and 10.5 acres of park land per 1,000 persons. The NRPA also developed facility standards based on population. As an example, for sports fields, the standard is one field per 6,000 persons.

More recently, the NRPA has recognized the shortcomings of using uniform standards to access local conditions. In 1995 the NRPA published updated guidelines in *The Park, Recreation, Open Space, and Greenway Guidelines* by James D. Mertes and James R. Hall. The updated guidelines recommend that jurisdictions develop their own standards to more accurately reflect local conditions. The NRPA suggests several helpful approaches for conducting a LOS analysis, including: administering park visitor surveys, conducting resident questionnaires, and making field observations of participation rates.

Service Area Boundary and Service Population Ratio: The service area boundary is commonly used in park and recreation planning to identify level-of-service. The NRPA's *Parks, Recreation, Open Space, and Greenway Guidelines* recommend the use of location criteria for various park classifications. For example, the NRPA recommends that Neighborhood Parks be within ¼ to ½ mile of the neighborhoods they serve and be uninterrupted by non-residential roads and other physical barriers. Service area boundaries can be mapped using geographic information systems (GIS) to display spatially the service area for various types of park facilities. For underserviced populations, funding may be directed to develop additional facilities in these communities.

Complimenting the service area boundary are service population ratios. These ratios relate population to demand for various types of park facilities. For example, the service population ratio used in the County of Maui's *Public Facilities Assessment Update* (March 2007) for neighborhood parks is 500 to 2,500 persons per facility. Using this standard, Kihei-Makena, a community of approximately 25,609 residents, would warrant at least ten neighborhood parks.

Participation Models and Surveys: Level-of-service may also be measured by conducting surveys or questionnaires of park users to determine recreation behavior. One such technique is for park users to be given a diary to record their park and recreation behavior over a measurable period of time. The results are then compiled to create a statistical profile of the demand for and user characteristics of different types of facilities. Likewise, surveys can help assess attitudes and perspectives towards the adequacy of a community's park land and recreation facilities. Field observation studies may also be conducted to determine by whom and to what extent park land and recreation facilities are being used.

Community Based Standards: Communicating directly with park and recreation users is especially helpful when developing locally based standards. Interacting directly with users makes it possible to identify problems and needs and provides a forum to gauge support for various proposals.

Today's park and recreation planning professionals typically employ a combination of the techniques described above to conduct level-of-service studies. Measuring level-of-service is often the first step when preparing a park and recreation facility plan; and the results of the LOS analysis form the basis by which funding for the Plan's capital improvement program is justified.

Existing Level-of-Service Conditions

Locally-based level-of-service standards have not been developed for Maui County. Therefore, for the purpose of this study, NRPA's population based ratio's provide a helpful starting point, recognizing that the NRPA standards may not account for the uniqueness of local conditions.

To prepare the parks and recreation chapter of the County of Maui's *Public Facility Assessment Update* (March 2007) R.M. Towill used LOS standards adapted from the NRPA, Urban Land Institute and City and County of Honolulu. These standards are presented below:

Table 26: Park Level-of-Service Standards

Standard	Mini Parks	Neighborhood Parks	District / Community Parks	Regional Parks	Special-Use Parks
Area per 1,000 persons	2 acres	4 acres	4 acres	15 acres	As Needed
Service Population	N/A	500-2,500	2,500-10,000	25,000 +	--
Ideal Size (Acres)	1.5	4-10	15-20	100 +	N/A
Range (acres)	.5-1.5	2-10	10-40	40+	N/A
Service Area	¼ - ½ mile radius	½ - 1 mile radius	10-30 minute travel time	1 hour travel time	Island-wide
Sub-Regional Acres (Mini, Neighborhood, Dist./ Comm.) per 1,000 persons		10 acres			

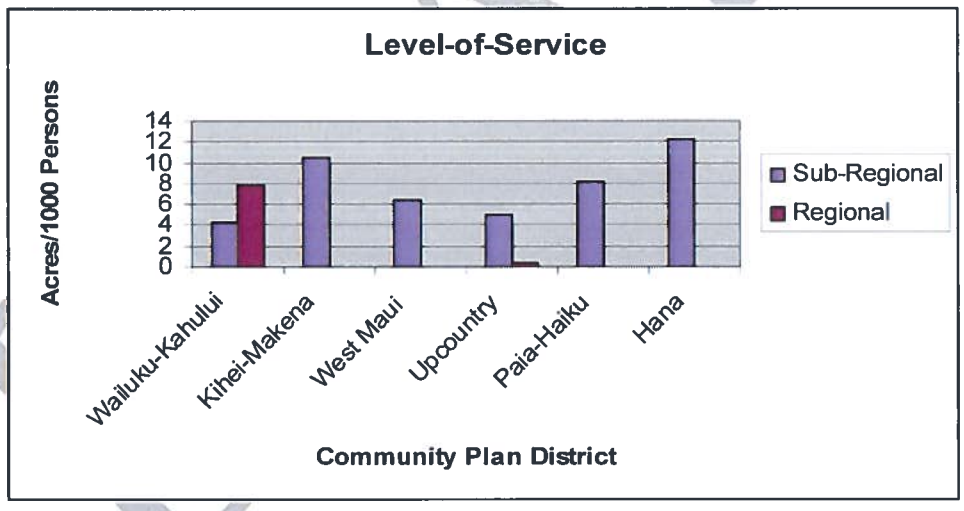
Source: R.M. Towill Corporation. March 2007. *Public Facilities Assessment Update County of Maui. Park and Recreation Chapter.* Prepared for the County of Maui Planning Department. County of Maui, HI.

Using a population based ratio of ten (10) acres of sub-regional park land per 1,000 persons and fifteen (15) acres of regional park land per 1,000 persons, Table 27 identifies existing LOS conditions by community plan district.

Table 27: Park Level-of-Service Conditions by Community Plan District

	Sub-Regional Analysis[44]			Regional Analysis		
Community Plan Region	**Sub-[45]Regional Acres**	**2005 LOS (acres/1000 pop)**	**Regional Surplus / Deficit**	**Regional Acres**	**2005 LOS (acres/1000 pop)**	**Regional Surplus / Deficit**
Wailuku-Kahului	185.6	4.17	-259	350.5	7.88	-317
Kihei-Makena	278.6	10.51	13.81	0	0	-397
West Maui	124.8	6.38	-71	0	0	-293
Makawao-Pukalani-Kula	116.5	4.93	-344.5	10	0.42	-345
Paia-Haiku	109.2	8.23	-23.97	0	0	-200
Hana	24.6	12.2	5.08	136	69.88	107
TOTAL	**839**	**5.99**	**-680**	**496**	**3.54**	**-1445**

Figure 26: Park Level of Service by Community Plan District



In the absence of locally based standards, a comparison of level-of-service conditions across communities can help park planners gauge the relative performance of communities of similar character, demographics or geographic scope.

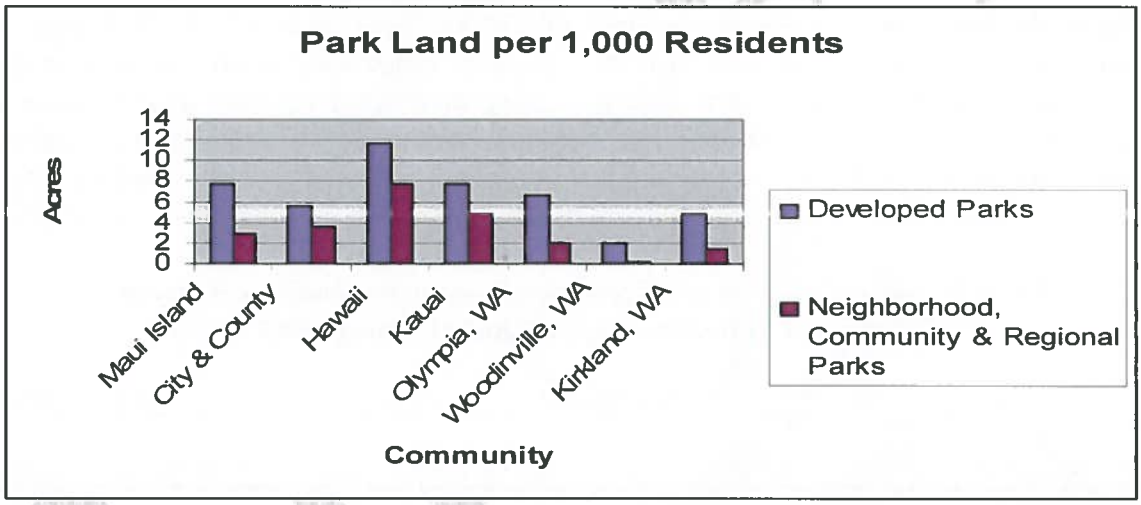
[44] Resident population rather than defacto population is used to determine demand for sub-regional parks; except for beach parks where defacto population is used.

[45] Sub-regional parks include mini-, neighborhood, and district/community parks. Beach parks are included in the inventory for sub-regional park land. State parks are included in either the sub-regional or regional categories depending upon the type and use of the facility. For example, "Makena State Park" is included in the sub-regional category while the "Iao Valley State Monument" is included in the regional analysis.

Table 28: Park Level-of-Service Comparison

		Developed Park Land			
Community	2007 Resident Population	Park Land[46] (Developed)	Developed Park (acres/1000 res. pop)	Neighborhood,[47] Community & Regional Parks (acres/1000 res. pop)	Beach Parks (acres/1000 defacto pop)
Maui Island	129,471	999	7.72	2.94	1.86
Honolulu (C&C)	905,034	5069	5.60	3.67	1.16
Hawaii	172,547	2036	11.58	3.71	3.47
Kauai	63,689	487	7.65	4.88	2.03
Olympia, WA	45,322	299.55	6.61	1.91	N/A
Woodinville, WA	11,240	23	2.04	0.26	N/A
Kirkland, WA	47,303	232.18	4.91	1.45	N/A

Figure 27: Park Land per 1000 Residents



As shown in
Table 28 and Figure 27, Maui Island performs better than the island of Hawaii and the City and County of Honolulu, but lags behind Kauai in the amount of developed park land per 1,000 persons. Only the Big Island meets the NRPA standard of 10 acres of sub-regional park land per 1,000 persons, when beach parks are included. Relative to its sister islands, Maui Island has considerably less neighborhood, community park and regional park land per 1,000 residents. Since beach parks account for much of the State's developed park land there in Hawaii than in those communities surveyed on the Mainland.

[46] Includes all types of developed parks, but does not include undeveloped parks or nature parks and preserves. For Maui, does not include public golf courses.

[47] Includes parks classified as neighborhood, community, district or regional. These parks range in size from 1 acre to 200 acres and are predominantly used for active and passive recreation. Does not include special use, special area, or special parks.

Revenue/Expenditure Analysis

Major projected capital costs to 2030 will be in the following areas: 1) Acquisition of undeveloped park land to address existing deficiencies and accommodate the projected population growth; 2) Development of new park facilities and supporting infrastructure; and 3) On-going repair and maintenance of the existing facilities.

The revenue and expenditure analysis is based on available information provided by the Department of Parks and Recreation. The Department conducts its long-range parks and recreation planning through the development of its six-year capital improvement program (CIP). The six-year plan identifies capital projects, associated costs and funding sources. In addition, in support of this study and the update of the Maui County General Plan, the Department supplemented the six-year CIP with a list of additional projects necessary to accommodate demand through 2020. In conversations with the Department, it was acknowledged that the six-year CIP projects proposed would likely exceed available funding and that many projects would therefore be funded over a longer time horizon.

Revenues are based on a seven-year average of CIP revenues from 2003 to 2009 plus an escalation factor of five percent each year through 2015. Calculating future revenues in this manner makes major assumptions that existing funding sources will continue into the future at or near their current level. While this is a legitimate assumption considering past funding trends, no guarantee can be made of funding or sources of funding. As with estimated future CIP costs, the following revenue projections are in 2010 dollars and do not account for inflation.

Table 29: 2010-2015 Parks and Recreation Revenue/expenditure Analysis
Parks and Recreation Capital Projects through 2015

	2009	2010	2011	2012	2013	2014	2015	Total 2010-2015
Revenue for Projects[48]	$10,510,000	$9,817,290	$9,667,729	$10,151,116	$10,658,671	$11,191,605	$11,751,185	$63,237,596
General Fund Revenue	2,635,000	6,055,000	4,752,749	4,990,387	5,239,906	5,501,902	5,776,997	32,316,941
Park Assessment Fees	4,875,000	3,762,290	2,111,593	2,217,173	2,328,031	2,444,433	2,566,655	15,430,175
Bond Sales	3,000,000	0	2,803,387	2,943,556	3,090,734	3,245,270	3,407,534	15,490,481
CIP Funded Expenditures								
Countywide ADA Compliance		500,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,500,000
Countywide Parks and Pool Improvements		300,000	500,000	500,000	500,000	500,000	500,000	2,800,000
TOTAL FOR PROJECTS	$9,017,290	$8,167,729	$8,651,116	$9,158,671	$9,691,605	$10,251,185	$54,937,596	
PARK AND RECREATION CAPITAL PROJECT EXPENDITURES								
Beach Parks	$350,000	$2,155,000	$2,650,000	$2,250,000	$1,800,000	$3,000,000	$12,205,000	

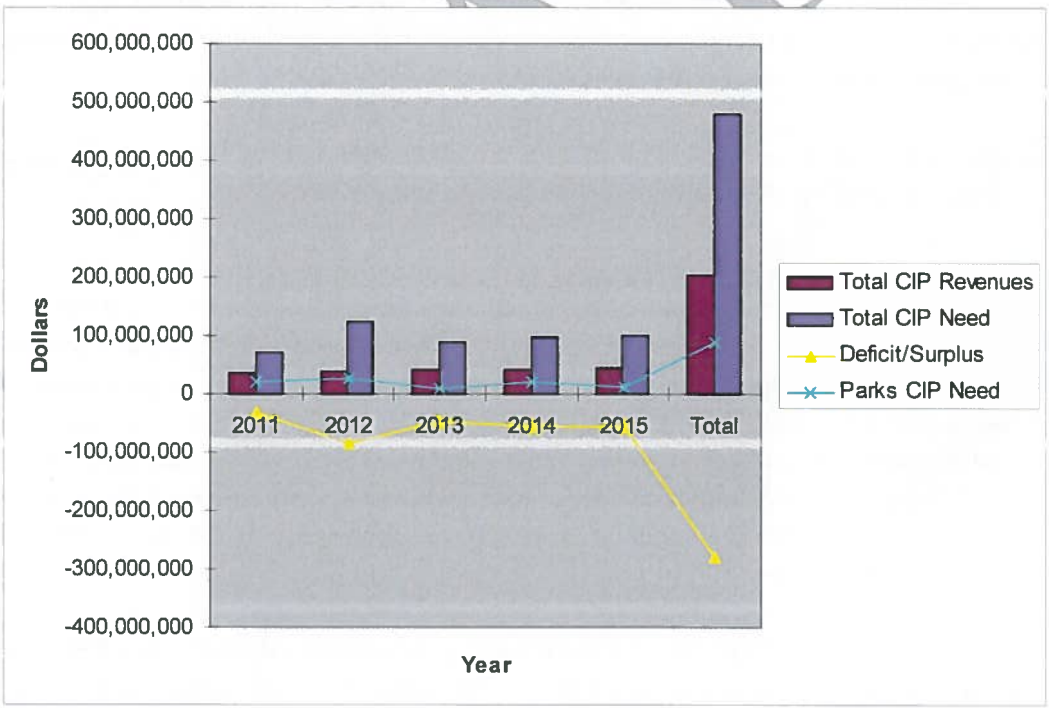
[48] Assumes a 5% escalator each year for each of the County's existing revenue sources.

	2009	2010	2011	2012	2013	2014	2015	Total 2010-2015
Neighborhood Parks	$550,000	$3,330,000	$3,350,000	$0	$1,000,000	$0	$8,230,000	
Community Parks	$3,410,000	$5,695,000	$13,500,000	$2,900,000	$16,425,000	$10,000,000	$51,930,000	
District Complexes	$1,020,000	$725,000	$0	$0	$1,000,000	$0	$2,745,000	
Greenways/Bikeways	$0	$250,000	$0	$0	$0	$0	$250,000	
Regional Park	$400,000	$7,280,000	$8,000,000	$4,000,000	$0	$0	$19,680,000	
AVAILABLE REVENUE FOR PROJECTS	$9,017,290	$8,167,729	$8,651,116	$9,158,671	$9,691,605	$10,251,185	$54,937,596	
PROJECT EXPENDITURES	$5,730,000	$19,435,000	$27,500,000	$9,150,000	$20,225,000	$13,000,000	$95,040,000	
BALANCE	**$3,287,290**	**-$11,267,271**	**-$18,848,884**	**$8,671**	**-$10,533,395**	**-$2,748,815**	**-$40,102,404**	

Current Revenues versus Project Expenditures

As shown in Table 29 the projected CIP revenues for park projects through 2015 are $54.94 million, which is well short of the $95.04 million requested to fund park improvements through 2015. Figure 28 shows the relative size of the Park Department's CIP request, total CIP request for the six systems addressed in this study, and projected CIP revenues for the six-year period.

Figure 28: CIP Needs & Resources Vs CIP Needs for Park Facilities



Supplemental Revenue Sources

The County will need to increase revenues to pay for the Department's growing operational and capital costs. The County can achieve this through a combination of increasing current revenue sources and pursuing additional sources. New funding sources could be utilized to

acquire land and facilities, maintain existing facilities or expand streetscape beautification and landscape maintenance programs.

As discussed in Section II, alternative financing mechanisms appropriate for funding park CIP projects include:

- special district financing,
- impact fees,
- real estate excise tax,
- strategic budget allocations,
- public-private partnerships, and
- Federal and State grants and loans (see: Section II, Supplemental Revenue Sources).

The following analysis looks at the potential revenue impact of four strategies: parks assessment (impact) fees; Maui Open Space Preservation Fund, Real Estate Excise Tax (REET), and Benefit Assessment Districts.

Park Assessment Fees: For subdivisions comprising more than three lots, the County of Maui currently requires a land dedication, or cash-in-lieu fee, of 500 square feet of land per subdivided lot. However, the existing level-of-service for developed park land on Maui Island is 7.7 acres per 1,000 residents. With an average of 2.7 persons per dwelling unit, each new residential unit would need to contribute approximately 848 square feet of land to maintain the existing ratio of developed park land to population.

By performing a detailed level-of-service analysis for each region of the Island, the County may be able to justify increasing the existing land dedication requirement.

Maui Open Space Preservation Fund: In 2002 seventy-three percent of voters in Maui County approved a Charter Amendment mandating that a *minimum of one percent* of annual property tax revenues be placed into a special fund for the protection of open space, natural and cultural resources and the preservation of public access to coastal lands. In 2010 approximately $2.32 million was placed into the Maui Open Space Preservation Fund, which was established to collect these monies. The fund currently has a balance of $10.53 million for open land acquisition. By increasing the annual set aside from 1% to 1.5%, approximately $1.10 million of additional monies could have been generated in 2010 for open space acquisitions. Much of the lands acquired may be suitable for both passive recreation and preservation.

Real Estate Excise Tax (REET): Several mainland communities currently use REET to help fund park land acquisition and capital projects. Set-asides typically range from one-quarter percent to one percent. Assuming Maui County had such a program, in 2009 approximately $2.3 million (1/4%) to $12 million (1%) could have been generated to fund park projects based on the value of single-family, multi-family and residential land transactions that year.

Benefit Assessment Districts: Throughout California, many communities have established annual park maintenance and future capital replacement benefit assessments in the range of $100 to $300 or more per year per residential unit.

On Maui, an island-wide benefit assessment of $100 per residential unit per year would have generated an additional $4.5 million for park projects in 2005.[49] The same assessment, applied just to the Kihei-Makena Community Plan region, could have generated an additional $1.1 million for park related improvements within that region.[50] The County should consider establishing such districts on a regional scale to help fund sub-regional park facilities and at an island-wide scale to fund regional or island-wide park facilities.

Revenue/Expenditure Analysis with Supplemental Revenue Sources

Table 30: Park Revenue/Expenditure Analysis with Supplemental Revenue Sources

	2009	2010	2011	2012	2013	2014	2015	Total 2010-2015
Revenue for Projects[51]	$ 20,008,136	$19,611,576	$19,604,756	$20,494,549	$21,419,026	$22,379,922	$23,379,059	$253,777,775
General Fund Revenue	2,635,000	6,055,000	4,752,749	4,990,387	5,239,906	5,501,902	5,776,997	32,316,941
Park Assessment Fees	4,875,000	3,762,290	2,111,593	2,217,173	2,328,031	2,444,433	2,566,655	15,430,175
Bond Sales	3,000,000	0	2,803,387	2,943,556	3,090,734	3,245,270	3,407,534	15,490,481
Supplemental Revenue Sources:								
Open Space Pres. Fund[52]	1,166,921	1,117,345	906,879	952,223	999,834	1,049,826	1,102,317	6,128,424
REET[53]	2,992,515	3,142,141	3,299,248	3,464,210	3,637,421	3,819,292	4,010,256	21,372,568
Benefit Ass. District[54]	5,338,700	5,534,800	5,730,900	5,927,000	6,123,100	6,319,200	6,515,300	36,150,300
CIP Funded Expenditures								
Countywide ADA Compliance	500,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,500,000
Countywide Parks and Pool Imprv	300,000	500,000	500,000	500,000	500,000	500,000	500,000	2,800,000
TOTAL AVAILABLE FOR PROJECTS	**$18,811,576**	**$18,104,756**	**$18,994,549**	**$19,919,026**	**$20,879,922**	**$21,879,059**	**$245,477,775**	
PARK AND RECREATION CAPITAL PROJECT EXPENDITURES								
Beach Parks	$350,000	$2,155,000	$2,650,000	$2,250,000	$1,800,000	$3,000,000	$12,205,000	
Neighborhood Parks	$550,000	$3,330,000	$3,350,000	$0	$1,000,000	$0	$8,230,000	

[49] Maui County had 45,474 residential units in 2005 (Department of Planning, Land Use Forecast, November 2006)

[50] The Kihei-Makena Community Plan region had 11,070 residential units in 2005 (Department of Planning, Land Use Forecast, November 2006)

[51] Assumes an escalator of 5% per year for each of the County's existing revenue sources.

[52] Based on a dedication of ½ percent of real property tax revenues. Average property tax collections for 2004 through 2010 was used to establish the 2011 base year. Revenues are increased each year from 2011 at a 5% escalator.

[53] Based on a ¼ percent rate on the value of land transactions for single, multi-family, and residential land transactions. Revenues are increased each year at a 5% escalator from a 2009 base year.

[54] An assessment of $100 is levied on each residential unit on Maui. Assumes a growth rate of 1,961 residential units per year from 2005 (Department of Planning, Land Use Forecast, November 2006).

	2009	2010	2011	2012	2013	2014	2015	Total 2010-2015
Community Parks		$3,410,000	$5,695,000	$13,500,000	$2,900,000	$16,425,000	$10,000,000	$51,930,000
District Complexes		$1,020,000	$725,000	$0	$0	$1,000,000	$0	$2,745,000
Greenways & Bikeways		$0	$250,000	$0	$0	$0	$0	$250,000
Regional Park / Complex		$400,000	$7,280,000	$8,000,000	$4,000,000	$0	$0	$19,680,000
AVAILABLE REVENUE FOR PROJECTS		$18,811,576	$18,104,756	$18,994,549	$19,919,026	$20,879,922	$21,879,059	$118,588,888
PROJECT EXPENDITURES		$5,730,000	$19,435,000	$27,500,000	$9,150,000	$20,225,000	$13,000,000	$95,040,000
BALANCE		**$13,081,576**	**-$1,330,244**	**-$8,505,451**	**$10,769,026**	**$654,922**	**$8,879,059**	**$23,548,888**

By increasing the dedication to the Open Space Preservation Fund and directing the increase to park projects, adopting REET, and a Benefit Assessment District the County can eliminate a potential $40.1 million deficit and generate a surplus of $23.5 million.

Supplemental Revenue Sources	
Open Space Preservation Fund.	Expanding the dedicated funding to the Open Space Preservation Fund by ½ percent generates an additional $6.1 million between 2010 and 2015.
REET.	Setting aside ¼ percent of the value of real estate transactions (single, multi-family, and land) generates approximately $21.4 million between 2010 and 2015.
Benefit Assessment District.	Creating a Benefit Assessment District with an annual levy of $100 per residential unit generates approximately $36.1 millions dollars for park land acquisition, improvements, and maintenance.

Findings and Conclusions

According to the revenue and expenditure analysis conducted for the six infrastructure systems included in this study, each system will experience a revenue shortfall to fully implement its six-year CIP if current revenue sources are maintained at present levels. The County will need to secure supplemental revenue sources for each infrastructure system and public facility in order to balance CIP budgets and provide adequate levels-of-service to the community. A number of supplemental revenue sources were explored in this study to assess their feasibility to help fund needed capital projects. Potential supplemental revenue sources the County could use are listed below.

- Increase Existing Fees
- Drainage Utility Fee
- Special Taxing Districts / Community Facilities Districts
- Tax Increment Financing
- Benefit Assessment Districts
- Business Improvement Districts
- Impact Fees
- Real Estate Excise Tax
- Strategic Budget Allocations / Trust Funds
- Public-Private Partnerships
- State and Federal Grants and Loans

Some of these sources are currently available to the County while others would require enabling legislation or voter approval before they could be utilized. The information provided in this study is intended to be a first step to aid the County in developing alternative financing strategies for infrastructure and public facility improvements. The County will need to determine what combination of supplemental revenue sources are most advantageous and feasible to implement and when.

Definition of Terms

Benefit Assessment Districts: Benefit assessment districts are a form of special district financing which can be established to help fund major upgrades to utility services and public facilities within a designated area. Properties within a benefit assessment district have an annual assessment placed on their properties to help fund projects within the district. A benefit assessment can be applied to a neighborhood, special district, or larger areas. These funds are used to fund capital improvements, land acquisition and related long-term debt service, as well as the costs of on-going maintenance. The amount of an assessment on a particular property is related to the amount of benefit that property receives. In benefit assessment districts the cost of public improvements are paid for by those properties which receive a specific benefit from those improvements.

Business Improvement Districts: Business improvement districts operate like other special financing districts but are directed towards improving the business climate within a defined area. Hawaii Revised Statutes (HRS) § 46-80.5 authorizes the counties to establish improvement districts to issue and sell bonds to finance projects that benefit the stated public purpose and which will restore or promote business activity within the district.

Community Facilities Districts: Within a community facilities district (CFD) the district may issue tax-exempt municipal bonds to finance the construction of roads, sewers and other public infrastructure. These bonds are then repaid through a special tax imposed on the properties benefiting from the improvements. The tax is based on the amount of principal and interest required to pay for the bond along with any administration costs. These taxes may be allocated on a unit or acre basis and as a flat or variable charge. The tax is generally collected with property taxes and failure to pay the tax can result in legal action or foreclosure on the property. Hawaii Revised Statutes (HRS) §46-80.1 authorizes the counties to enact procedural ordinances to establish CFD to finance special improvements in the counties.

Drainage Utility Fee: A drainage utility fee, or stormwater utility fee, is a user fee similar to a water or wastewater fee, and is typically included on the monthly utility bill. A drainage utility fee is be charged to all existing development and can be used for both capital and operating expenses. Revenues generated by the fee help fund remedies to existing drainage problems as well as on-going maintenance costs. The fee is related to the generation of runoff and reflects actual costs to provide the service.

Full Cost Pricing: Full cost pricing, or full cost recovery, is recouping the entire cost of providing a service, such as wastewater, through rates, fees and charges. Full cost recovery is achieved by factoring all costs – past, present, and future operations, maintenance, and capital costs – into prices and rate structures.

Impact Fees: An impact fee is a one-time fee payment by new development for off-site capital facilities needed by the new development. Impact fees are an effective method to pay for infrastructure expansion needs to address new growth, however the fees cannot be use to fund existing infrastructure deficits or pay non-capital costs. Impact fees are an equitable form of infrastructure funding because they ensure that growth only pays for its fair share of new facilities. The 1992 Hawaii Impact Fee Law, HRS § 46-141 to 148, authorizes the counties to adopt impact fees.

Level-of-Service: Level-of-service (LOS) standards are typically quantitative measures expressed as ratios of facility capacity to demand by existing and projected future users. LOS standards help a community plan and budget for the demands of a growing and changing population. They serve multiple purposes including providing a benchmark for evaluating service deficiencies in existing neighborhoods, defining what new public facilities and services will be needed to support new development, and providing a basis for assuring that existing services are maintained as new development is served.

Order of Magnitude: An order of magnitude is the class of scale or magnitude of any amount, where each class contains values of a fixed ratio to the class preceding it. Orders of magnitude are generally used to make very approximate comparisons, but reflect deceptively large differences.

Public-Private Partnerships: A public-private partnership (PPP) is a service contract between the public and private sectors where the government pays the private sector to deliver infrastructure and related services over the long-term. The contract allocates responsibilities and business risks among the partners involved. The goal of a PPP is to combine the best capabilities of the public and private sectors for mutual benefit. Public-private partnerships come in many different forms including Build Operate and Own (BOO), Build Operate and Transfer (BOT), and Private Finance Initiatives (PFI). Depending upon the circumstances, private sector involvement can vary from minimal to extensive.

Real Estate Excise Tax: A real estate excise tax (REET), also know as real estate transfer tax or deed recordation tax, is imposed on the sale or transfer of real property. It is levied on the total selling price of the property and is generally paid by the seller. Funds collected through a REET can be placed in a special fund to help fund CIP operations, maintenance and expansion projects. Use of REET financing is often justified on the basis that population growth creates a demand for additional infrastructure capacity and since buyers of land are often new residents or create the demand for new residents by creating new employment, they should contribute to the cost of growth.

Strategic Budget Allocations: Strategic budget allocations are when a designated portion of a tax bill or a rate bill, such as a sewer bill, is deposited into a special fund. The fund is invested, and the interest earned re-invested, with the funds being earmarked for specific future CIP projects. Similar to strategic budget allocations, monies in trust funds are generally provided

from a percentage of tax revenues that are dedicated to a specific investment area. Trust funds provide a dedicated funding source and are less expensive in the long-term than bonds or loans.

Tax Increment Financing: Tax increment financing (TIF) is an economic development / public financing tool used by municipalities to generate revenues to help pay for targeted infrastructure and public facility improvements designed to stimulate private development and increase land values in a designated area. TIF captures the marginal increase in property tax revenues resulting from targeted public improvements. The tax revenues captured are used to pay for the improvements that enabled development to occur. TIF does not require the levying of an additional tax on top of existing property taxes. TIF enables a local government to use the expected future benefits of a development or redevelopment to pay for specified current public expenditures. Tax increment financing is authorized in Hawaii by the Hawaii Tax Increment Financing Act, HRS §46-102 through 46-112 .

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Appendix A: Supplemental Revenue Sources Summary Table

Table 31: Supplemental Revenue Sources Summary

Supplemental Sources	Description	Implementation Process	Advantages	Disadvantages
Increase Existing Fees	Increase existing fees charged to customers for utility services. Existing fees include the Landfill Disposal Fees, Refuse Collection Fee, and the Sewer and Cesspool Fee.	• County Council approval • PUC approval? verify	• Fee structure already established • Minimal implementation time • Customers accustomed to paying fee	• Politically unpopular • Community resistance • Imposes growth induced CIP costs onto existing users
Establish New Utility Fees	Establishing new fees for existing services. New fees include Drainage Utility Fee. Utility Fees can also be used for transportation infrastructure.	• Voter approval by referendum	• Fee linked to benefit/service to be provided • New source of revenue	• Politically unpopular • Community resistance • Upfront cost to develop and promote improvement plans
Community Facilities Districts	Within a community facilities district the local jurisdiction issues tax-exempt bonds to finance public infrastructure and the bonds are then repaid through taxes imposed on the benefitted properties.	• Enact procedural ordinance to establish district boundaries and identify special improvements to be implemented and funded • Public hearing to provide opportunity for affected owners to be heard • Enact an additional ordinance for each bond to be issued	• New source of revenue – government is not giving up any tax revenues it would otherwise get • Burden of cost falls on property owners benefiting from improvement • Can be used to attract development to a desired area	• Community resistance • Lengthy process to establish districts • Upfront cost to develop and promote improvement plans

Supplemental Sources	Description	Implementation Process	Advantages	Disadvantages
Tax Increment Financing	Economic development / public financing tool used to generate revenues to help pay for targeted infrastructure and public facility improvements designed to stimulate private development and increase land values in a designated area. TIF captures the marginal increase in property tax revenues resulting from the public improvement and the revenues are used to pay for the improvements that enabled the development to occur.	• Develop a TIF plan • Adopt ordinance establishing tax increment district including boundaries, date of commencement and termination, and establishment of tax increment fund	• Not a new tax – takes advantage of increases in existing taxes • Burden of cost falls on property owners benefiting from improvement • Can be used to attract development to a desired area	• Lengthy process to establish districts • If an increase in tax revenues does not result from improvements then alternative forms of financing will be required
Benefit Assessment Districts	Properties within a Benefit Assessment District have an annual levy placed on their properties to help fund projects within the district.	• Enact procedural ordinance to establish district boundaries and identify special improvements to be implemented and funded • Public hearing to provide opportunity for affected owners to be heard • Enact an additional ordinance for each bond to be issued	• Burden of cost falls on property owners benefiting from improvement • New source of revenue	• Lengthy process to establish districts • Upfront cost to develop and promote improvement plans • Community resistance to levy

Supplemental Sources	Description	Implementation Process	Advantages	Disadvantages
Business Improvement Districts	Special charge is assessed on property owners in a geographic area to finance needed infrastructure or services and improve the business climate within the defined area.	• Enact procedural ordinance to establish district boundaries and identify special improvements to be implemented and funded • Public hearing to provide opportunity for affected owners to be heard • Enact an additional ordinance for each bond to be issued	• Burden of cost falls on property owners benefiting from improvement • Creates a partnership between property owners and business in commercial areas	• Lengthy process to establish districts • Upfront cost to develop and promote improvement plans • Community resistance to levy
Impact Fees	One-time fee payment by new development for off-site capital facilities needed by the new development.	• Identify existing levels-of-service and capital improvement needs • Identify service areas and calculate impact fees • Establish fund to collect fees	• Establishes a direct link between who pays the fee and who benefits from the improvement • Equitable and efficient way to fund infrastructure project needed for new growth • Reduce borrowing and debt costs of a local government	• Significant amount of research and planning needed to establish and implement fees • Fee revenues depend on the rate of new development • Effect on low/moderate income housing prices
Real Estate Excise Tax (REET)	Tax imposed on the sale or transfer of real property. Funds are placed in a special fund to help fund CIP operations, maintenance and expansion projects.	• Requires voter approval • Establish fund to collect revenues	• Tax revenues will be larger during times of economic growth when infrastructure to service new growth is likely needed	• Unpredictable revenue source due to dependence on real estate market • Impacts on housing affordability
Strategic Budget Allocations / Trust Funds	Funds provided from a percentage of tax revenues that are dedicated to a specific investment area.	• Voter approval	• Dedicated funding source • Less expensive in the long-run than bonds and loans • No tax or fee increase	• Takes funds away from other projects/programs • Return on investment fluctuates with interest rates

Supplemental Sources	Description	Implementation Process	Advantages	Disadvantages
Public-Private Partnerships	A PPP is a service contract between the public and private sector where the government pays the private sector to deliver infrastructure and related services over the long-term.	• Draft PPP contract • County Council approval?	• Improves service delivery • Improves cost-effectiveness • Reduces public sector risk • Delivers capital projects faster • Improves budget certainty	• Complex and expensive procurement process • Potential need for contract negotiations due to unforeseen circumstances during long-term contracts
State & Federal Grants & Loans	Grants and loans from various State and Federal agencies.	• Apply for grant or loan	• Revenue source that either does not need to be paid back or is paid back at a low interest rate	• Competition from other local governments and organizations for limited funds • Decreasing funding over the last decade • Cost and expertise required to prepare grant applications

Appendix B: Hawaii Improvement District Legislation

Title 6. County Organization and Administration
Subtitle 1. Provisions Common to All Counties
Chapter 46. General Provisions

[Part V.] Miscellaneous

§46-80 Improvement by assessment; financing. Any county having a charter may enact an ordinance, and may amend the same from time to time, providing for the making and financing of improvement districts in the county, and such improvements may be made and financed under such ordinance. The county may issue and sell bonds to provide funds for such improvements. Bonds issued to provide funds for such improvements may be either bonds when the only security therefor is the properties benefited or improved or the assessments thereon or bonds payable from taxes or secured by the taxing power of the county. If the bonds are secured only by the properties benefited or improved or the assessments thereon, the bonds shall be issued according and subject to the provisions of the ordinance. If the bonds are payable from taxes or secured by the taxing power, the bonds shall be issued according and subject to chapter 47. Except as is otherwise provided in section 46-80.1, in assessing land for improvements a county shall assess the land within an improvement district according to the special benefits conferred upon the land by the special improvement; these methods include assessment on a frontage basis or according to the area of land within an improvement district, or any other assessment method which assesses the land according to the special benefit conferred, or any combination thereof. [L 1976, c 105, §1; am L 1978, c 180, §1(2); am L 1992, c 226, §3]

[§46-80.1] Community facilities district. (a) Any county having a charter may enact an ordinance, and may amend the same from time to time, providing for the creation of community facilities districts to finance special improvements in the county. The special improvements may be provided and financed under the ordinance. The county shall have the power to levy and assess a special tax on property located in a district to finance the special improvements and to pay the debt service on any bonds issued to finance the special improvements. The county may issue and sell bonds to provide funds for the special improvements. Bonds issued to provide funds for the special improvements may be either: bonds secured only by the properties included in the district and/or the special taxes thereon, or bonds payable from general taxes and/or secured by the general taxing power of the county. If the bonds are secured only by the properties included in the district and/or the special taxes thereon, the bonds shall be issued according and subject to the provisions of the ordinance. If the bonds are payable from general taxes or secured by the general taxing power, the bonds shall be issued according and subject to chapter 47.

(b) There is no requirement that the special tax imposed by ordinance pursuant to this section be fixed in an amount or apportioned on the basis of special benefit to be conveyed on property by the special improvement, or that the special improvement convey a special benefit on any property in the district. It shall be sufficient that the governing body of the county determines that the property to be subject to the special tax is improved or benefited by the special improvement in a general manner or in any other manner. The special improvement may also benefit property outside the district. The special taxes assessed pursuant to this section shall be a lien upon the property assessed. The lien shall have priority over all other liens except the lien of general real property taxes and the lien of assessments levied under section 46-80. The lien of special taxes assessed pursuant to this section shall be on a parity with the lien of general real property taxes and the lien of assessments levied under section 46-80, except to the extent the law or assessment ordinance provides that the lien of assessments levied under section 46-80 shall be subordinate to the lien of general real property taxes.

(c) The ordinance shall describe the types of special improvements that may be undertaken and financed. In addition, the ordinance shall include, but not be limited to, procedures for:

(1) Creating community facilities districts (and zones therein), including specific time spans for the existence of each district;

(2) Apportioning special taxes on real properties within a community facilities district;

(3) Providing notice to and opportunity to be heard by owners of property proposed to be subject to the special tax (the affected owners), subject to waiver by one hundred per cent of the affected owners, including termination of proceedings if the affected owners of more than fifty-five per cent of the property, or if more than fifty-five per cent of the affected owners of the property, in the community facilities district proposed to be subject to the special tax protest in writing at the hearing. The ordinance shall also provide that if a lease requires the lessee to pay the proposed special tax, the ordinance shall state that the affected owner may waive this requirement in writing and that the affected owner refrain from imposing upon any successor lessee the obligation to pay the special tax. The ordinance shall also provide that if the affected owner fails to waive the requirement that the lessee pay the proposed tax, then all the rights for notice, hearing, and protest contained in this paragraph shall inure to the benefit of the original lessee or any subsequent lessee;

(4) Provide notice to buyers or lessees of the property who would be required to pay the special tax;

(5) Fixing, levying, collecting, and enforcing the special taxes against the properties affected thereby (including penalties for delinquent payment and sales for default);

(6) Making changes in the community facilities district, in the special taxes, or in the special improvements to be financed or provided;

(7) The acquisition or construction of the special improvements;

(8) The issuance of bonds to pay all or part of the cost of the special improvements (including costs of issuance, reserves, capitalized interest, credit enhancement, and any other related expenses);

(9) Refunding bonds previously issued;

(10) The establishment and handling of a separate special fund or funds to pay or secure such bonds or to pay for acquisition or construction of special improvements or any other related expenses; and

(11) Other matters as the council shall determine to be necessary or proper.

The amount of special taxes may include amounts determined by the council to be necessary or reasonable to cover administration and collection of the assessments, administration of the bonds or of the program authorized by this section, replenishment of reserves, arbitrage rebate, and a reasonable financing fee.

(d) Each issue of bonds shall be authorized by ordinance, separate from the foregoing procedural ordinance, and shall be in such amounts, denominations, forms, executed in such manner, payable at such place or places, at such time or times, at such interest rate or rates (either fixed or variable), with such maturity date or dates and terms of redemption, security (including pledge of proceeds, special taxes and liens therefor), credit enhancement, administration, investment of proceeds and special tax receipts, default, remedy, or other terms and conditions as the council deems necessary or convenient. The bonds shall be sold in the manner and at the price or prices determined by the council.

(e) This section is a special improvement statute which implements section 12 of Article VII of the State Constitution and provides a complete, additional, and alternative method of doing the things authorized herein; and the creation of districts, levying, assessments and collection of special taxes, issuance of bonds and other matters covered by this section, or by the procedural or bond ordinances authorized by this section, need not comply with any other law applicable to these matters. Bonds issued under this section, when the only security for such bonds is the special taxes or liens on the property in the district subject thereto, shall be excluded from any determination of the power of a county to issue general obligation bonds or funded debt for purposes of section 13 of Article VII of the State Constitution.

(f) Notwithstanding any other law, no action or proceeding to question the validity of or enjoining any ordinance, action, or proceeding undertaken pursuant hereto (including the determination of the amount of any special tax levied with respect to any property or the levy or assessment thereof), or any bonds issued or to be issued pursuant thereto or under this section, shall be maintained unless begun within thirty days of the adoption of the ordinance,

determination, levy, assessment or other act, as the case may be, and, in the case of bonds, within thirty days after adoption of the ordinance authorizing the issuance of those bonds.

(g) Bonds issued pursuant to this section and the interest thereon and other income therefrom shall be exempt from any and all taxation by the State or any county or other political subdivision thereof, except inheritance, transfer, and estate taxes.

(h) Properties of entities of the state, federal, or county governments, except as provided in subsection (i), shall be exempt from the special tax. No other properties or entities are exempt from the special tax unless the properties or entities are expressly exempted in the ordinance of formation to establish a district adopted pursuant to this chapter or in an ordinance of consideration to levy a new special tax or special taxes or to alter the rate or method of apportionment of an existing special tax as provided in this section.

(i) If a public body owning property, including property held in trust for any beneficiary, which is exempt from a special tax pursuant to subsection (h), grants leasehold or other possessory interest in the property to a nonexempt person or entity, the special tax, notwithstanding subsection (h), shall be levied on the leasehold or possessory interest and shall be payable by the lessee. [L 1992, c 226, §2]

§46-80.5 Special improvement district. (a) In addition and supplemental to the authority vested in the counties by sections 46-80 and 46-80.1, any county having a charter may enact an ordinance, and may amend the same from time to time, authorizing the creation of special improvement districts for the purpose of providing and financing supplemental maintenance and security services and such other improvements, services, and facilities within the special improvement district as the council of the county determines will restore or promote business activity in the special improvement district and making and financing improvements therein. Each separate special improvement district shall be established by a separate ordinance enacted as provided in the ordinance authorizing the creation of special improvement districts. The ordinance authorizing the creation of special improvement districts may permit the county to provide for a board or association, established pursuant to chapter 414D, to provide management of the special improvement district, and to carry out activities as may be prescribed by the ordinance authorizing the creation of special improvement districts and the ordinance establishing the special improvement district as permitted thereby.

(b) The county may levy and assess a special assessment on property located within the special improvement district to finance the maintenance and operation of the special improvement district and to pay the debt service on any bonds issued to finance improvements within the special improvement district. Notwithstanding any law to the contrary, in assessing property for a special assessment, the county may implement a methodology as the council of the county deems appropriate. The special assessment may be fixed in an amount or appropriated on a basis as the council of the county deems appropriate, and it shall not be essential that the property subject to the special assessment be improved or benefitted by the

operation and maintenance of the special improvement district or any activity or improvement undertaken for, and financed by, the special improvement district.

(c) The county may issue and sell bonds to finance improvements within the special improvement district and the ordinance authorizing the creation of special improvement districts may provide the method, procedure, and type or types of security for those bonds. Each issue or series of bonds shall be authorized by ordinance separate from the ordinance establishing the special improvement district. The bonds shall be in amounts, in denomination or denominations, in form or forms, executed in a manner, payable in place or places and at time or times, bear interest at rate or rates (either fixed or variable), mature on date or dates and provide terms and conditions of redemption, provide security (including the pledge of proceeds of the bonds, special assessments, and the lien therefor), provide for credit enhancement, if any, administration, terms of investment of proceeds of the bonds and special assessment receipts, provide terms of default and remedy, and other terms and conditions, as the council of the county deems necessary or proper. The bonds may be sold in a manner and at price or prices as the council of the county shall determine. Bonds issued pursuant to this section and the interest thereon and other income therefrom shall be exempt from any and all taxation by the State or any county or other political subdivision, except inheritance, transfer, and estate taxes.

(d) Notwithstanding any other law to the contrary, no action or proceeding to object to or question the validity of or enjoining any ordinance, action, or proceeding permitted by this section (including the liability for or the determination of the amount of any special assessment levied or the imposition thereof), or any bonds issued or to be issued pursuant to an ordinance enacted as permitted by this section, shall be maintained unless begun within thirty days of the enactment of the ordinance, determination, or other act, as the case may be and, in the case of the assessment, whether the determination or levy, within thirty days after adoption of the ordinance authorizing or amending the assessment formula and, in the case of bonds, within thirty days after enactment of the ordinance authorizing the issuance of the bonds.

(e) Exemptions.

(1) Property owned by the state or county governments or entities, may be exempt from the assessment except as provided in paragraph (3);

(2) Property owned by the federal government or entities, shall be exempt from the assessment except as provided in paragraph (3);

(3) If a public body owning property, including property held in trust for any beneficiary, which is exempt from an assessment pursuant to paragraphs (1) and (2), grants a leasehold or other possessory interest in the property to a nonexempt person or entity, the assessment, notwithstanding paragraphs (1) and (2), shall be levied on the leasehold or possessory interest and shall be payable by the lessee; and

(4) No other properties or owners shall be exempt from the assessment unless the properties or owners are expressly exempted in the ordinance establishing a district adopted pursuant to this section or amending the rate or method of assessment of an existing district.

(f) The assessments levied pursuant to the ordinance authorizing the creation of special improvement districts, the ordinance establishing a district, and this section shall be a lien upon the property assessed. The lien shall have priority over all other liens except the lien of general real property taxes and shall be on a parity with the lien of assessments levied under sections 46-80 and 46-80.1.

(g) Any board or association established for the purposes of carrying out the activities described in this section shall not be deemed a governmental body. The board and association shall neither be deemed to be a government department, agency, or a county nor to be performing services on behalf of a government department, agency, or county. [L 1999, c 107, §1; am L 2002, c 40, §2]

Appendix C: Hawaii Tax Increment Financing Act

Title 6. County Organization and Administration
Subtitle 1. Provisions Common to All Counties
Chapter 46. General Provisions

[Part VI.] Tax Increment Financing

§46-102 Definitions. As used in this part, the following words and terms shall have the following meanings unless the context indicates a different meaning or intent:

"Adjustment rate" means a percentage rate or rates of adjustment of the assessment base determined by the director of finance at the time the tax increment district is established, based on the historical and projected increases to the assessed values of taxable real property within the boundary of the tax increment district and the projected cost increases to the county for servicing the new developments within the tax increment district.

"Assessment base" means the total assessed values of all taxable real property in a tax increment district as most recently certified by the director of finance on the date of creation of the tax increment district.

"Assessment increment" means the amount by which the current assessed values of taxable real property located within the boundaries of a tax increment district exceeds its assessment base.

"Community development plan" means a plan established pursuant to section 206E-5.

"Council" means the council of the county in which a tax increment district is situated.

"County" has the same meaning as set forth in section 1-22 and means the county in which a tax increment district is situated.

"Director of budget" means the office or chief budget officer of the county charged with the responsibility of preparing and reviewing the operating and capital budget programs of the county.

"Director of finance" means the officer or officers of the county charged with the responsibility of administering the real property taxation function of the county.

"High technology parks" means an industrial park that has been developed to accommodate and support high technology activities including the Hawaii technology park at Mililani town,

city and county of Honolulu, the Maui research and technology park, Maui county, and the Hawaii ocean science and technology (HOST) park, Hawaii county.

"Project costs" means expenditures made or estimated to be made or monetary obligations incurred or estimated to be incurred by the agency that are listed in a tax increment financing plan as costs of public works or public improvements in a tax increment district, plus other costs incidental to the expenditures or obligations. Project costs include:

(1) Capital costs, including the actual costs of the construction of public works or public improvements, new buildings, structures, and fixtures; the actual costs of the demolition, alteration, remodeling, repair, or reconstruction of existing buildings, structures, and fixtures; and the actual costs of the acquisition, clearing, and grading of land;

(2) Financing costs, including, but not limited to, all necessary and incidental expenses related to the issuance of tax increment bonds and all interest paid to holders of evidences of indebtedness or other obligations issued to pay for project costs, any capitalized interest, and any premium paid over the principal amount of the obligations because of the redemption of the obligations prior to maturity;

(3) Professional service costs, including architectural, planning, engineering, marketing, appraisal, financial consultant, and special services and legal advice;

(4) Imputed administrative costs, including reasonable charges for the time spent by employees of the agency in connection with the implementation of a tax increment financing plan;

(5) Relocation costs to the extent required by federal or state law;

(6) Organizational costs, including the costs of conducting environmental impact studies or other studies, the costs of publicizing the creation of a tax increment district, and the cost of implementing the tax increment financing plan for the tax increment district;

(7) Payments determined by the county council to be necessary or convenient to the creation of a tax increment district or to the implementation of the tax increment financing plan for the tax increment district.

"Redevelopment agency" or "agency" means an agency defined in section 53-1 or the Hawaii community development authority as established pursuant to chapter 206E.

"Redevelopment plan" means a plan as defined in section 53-1.

"Tax increment" means the amount of real property taxes levied for one year on the assessment increment.

"Tax increment bonds" mean bonds, notes, interim certificates, debentures, or other obligations issued pursuant to this part.

"Tax increment district" or "district" means a contiguous or noncontiguous geographic area designated pursuant to section 46-103 by the county council for the purpose of tax increment financing.

"Tax increment financing plan" means the plan for tax increment financing for a tax increment district submitted to the county council. The tax increment financing plan shall contain estimates of: project costs; amount of tax increment bonds to be issued; sources of revenue to finance or otherwise pay project costs; the most recent assessed value of taxable real property in the district; the duration of the district's existence; and statements from the county's department of finance, and the county's department of budget, if applicable, regarding the financial and budgetary impacts on the county resulting from the proposed tax increment financing plan.

"Tax increment fund" means a fund which shall be held by the director of finance or other fiduciary designated by the county council and into which all tax increments and other moneys pledged by the county for payment of tax increment bonds are paid, and all proceeds from the sale of tax increment bonds are deposited, and from which moneys are disbursed to pay project costs for the tax increment district or to satisfy claims of holders of tax increment bonds issued for the district. [L 1985, c 267, pt of §1; am L 1987, c 248, §2]

§46-103 Establishment of tax increment district. Any county council may provide for tax increment financing by approving a tax increment financing plan and adopting an ordinance establishing the tax increment district. The ordinance shall:

(1) Describe the boundaries of the tax increment district;

(2) Provide for the date of commencement of the tax increment district and date of termination of the district;

(3) Provide for the establishment of a tax increment fund for the district; and

(4) Provide for such other matters deemed to be pertinent and desirable for tax increment financing and not inconsistent with any relevant redevelopment plan, community development plan, high technology park plan, or telecommunication development plan. [L 1985, c 267, pt of §1; am L 1987, c 248, §3]

§46-104 County powers. A county may exercise any power necessary and convenient to establish tax increment districts, including the power to:

(1) Create tax increment districts and determine the boundaries of the districts;

(2) Issue tax increment bonds;

(3) Deposit tax increments into the tax increment fund created for a tax increment district; and

(4) Enter into agreements, including agreements with the redevelopment agency and owners or developers of project lands and bondholders, determined to be necessary or convenient to implement redevelopment plans or community development plans, as the case may be, and achieve their purposes. [L 1985, c 267, pt of §1; am L 1987, c 248, §4]

§46-105 Collection of tax increments. (a) The county by ordinance shall provide for the allocation of real property taxes and tax increments in the manner required by this part.

(b) If a county exercises the power allowed under this part, then commencing with the first payment of real property taxes levied by the county subsequent to the time a tax increment district takes effect, receipts from real property taxes shall be allocated and paid over as follows:

(1) The amount of real property tax produced from the assessment base shall be paid to the county general fund; and

(2) The tax increments produced from the assessment increment in the tax increment district shall be applied as follows:

(A) First, an amount equal to the installment of (i) principal and interest falling due of any tax increment bonds, or (ii) any project cost approved by the county, shall be deposited into the tax increment fund established for the tax increment district.

(B) Second, an amount equal to the adjustment rate times the amount of real property tax produced from the assessment base shall be computed and paid to the county general fund.

(C) Third, the remaining amount of tax increments, if any, shall be deposited into the tax increment fund established for the tax increment district.

(c) The allocation of real property taxes pursuant to this part shall in no way limit the power of the county under section 47-12 to levy ad valorem taxes without limitation as to rate or amount on all real property subject to taxation by the county for the payment of the principal and interest of its general obligation bonds. [L 1985, c 267, pt of §1; am L 1990, c 34, §5]

§46-106 Tax increment bonds. (a) A county may issue tax increment bonds, the proceeds of which may be used to pay project costs for a tax increment district or to satisfy claims of bondholders. The county may issue refunding bonds previously issued by the county for the purpose of paying or retiring or in exchange for tax increment bonds previously issued by the county. Principal and interest on tax increment bonds shall be made payable, as to both

principal and interest, solely from the tax increment fund established for the tax increment district.

A county may provide in its contract with the owners or holders of the tax increment bonds that the county will pay into the tax increment fund all or any part of the revenue or money produced or received as a result of the operation or sale of a facility acquired, improved, or constructed pursuant to a redevelopment plan or community development plan, as the case may be, to be used to pay principal and interest on the tax increment bonds and, if a county so agrees, the owners or holders of the tax increment bonds may have a lien or mortgage on any facility acquired, improved, or constructed with the proceeds of the tax increment bonds.

(b) Tax increment bonds, and the income therefrom, issued pursuant to this part shall be exempt from all state and county taxation, except estate and transfer taxes.

The bonds shall be authorized by ordinance and may be issued in one or more series. The tax increment bonds of each issue shall be dated, be payable upon demand or mature at a time or times not exceeding thirty years from their date of issuance, bear interest at a rate or rates, be in a denomination or denominations, be in registered form, have a rank or priority, be executed in a manner, be payable in a medium of payment at a place or places, and be subject to terms of redemption (with or without premium), be secured in a manner, and have other characteristics as may be provided by the ordinance providing for issuance of the bonds or by the trust indenture or mortgage issued in connection with the bonds. The county may sell tax increment bonds in such manner, either at public or private sale, and for such price as it may determine.

(c) Prior to the preparation of definitive tax increment bonds, the county may issue interim receipts or temporary bonds exchangeable for definitive bonds when such bonds have been executed and are available for delivery.

(d) Should any bond issued under this part become mutilated or be lost, stolen, or destroyed, the county may cause a new bond of like date, number, and tenor to be executed and delivered in exchange and substitution for, and upon the cancellation of such mutilated bond, or in lieu of and in substitution for such lost, stolen, or destroyed bond. Such new bond shall not be executed or delivered until the holder of the mutilated, lost, stolen, or destroyed bond:

(1) Has paid reasonable expenses and charges in connection therewith;

(2) In the case of a lost, stolen, or destroyed bond, has filed with the county or its fiduciary satisfactory evidence that such bond was lost, stolen, or destroyed, and that the holder was owner thereof; and

(3) Has furnished indemnity satisfactory to the county.

(e) Notwithstanding any of the provisions of this part or any recital in any tax increment bond issued under this part, all tax increment bonds shall be deemed to be investment securities

under the Uniform Commercial Code, chapter 490, subject only to the provisions pertaining to registration.

(f) In any suit, action, or other proceeding involving the validity or enforceability of a bond issued under this part or the security for a bond or note issued under this part, a bond reciting in substance that it had been issued by the county for a tax increment district shall be conclusively deemed to have been issued for that purpose, and the development or redevelopment of the district conclusively shall be deemed to have been planned, located, and carried out as provided by this part.

(g) All banks, trust companies, savings banks and institutions, building and loan associations, savings and loan associations, investment companies, and other persons carrying on a banking or investment business; all insurance companies, insurance associations, and other persons carrying on an insurance business; and all personal representatives, administrators, curators, trustees, and other fiduciaries legally may invest sinking funds, money, or other funds belonging to them or within their control in tax increment bonds issued by a county pursuant to this part. The bonds shall be authorized security for all public deposits. Any person, political subdivision, and officer, public or private, are authorized to use funds owned or controlled by them for the purchase of tax increment bonds. This part does not relieve any person of the duty to exercise reasonable care in selecting securities.

(h) Tax increment bonds shall be payable only out of the tax increment fund. The county council may pledge irrevocably all or a part of the fund for payment of the bonds. The part of the fund pledged in payment thereafter shall be used only for the payment of the bonds or interest or redemption premium, if any, on the bonds until the bonds have been fully paid. A holder of the bonds shall have a lien against the fund for payment of the bonds and interest thereon and may either at law or in equity protect and enforce such lien.

(i) No officer of the county including any officer executing tax increment bonds shall be liable for the tax increment bonds by reason of the issuance thereof. Tax increment bonds issued under this part shall not be general obligations of the State or county, nor in any event shall they give rise to a charge against the general credit or taxing powers of the State or county or be payable other than as provided by this part. No holder of bonds issued under this part shall have the right to compel any exercise of the taxing power of the State or county to pay such bonds or the interest thereon, and no moneys other than the moneys in the tax increment fund pledged to the bonds shall be applied to the payment thereof. Tax increment bonds issued under this part shall state these restrictions on their face.

(j) The tax increment bonds bearing the signature or facsimile signature of officers in office on the date of the signing thereof shall be valid and sufficient for all purposes, notwithstanding that before the delivery thereof and payment therefor any or all persons whose signatures appear thereon shall have ceased to be officers of the county.

(k) Tax increment bonds shall not be issued in an amount exceeding the total costs of implementing the tax increment financing plan for which they were issued. [L 1985, c 267, pt of §1]

§46-107 Tax increment bond anticipation notes. Whenever the county has authorized the issuance of tax increment bonds under this part, tax increment bond anticipation notes of the county may be issued in anticipation of the issuance of such bonds and of the receipt of the proceeds of sale thereof, for the purposes for which such bonds have been authorized. All tax increment bond anticipation notes shall be authorized by the county, and the maximum principal amount of such notes shall not exceed the authorized principal amount of the bonds. The notes shall be payable solely from and secured solely by the proceeds of sale of the tax increment bonds in anticipation of which the notes are issued and the moneys in the tax increment fund from which would be payable and by which would be secured such bonds; provided that to the extent that the principal of the notes shall be paid from moneys other than the proceeds of sale of such bonds, the maximum amount of bonds authorized in anticipation of which the notes are issued shall be reduced by the amount of notes paid in such manner. The authorization, issuance, and details of such notes shall be governed by this part with respect to tax increment bonds insofar as the same may be applicable; provided that each note, together with renewals and extensions thereof, or refundings thereof by other notes issued under this section, shall mature within five years from the date of the original note. [L 1985, c 267, pt of §1]

§46-108 Annual report. The county council by ordinance may require the director of finance to prepare a report to the county council on the status of the tax increment district. The county council shall determine what information and data are required to be included in the report. [L 1985, c 267, pt of §1]

§46-109 Termination of a tax increment district. A tax increment district shall terminate at the time designated in the ordinance creating the district or at an earlier time designated by a subsequent ordinance, but in no event shall the district terminate until such time as all project costs and tax increment bonds issued for the district and the interest thereon, have been paid in full, or sufficient funds have been irrevocably deposited in a special fund or other escrow account held in trust for all outstanding tax increment bonds issued for such district to provide for the payment of such bonds at maturity or date of redemption and interest and premium, if any, thereon. [L 1985, c 267, pt of §1]

§46-110 Tax increment fund. (a) Money shall be disbursed from the tax increment fund for a tax increment district only to satisfy the claims of holders of tax increment bonds issued for the tax increment district or to pay project costs for the district, or to make payments to the county as provided by subsection (c).

(b) Subject to an agreement with the holders of tax increment bonds, money in a tax increment fund may be temporarily invested in the same manner as other funds of the county.

(c) In any year in which the tax increment exceeds the amount necessary to pay all project costs and all installments of principal and interest of tax increment bonds issued for a tax increment district falling due and the amount paid to the county general fund pursuant to section 46-105(b)(2)(B), and subject to any agreement with bondholders, any excess money in the fund at the option of the county council, shall be used to redeem or purchase any outstanding tax increment bonds issued for the district, discharge the pledge of tax increment therefor, be paid into an escrow account dedicated to the payment of such bonds, be paid over to the county general fund, or any combination thereof. [L 1985, c 267, pt of §1]

§46-111 Computation of tax increment. (a) Upon or after creation of a tax increment district, the director of finance of the county in which the district is situated shall certify the assessment base of the tax increment district and shall certify in each year thereafter the amount by which the assessment base has increased or decreased as a result of a change in tax exempt status of property within the district, or reduction or enlargement of the district. The amount to be added to the assessment base of the district as a result of previously tax exempt real property within the district becoming taxable shall be equal to the assessed value of the real property as most recently assessed or, if the assessment was made more than one year prior to the date of transfer rendering the property taxable, the value which shall be assessed by the director of finance at the time of such transfer. The amount to be added to the assessment base of the district as a result of enlargements thereof shall be equal to the assessed value of the additional real property as most recently certified by the director of finance as of the date of modification of the tax increment financing plan. The amount to be subtracted from the assessment base of the district as a result of previously taxable real property within the district becoming tax exempt, or a reduction in the geographic area of the district, shall be the amount of assessment base initially attributed to the property becoming tax exempt or being removed from the district.

If the assessed value of property located within the tax increment district is reduced by reason of a court-ordered abatement, stipulated agreement, or voluntary abatement made by the director of finance, the reduction shall be applied to the assessment base of the district when the property upon which the abatement is made has not been improved since the date of creation of the district, and to the assessment increment of the district in each year thereafter when the abatement relates to improvements made after the date of creation.

(b) The director of finance shall certify the amount of the assessment increment to the county and redevelopment agency each year, together with the proportion that the assessment increment bears to the total assessed value of the real property within the tax increment district for that year. [L 1985, c 267, pt of §1]

§46-112 Tax on leased redevelopment property. Whenever property in the tax increment district has been redeveloped and thereafter is leased by the county or redevelopment agency to any person or whenever the county or agency leases real property in any tax increment district to any person for redevelopment, the property shall be assessed and taxed in the same manner

as privately owned property, and the lease or contract shall provide that the lessee shall pay taxes upon the assessed value of the entire property and not merely the assessed value of the lessee's leasehold interest. [L 1985, c 267, pt of §1]

Appendix D: Existing CIP Revenues

Fire

Capital Revenues

Funding sources for fire capital projects include the County General Fund, General Obligation (G.O.) Bonds and grant revenue. These funding sources are further described below:

General Fund: The General Fund finances the large majority of the Department's operational expenses and CIP projects.

General Obligation (G.O.) Bonds: G.O. bonds are a primary funding source for County capital projects. These bonds are guaranteed by County property tax and special fund revenues. The Fire Department relies on G.O. Bonds to partially fund fire capital projects, especially one-time, large ticket projects such as new fire stations.

Grant Revenue: The Department of Fire and Public Safety has a number of small and medium grants they rely on each year for funding specific operational programs. Grants do not generally play a major role in funding fire CIP projects, however some capital projects have been partially funding by grant revenues, such as the Haiku Fire Station.

Figure 29 through Figure 31 analyze past fire CIP budgets between FY 2004 and 2010 to identify past infrastructure funding trends and project future CIP revenues. Annual fire CIP revenues have increased steadily since FY 2004 except for a large decrease in FY 2010.

Figure 29: Annual Fire CIP Revenues FY 2004 - 2010

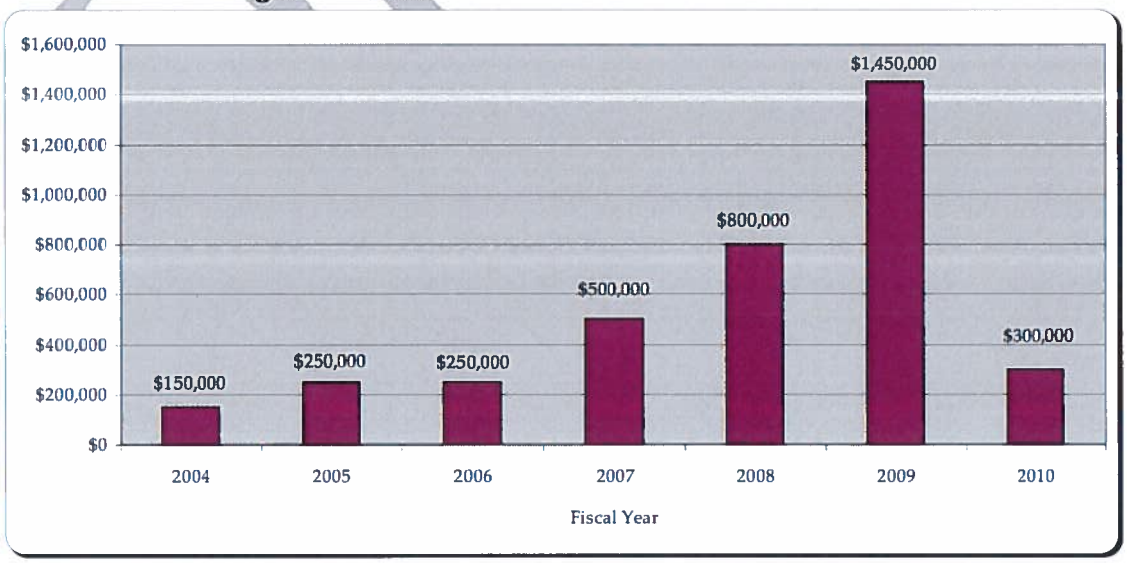
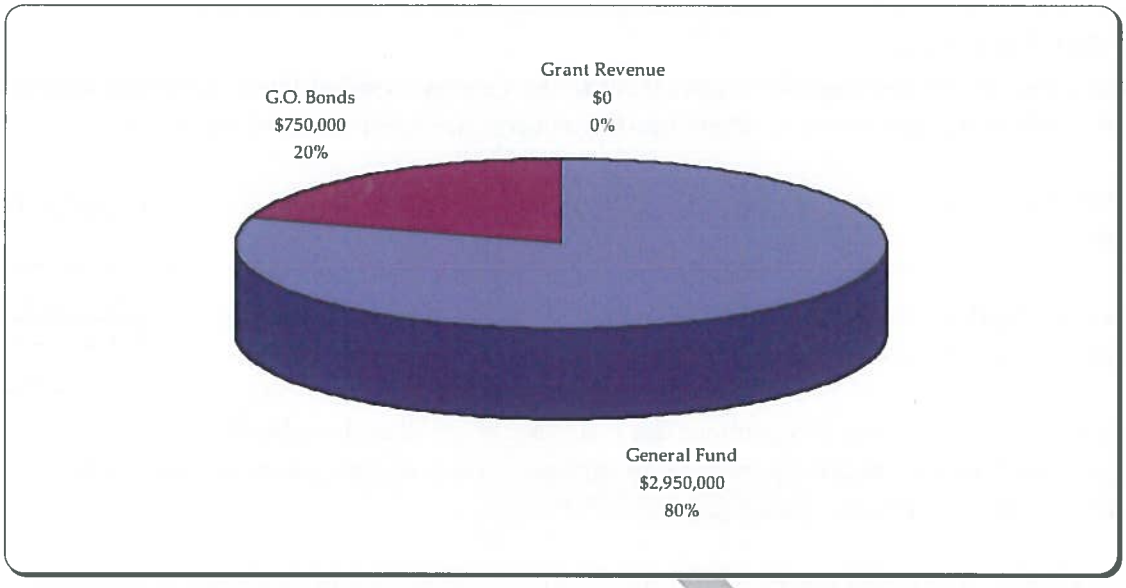
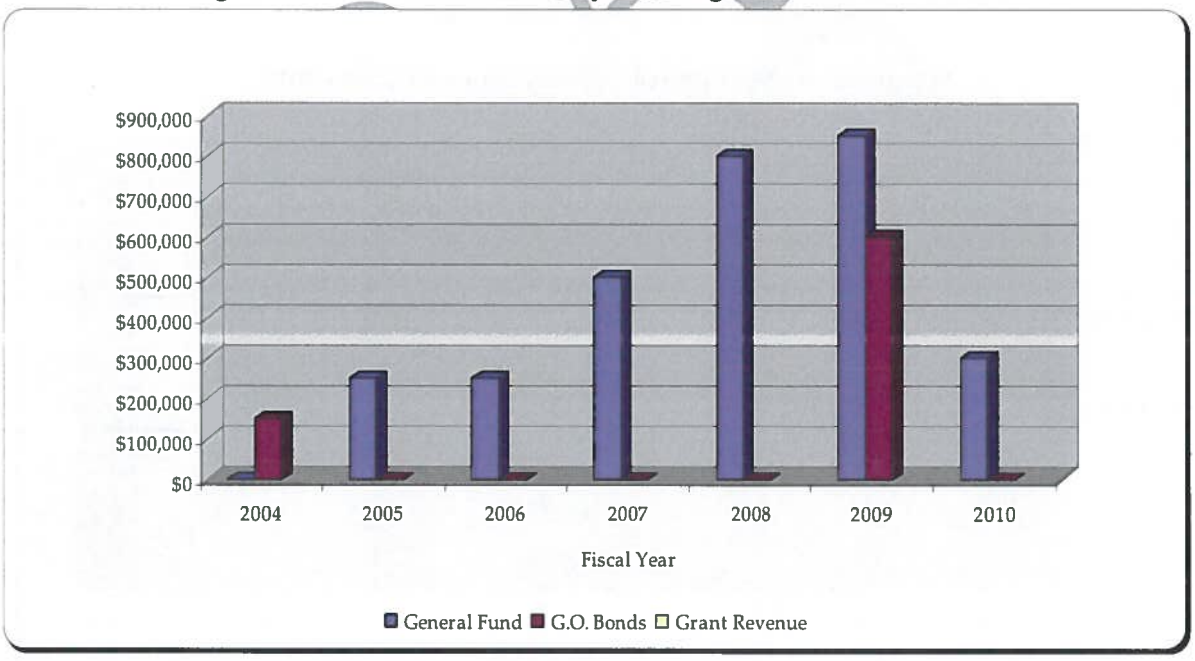


Figure 30: Total Fire CIP Revenues by Funding Source FY 2004 - 2010



General Fund revenues are the largest funding source for fire CIP projects, accounting for approximately 80 percent of the Department's CIP revenues for FY 2004 through 2010.

Figure 31: Fire CIP Revenues by Funding Source FY 2004 - 2010



Police

Capital Revenues

Funding sources for fire capital projects include the County General Fund, General Obligation (G.O.) Bonds and grant revenue. These funding sources are further described below:

General Fund: The General Fund is an important funding source for the Department's operational expenses and CIP projects.

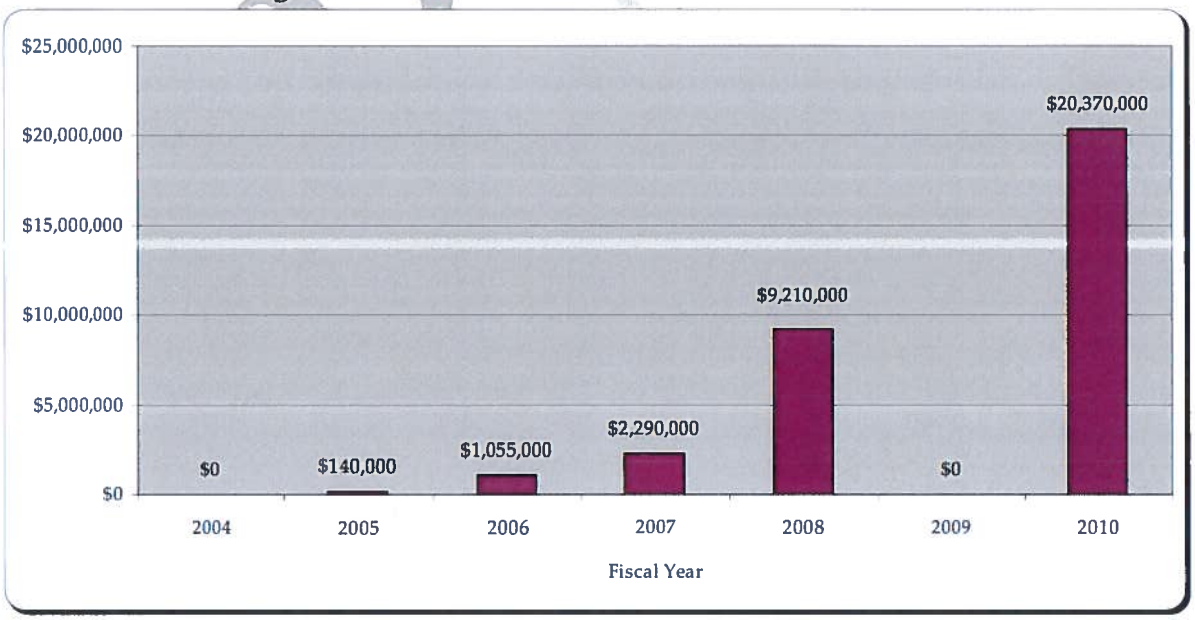
General Obligation (G.O.) Bonds: G.O. Bonds are used to fund the majority of police capital projects, especially one-time, large ticket projects such as new police stations.

Grant Revenue: The Police Department has a number of small and medium grants they rely on each year for funding specific operational programs. Grants do not generally play a major role in funding fire CIP projects. (Any used for CIP???)

Figure 32**Error! Reference source not found.** through Figure 34**Error! Reference source not found.** analyze past police CIP budgets between FY 2004 and 2010 to identify past infrastructure funding trends and project future CIP revenues.

Need past annual grant amounts.

Figure 32: Annual Police CIP Revenues FY 2004 - 2010



Annual police CIP budgets have steadily risen since FY 2004 with the exception of FY 2009. There is a large variation in the annual CIP budget amounts with FY 2010 being the largest budget year at approximately $20.4 million and FY 2004 and 2009 with zero CIP budget allocations. (See Figure 32) G.O. bonds are the largest revenue source for police CIP projects, accounting for approximately 64 % of CIP projects between FY 2004 and 2010. (See Figure 33)

Figure 33: Total Police CIP Revenues by Funding Source FY 2004 - 2010

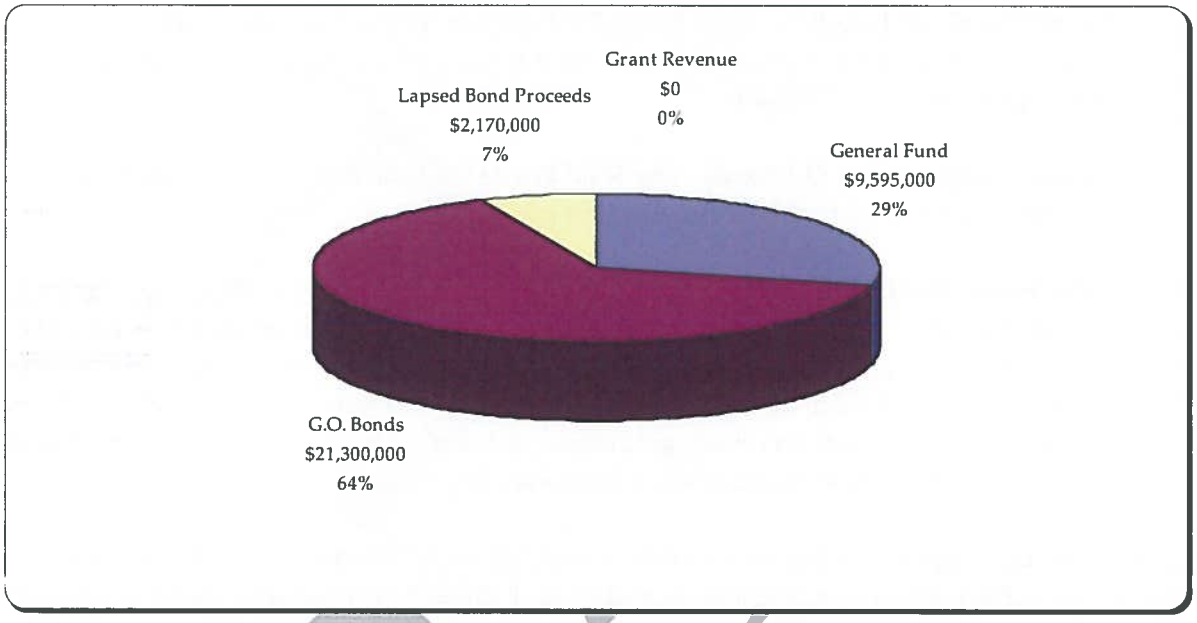
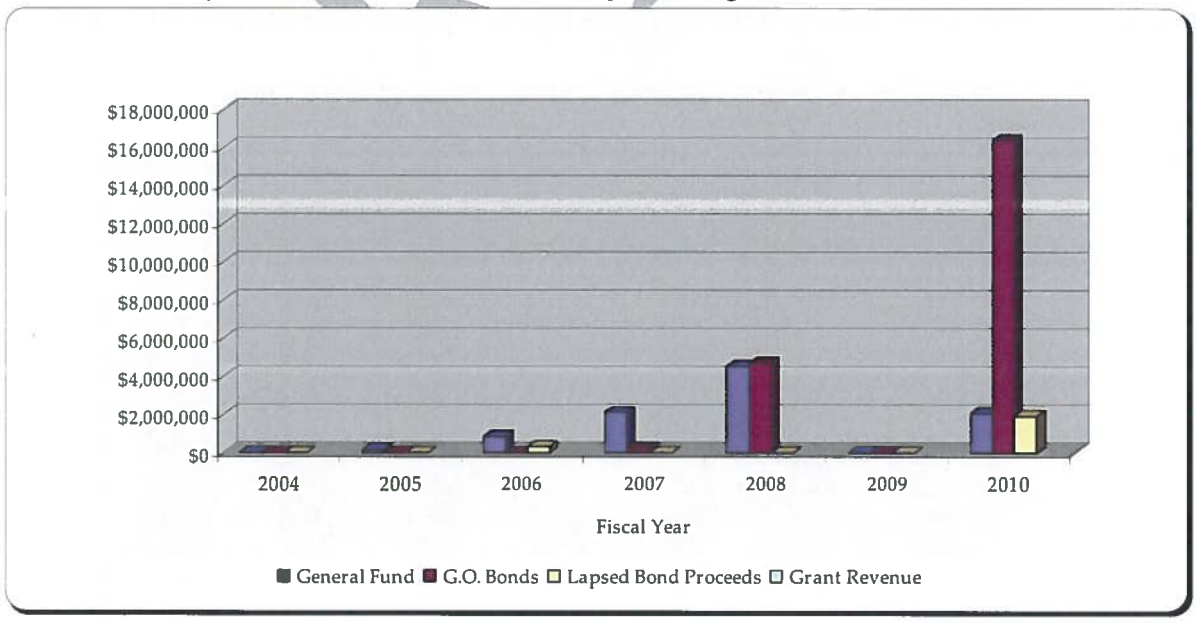


Figure 34: Police CIP Revenues by Funding Source FY 2004 - 2010



Solid Waste

Capital Revenues

Funding sources for solid waste capital projects include the County General Fund, G.O. bonds, the Solid Waste Fund, and grant revenue. These funding sources are further described below:

> ***General Fund:*** Although the Solid Waste Division has received revenue from the General Fund in previous fiscal years, the fund is not a primary funding source for capital projects for the Division.
>
> ***General Obligation (G.O.) Bonds:*** The Solid Waste Division relies on G.O. bonds to fund the majority of its capital improvement projects.
>
> ***Solid Waste Fund:*** The Solid Waste Fund is the primary funding source for Division operational costs. The fund was established to receive all landfill disposal fees and refuse collection fees. The fund is used for the operation and maintenance of the County's collection and disposal program as well as for diversion programs such as resource recovery and recycling programs. Revenues from the Solid Waste Fund contribute marginally to the funding of Division CIP projects.

Figure 35 through Figure 37 analyses past solid waste CIP budgets between FY 2004 and 2010 to identify past infrastructure funding trends and project future CIP revenues. Solid waste CIP budgets have been steadily increasing during that time period except for declines in 2007 and 2010. The average annual CIP budget for that seven year time period is approximately $6.2 million. G.O. bonds have consistently been the largest funding source for solid waste CIP projects, covering over 90 percent of the Division's capital expenditures from FY 2004 to 2010.

Figure 35: Annual Solid Waste CIP Revenues FY 2004 - 2010

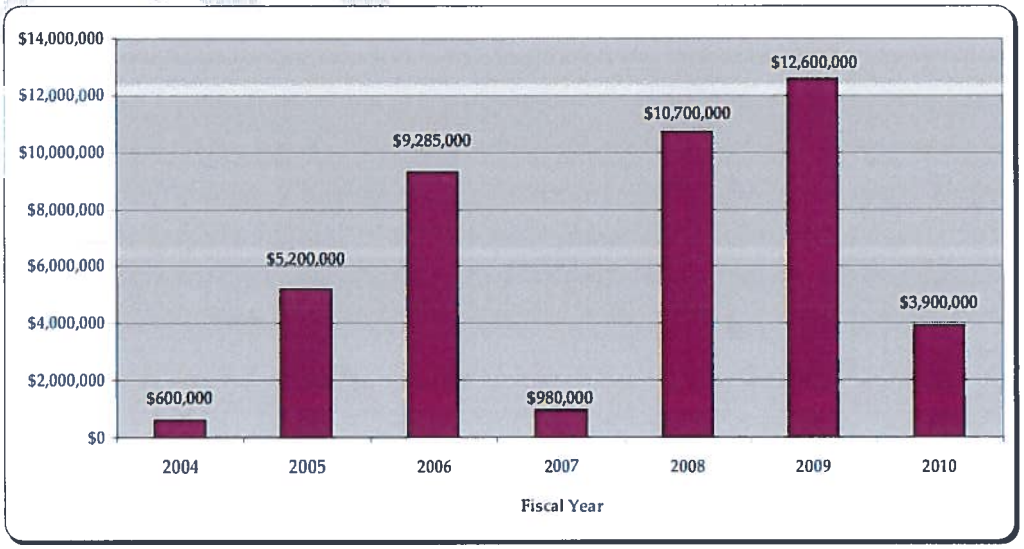


Figure 36: Total Solid Waste CIP Revenues by Funding Source FY 2004 - 2010

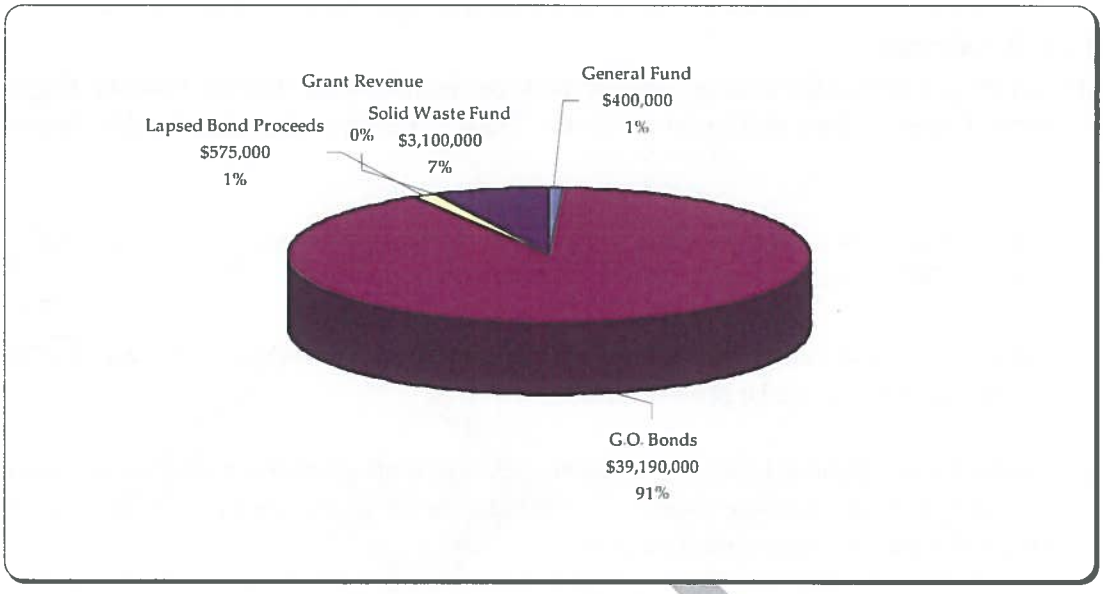
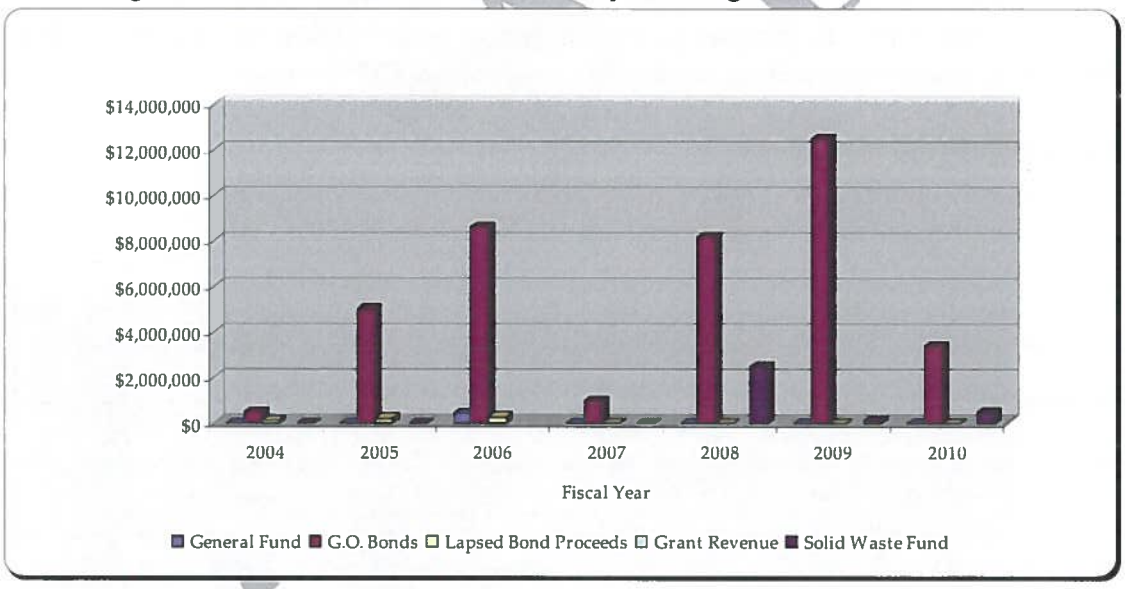


Figure 37: Solid Waste CIP Revenues by Funding Source FY 2004 - 2010



Drainage

Capital Revenues

Primary funding sources for drainge capital projects include G.O. bonds, County Highway Fund, County General Fund and grant revenue. These funding sources are further described below:

General Obligation (G.O.) Bonds: G.O. bonds are the primary funding source for drainage CIP projects.

County Highway Fund: The County fuel, franchise and weight taxes are the major revenue sources for the Highway Fund.

General Fund: Although the Department of Public Works has received revenue from the General Fund for drainage projects in previous fiscal years, the fund is not a primary funding source for such capital projects.

Grant Revenue: ???

Figure 38 through Figure 40 analyses past drainage CIP budgets between FY 2004 and 2010 to identify past infrastructure funding trends and project future CIP revenues.

Need past annual grant amounts.

Figure 38: Annual Drainage CIP Revenues FY 2004 - 2010

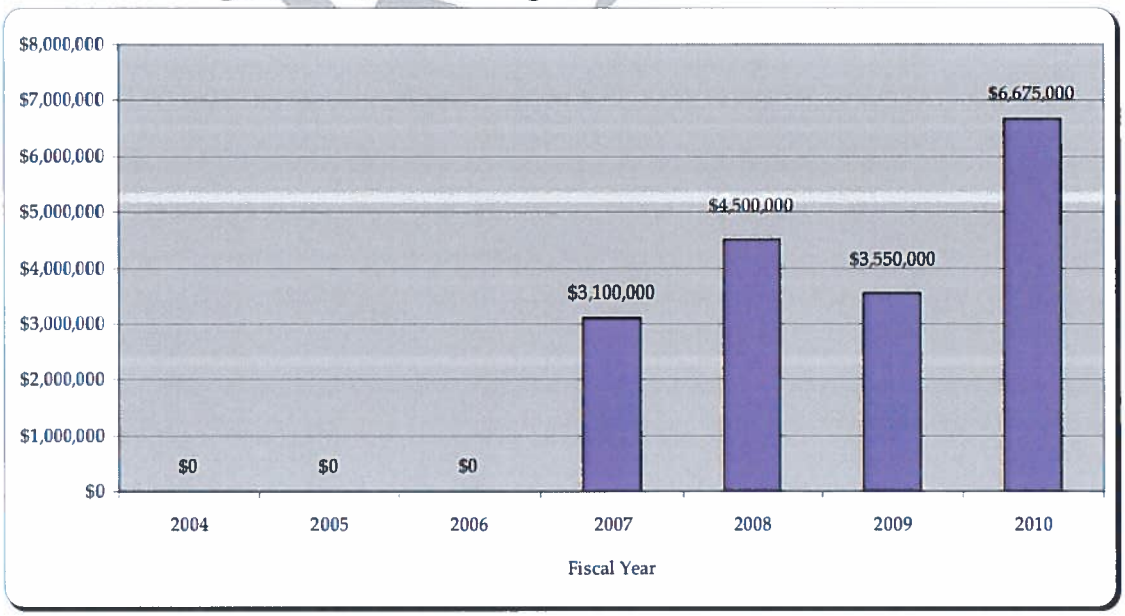


Figure 39: Total Drainage CIP Revenues by Funding Source FY 2004 - 2010

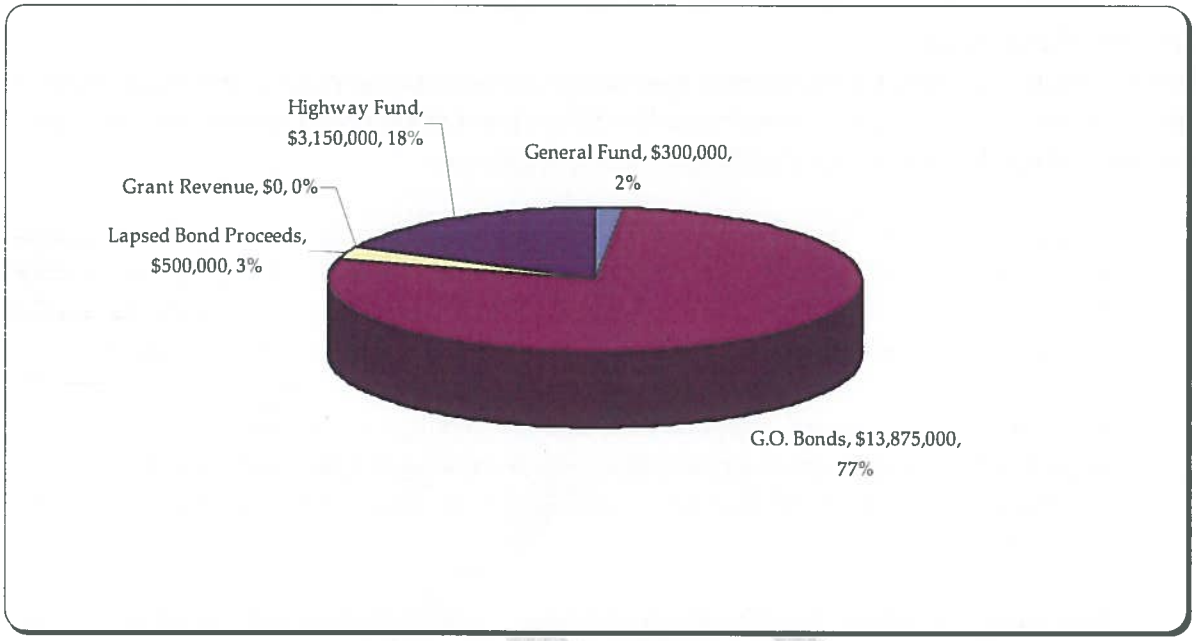
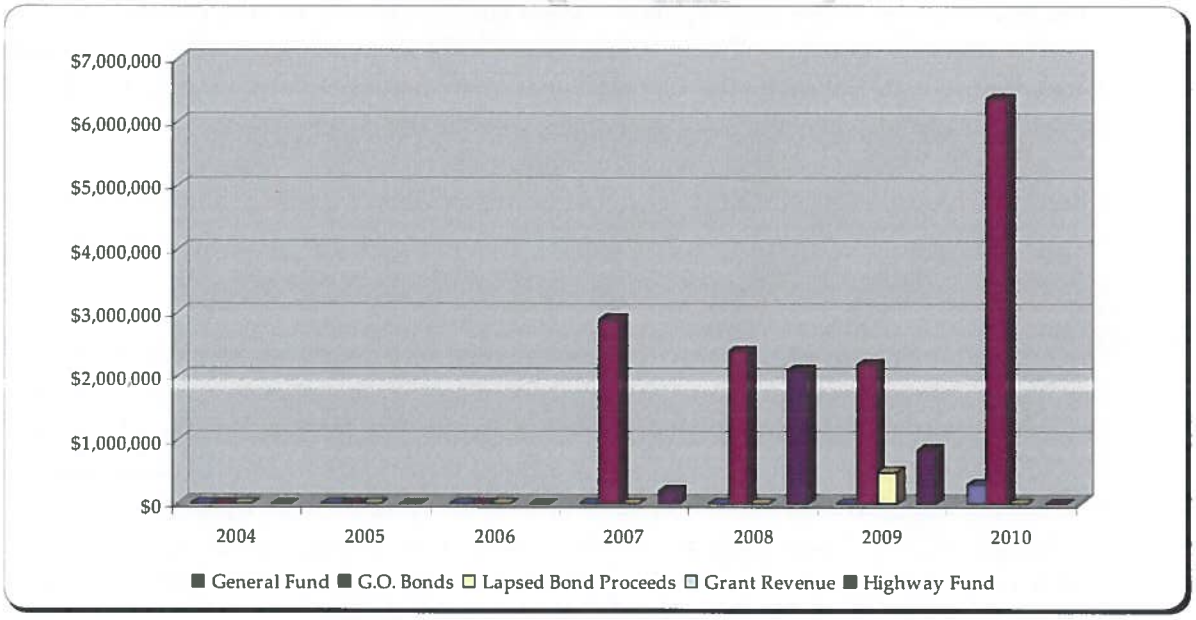


Figure 40: Drainage CIP Revenues by Funding Source FY 2004 - 2010



Wastewater

Capital Revenues

Primary funding sources for wastewater capital projects include the Wastewater Fund, General Obligation (G.O.) Bonds, Clean Water State Revolving Fund (SRF) Loans, grants, and developer exactions. These funding sources are further described below:

Wastewater Fund: The Wastewater Fund's primary revenue source is from monthly sewer and cesspool fees as well as fees charged to developers for tying into the system. This fund pays for wastewater administration and operations as well as capital improvements through cash purchases and interest payments on bond funding.

In addition to sewer and cesspool fees, South Maui has a one-time hook-up fee that helps fund prior infrastructure investments into treatment plant and collection system expansion. Central Maui also has a similar fee to help fund prior treatment plant expansion costs.

Developer Exactions: The Wastewater Division reviews all development projects in the County. Projects in South and Central Maui are charged assessment fees to tie into the County Wastewater System. These fees are deposited into the County's Wastewater Fund and are used to pay existing debt service on CIP projects already completed. The Division generally requires all new development projects to construct their own on-site infrastructure. In addition, the Division may also require improvements to off-site infrastructure when capacity is not available to service the development.

General Obligation (G.O.) Bonds: G.O. bonds are a primary funding source for County capital projects. These bonds are guaranteed by County property tax and special fund revenues.

State Revolving Fund (SRF) Loans: The Clean Water SRF Loan Program was created by the Water Quality Act of 1987 to assist public agencies in financing water pollution prevention works. The Hawaii Department of Health Wastewater Branch administers the SRF Loan Program which provides low interest loans to county and state agencies to construct point source and non-point source water pollution control projects. The availability of SRF Loan Program funds is subject to Congressional appropriations which have steadily declined in the past decade. Regardless, SRF loans remain a preferred funding source for County wastewater capital projects.

Figure 41 through Figure 43 analyze past wastewater CIP budgets between FY 2000 and 2009 to identify past infrastructure funding trends and project future CIP revenues. From FY 2000 to 2006 the Division's annual CIP budgets steadily remained below $9 million, with the exception of FY 2002 when the budget reached approximately $13 million. Fiscal years 2007 through 2009

are marked by large increases in the Division's CIP budgets, with each year's budget greater than $20 million. (Why?)

Figure 41: Annual Wastewater CIP Revenues FY 2000 - 2009

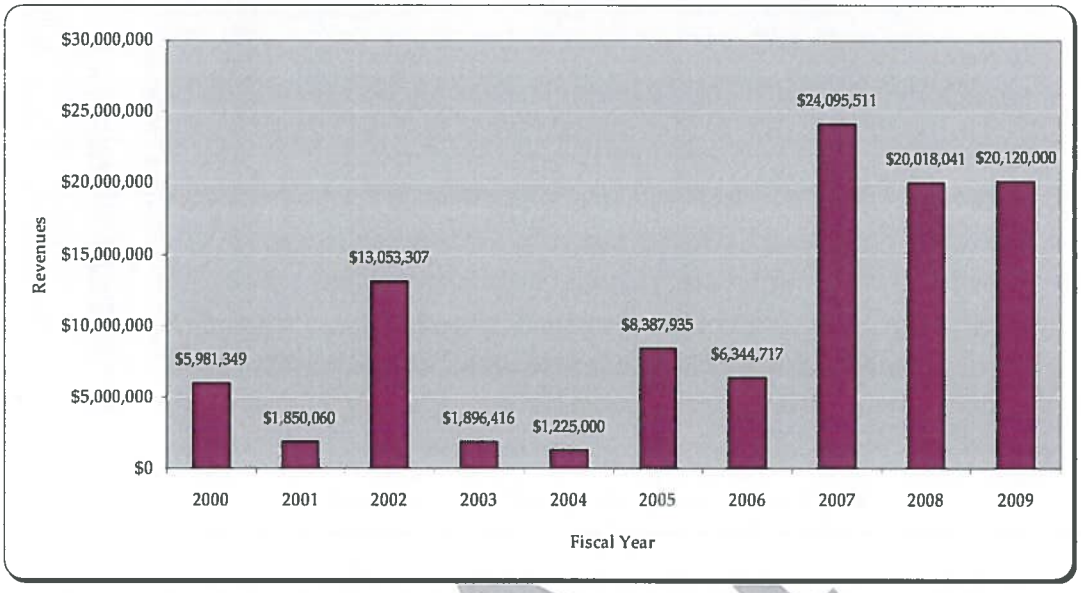
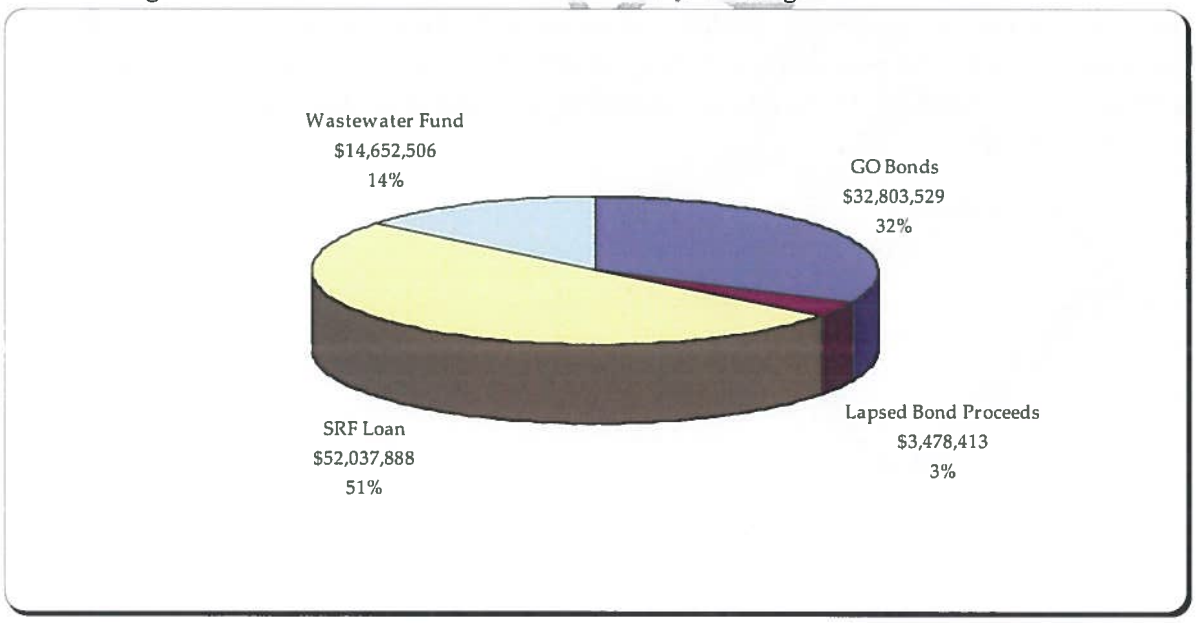
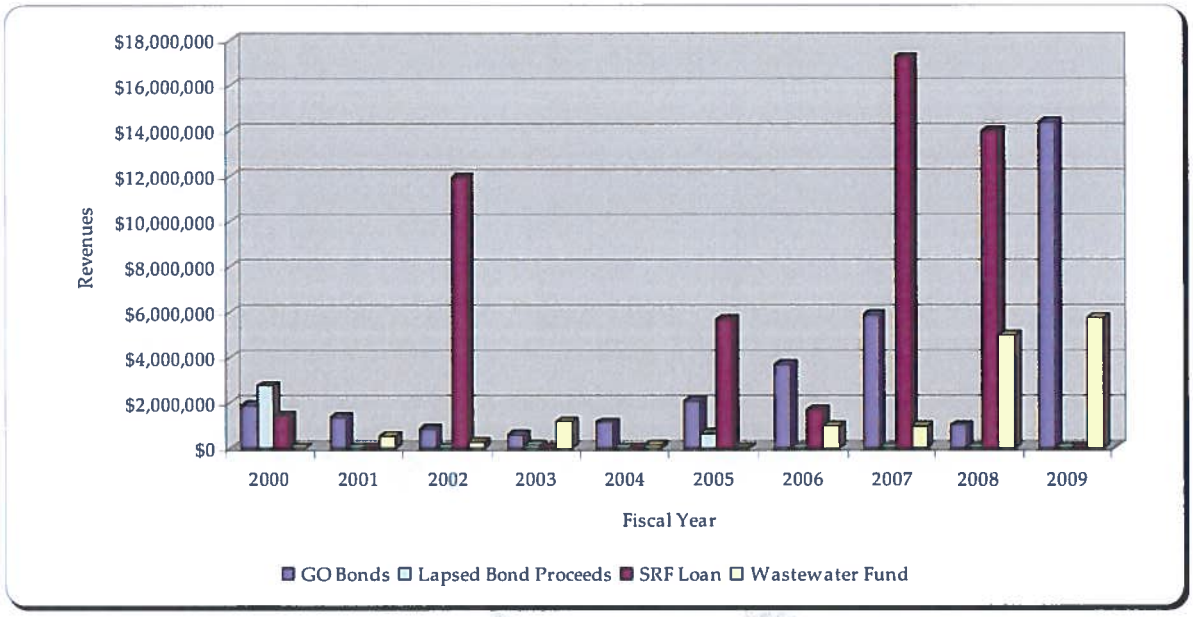


Figure 42: Total Wastewater CIP Revenues by Funding Source FY 2000 - 2009



From FY 2000 to 2009, SRF loans were the largest funding source for wastewater CIP projects, with a total contribution of more than $52 million. However yearly total SRF loan amounts range drastically from a low of zero dollars in four (4) of the 10 years to a high of more than $17 million in FY 2007.

Figure 43: Wastewater CIP Revenues by Source FY 2000 - 2009



The use of G.O. bonds to finance wastewater infrastructure projects has been on a steady increasing trend since FY 2003 when bond revenue was $600,000 to FY 2009 when it was more than $14 million, with the exception of a decrease in FY 2008. The Wastewater Fund has traditionally been a comparatively smaller component of the Division's CIP budget, steadily remaining well below $1 million annually between FY 2000 and 2007. In FY 2008 sewer rate increases were implemented resulting in a significant increase in the use of the Wastewater Fund for CIP projects.

Parks

Capital Revenues

Figure 44 shows the change in the Department's annual budgets from 1997 to 2010. Figure 45 shows the change in the Department's CIP budgets from 1997 to 2010. During this period, the Department's annual operating budget has trended upwards from approximately $13.75 million in 1997 to 30.98 million in the FY 10 Budget, an increase of 225%. Meanwhile, the Department's annual CIP budget has also increased significantly, although with considerable variation between years. During this fourteen year period the budget has ranged from $2.5 million in 2004 to $15.16 million in the FY08 budget.

Figure 44: Change in Department of Parks and Recreation Annual Operating Budget, 1997-2010

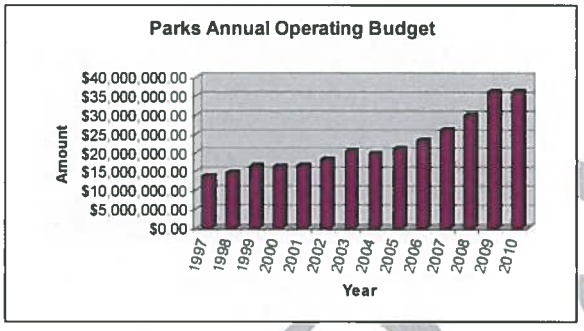
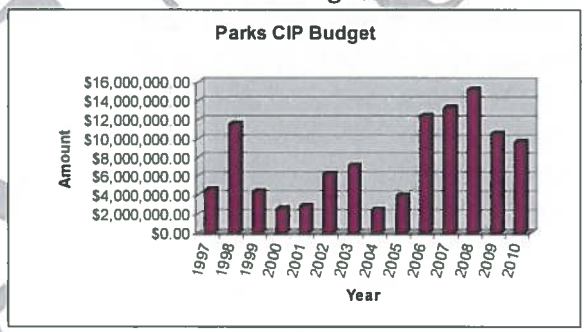


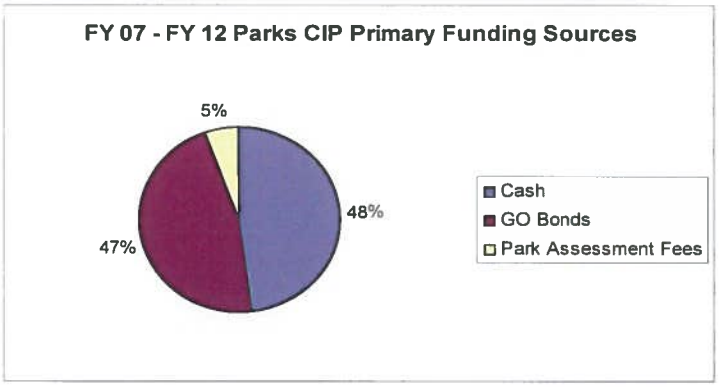
Figure 45: Change in Department of Parks and Recreation CIP Budget, 1997-2006



The Department of Parks and Recreation receives its funding for operations through General Fund revenues. CIP projects are funded through cash, General Obligation (G.O.) Bonds, and Park Assessment Fees.

From the Department's FY07 – FY 12, Capital Improvement Program Budget, 47%, or $17.89 million of CIP projects are funded through General Obligation Bonds. Cash funds 48% or $18.24 million, and Park Assessment Fees just 5%, or $2.06 million.

Figure 46; FY 07 - FY 12 Park CIP Funding Sources

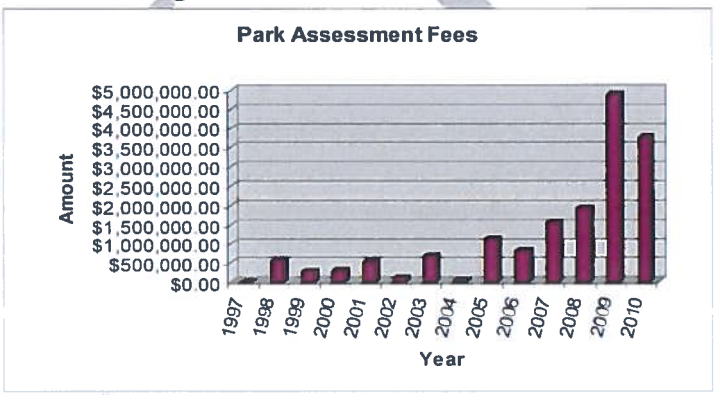


The County's Park Assessment Fees are further described below:

> ***Parks Assessment Fees:*** The Department of Parks and Recreation requires either land dedication or payment of a Parks Assessment Fee for all new subdivisions with three (3) or more lots or units. The land dedication requirement is five hundred (500) square feet per subdivided lot or unit and is assessed for each additional lot or unit in excess of three (3). The Director of the Department of Parks and Recreation may require a cash payment in-lieu of land dedication. The Park Assessment Fee varies by Community Plan District and is based on the average value per square foot for improved and unimproved residential land. In FY 09-10, the fee ranged from $6,930 per unit for the Hana Community Plan region to $24,995 per unit for the West Maui Community Plan Region.

Figure 47 identifies the amount of Park Assessment Funds collected island-wide from 1997 to 2010. During this period approximately $16.52 million of fees have been collected and 57 acres parkland dedicated to the County pursuant to park dedication requirements.

Figure 47: Park Assessment Fees



Appendix E: Land Use Data

For the impact fee analysis, it is important to know both the existing amount of residential development and the number of residents associated with each dwelling unit. For this study, data on housing units must be compiled for each of the County's community planning areas. Data on single family and multi-family units is available for each Maui Island planning area from 2005. The estimated number of residential units in this study for 2010 is based on new permit data for 2005 through 2009. The 2030 forecast is based on the growth rate estimate for each plan area from the County's General Plan. The estimates for 2005 through 2030 by planning area are summarized in Table 32.

Table 32. Total Housing Units, 2005-2030

	2005		2010		2030	
Planning Area	SF	MF	SF	MF	SF	MF
Lahaina (W. Maui)	4,000	3,440	4,373	3,744	5,858	5,015
Kihei-Makena	6,181	4,889	7,049	5,463	9,718	7,531
Wailuku-Kahului	11,094	1,475	12,772	1,650	17,728	2,290
Makawao-Pukalani-Kula	8,840	193	9,443	193	11,832	242
Pa'ia-Ha'iku	4,403	116	4,660	116	5,158	128
Hana	809	35	863	35	1,070	43
Subtotal, Maui Island	35,327	10,148	39,160	11,201	51,364	15,249
Moloka'i	1,945	559	2,031	581	2,343	670
Lana'i	942	271	1,043	298	1,369	391
Total Maui County	38,214	10,978	42,234	12,080	55,076	16,310

Note: Single-family category includes duplex units; multi-family excludes visitor units

Source: Estimated housing units for Maui County derived from 2005 units by type from PlanPacific, Inc., *Land Use Forecast, Maui County General Plan, 2030*, Table 3-2; 2010 units based on new permit data from Maui County Development Services Administration, Permit Summary by Plan District, February 24, 2010; Moloka'i and Lana'i unit totals for 2005 and 2010 estimated based on share of total population for 2005 from Table 4; 2030 housing estimate based on planning area growth rate from 2010 to 2030 from Table 4.

An important input into the impact fee calculations is the number of persons associated with the single family and multi-family housing types. The best and most complete available data source on average household size in Maui County is the 2000 U.S. Census. As shown in Table 33, average household size is 92,916 persons per single-family unit and 33,298 persons per multi-family unit. The single-family occupancy rate is useful, but the multi-family occupancy rate requires further refinement (see below), since it include visitor units.

Table 33. Average Household Size by Housing Type, 2000

Housing Type	Total Units	Vacant Units	Occupancy Rate	Occupied Units	Household Population	Avg. HH Size
Single Family	32,629	2,506	**92.3%**	30,123	92,916	**3.08**
Multi-Family	23,597	10,340	56.2%	13,257	33,298	**2.51**
Total	56,226	12,846	77.2%	43,380	126,214	**2.91**

Note: Single-family category includes single-family detached and duplex units, multi-family includes visitor units (which are classified as vacant and do not affect average household size); mobile homes and boars/RV/vans are excluded

Source: U.S. Census Bureau, 2000 Census SF-3 (1-in-6 weighted sample data) for Maui County.

Determining occupancy rates for non-visitor multi-family units requires further analysis, since published Census data does not distinguish year-round multi-family units from visitor units. Available Census microdata samples, which contain records for individual dwelling units, can be used to make such distinctions. Such data is only available for large areas – in this case, the geographic area includes the counties of Maui, Kaua'i and Kalawao. However, Maui County accounts for 68.6% of the 2000 population of the Census area. Excluding vacant multi-family units held for seasonal, recreational or occasional use from the total number of multi-family units results in the following occupancy rates.

Table 34. Non-Visitor Multi-Family Occupancy Rate, 2000

Occupied Multi-Family Units	16,471
÷ Total, Non-Visitor Multi-Family Units	18,902
Multi-Family Occupancy Rate	**87.1%**

Source: U.S. Census, 5% Public Use Microdata Sample for Maui, Kaua'i and Kalawao Counties, 2000 (vacant units held for seasonal, recreational or occasional use excluded from total units).

The occupancy rates derived from the 2000 census data appear to be reasonably representative of current occupancy rates in Maui County. Applying the single-family rate derived from the published 1-in-6 sample data for Maui county and the non-visitor multi-family rate derived from microdata for a larger area to the current housing count estimates and multiplying by average household sizes yields a total 2010 population estimate that is almost identical to the figure projected by the Hawai'i Department of Business, Economic Development and Tourism, as shown in Table 35.

Table 35. Occupancy Rates, 2010

	Single-Family	Multi-Family	Total
2010 Housing Units, County-Wide	42,234	12,080	54,314
Occupancy Rate	**92.3%**	**87.1%**	na
2010 Occupied Units, County-Wide	38,982	10,522	49,504
Average Household Size	3.08	2.51	na
2010 County Population Estimate	120,065	26,409	146,474
2010 County Population Projection from DBEDT			146,452

Source: 2010 housing units from Table 76; single-family occupancy rate from Table 77; multi-family occupancy rate from Table 78; 2010 Maui County population projection from Hawai'i State Department of Business, Economic Development & Tourism, *Population and Economic Projections for the State of Hawai'i to 2035 - DBEDT 2035 Series* (July 2009).

The estimated number of visitor units between 2000 and 2030 is shown in Table 36. Visitor units include hotel/motel rooms, timeshare units, resort condominiums and licensed bed and breakfast rooms. The units by plan area for Maui Island in 2000 and 2030 are from the General Plan, with the units derived for 2010 based on changes in total visitors by plan area.

Table 36. Resort Units, 2000-2030

Planning Area	2000	2010	2030
Lahaina (W. Maui)	9,659	10,859	12,549
Kihei-Makena	6,789	8,476	12,500
Wailuku-Kahului	807	255	544
Makawao-Pukalani-Kula	10	7	7
Pa'ia-Ha'iku	12	17	20
Hana	196	10	93
Subtotal, Maui Island	17,473	19,624	25,713
Moloka'i	473	542	689
Lana'i	378	407	509
Total Maui County	18,324	20,573	26,911

Source: Estimated resort units for Maui County derived from 2000 and 2030 estimated units from PlanPacific, Inc., *Land Use Forecast, Maui County General Plan, 2030,* Table 4-2; 2010 units based on 2000-2010 visitor growth from Table 5; Moloka'i and Lana'i unit totals based on share of total visitors from Table 5.

The commercial and industrial square feet by planning area is shown in Table 37. The base data from 2005 is from the County's General Plan. The forecast for 2010 and 2030 is based on annualized county-wide employment growth of 1.2%, which is derived from County's socio-economic forecast used in the 2030 General Plan.

Table 37. Nonresidential Square Feet, 2005 to 2030

	2005		2010		2030	
Planning Area	Comm.	Indust.	Comm.	Indust.	Comm.	Indust.
Lahaina (W. Maui)	2,148,605	603,398	2,280,653	640,481	2,895,139	813,049
Kihei-Makena	2,033,226	293,685	2,158,183	311,734	2,739,671	395,726
Wailuku-Kahului	4,996,602	5,341,991	5,303,680	5,670,296	6,732,674	7,198,068
Makawao-Pukalani-Kula	655,162	105,772	695,427	112,272	882,798	142,523
Pa'ia-Ha'iku	273,181	264,898	289,970	281,178	368,098	356,937
Hana	119,937	26,447	127,308	28,072	161,609	35,636
Subtotal, Maui Island	10,226,713	6,636,191	10,855,220	7,044,034	13,779,989	8,941,939
Moloka'i	341,644	221,695	562,995	365,332	649,580	421,518
Lana'i	283,489	183,958	289,003	187,536	379,225	246,081
Total Maui County	10,851,846	7,041,844	11,707,218	7,596,902	14,808,794	9,609,538

Source: Estimated square feet for Maui County derived from 2005 square feet from PlanPacific, Inc., *Land Use Forecast, Maui County General Plan, 2030,* Table 5-4; 2010 units based on annual 2005-2030 employment growth of 1.2% from visitor growth from Table 6; Moloka'i and Lana'I unit totals based on share of total employment from Table 6.

ORDINANCE NO.

BILL NO. _____ (2016)

A BILL FOR AN ORDINANCE AMENDING TITLE 14, MAUI COUNTY CODE, PERTAINING TO IMPACT FEES FOR SOLID WASTE, FIRE, POLICE, AND WASTEWATER IMPROVEMENTS ON MAUI, HAWAII

BE IT ORDAINED BY THE PEOPLE OF THE COUNTY OF MAUI:

SECTION 1. Title 14, Maui County Code, is amended by adding a new chapter to be appropriately designated and to read as follows:

"**Chapter 14.82**

IMPACT FEES FOR SOLID WASTE, FIRE, POLICE AND WASTEWATER IMPROVEMENTS ON MAUI, HAWAII

Sections:

14.82.010 Authorization. This ordinance is enacted pursuant to Part VIII, chapter 46, subsections 141 through 148, inclusive, and chapter 46, subsections 121 through 127, inclusive, Hawaii Revised Statutes.

14.82.020 Purpose and intent. This chapter is intended to promote public health, safety, and welfare by

providing a fair and equitable method for new development on Maui Island to pay for its fair share of solid waste, fire, police, and wastewater infrastructure through the imposition of impact fees. The amount of each impact fee shall be calculated based on the amount and relative intensity of land use creating demand on Maui Island's solid waste, fire, police and wastewater infrastructure and thereby resulting in a fee that is roughly proportional to the impacts of new development on these public facilities.

14.82.030 Findings. Maui County hereby finds that:

A. The Maui County General Plan anticipates Maui Island will experience continued growth and development in the future.

B. Continued growth will place additional demands on Maui Island's solid waste, fire, police, and wastewater facilities and result in a decreased level of service and quality of life without improvement to system infrastructure.

C. Well functioning solid waste, fire, police, and wastewater facilities are essential to the continued social and economic well-being of the residents of the Island of Maui.

D. The County Council, after careful consideration of several studies and documents and the experience of other similar jurisdictions, finds that the imposition of impact fees to finance specified solid waste, fire, police, and wastewater facilities in designated benefit zones is in the best interest of the general welfare of the County, is equitable, and does not impose an unfair burden on new development.

14.82.040 Definitions. For the purpose of this chapter, unless it is plainly evident from the context that a different meaning is intended, certain words and phrases used in this chapter are defined as follows:

''Applicant'' means an individual, partnership, corporation, trust or agent having the requisite authority, who has applied for a building permit.

''Benefit zone'' means a geographical area designated in the needs assessment study in which impact fees collected must be spent.

''Building'' shall have the same meaning as defined in the uniform building code as adopted and amended by the County of Maui.

''Building permit'' means an official document or certificate issued by the County authorizing the construction of any building or structure.

''Capital improvement'' means a solid waste, fire, police, or wastewater infrastructure or facility project

intended to increase the capacity, safety and general usability of the aforementioned systems.

''Capital improvement plan'' means a schedule of proposed future infrastructure or public facility projects and estimates of cost on which impact fees are intended to pay all or part of the cost. The Capital Improvement Plan is a component of the Needs Assessment Study.

''Credit'' means the present value of past or future payments or contributions, including, but not limited to, the dedication of land or construction of a public facility made by a developer toward the cost of existing or future public facility capital improvements, except for contributions or payments made under a development agreement.

''Commercial, Retail'' means establishments engaged in the selling or rental of goods, services or entertainment to the general public. Such uses include, but are not limited to, shopping centers, discount stores, supermarkets, home improvement stores, pharmacies, automobile sales and service, banks, movie theaters, amusement arcades, bowling alleys, barber shops, laundromats, funeral homes, vocational or technical schools, dance studios, health clubs and golf courses.

''Developer'' means a person or entity that engages in development of land.

''Development'' means an act or result of constructing, improving or enlarging physical facilities on a land area.

''Development unit'' means a standardized unit of measure applicable to a particular land use for the purpose of determining the relative size or intensity of a particular development. A development unit may include, but not be limited to: dwelling units, gross or net acres of development, employees, gross square feet of building area, students, seats, and beds.

''Dwelling'' shall have the meaning defined in the Maui County comprehensive zoning code, section 19.04.040 of this code, as amended.

''Duplex dwelling'' means a building consisting of only two dwelling units designed designed exclusively for occupancy by two families living independently of each other.

''Dwelling unit, multifamily'' means a building or portion thereof which consists of three or more dwelling units and which is designed for occupancy by three or more families living independently of each other.

''Functional population'' means the equivalent number of people occupying a land use on a twenty-four hour per day basis.

''General plan'' means the Countywide Policy Plan, Maui Island Plan and Community Plans as defined in Maui County Code Chapter 2.80B.

''Gross floor area'' means the total area within the perimeter of the outside walls of a building as measured from the outside surface of the exterior walls, with no deduction for hallways, stairs, closets, thickness of walls, columns, or other interior features. This is also the total of the gross horizontal area of all floors below the roof and:

1) Within the outer surface of the main walls of principal or accessory buildings;

2) Within the outer surface of the main walls and the centerlines of a party wall separating such buildings or portions thereof; or

3) Within lines drawn parallel to and two feet within the roof line of any building or portions thereof without walls.

Gross floor area excludes unscreened residential porches or balconies, vehicle parking garages, accessory or commercial vehicular parking areas and structures, and nonresidential arcades and similar open areas that are accessible to the general public, and are not designed for or used as sales, display, storage, service or production areas.

''HRS'' means Hawaii Revised Statutes.

''Impact fee'' means the charges imposed on a developer by Maui County to fund all or a portion of the public facility capital improvement costs required by the development from which it is collected or the recoupment of costs of existing public facility capital improvements made in anticipation of the needs of a development.

''Impact-generating development'' means any land development designed or intended to permit a use of land that will increase the number of service units, including the types of developments or land uses listed in the Needs Assessment Study.

''Industrial development'' means the development of land primarily used for warehousing and distribution types of activity as well as the manufacturing, compounding, assembly, processing or treatment of materials.

''Institutional, Public'' mean a governmental, quasi-public or institutional use, or a non-profit recreational use, not located in a shopping center. Typical uses include elementary, secondary or higher educational establishments, day care centers, hospitals, mental institutions, nursing homes, assisted living facilities, fire stations, city halls, county court houses, post offices, jails, libraries, museums, places

of religious worship, military bases, airports, bus stations, fraternal lodges, parks and playgrounds.

''Land development activity'' means the carrying out of any building activity or the making of any material change in the use of any structure or land that increases solid waste, fire, police or wastewater demand over and above that produced by the existing use of the land; provided, that this term shall not include uses which are of a duration not exceeding one hundred eighty days or for temporary construction offices.

''Needs assessment study'' a study that determines the need for a public facility, the cost of development, and the level of service standard, and that projects future public facility capital improvement needs based on current Maui County planning and infrastructure analysis efforts adopted by Maui County. The Needs Assessment Study includes, but is not limited to, the Capital Improvement Plan.

''Office'' means a building not located in a shopping center and exclusively containing establishments providing executive, management, administrative or professional services, and which may include ancillary services for office workers, such as a restaurant, coffee shop, newspaper or candy stand, or child care facilities. Typical uses include real estate, insurance, property management, investment, employment, travel, advertising, secretarial, data processing, photocopy and reproduction, telephone answering, telephone marketing, music, radio and television recording and broadcasting studios; professional or consulting services in the fields of law, architecture, design, engineering, accounting and similar professions; interior decorating consulting services; medical and dental offices and clinics, including veterinarian clinics and kennels; and business offices of private companies, utility companies, trade associations, unions and nonprofit organizations.

''Person'' means same as defined in section 19.04.040.

''Recoupment'' means the proportionate share of the public facility capital improvement costs of excess capacity in existing capital facilities where excess capacity has been provided in anticipation of the needs of a development.

''Refund'' means the rebate of fees paid and accrued interest in accordance with §46-145 of the Hawaii State Statutes.

''Residential development'' means the development of land primarily used for human habitation.

''Service units'' means fire single-family equivalents (SFEs), police functional population, solid waste SFEs, or wastewater SFEs.

''Shopping center'' means a group of retail and

other commercial establishments that is planned, owned, and managed as a single property. On-site parking is provided. The two main configurations of shopping centers are malls and open-air strip centers.

''Single-family'' means a single-family dwelling, including a farm dwelling, or a duplex dwelling, as defined in section 19.04.040.

''Single-family equivalent (SFE)'' means a measurement of the impact of a typical single-family dwelling. A typical single-family detached dwelling unit represents, on average, one SFE.

''Square foot'' is computed by determining the total gross floor area under roof.

''Visitor accommodation unit'' means a dwelling or lodging unit, including a bed and breakfast home, used by transients for any period of less than one hundred eighty days.''

''Wastewater'' means water mixed with waste matter, also known as sewer water.

14.82.050 Applicability. Unless expressly exempted, this ordinance applies to all impact fees imposed by the County to finance infrastructure or public facility capital improvement costs attributable to new development occurring exclusively on the Island of Maui, including without limitations:

A. Solid waste system improvements - means capital improvements that result in a net expansion of the capacity of the solid waste facilities to serve new development. Solid waste facilities include land, buildings, vehicles, and capital equipment owned by the County and used for recycling or disposal of solid waste, but exclude equipment, facilities and associated land related to residential solid waste collection services. Fees imposed can be applied to the planning, preliminary engineering, engineering design and study, land surveys, environmental studies, acquisition of land, permitting and construction of all the necessary features for any solid waste facility including, but not limited to:

1. Permanent landfill improvements, such as operations buildings, scales, wind barriers, litter screens, and roads, but excluding consumable improvements such as the construction and closure of cells for the storage of solid waste;

2. Landfill equipment and vehicles, but excluding any equipment or vehicles related to the collection of residential solid waste;

3. Recycling centers;

4. Waste-to-energy plants or similar facilities; and

5. The preparation of Solid Waste System Functional Plans.

B. Fire system improvements - means capital improvements that result in a net expansion of the capacity of fire facilities to serve new development. Fire facilities include land, buildings, vehicles and capital equipment owned by the County and used for providing fire protection and emergency rescue services, including fire stations, fire department administrative offices, training facilities, fire-fighting apparatus and support vehicles, and fire-fighting equipment. Fees imposed can be applied to the planning, preliminary engineering, engineering design and study, land surveys, environmental studies, acquisition of land, permitting and construction of all the necessary features for any fire facility including, but not limited to:

1. New fire stations, except to the extent that the new fire station replaces an existing station of the same size in the same benefit district that is being retired from service;

2. Enlargement of an existing fire station or the replacement of an existing station in the same benefit district with a larger station; provided that the fees are only used for the portion of the cost attributable to the net increase in fire station square footage;

3. Acquisition of additional fire-fighting apparatus, vehicles or equipment, provided that the new equipment does not replace existing equipment in the benefit district that is being retired from service; and

4. The preparation of Fire System Functional Plans.

C. Police system improvements - means capital improvements that result in a net expansion of the capacity of the police facilities to serve new development. Police facilities include land, buildings, vehicles, and capital equipment owned by the County and used for providing police services, including police stations and substations, police department administrative offices, training facilities, patrol vehicles, and police equipment. Fees imposed can be applied to the planning, preliminary engineering, engineering design and study, land surveys, environmental studies, acquisition of land, permitting and construction of all the necessary features for any police facility including, but not limited to:

1. New police stations, except to the extent that the new police station replaces an existing station of the same size in the same benefit district that is being retired from service;

2. Enlargement of an existing police station or the replacement of an existing station in the same benefit district with a larger station; provided that the fees are only used for the portion of the cost

attributable to the net increase in police station square footage;

3. Acquisition of additional police vehicles or equipment, provided that the new equipment does not replace existing equipment in the benefit district that is being retired from service; and

4. The preparation of Police System Functional Plans.

D. Wastewater system improvements - means capital improvements that result in a net expansion of the capacity of the wastewater facilities to serve new development. Gravity lines less than twelve inches in diameter are not considered system improvements. Wastewater facilities include the land and improvements associated with a wastewater plant, including effluent outfall to receiving waters, and the wastewater collection system, excluding gravity laterals and collector sewers that are less than 12 inches in diameter. Fees imposed can be applied to the planning, preliminary engineering, engineering design and study, land surveys, environmental studies, acquisition of land, permitting and construction of all the necessary features for any wastewater facility including, but not limited to:

1. New wastewater treatment plants, except to the extent that the new plant replaces capacity in another plant in the same benefit district that is being retired from service;

2. Expansions or improvements to existing treatment plants that expand the capacity of the plant;

3. New pumps and force mains, except to the extent that the new facility replaces capacity in existing facilities that are being retired from service;

4. New gravity collection lines of 12 inches or more in diameter, except to the extent that the new line replaces capacity in an existing line that is being retired from service;

5. Wastewater reuse lines; and

6. The preparation of wastewater system functional plans.

E. In no case shall impact fees be used for the payment of annual operational and maintenance expenses or deficits that pre-exist the developments on which fees are imposed.

14.82.060 Calculation of impact fees. A. Except as provided in this ordinance, the department of public works shall impose impact fees as a condition of approval of all developments through the building permit process. No building permit may be approved unless the provisions of this chapter have been fulfilled.

B. Impact fees shall be imposed based on the size and intensity of the particular land use in accordance

with the applicable fee schedules adopted through ordinance as part of the County's annual budget for the benefit zone or zones in which the development is situated. The total impact fee shall be calculated by multiplying the number of development units applicable to the particular land use as shown in the applicable fee schedule by the fee per development unit indicated for the particular land use.

C. The following categories of uses shall serve as the basis for a fee schedule. These fee categories may be further defined during the adoption of the fee schedule:

1. Residential development:
   a. Single family or duplex
   b. Multi family
2. Commercial development:
   a. Commercial, retail
   b. Office
3. Industrial development
4. Visitor Accommodation Unit
5. Institutional, public

D. For land uses not specifically listed or that can be reasonably classified from the applicable fee schedules, the County shall utilize the most similar land use in terms of infrastructure or public facility generating characteristics to determine the applicable impact fee rate to be used for assessment of impact fees.

E. Assessment of cost. A schedule for determining impact fees shall be established by the needs assessment study. The fee rates may vary from benefit zone to benefit zone.

The department of planning shall compute the impact fees and the department of public works shall collect the impact fees from applicants upon issuance of building permits. In the event that no building permit is required prior to a new connection to the County wastewater system, the wastewater impact fee shall be collected in full prior to connection to the wastewater system.

F. In general, impact fees shall be assessed based on the principal use of a building or lot. For example, a warehouse that contained a small administrative office would be assessed at the warehouse rate for all of the square footage. Shopping centers are assessed at the retail/commercial rate, regardless of the type of tenants. For a true mixed-use development, such as one that includes both residential and nonresidential development, the fee shall be determined by adding up the fees that would be payable for each use as if it was a free-standing land use type pursuant to the fee schedule.

G. If the type of impact-generating development is

for a change of land use type or for the expansion, redevelopment, or modification of an existing development, the fee shall be based on the net increase in the fee for the new land use as compared to the previous land use. The previous land use shall be the most intensive use of the site during the previous ten years.

H. In the event that the proposed change of land use type, redevelopment, or modification results in a net decrease in the fee for the new use or development as compared to the previous use or development, there shall be no refund of impact fees previously paid.

14.82.070 Assessment and collection of impact fees. Assessment of impact fees shall be a condition precedent to the issuance of a building permit and shall be collected in full before or upon issuance of the permit. In the event that no building permit is required prior to a new connection to the County wastewater system, the wastewater impact fee shall be collected in full prior to connection to the wastewater system.

14.82.080 Needs assessment study. A needs assessment study approved by the Maui County Council shall serve as the basis for the calculation of impact fee rates.

14.82.090 Impact fee improvement fund. A. The department of finance shall establish an impact fee improvement fund for each benefit zone, as designated by the ordinance for which an impact fee is imposed, and monies collected shall be deposited by the department of finance in such fund according to the benefit zone.

B. Each account shall be interest-bearing and the accumulated interest shall become part of the account.

C. The funds of each account shall be expended within the benefit zone exclusively to acquire, construct or expand system improvements of the type and in the location reflected in the title of the account. The funds may also be used to pay debt service on any portion of any current or future general obligation bond or revenue bond that was used to create capacity of the type reflected in the title of the account that will be available to serve development occurring after the effective date of this chapter;

D. The monies in each impact fee account shall not be used for the following:

1. Rehabilitation, reconstruction, replacement or maintenance of existing

facilities, except to the extent that it has the net effect of adding capacity (for example, the replacement of an existing fire station with a larger fire station); or

2. Ongoing operational costs.

14.82.100 Exemptions. The following shall be exempted from payment of impact fees under this chapter:

A. Alteration or expansion of an existing dwelling unit where no additional units are created and the use is not changed.

B. The construction of accessory buildings or structures, to the extent that there is no increase in service unit generation of the original land use.

C. The replacement of an existing building or structure with a new building or structure of the same size and use which will not increase traffic counts.

D. Any claim of exemption must be made no later than the time of application for a building permit. Any claim not so made shall be deemed invalid.

14.82.110 Credits and refunds.

A. An applicant, as defined in this article, may apply for a credit to assessed impact fees as follows:

1. An applicant who elects to construct, dedicate or escrow funds with the County for all or a portion of a capital improvement identified in the Needs Assessment Study as a basis for the calculation of impact fees shall be eligible for a credit for such contribution up to the amount of the impact fees otherwise due.

2. The applicant must, prior to the applicant's construction, dedication or escrow submit a petition to the director of public works and obtain a determination of credit eligibility and the amount of any credit.

3. The director of public works may grant the credit and determine the amount to be credited if the proposed project or comparable infrastructure or public facility improvement is in the Needs Assessment Study.

4. Impact fees due and payable shall be net of any approved credits available pursuant to this Section. It shall be the responsibility of the applicant to claim

credits prior to payment of impact fees. Any credits not claimed shall be deemed waived.

B. Refund of collected impact fees may be made under the following conditions:

1. If impact fees collected are not expended or encumbered within six years of the date of collection, a developer or developer's successor may, by application, request a refund within 365 days on which the right to claim arises. Refunded fees shall include interest accrued.

2. If the County terminates impact fee requirements under this article, unexpended or unencumbered funds shall be refunded as provided in subsection 1.

3. If the activity for which the permit is issued is not pursued, a developer or developer's successor may, by application, request a refund within 180 days of permit issuance. The refund shall be paid, less a handling fee, with the cancellation of the building permit.

4. Unclaimed funds shall be distributed in accordance with §46-145 of the Hawaii Revised Statutes.

14.82.120 Hearing and appeal procedures. Within fifteen days after receiving a written notice, the applicant affected or the owner of the development subject to impact fees may challenge the department of planning fee determination and request a hearing from the board of variances and appeals. The board of variances and appeals shall review the planning director's decision in accordance with its rules of practice and procedure and other applicable laws. An appeal may be granted only if the board finds one of the following:

1. That the subject decision or order was based on an erroneous finding of a material fact or erroneously applied the law;

2. That the subject decision or order was arbitrary and capricious in its application; or

3. That the subject decision or order was a manifest abuse of discretion.

14.82.130 Update and amendment of impact fees.

A. The Needs Assessment Study shall be reviewed by the County department of planning not later than upon the fifth year anniversary from its adoption and at least every five years thereafter or as deemed necessary by the Planning Director.

B. Annually following the adoption of this chapter, the Department of Public Works shall submit a report to the County Council which shall include the following:

1. A financial summary including total impact fee collections and collections by benefit zone, over the past 12 months; amounts currently expended and encumbered and amounts not expended or encumbered relative to the refund date of the collections;

2. A summary of capital improvement projects initiated, underway and completed within the past 12 months that utilize the impact fees collected;

3. Any recommendations for changes in the boundaries of benefit zones;

4. Any recommendations for changes to the capital improvements plan; and

5. Any recommendations for changes to impact fee rates and schedules. Increases in impact fees in line with changes in the Honolulu Construction Cost Index as compiled by the State of Hawaii Department of Business, Economic Development and Tourism will be calculated and presented in the report. Changes to impact fee rates may be proposed to account for the effects of inflation on the costs of projects identified in the capital improvements list or to reflect newly obtained data that more accurately reflects the anticipated cost of capital improvements.

14.82.140 Administrative costs. In carrying out its responsibilities, the Department of Planning and the Department of Public Works may retain not more than two percent of the total funds collected to offset costs associated with the collection of these funds.

14.82.150 Rule-making authority. The Planning Director, Director of Public Works, and Finance Director shall have the authority to adopt rules regarding the administration of this chapter.''

SECTION 2. Severability. If any provision of this ordinance or application thereof to any person or circumstance is held invalid, the invalidity shall not affect other provisions or applications of the ordinance which can be given effect without the

invalid provision or applications of the ordinance, and to this end the provisions of this ordinance are severable.

SECTION 3. This ordinance shall take effect upon its approval. However, building permits submitted to the County prior to the effective date of this ordinance are exempt from compliance with this ordinance provided that: 1. The construction proceeds according to the provisions of the permit and the permit does not expire prior to the completion of the construction; and 2. At the time of application for the building permit the subject land development activity for which the building permit is being obtained did not have a condition of development approval, unilateral agreement, covenant or other similar agreement attached to it requiring the payment of wastewater, fire, police or solid waste impact fees.

APPROVED AS TO FORM
AND LEGALITY:

MICHAEL J. HOPPER
Deputy Corporation Counsel
County of Maui