10-YEAR WATER SUPPLY FACILITIES WORK PLAN

Prepared for:

Village of Golf
Palm Beach County, Florida

Prepared by:

Village of Golf Local Planning Agency
and JLH Associates

May, 2015

1.0 Introduction

The purpose of the Village of Golf Water Supply Facilities Work Plan (Work Plan) is to identify and plan for the water supply sources and facilities needed to serve existing and new development within the local government's jurisdiction. Chapter 163, Part II, F.S., requires local governments to prepare and adopt Work Plans into their comprehensive plans within 18 months after the water management district approves a regional water supply plan or its update. The Lower East Coast Water Supply Plan Update was approved by the South Florida Water Management District (SFWMD) on ~~February 15, 2007~~ September 12, 2013. Therefore, the deadline for local governments within the Lower East Coast jurisdiction to amend their comprehensive plans to adopt a Work Plan is ~~August 15, 2008~~ March 15, 2015.

Residents of the Village of Golf (the Village) obtain their water directly from Village owned water treatment, storage and distribution facilities (the System). The System also provides water supply to areas outside the Village corporate limits in unincorporated Palm Beach County. The Village is responsible for ensuring that enough capacity is available for existing and future customers within their water service area.

The Work Plan is divided into five sections:

Section 1 – Introduction
Section 2 – Background Information
Section 3 – Data and Analysis
Section 4 – Work Plan Projects/Capital Improvement Element/Schedule
Section 5 – Goals, Objectives, Policies

1.1 Statutory History

The Florida Legislature has enacted bills in the 2002, 2004, ~~and~~ 2005 and 2011 sessions to address the state's water supply needs. These bills, especially Senate Bills 360 and 444 (2005 legislative session), significantly changed Chapter 163 and 373 Florida Statutes (F.S.) by strengthening the statutory links between the regional water supply plans prepared by the water management districts and the comprehensive plans prepared by local governments. In addition, these bills established the basis for improving coordination between the local land use planning and water supply planning.

1.2 Statutory Requirements

Each local government must comply with the following requirements:

1. Coordinate appropriate aspects of its comprehensive plan with the appropriate water management district's regional water supply plan, [163.3177(4)(a), F.S.]

2. Ensure that its future land use plan is based upon availability of adequate water supplies and public facilities and services [s.163.3177(6)(a), F.S., effective July 1, 2005]. Data and analysis demonstrating that adequate water supplies and associated public facilities will be available to meet projected growth demands must accompany all proposed Future Land Use Map amendments submitted to the Department for review. The submitted package must also include an amendment to the Capital Improvements Element, if necessary, to demonstrate that adequate public facilities will be available to serve the proposed Future Land Use Map modification.

3. Ensure that adequate water supplies and facilities area available to serve new development no later than the date on which the local government anticipates issuing a certificate of occupancy and consult with the applicable water supplier prior to approving building permit, to determine whether adequate water supplies will be available to serve the development by the anticipated issuance date of the certificate of occupancy [s.163.3180 (2)(a), F.S., effective July 1, 2005]. This "water supply concurrency" is now in effect, and local governments should be complying with the requirement for all new development proposals. In addition, local governments should update their comprehensive plans and land development regulations as soon as possible to address these statutory requirements. The latest point at which the comprehensive plan must be revised to reflect the concurrency requirements is at the time the local government adopts plan amendments to implement the recommendations of the Evaluation and Appraisal ~~Report~~ Review (EAR).

4. For local governments subject to a regional water supply plan, revise the General Sanitary Sewer, Solid Waste, Drainage, Potable Water, and Natural Groundwater Aquifer Recharge Element (the "Infrastructure Element"), within 18 months after the water management district approves an updated regional water supply plan, to:

   a. Identify and incorporate the alternative water supply project(s) selected by the local government from projects identified in the updated regional water supply plan, or the alternative project proposed by the local government under s. ~~373.0361(7)~~ 373.709(8) (a) (b), F.S. [s. 163.3177(6)(c), F.S.];

   b. Identify the traditional and alternative water supply projects, bulk sales agreements, and the conservation and reuse programs necessary to meet current and future water use demands within the local government's jurisdiction [s. 163.3177(6)(c), F.S.]; and

   c. Include a water supply facilities work plan for at least a 10-year planning period for constructing the public, private, and regional water supply facilities identified in the element as necessary to serve existing and new development. [s. 163.3177(6)(c), F.S.] Amendments to incorporate the water supply facilities work plan into the comprehensive plan are exempt from the twice-a-year amendment limitation. [s. 163.3177(6)(c), F.S.]

5. Revise the Five-Year Schedule of Capital Improvements to include any water supply, reuse, and conservation projects and programs to be implemented during the five-year period.

6. To the extent necessary to maintain internal consistency after making changes described in Paragraph 1 through 5 above, revise the Conservation Element to assess projected water needs and sources for at least a 10-year planning period, considering the appropriate regional water supply plan, the applicable District Water Management Plan, as well as applicable consumptive use permit(s). [s.163.3177 (6)(d), F.S.]

   If the established planning period of a comprehensive plan is greater than ten years, the plan must address the water supply sources necessary to meet and achieve the existing and projected water use demand for established planning period, considering the appropriate regional water supply plan. [s.163.3167 (13), F.S.]

7. To the extent necessary to maintain internal consistency after making changes described in Paragraphs 1 through 5 above, revise the Intergovernmental Coordination Element to ensure

coordination of the comprehensive plan with applicable regional water supply plans and regional water supply authorities' plans. [s.163.3177(6)(h)1., F.S.]

8. Address in the EAR, the extent to which the local government has implemented the 10-year water supply facilities work plan, including the development of alternative water supplies, and determine whether the identified alternative water supply projects, traditional water supply projects, bulk sales agreements, and conservation and reuse programs are meeting local water use demands. [s.163.3191 (2)(1), F.S.]

2.0 Background Information

2.1 Overview

The Village was incorporated in 1957. The boundaries of the Village encompass an area of approximately 541.8 acres or 0.846 square miles bounded by the City of Boynton Beach to the east, the south and partially to the north, and Palm Beach County to the west, and partially to the north. Since its original charter size of 388.82 acres the Village has annexed and de-annexed land areas to arrive at its present configuration. Chapter 10 of the Comprehensive Development Plan provides additional information on the topic.

The Village is substantially built-out. Between 1980 and 2000, Village population grew from 110 to 230, an increase of 109 percent. According to the University of Florida Bureau of Economic and Business Research (BEBR), the Village population was projected to have 225 residents a decrease of 5 since 2000. However, the Village data reveals there were 254 year round residents living within the corporate limits. Data obtained from Palm Beach County (the County), projected the Village population to have been 266 in 2007.

In 2006 the Village Evaluation Appraisal Report (the EAR) based Amendments, concluded that of the total gross acreage in the Village that 34.4% is dedicated to residential use. The remaining gross acreages are allocated to non-residential such as commercial and office (1.9%); Agriculture (17.9%); Recreational (32.3%); Conservation (4.5%); Transportation (4.7%); Public Buildings and Grounds (1.7%) and Vacant Land (2.7%). The Village does not anticipate any increases in land area in the near future, unless there is policy decision from the Village Council to reconsider their position on annexation. In the meantime, the residential growth rate is anticipated to be minimal for the next 10 to 20 years. In 2006, the Village's Building Department records indicated that only 2 permits were issued for new residential construction and no permits for commercial construction.

2.2 Relevant Regional Issues

As the state agency responsible for water supply in the Lower East Coast planning area, the SFWMD plays a pivotal role in resource protection, through criteria used for Consumptive Use Permitting. As pressure increased on the Everglades ecosystem resource, the Governing Board initiated rule making to limit increased allocations dependent on the Everglades system. As a result, the Regional Water Availability Rule was adopted by the Governing Board on February 15, 2007 as part of the SFWMD's water use permit program. This reduced reliance on the regional system for future water supply needs, mandates the development of alternative water supplies, and increasing conservation and reuse.

The following regional issues are identified in the "Lower East Coast Water Supply Plan 2013": 1) increased withdrawals from both the Surficial Aquifer System and surface water from Lake Okeechobee are limited; 2) conservation continues to be relied upon to reduce per capita use and a means to potentially delay or perhaps avoid adding capacity; and, 3) use of reclaimed water continues to be an important alternative source in the region and helps to meet requirements of the 2008 Leah G. Shad Ocean Outfall Program.

Various conservation techniques are implemented by the Village through Policies adopted in this Comprehensive Plan and through its land development regulations.

3.0 Data and Analysis

3.1 Population Information

The Village water supply system provides total service to the land areas within the Village corporate limits, and in addition five (5) other areas (developments) that are in unincorporated Palm Beach County. Those development areas consist of Quail Ridge, Delray Dunes, Indian Hill, Indian Springs, and Brookside. The area served outside the Village is much larger than the Village. Table 1 below provides a summary of historical population and forecast population of the entire water service area. The population projections remain consistent with the currently adopted SFWMD Lower East Coast Water Supply Plan dated September 12, 2013.

Table 1
Existing and Forecast Population, 2010 through 2025

	2000[1]	**2007**	**2010**	**2015**	**2020**	**2025**
Village	105	266[2]	223[4]	259[3]	255[4]	255
Outside[3]	2664	2584	2589	2630	2779	2900
Total	**2769**	**2850**	**2821**	**2889**	**3034**	**3155**

(1) U.S. Census
(2) Palm Beach County Planning
(3) SFWMD Water Use Permit, 2008
(4) EAR, 2007

Data for the forecast year of 2010 through 2025 reveals a possible growth of 334 persons over the 15 year period. Although this data is consistent with SFWMD 10-year WSP documents, the Village is of the opinion that very little real growth will occur. There are only a few building lots left within the Village and each of the five sub-service area located outside the Village are completely built out.

3.2 Maps of Current and Future Areas Served

The map depicting current Village boundaries and the entire System service area is provided in Figure 1.

3.3 Potable Water Level of Service Standard

A water supply system must have the current and reserve capacity to supply sufficient quantities of water for treatment and for distribution to its customers. The untreated water supply (raw water) requirements are greater than the amount required to meet customer demands through the distribution piping network. A typical lime softening treatment facility will result in a loss of 5 to 10 percent within the treatment process with another 10 percent or so lost within the piping network due to inaccurate meters, system flushes, piping leaks and breaks and other occurances. In the case of the Village's Membrane Water Treatment Facility, 15 to 20 percent of the raw water pumped from the wellfield is lost in the form of reject water or concentrate. Therefore, for every 1,000 gallons of treated water desired, 15 to 20 percent more raw water must be pumped to compensate for that lost as concentrate plus another 10 percent or so for other losses.

Water usage is commonly reviewed where a treatment facility is used, based on the volume of untreated water pumped to the treatment process from the source and that pumped from the treatment facility to the customers through the distribution piping network.

The per person rate of water consumption is then often calculated based on water pumped and population served and used to evaluate the efficiency of a water supply system. Table 2 below shows historical and forecast raw water use data for the years of 2006 through 2025. ~~This data was extracted from the January 2008 Water Use Permit Application to the SFWMD.~~ According to Village Utilities Department data, the 199 gallons per capita day (gpcd) raw water projected from 2007 through 2025 is consistent with that for 2014, and continues to be used for projection purposes through the ten (10) year planning timeframe (2025). Likewise, the daily demand projections also remain consistent.

Table 2
Historical and Forecast Raw Water Demands

Year	Population Served	Water Demand Per Person Per Day	Daily Demand[(1)]	Annual Water Demand[(2)]
2006	2784	205	0.571	208.27
2007	2850	199	0.557	203.44
2010	2821	199	0.560	204.49
2015	2889	199	0.574	209.42
2020	3034	199	0.602	219.93
2025	3155	199	0.627	228.70

(1) Million gallons per day
(2) Million gallons per year

3.5 Water Supply Provided by the Village

The System recently ~~obtained a renewed~~ was issued ~~Consumptive~~ Water Use Permit (the ~~CUP~~ WUP) from the SFWMD, Permit No. 50-00612-W dated May 28, 2013. This twenty (20) year permit, ~~that~~ will expire~~s on March 13, 2013~~ on May 28, 2033 and provides an annual allocation not to exceed ~~of 220~~ 251MG per year (0.602 MGD) with a maximum monthly allocation of ~~22.012~~ 28. 2563 MG. ~~Between the period of March 13, 2013 and March 13, 2028 the annual allocation could reduce to the previous permit amount of 196 MG per year (0.537 MGD) with a maximum monthly allocation of 19.59 MG. To avoid the reduction in the allocation, the Village will need to provide the SFWMD with evidence that the five year allocation is reasonable, beneficial and does not interfere with any presently existing legal uses.~~

All water is pumped by three (3) 10" X 100' ground water wells from the Surficial Aquifer System at a rate of 350 gallons per minute (gpm) to the water treatment system. The water treatment system consists of pre filters, medium pressure pumps, low pressure membranes, air striping, off-gas odor removal, disinfection and pumping to storage and to the distribution system.

The dual train membrane ultra-filtration treatment plant has the capacity to produce 0.864 MGD of treated water (permeate) at a rate of 600 gpm. The maximum treatment rate produces approximately 0.144 MGD of reject water that is disposed of in the sanitary sewer system. Therefore, approximately 15 % to 20% of the raw water pumped is lost due to the nature of the type of treatment system utilized. The average volume of raw water pumped and treated in 2006 was 0.571 MGD which represents approximately 95% of the CUP water withdrawal volume but only 66% of treatment capacity. Since only minimal growth is projected, raw water demands are forecast to reach 0.627 in 2025 as shown in Table 2. This forecast volume does exceed the existing allocation of the CUP by 0.007 MGD, and should that demand occur the Village may be required to file for a modified permit, however, since this amount does not result in an exceedance of the system's capacity, no capital outlays will be required.

Table 3 below shows historical and forecast data for treated water consumption by the system for the years 2006 through 2025. This data was extracted from the January 2008 SFWMD CUP Application.

According to Village Utilities Department data, the approximate 173 gpcd (LOS) treated water projected from 2007 through 2025 is consistent with that for 2014, and continues to be used for projection purposes through the new twenty (20) year planning timeframe (2033). Likewise, the Department verifies that the daily demand projections remain consistent with the demands shown in Table 3; therefore, they are the most relevant and realisitic for projections purposes .

Table 3
Historical and Forecast Treated Water Demands

Year	Population Served	Water Demand Per Person Per Day	Daily Demand[(1)]	Water Demand[(2)]
2006	2784	174.8	0.487	177.68
2007	2850	173.4	0.484	176.80
2010	2821	173.4	0.489	178.30
2015	2889	173.4	0.501	182.90
2020	3034	173.4	0.526	192.00
2025	3155	173.4	0.546	199.20

(1) Million gallons per day
(2) Million gallons per year

The 0.546 MGD forecast for 2025 represents approximately 63% of the treatment plant capacity. No capacity related capital outlays are forecast through the planning period.

Water storage capacity within the system totals in excess of 0.50 MG. This volume is adequate for the existing system.

The Village has an emergency interconnection with the City of Boynton Beach just north of the intersection of Golf Road and Military Trail. Boynton has sufficient capacity to supply the entire System service area on an emergency basis should the need arise.

A detailed review of the year 2006 showed that system water losses within the distribution network were less than 10% of the water pumped into the distribution system.

The System is well operated and maintained and in compliance with local, state and federal regulations.

The Village of Golf has no areas of domestic self-supply. The entire system is served by the central system.

3.5.1 Conservation Elements

The Village has been diligent in its pursuit of efficient and effective use of its water resource. This is evidenced by the fact that total annual water use has declined over the past three years and despite only a nominal growth in customers served, water use per person has also continued to decline. Some other elements of the Village's Conservation Programs are as follows:

- The Village adopted Ordinance No. 44 on October 1, 1989 stipulating that no potable water may be used for irrigation purposes. Residential units are not permitted to hook up irrigation systems to the public water supply system.

- The Village is under the jurisdiction of Palm Beach County Ordinance 93-3 that covers all of the water conservation items, including restricted irrigation. ~~Xeriscape~~ Florida Friendly landscaping is encouraged by the Village throughout its service area. Those areas outside the corporate limits fall within the jurisdiction of Palm Beach County Ordinance 93-3 that address Xeriscape landscaping techniques for all new developed lots.

- The Village has adopted the southern Standard Building Code thorough Palm Beach County. This code contains requirements for the installation of low volume plumbing fixtures and water restrictions on other fixtures.

- The Village bills residential customers quarterly and commercial customers monthly. Usage rates charged to residential customers increase if the quarterly allowance of 30,000 is exceed.

- The water treatment system is monitored seven (7) days a week enabling a relatively consistent observation of abnormalities that may occur due to major leaks. One advantage of a small and compact service area is being able to detect leaks through ongoing monitoring efforts. The audit data furnished in Attachment D reflects the success of the system being used.

- Since the Village does not allow the construction of irrigation systems tied onto the public water supply system, monitoring the provisions of rain sensing devices is not applicable. Those area outside the corporate limits fall within Palm Beach County Ordinance 93-3. Such devices will not allow for watering from an irrigation system with the occurrence of adequate rainfall.

- The Village staff promotes water conservation through messages on the customers' utility bill, as well as recognizing Water Plant Operators Week with tours of the plant for the public. The Village staff is also available to teach at area schools.

3.5.2 Water Reuse

Since Village regulations do not allow its citizens to irrigate their lawns or any other vegetation from the public water supply system, irrigation water is supplied from private wells located on each private property or from small lakes. Presently Village residents do not have ready access to reclaimed water. Reclaimed water is, however, used by three (3) major golf courses that exist within the Village service area. The Country Club of Florida, Quail Ridge, and Delray Dunes use reclaimed water to irrigate their golf course. By contract with the South Central Regional Wastewater Treatment and Disposal Board, 591 million gallons are contracted for purchase. This represents a major contribution to area water conservation.

The Village of Golf receives re-use water from the Boynton Beach wastewater reclamation facility which has the capacity to support 1.0 MGD. ~~Separate and apart from the Utility System, the Village had a study conducted to determine the feasibility of constructing a Village wide reclaimed (irrigation quality) water supply system. The City of Boynton Beach has enough capacity in their reclaimed water supply and distribution system to support the 1.0 MGD required for this project. If approved by the citizens, a voting ballot question will be placed on the November 2008 ballot for public approval of the design, permitting, construction and financing of the such a project. Implementation of this project would have two major positive points, 1) it would provide for a reduction in ground water withdrawals, thus meeting one of the major objectives of the SFWMD along with some resulting ground water recharge, and 2) wastewater effluent that would be otherwise wasted to the Atlantic Ocean or to a deep underground waste disposal well would be put to a greater public use. This project would not, however, have a direct impact on the Village's water supply system.~~

4.0 Capital Improvements

4.1 Projects

The Village establishes a 5-year Capital Improvement Program (CIP) annually and updates it each year as a part of their normal annual operating budgeting process. Table 4 shows the CIP for the Fiscal Years 2015-2019 Utilities Fund ~~pending 2009 fiscal year and for subsequent years through 2013. It should be noted that none of the projects included are related to new or replacement capacity as a result of new or forecast growth and development.~~

The existing infrastructure has the capacity to meet existing demands and to meet the capacity demands required by the moderate growth projected through 2025.

~~The SFWMD WSP for the Lower East Coast of Florida, listed a water reuse project for the Village identified as "Delray Beach Expanded Area Reclaimed Water System", costing approximately $100,000. Section 3.5.2 above describes a reclaimed water project currently being evaluated by the Village residents and elected officials. Should this project move forward at a cost of $3,000,000 to $4,000,000 it will be funded through the Village General Fund and not the Utility Enterprise Fund.~~

4.2 CIP Funding

The cost to implement CIP projects will be funded on an annual basis from reserve funds and annually replaced "Renewal and Replacement" funds. User rates are reviewed and adjusted annually or as required in order to maintain adequate reserves and fund balances.

5.1 Goals, Objectives and Policies

1. Need to review GOPs throughout the comprehensive plan to determine if any new ones should be added or any existing ones revised.

2. The following list is from the ~~DCA~~ DEO Guidelines, pages 15 and 16 and is an example of the issues that need to be addressed:

    a. Coordination of land uses and future land use changes with the availability of water supplies and water supply facilities;

    b. Revision of potable water level-of-service standards for residential and non-residential users;

    c. Provision for the protection of water quality in the traditional and new alternative water supply sources;

    d. Revision of priorities for the replacement of facilities, correction of existing water supply and facility deficiencies, and provision for future water supply and facility needs;

    e. Provision for conserving potable water resources, including the implementation of reuse programs and potable water conservation strategies and techniques;

f. Provisions for improved or additional coordination between a water supply provider and the recipient local government concerning the sharing and updating of information to meet ongoing water supply needs;

g. Coordination between local governments and the water supply provider in the implementation of alternative water supply projects, establishment of level-of-service standards and resource allocations, changes in service areas, and potential for annexation;

h. Coordination of land uses with available and projected fiscal resources and a financially feasible schedule of capital improvements for water supply and facility projects; and

i. Additional revenue sources to fund water supply and facility projects.

3. In addition, goals, objectives, and policies may need to be established or revised to address the new statutory requirements discussed in section 1.2. Policies should be particularly developed to address:

a. Coordination with the respective regional water supply plan;

b. Update the Work Plan within 18 months following the approval of a regional water supply plan; and

c. Concurrency requiring water supply at the building permit stage.

Revised: January 21, 2009

TABLE 4

CAPITAL IMPROVEMENTS PROGRAM
Fiscal Years 2014/15 - 2018/19

Description	FY 2014/15	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	Total
Fire Hydrant - New	$60,500	$54,450	$5,500	$5,500	$5,500	$131,450
SCADA/Upgrade/ Class	0	0	0	0	0	0
Resurface Nano Plant Floor	0	0	27,500	0	0	27,500
Water Treatment Plant Painting	0	27,500	0	0	33,000	60,500
Meter Replacement - Flat Rate Customers	0	0	0	0	0	0
Nano Filtration Membrane	143,000	0	0	0	0	143,000
30 Kilowatt Generator	0	0	0	0	0	0
Automatic Transfer Switch	5,500	0	0	0	0	5,500
Hydrant Replacement - On Going	0	4,400	4,400	4,400	4,400	17,600
Water Main/Line Improvements	0	74,250	99,000	123,750	148,500	445,500

Plant Painting	0	0	0	0	0	0
Electrical Improve-ments	0	220,000	0	0	0	22,000
Other - Describe	0	0	0	0	0	0
Total CIP Items	**$209,000**	**$380,000**	**$136,400**	**$133,650**	**$191,400**	**$1,051,050**
Items Reclassified from Budget						
Water Projects	0	0	0	0	0	0
Reclassified Joint Items	34,375	34,375	34,375	34,375	34,375	171,875
Total Items Reclassified from Budget	**34,375**	**34,375**	**34,375**	**34,375**	**34,375**	**171,875**
Total Water System	**$243,375**	**$414,975**	**$170,775**	**$168,025**	**$225,775**	**$1,222,92**

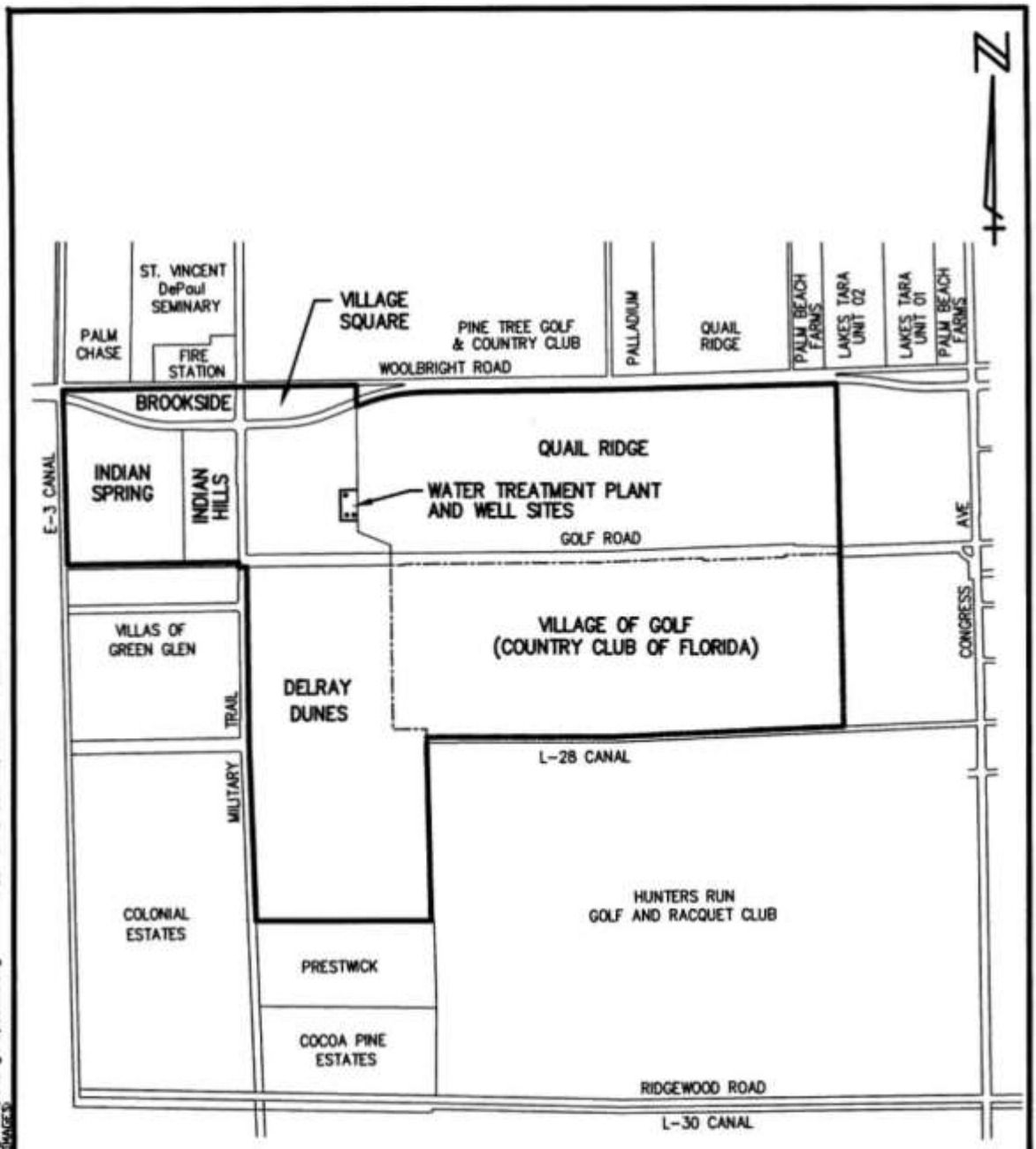
Source: Village of Golf Revenue Sufficiency and Rate Design and Analysis, Water and Sewer Systems, Draft #1, 2015

TABLE 4

PROPOSED 5-YEAR CAPITAL IMPROVEMENT PLAN

FISCAL YEARS 2009-2013

	FISCAL YEAR BEGINNING ON OCTOBER 1,				
PROJECT DESCRIPTION	**2009**	**2010**	**2011**	**2012**	**2013**
Water System:					
Chlorine Generator	$140,000.00				
Membrane Replacement	$ 25,000.00	$ 25,000.00	$ 25,000.00	$ 25,000.00	$ 25,000.00
Woolbright Road Driveway			$ 300,000.00		
Valve Addition Program	$ 10,000.00	$ 10,000.00	$ 10,000.00	$ 10,000.00	$ 10,000.00
Computer Meter Reading	$ 50,000.00	$ 50,000.00	$ 50,000.00	$ 50,000.00	$ 50,000.00
TOTAL WATER	**$225,000.00**	**$ 85,000.00**	**$ 385,000.00**	**$ 85,000.00**	**$ 85,000.00**
Wastewater System:					
Gravity Sewer Pipe Lining	$ 60,000.00	$ 60,000.00	$ 60,000.00	$ 60,000.00	$ 60,000.00
Pump Station SCADA	$150,000.00	$ 93,000.00	$ 97,000.00	$100,600.00	$ 68,000.00
TOTAL WASTEWATER	**$210,000.00**	**$153,000.00**	**$ 157,000.00**	**$160,600.00**	**$128,000.00**
Miscellaneous:					
Backhoe/Loader	$ 50,000.00				
Contingency Set Aside:	$ 20,000.00	$ 15,000.00	$ 55,000.00	$ 15,000.00	$ 15,000.00
TOTAL PROJECTED ANNUAL COST	**$505,000.00**	**$253,000.00**	**$ 597,000.00**	**$260,600.00**	**$228,000.00**



PLOT DATE: Jun 26, 2007 - 7:36am

DWG: K:\golf\golfmaps\dwg\vapsex06.dwg

SHEET 1 OF 1

SEC. 36, TWP. 45S., RGE. 42 E

REV:	FL. E.B. NO. 48 FL. L.B. NO. 48	WATER SERVICE AREA VILLAGE OF GOLF	SCALE: 1"=2000'
FIELD:-------	MOCK • ROOS ENGINEERS • SURVEYORS • PLANNERS		DATE: JUNE 2007
DRAWN: GCS	5720 Corporate Way, West Palm Beach, Florida 33407 (561) 683-3113, fax 478-7248		P.A.NO. 73120.11
APPR: CHG		PALM BEACH COUNTY, FLORIDA	DR. NO. A- 4444

5.0 Goals, Objectives and Policies

Chapter 5

INFRASTRUCTURE ELEMENT

(SANITARY SEWER, SOLID WASTE, DRAINAGE, POTABLE WATER, AND NATURAL GROUNDWATER AQUIFER RECHARGE)

5.1 INTRODUCTION

5.1.1 Scope of the Element

This element has been prepared to meet the requirements of the ~~Local Government Comprehensive~~ Community Planning ~~and Land Development Regulation~~ Act, Chapter 163, *Florida Statutes* (F.S.). In relevant part, the Act requires comprehensive plans to describe: 1) sanitary sewer, solid waste, drainage, potable water and aquifer recharge protection problems and needs; 2) ways to provide for future requirements; and, 3) general facilities that will be required for solution of the problems and needs. In addition, the element was prepared in accordance with Chapter 9J-5, Florida Administrative Code (F.A.C.), "Minimum Criteria for Review of Local Government Comprehensive Plans and Determination of Compliance."

Essentially, this element updates the various master plans for facilities which serve the Village of Golf. The update covers a planning period of ten (10) years overall, beginning with the year in which the plan is to be adopted, i.e. ~~2006~~ 2015, and projecting future conditions for the years ~~2011~~ 2020 and ~~2016~~ 2025. It is anticipated that build out will be achieved by year 2020. Facility needs and implementation plans have been re-evaluated based on the most current demographic and land use data and projections, using the same methodologies as in the original construct of the master facility plans wherever possible.

5.1.2 Organization of the Element

This element is divided into sections containing: 1) the support documents, which are the technical reports summarizing the data and analyses on which the element is based; and 2) the goals, objectives and policies for the element, as adopted in the comprehensive plan for the Village. The support documents are presented as sub-elements for the different types of facilities dealt with in the element and for natural groundwater aquifer recharge areas Each sub-element includes: 1) background information about relevant terms, concepts and regulatory provisions; 2) a survey of existing conditions; 3) an assessment of existing and future needs and recommendations for meeting those needs; and 4) exhibits at the end of each sub-element such as maps, charts, tables etc., listed on the cover sheet (contents) of each sub-element.

5.1.3 Area of Service Responsibility

On October 5th, 1988, the Village advised Palm Beach County Planning and Zoning Department and other interested parties, that the Indian Spring "40" acres is in the service area of the Village of Golf Utility. This dates back to 1975 when an original agreement was signed by Indian Spring for service as consented to by the Board of County Commissioners of Palm Beach County.

The City of Boynton felt that this was their area of responsibility agreed upon in 1984 or 1985 with no

consent or input from the Village of Golf. This "40" acres had always been in the water permitting and

wastewater planning for the Village. The resolution for treating wastewater included this area. This dispute has been settled and the Indian Springs areas continues to be served by the Village of Golf. The Village's service area includes the Village, itself, Delray Dunes, Quail Ridge, Indian Springs, Brookside and Indian Hill. See Figure 10, ~~p. 529,~~ Utility Service Area Map. The Village itself comprises only 9.2% of the Utility's residential customers. The Village utility service area population is 3,244.

5.1 SANITARY SEWER SUB-ELEMENT

5.1.1 Background

5.1.2 Terms and Concepts

A. Regional Facilities

Regional facilities are large scale sanitary sewer systems which generally pro-vide service to densely populated areas. These facilities are comprised of three components which perform the basic functions of collection, treatment, and disposal of sewage.

The collection system is composed of a network of sewer pipes which collect sewage (also called wastewater) from individual establishments and convey it to a central location for treatment. The collection network is generally laid out in a pattern roughly analogous to the branching pattern of a tree. This classification scheme identifies sewers according to their location within the network and not according to their size. Since sewage flow within the network is from the periphery toward the treatment plant, this scheme allows for easy identification of downstream components which will be affected by sewage flows from a peripheral area.

The major components of the collection network which will be discussed in this element are the trunk mains and interceptors. Interceptors are defined as sewers which connect directly to and convey sewage to the treatment plant. Trunk mains are defined as sewers which connect directly to and convey sewage to an interceptor. For more complex regional facilities, sewer mains will also be addressed.

Due to the relatively level terrain of Palm Beach County, a pumping system is used in conjunction with the major components of the regional collection systems. This allows sewage to be conveyed under pressure against the force of gravity and for long distances at minimal slopes. The lift stations of these systems will be addressed as necessary in the element. In conjunction with this type of system, the term "force main" is often applied to pressurized sewers without regard to their location within the network. See Figure 11, Sewer System Schematic ~~p. 530~~.

The South Regional Treatment Plant jointly owned by Boynton Beach and Delray Beach is the component of the regional sanitary sewer facility which functions to remove solid and organic materials from the sewage. There are a large number of processes which can accomplish this, but they are generally grouped into one of the following three categories depending on the proportion of materials removed.

B. Primary Treatment

This refers to the removal of between 30 and 35 percent of the organic materials and up to 50 percent of the solids from the sewage. This is also commonly referred to as physical treatment because screens and settling tanks are the most common methods used to remove the solids.

C. Secondary Treatment

Secondary treatment processes remove between 80 and 90 percent of total organic materials and suspended solids from sewage. This level of treatment generally requires multiple steps involving one biological process and one or more processes for removal of suspended solids.

D. Tertiary Treatment

Sewage may also contain large quantities of synthetic organic compounds or inorganic chemicals which may create pollution problems if not removed Tertiary (or advanced) treatment adds steps to primary and secondary processes to remove these pollutants The most common tertiary processes remove compounds of phosphorus and nitrogen The effluent of advanced treatment processes often approaches potable water purity

Effluent and sludge are the waste products of the treatment process. Effluent is the treated wastewater which flows out of the treatment plant. Effluent disposal alternatives include discharge to a water body, irrigation reuse or injection into deep aquifers. Sludge refers to the accumulated solid residues of the treatment process. Prior to final disposal, sludge is usually subjected to an additional biological treatment process to remove pathogens and to physical dewatering processes to facilitate transportation and disposal. Common disposal methods include burial in solid waste landfills and land application as a soil conditioner for agricultural purposes.

5.1.3 Package Treatment Plants

Package treatment plants are essentially small treatment systems which have a collection network, treatment plant and disposal system. Package plants may be designed to provide any level of treatment, but plants providing secondary treatment are most commonly used. Package plants are available in a range of capacities up to one million gallons per day. They are generally used to serve isolated development and are usually partially or completely preassembled by the manufacturer prior to shipment to the site of use.

5.1.4 Septic Tanks

Septic tank systems have been eliminated. There are no septic tanks currently utilized in the Village of Golf, nor in its service area.

There are 1950 utility connections within the Village's Utility Service Area.

5.1.5 Regulatory Framework

A. Federal

The Federal Water Pollution Control Act as amended, (PL 92-500) is the controlling national legislation relating to the provision of sanitary sewer service. The goal of this act is the restoration and/or maintenance of the chemical, physical and biological integrity of the nation's waters. The act established the national policy of

implementing area wide waste treatment and management programs to ensure adequate control of sources of pollutants. Grants are made available to local governments to construct facilities to treat "point sources" of pollution, which include effluent from sewage treatment processes. The U.S. Environmental Protection Agency is responsible for implementing the act.

B. State

The Florida Department of Environmental Protection (DEP) is responsible for ensuring that the State carries out responsibilities assigned to it under the Federal Water Pollution Control Act. DEP has adopted rules for the regulation of wastewater facilities in the Florida Administrative Code "F.A.C". These rules apply to facilities which treat flows exceeding 5,000 gallons per day for domestic establishments, 3,000 gallons per day for food service establishments, and where the sewage contains industrial or toxic or hazardous chemical wastes.

The Florida Department of Health and Rehabilitation Services (DHRS) regulates septic tank and drainfield installation within the state These requirements have been adopted by rule in the F.A.C.

C. Local

The Village of Golf Utility, through its sewage collection system, wastewater is pumped to the Boynton Beach lift station and is processed by the South Central Regional Wastewater Treatment and Disposal Facility. This is accomplished through an interlocal agreement with the City of Boynton Beach.

5.1.6 Existing Conditions

A. South Central Regional Wastewater Treatment Facility

The South Central Regional Wastewater Treatment and Disposal Facility (SCRWT & D) is jointly owned by the City of Boynton Beach and the City of Delray Beach.

The Village of Golf collects its sewage in their pump lift stations. The sewage is then sent through a force main to a metered pump station owned by the City of Boynton Beach, located 600 feet east of Military Trail on the north side of Golf Road known as master pump station 316.

From there the wastewater is sent to the South Central Regional Wastewater Treatment and Disposal Facility. This facility is located on Congress Avenue at the 'L-30' canal on the boundary between the City of Delray Beach and the City of Boynton Beach.

From there the effluent is pumped through a force main to an ocean outfall 1 mile seaward 100 feet below surface directly east of Atlantic Avenue in the City of Delray Beach.

B. Effluent Quality and Treatment

The raw sewage generated throughout the entire service area is typical of domestic sewage generated throughout South Florida. Less than 15 percent of the sewage connections are commercial, and most of the commercial connections, such as retail establishments or restaurants, generate sewage typical of a domestic connection. No industrial connections exist. Waste strength does vary during the year, mostly as a result

of dilution with stormwater during the wet season when infiltration/inflow is highest.

C. Regional Facility Treatment Plant

The plant provides secondary (biological) treatment using the contact stabilization modification of the activated sludge process. Following secondary treatment, the sludge is further stabilized using aerobic digestion, then placed in holding tanks until it is transported to an ultimate disposal site (land spread to Orange Groves). The plant is equipped with chlorination facilities to disinfect treated effluent prior to disposal

5.1.7 Needs Assessment

A. Capacity/Performance Assessment

Currently the Village of Golf disposes on an average 410,000 gallons per day of wastewater. (From 100,000 GPD low season to 500,000 GPD high season).

This equates to approximately 2% of total capacity for the City of Delray Beach and the City of Boynton Beach jointly owned South Central Regional Wastewater and Disposal Facility.

This facility has a total capacity of processing 24,000,000 gallons per day. The LOS is provided at a level equal to at least 350 gallons per ERC per average daily flow.

The Village of Golf Utility service area is projected to increase in number of utility hook-ups.

This constitutes an increase of capacity demand and should not demand expanded facilities above and beyond existing, through year 2020. See Table 5-1 below:

TABLE 5-1

WASTEWATER TREATMENT DEMAND

	1986	Current	Projected Build Out 2020
Connections	1428	1950	2014
Capacity	0.5 MGD	0.5 MGD	.5
Usage - average daily	0.26 MGD	.41 MGD	.42
Reserve	0.24 MDG1	.09 MGD	.08
GPD/Connection – daily average	180 G	212 G*	209

* Based on 2 persons per connection

** Water permit issued 1998-2008 does not include two agricultural areas. If and when these parcels are developed other than their current status, the utility water permit change request will be made.

1 Theoretical average reserve capacity. Transient peak loading uses full capacity.

Fees are approved in a two part charge as follows:

1) Fixed charge for 20 years
2) SCRWT & D Board fee

Level of Service – The level of service will be provided at level equal to at least 350 gallons per equivalent residential connection. (ERC) per day average daily flow.

The City of Boynton Beach and the Village of Golf completed construction of necessary facilities in 1982 for transportation of Village of Golf wastewater to the South Central Regional Wastewater Treatment Facility. The start of transportation and treatment of Village of Golf wastewater commenced in November 1985, with an interlocal agreement between the City of Boynton Beach and the Village of Golf which is still in effect.

TOTAL WASTEWATER SERVICE AREA

PROPORTIONAL CAPACITY – ACRES

Location	No. Acres
Village of Golf	395
Quail Ridge	356
Delray Dunes	320
Indian Springs (including Brookside)	110
Indian Hill	38.6
Total	1219.6

TABLE 5-2

VILLAGE OF GOLF LIFT STATIONS
October 2006

~~1.~~		City Sewers
2.	1001	Stablemaster
3.	1047	C of C #4 Pump (gold Course Maintenance)
4.	1052	C of C Golf Course Maintenance
5.	1053	Raborn Farms
6.	1102	V of G Administration Building
~~7.~~		City Sewer (Phase I=1 Phase II=2 Phase III=1
8.	2018	Southeast Shopping Center – Outside Connection Only
9.	2037	Seven Eleven Store (Southland Corporation)
~~10.~~		City Sewers
11.	3132	Delray Dunes Golf Rest Area #14
12.	3211	Delray Dunes Association – Gate House
13.	4042	Quail Ridge Rest Station
14.	4043	Quail Ridge Fountain 17 Tee
~~15.~~		City Sewers
16.	5190	Indian Springs Executive Office

17.	5191	Indian Springs Rest Area East

Source: 2006 Village of Golf

5.2 SOLID WASTE SUB-ELEMENT

5.2.1 Background

5.2.2 Terms and Concepts

A. Solid Waste Definition and Classification

The materials dealt with in this element fall under the definition of "solid waste" adopted in Section 9J-5.003(88), FAC, which reads:

> "Solid waste" means sludge from a waste treatment works, water supply treatment plant, or air pollution control facility or garbage, rubbish, refuse, or other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from domestic, industrial, commercial, mining, agricultural, or governmental operations.

B. In addition, this element will also address "hazardous wastes" as defined in Section 9J-5 003(34), FAC, which reads:

> "Hazardous waste" means solid waste, or a combination of solid wastes, which, because of its quantity, concentration, or infectious characteristics, may cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible or incapacitating reversible illness or may pose a substantial pre-sent or potential hazard to human health or the environment when improperly transported, disposed of, stored, treated, or otherwise managed.

C. For the purpose of this element, the term "solid waste" excludes hazardous waste and has been used to include the following classifications which indicate general characteristics of the materials and their sources of generation.

1. Residential wastes are mixed household wastes, including yard wastes, generated by the general population.

2. Commercial wastes are generated by the commercial and institutional sectors Physical characteristics of these wastes are similar to those of residential wastes, in that they consist largely of combustible materials in the form of paper and food waste from offices, restaurants, retail establishments, schools, hospitals, motels, and churches.

3. Industrial wastes include wastes generated by industrial processes and manufacturing operations, excluding hazardous wastes These wastes also include general industrial housekeeping and

support activity wastes.

4. Special wastes include wastes having special characteristics or requiring special handling. These wastes include oversized bulky wastes and materials generated in demolition and construction projects.

5.2.3 Solid Waste Facilities

The primary focus of this element is to identify the facilities which the County will need in order to manage and dispose of the solid waste and hazardous waste generated in the county during the planning period. For solid wastes these include transfer stations, processing plants and landfills. For hazardous waste only transfer stations will be addressed since disposal of such wastes within solid waste landfills is not permitted in Florida (Section 403.722, F.S., 2006).

The term "transfer station" refers to a facility for the temporary collection of solid waste prior to transport to a processing plant or to a final disposal site. For the purposes of this element only permanent facilities which would require attendance by trained operators will be addressed.

The term "processing plant" refers to a facility designed for incineration, resource recovery or recycling of solid waste prior to its final disposal. This element will address only such facilities as would serve the needs of the county as a whole. The purpose of these facilities may include any or all objectives of reduction of the volume of wastes disposed, energy recovery from wastes or recovery of reusable materials.

The term "landfill" refers to the final disposal site of solid wastes, and as it implies, involves burial of the wastes. Landfills are classified for regulatory purposes according to the characteristics of the wastes they are permitted to receive. This element will address only the type identified as a Class I land-fill, which can receive the solid wastes typically generated in the county and is the only type currently operating in the county.

5.2.4 Regulatory Framework

A. Federal

The potential environmental impacts of solid waste facilities have led to the development of an extensive network of permitting requirements at the federal and state levels. Impacts on air, and water quality are reviewed by the U.S. Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (DEP), and where dredging and filling might occur, by the U S Army Corps of Engineers (COE). The regional water management district also provides state level review for water quality and quantity impacts. Actual construction and operation of solid waste facilities requires further permits and review by DEP. For processing plants which will generate electrical power or require tall emission stacks, further DEP and Federal Aviation Administration (FAA) review may be required. These federal and state regulatory responsibilities are summarized in Table 5-3 following.

TABLE 5-3

FEDERAL AND STATE REGULATORY REVIEWS APPLICABLE TO SOLID WASTE FACILITIES

Air Quality	Review Agency	Activity Where Review is Applicable
New and Modified Source Review Requirements		
1. Prevention of Significant Deterioration (PSD)	DEP, EPA	Air emissions in attainment areas
2. New Source Review for Non-attainment	DEP	Air emissions in non-attainment areas
Permit to Construct Air Pollution Sources	DEP	Construction of air pollution source (subsequent to testing)
Permit to Operate Air Pollution Sources	DEP	Operation of air pollution source (subsequent to testing)
Water Quality	**Review Agency**	**Activity Where Review is Applicable**
Permit to Dredge and Fill	DEP, COE	Dredging and filling where possible effect on water quality
Permit to Constrict Wastewater Discharge	DEP	Discharge into state waters (construction of point source)
Permit to Constrict Wastewater Discharge	DEP	Discharge into state waters (operations)
Water Quality and Quantity	**Review Agency**	**Activity Where Review is Applicable**
Consumptive Use Permit	WMD	Consumptive use of surface and groundwater and drilling of wells
Solid Waste	**Review Agency**	**Activity Where Review is Applicable**
Permit to Construct a Solid Waste Facility	DEP	Construction of Solids Waste Facilities
Permit to Operate a Solid Waste Facility	DEP	Operate of Solids Waste Facilities
Other	**Review Agency**	**Activity Where Review is Applicable**
Certification of Proposed Electrical Power Generating Plant Site	DEP	Any power plant over 50 MW. Optional for smaller facilities
Notice of Proposed Construction	FAA	Construction of a tall emissions stack
Environmental Impact Statement Provisions	EPA, COE or other	EIS requirements dependant upon federal involvement

NOTES: 1) DEP reviews permit and recommends to EPA the action to take Final determination issued by EPA
2) Joint application between DEP and Corps of Engineers
3) Use of the Florida Electrical Power Plant Siting Act (PPSA) may preclude the need

for individual permit applications under Florida law since it serves as a clearinghouse for these various permits. A Memorandum of Understanding has been reached with EPA. Their permit requirements may also be addressed under the PPSA.

Source: State Statutes; Florida Administrative Code.

For hazardous waste, the national Resource Conservation and Recovery Act (RCRA) of 1976 directed EPA to develop a national program to regulate and manage hazardous waste and provide incentives for states to adopt consistent programs. The national Comprehensive Emergency Response and Compensation Liability Act (CERCLA) passed in 1980 provided EPA with authority and funds to respond to incidents requiring site clean-up and emergency mitigation (the EPA "Superfund" Program). This act also defined the liability of business engaged in hazardous waste generation, transport and disposal, and provided enforcement processes.

B. State

At the state level, the Florida Resource Recovery and Management Act (Section 403.702-403.7895, F.S., 2006), passed in 1980 and amended from time to time, adopted federal guidelines and directed DEP to develop and implement a hazardous waste management program. This act provided for: 1) adoption of federal hazardous waste definitions, 2) a system to monitor hazardous waste from generation to disposal, 3) an annual inventory of large hazardous waste generators, 4) permit requirements regulating treatment, storage and disposal of hazardous waste, 5) funds for hazardous waste spill and site clean-up, 6) hazardous waste management facility site selection procedures, and, 7) fines and penalties for violators.

Amendments to the Florida from time to time provided directions and funds to establish a cooperative hazardous waste management program between local, regional and state levels of government. These changes included provisions for county-level hazardous waste management assessments, regional and statewide facility needs assessments, and site selection for hazardous waste management facilities at the county, region and state levels.

C. Local

Palm Beach County Solid Waste Authority (SWA) is responsible for planning and management of solid waste facilities serving the Village of Golf. This includes processing permit applications for new facilities and ensuring that existing facilities are operated in conformance with permit requirements and in compliance with water quality objectives.

5.2.5 EXISTING CONDITIONS

A. Comprehensive Solid Waste Management and Resource Recovery Plan

Currently a new comprehensive solid waste management and resource recovery plan has been developed. This is the guiding document for development of solid waste facilities to serve the Village of Golf.

However, solid waste generation per capita remains as is for all practical purposes. At present, the landfill pertaining to the Village of Golf is the Dyer Landfill. This landfill is operated by SWA.

In September 1986 the SWA completed final preparations to allow usage of the last 30 acres of permitted disposal area at the Dyer Boulevard Landfill.

The SWA received a closure permit from DEP to finish closing 120 acres of old sections of the Dyer Boulevard landfill. It also installed a network of groundwater monitoring wells to facilitate the closing of this 120 acre tract. Capping and final closing of the Dyer landfill is scheduled for year 2000. However, it is still operational as of 2006. The SWA has capacity through the year 2020.

A major step was taken in 1986 to facilitate the construction of the first resource recovery facility in Palm Beach County. Approval by the governor and cabinet for power plant site certification was received by the Authority. Construction is complete and the plant is in operation.

The Village of Golf is currently assessed to generate 7 lbs of solid waste per capita per day.

Population estimates for year 1990 is 237
Population estimates for year 1995 is 261
Population for year 2006 is 254
Population estimates for 2020 is 319

Based on this standard the annual per capita generation is: 1778 pounds of solid waste. The SWA confirms that there is sufficient land fill space for all of Palm Beach County through the year 2020.

The Village's projected solid waste generation rate is as depicted on Table 5-4 below:

TABLE 5-4

SOLID WASTE GENERATION TABLE 2005-2020

Year	Population	Pounds per day
2005	254	7.0
2010	279	7.0
2015	337	7.5
2020	*319	7.5

* Will vary due to size of family and whether any of the currently agricultural zoned property is re-designated as residential. Table 4 assumes development of the 11 remaining residential lots and the family size increasing slightly from 1.63 persons per household to 1.91 persons. The EAR report projects a population of 371 at 2020.

Source: Palm Beach County Solid Waste Authority, 2006
EAR Report; LaRue Planning and Management Services, Inc.

Leachate indicators are as set forth on Table 5-5 below:

TABLE 5-5

LEACHATE INDICATORS

Physical	Chemical		Biological
Appearance pH Oxidation-Reduction Potential Conductivity Color Turbidity Temperature Odor	ORGANIC Phenols Chemical Oxygen Demand (COD) Total Organic Carbon (TOC) Volatile Acids Tannins, Lignins Organic-N Fther Soluble (oil & grease) M B A S Organic F u n c t i o n a l Groups as Required Chlorinated Hydrocarbons	INORGANIC Total Bicarbonate Solids (TSS, TDS) Volatile Solids Chloride Sulfate Phosphate Alkalinity and Acidity Nitrate-N Nitrite-IT Ammonia-N Sodium Potassium Calcium Magnesium Hardness Heavy Metals (Pb, Cu, Ni, Cr, Zn, Cd, Fe, Mn, Si, llg, As, Se, Da, Ag) Cyanide Fluoride	Biochemical Oxygen Deman (BOD) Caliform Bacteria (Total, fecal; fecal streptococcus) Standard Plate Count

5.2.6 Palm Beach County Hazardous Waste Assessment

A report entitled "Solid Waste Authority, Palm Beach County Hazardous Waste Assessment 1985" was issued in 1987.

This report summarizes the findings of an extensive survey of small quantity hazardous waste generators within Palm Beach County, Florida as required under the provisions of the Florida Water Quality Assurance Act of 1983, as amended. The survey, conducted by mail during the fall of 1984, was administered by the Solid Waste Authority of Palm Beach County and the Treasure Coast Regional Planning Council in accordance with guidelines established by the Florida Department of Environmental Regulation.

The information which has been evidenced through the conduct of the survey provided Palm Beach County and others involved in the process of hazardous waste program planning and decision making with a comprehensive description of the magnitude and nature of small quantity hazardous waste management efforts within the County. The findings presented in this report are the direct result of responses to the survey,

available data on large quantity generators, and extrapolated data based upon employment figures and industry-specific waste generation coefficients.

One of the survey's significant findings is that there was an estimated 12,580 tons of hazardous or potentially hazardous wastes generated in Palm Beach County during 1984 by small quantity generators (SQG) This quantity was generated by approximately 1020 SQGs identified through the survey

As previously referenced, the 12,580 tons estimated is comprised of both hazardous and potentially hazardous waste (i.e. non-hazardous wastes which, under certain circumstances and/or conditions, could pose a hazard but which are not currently defined as hazardous waste). The survey results do provide information on the relative distribution of hazardous and potentially hazardous waste Of the total extrapolated, approximately 5,335 tons fall into the category of potentially hazardous waste (42.5%).

Significant among the survey's other findings are the reported storage and disposal methods utilized by Palm Beach County SQGs in the management of their waste. The survey estimates that 70% of the reported wastes are either reused or recycled, and a summary of the storage and disposal methods are presented.

This report represents the completion of the first phase of an ongoing program by the Solid Waste Authority of Palm Beach County to provide and maintain an accurate data base on hazardous waste generation and management in Palm Beach County. Through its continuation and periodic update, valuable information may be provided to decision makers concerning the County's hazardous waste management effort over the coming years Program refinement and accuracy are anticipated with the additional software currently being added to the existing programs.

5.2.7 Needs Assessment

A. Capacity Assessment with Summary of Needs and Improvement Plans

The preceding section identified the available capacity of the Dyer Boulevard landfill and the level of service standard for the facility.

The Palm Beach County Solid Waste Authority has projected the per capita solid waste generation for the Village of Golf as set forth in Table 5-4 earlier herein.

As the Dyer landfill site serves other areas within Palm Beach County, the overall capacity of the site is expected to last until year 2020.

Siting studies are currently under way by Palm Beach County Solid Waste Authority with input from CAC (Citizens Advisory Committee) in evaluating future sites for solid waste management facilities Emphasis has been focused on sites for transfer sections in the northern and west central portions of Palm Beach County and the locations for future trash fill and resource recovery facilities to the south.

B. Performance Assessment

1. Solid Waste Facilities

In general, landfill practices at the Dyer Boulevard facility provide solid waste disposal for the Village in an economical and environmentally sound manner. Operational and structural modifications

recommended in the comprehensive solid waste management and resource recovery plan are currently being implemented to provide even greater efficiency and safety.

5.3 DRAINAGE SUB ELEMENT

5.3.1 BACKGROUND

5.3.2 Terms and Concepts

A. Drainage Systems

Water flowing overland during and immediately following a storm event is called stormwater drainage or stormwater runoff. Under the effect of gravity, the drainage flows toward sea level through depressions and channels which comprise the drainage system of an area. The drainage system may consist of natural features, manmade features, or a combination of both.

Natural drainage systems are defined by the topography of an area. The largest feature of a natural drainage system is the drainage basin, or watershed. The boundary of the basin is called the basin divide. This is a line where the natural land elevation directs runoff from the basin toward a common major drainage feature, such as a river, lake or bay. The major drainage feature is often called the receiving body and the smaller features are its tributaries.
Manmade drainage facilities are artificial constructs designed to store or convey stormwater runoff. Swales, ditches, canals and storm sewers are typical conveyance structures, collecting stormwater runoff and directing it toward downstream receiving waters. Stormwater storage structures are generally classified as either detention or retention facilities. Detention facilities are designed to temporarily impound runoff and release it gradually to downstream portions of the drainage system through an outlet structure Retention facilities are impoundments which release stormwater by-evaporation and by percolation into the ground, with no direct discharge to surface waters.

B. Drainage and Stormwater Management

The occurrence of stormwater runoff is highly variable, dependent on the amount of rain falling during each storm event and on conditions within the drainage basin. Since most storm events are relatively moderate, natural drainage features typically evolve to accommodate moderate quantities of stormwater runoff. Occasionally, severe storm events create runoff volumes in excess of what these features can handle, resulting in temporary flooding of adjacent land. This periodic flooding is part of the natural cycle of events and often has beneficial effects on the basin ecosystem. Flooding is generally not perceived as a problem until development occurs in flood prone areas.

Historically, the typical strategy adopted in response to stormwater flooding of developed areas was to modify the drainage system to convey runoff away from developed sites more rapidly. Initially, this response may result in limited success in reducing nuisance effects and property damage. However, as urbanization of a drainage basin increases, storm events produce proportionately more and faster runoff, primarily due to the increase in impervious surfaces in the basin As a result, the capacities of natural drainage features and previously constructed drainage facilities are exceeded more frequently and stormwater flooding problems increase, as do expenditures for further drainage improvements.

In addition to exacerbating flood problems, this strategy for coping with storm-water runoff has detrimental effects on water quality. Soil eroding from development sites, and materials such as oil, grease, pesticides and fertilizers from urban land uses are washed off by runoff, increasing pollutant loading on receiving waters. The increased velocity of runoff also disrupts natural drainage features by destabilizing channels, leading to further sediment loading and debris accumulation.

The term "stormwater management" refers to comprehensive strategies for dealing with stormwater quantity and quality issues. The central tenet of these strategies is to ensure that the volume, rate, timing and pollutant load of runoff after development is similar to that which occurred prior to development. To accomplish this, a combination of structural and non-structural techniques are utilized. Structural techniques emphasize detention and retention of stormwater to reduce runoff rates and provide settling and filtration of pollutants. Non-structural techniques emphasize preservation or simulation of natural drainage features to promote infiltration, filtering and slowing of runoff. The objective of stormwater management is to utilize the combination of techniques which provides adequate pollutant removal and flood protection in the most economical manner.

One of the key principles of current stormwater management techniques is recognition of the need for basinwide planning. The stormwater management system must be designed beginning with the final outlet point to ensure adequate capacity to handle all discharges from the upstream portion of the basin under conditions present at the time of design. It is then necessary to ensure that subsequent development upstream utilizes stormwater management techniques and systems which maintain pre-development runoff conditions so that the downstream system is not overloaded. By ensuring that all development within the basin is based on and supportive of a plan for the entire basin, the functions and useful life of both natural and manmade components of the system will be protected and extended.

There are two basic factors involved in establishing a successful stormwater management program around these principles: (1) establishing and applying uniform design standards and procedures; and, (2) ensuring adequate maintenance of system components once they are constructed. The design standard which is of primary importance is the design storm event. This standard specifies the intensity (rate of rainfall) and duration of the rainfall event to be used in the design of facilities.

Standard procedures for sizing and designing facilities should also be part of the stormwater management program. This will ensure that systems are structurally and functionally compatible. The program should also provide for routine inspection and maintenance of facilities to ensure proper performance during the facility life.

5.3.3 Regulatory Framework

A. Federal

Section 208 of the Federal Water Pollution Control Act (PL92-500, 1972) is the directing' federal law with respect to water pollution abatement. In implementing the Act, the Environmental Protection Agency (EPA) identified pollutants carried in stormwater runoff as a major source of water contamination. To achieve the pollution abatement goals of the act, EPA provided assistance to state and local governments to develop Area wide Water Quality Management Plans, or "208 Plans" as they are commonly known. These 208 Plans studied a broad range of potential water pollution sources, including stormwater, and focused on

identifying pollutant sources and abatement needs as well as development of regulatory programs to ensure implementation. At present, there are no federal regulations for stormwater management concerning the quantity of stormwater runoff.

B. State

The Florida Department of Environmental Protection (DEP) has adopted a Stormwater Rule (Ch 17-25, F.A.C.) to fulfill part of the state's responsibilities under Section 208 of the Federal Water Pollution Control Act. The rule's basic objective is to achieve 80-95 percent removal of stormwater pollutants before discharge to receiving waters. This rule requires treatment of the first inch of runoff for sites less than 100 acres in size and the first one-half inch of runoff for sites 100 acres or greater in size.

Treatment is generally accomplished through retention or through detention with filtration. Retention requires the diversion of the required volume of runoff to an impoundment area with no subsequent direct discharge to surface waters. Pollutant removal by settling and by percolation of the stormwater through the soil is almost total. Detention facilities are typically within the line of flow of the drainage system. Stormwater from a site passes through the detention facility and is filtered prior to discharge to remove pollutants.

Implementation of the stormwater rule is achieved through a permitting process. DEP has delegated permitting responsibility to the regional water management district with jurisdiction over the Palm Beach County area.

The Central and Southern Florida Flood Control District was created by Chapter 25270 Laws of Florida (1949) as a multi-county district for purposes of flood control and water conservation Chapter 373, *Florida Statutes* (F.S.), the Florida Water Resources Act of 1972 (Act), greatly expanded the District's responsibilities from flood control to the full range of water management activities. In addition, the Act changed the name of the agency to the South Florida Water Management District (SFWMD).

The Act is intended to govern the regulation of all waters of the State, unless exempted by law, where waters of the State are defined to include all water on or beneath the surface of the ground or in the atmosphere.

Generally, the purposes for which the Act was adopted are to provide for management of water and related land resources; to promote the conservation, development and proper utilization of surface and groundwater; to provide water storage for beneficial purposes, to prevent damage from floods, soil erosion and excessive drainage; to preserve natural resources, fish and wildlife; and to promote recreational development.

District Permits. Pursuant to the Administrative Procedures Act (Chapter 120, F.S.) the District has implemented all of the permitting programs that were authorized by the Act, by adopting rules which are published as Chapter 40E of the Florida Administrative Code (F.A.C.).

There are two types of water resource permits issued by the District: 1) permits for the consumptive use of water and 2) permits for drainage or surface water management. The basic criteria for both types of permits

are the same. The proposal must be reasonable and beneficial, must be in the public interest, and must not harm any other existing legal user of water. How these criteria are applied, differs by the type of permit

Permit review is handled by a staff of professionals experienced in water resource engineering, hydrology and the other disciplines. District staff provides assistance to meet the applicant's needs and to protect the resources and public safety of the people of South Florida. An average of 500 permits are processed by the District each year. State law requires that reviews must be completed within 90 days of receipt of a complete application. The application must contain specific information related to the activity and its impact on the environment. The District staff is given 30 days to determine if an application is complete and to request certain additional information. Only the applicant has the power to extend the 90-day deadline. All permits (except general permits), must be approved by the Governing Board of the Water Management District. If any affected member of the public objects to the permit, the application is taken to a public hearing. Ultimately, however, the Governing Board makes the final decision on whether or not the permit is issued.

1) Water Use Permits will not be addressed in this sub-element.
2) Surface Water Management Permits. For surface water management permits, criteria for reasonableness and public benefit are different. In these cases, runoff water quality, flood protection for roads and buildings in the development, protection of adjacent lands from increased stormwater runoff, and protection of the environment are considered as a basis to determine if a surface water management permit will be issued. As with consumptive use permits, small projects can obtain a general permit. In some cases, the District has delegated the review of small developments to local governments which have established review programs for local projects and whose criteria for approval are at least as stringent as those applied by the District. As with other permits, if the District feels that a more thorough review is warranted at the regional level, the general permit designation is not given and the District's staff conduct the application review.

   Applicants for surface water management permits must provide the following type of information: 1) applicant or responsible legal entity, 2) location and size of the project, 3) description of water management facilities, 4) existing and proposed future land use and land cover information, 5) storm-water discharge analysis in relation to the capacity of receiving facilities. In response to this information, the District conducts an on-site inspection of existing facilities (conditions), an analysis of the expected performance of the system and impacts on regional facilities, and may recommend changes to improve the design of the project. The District may also recommend programs for monitoring to obtain water level, discharge or water quality data.

C. Local

Surface Water Quality Programs. The SFWMD conducts two primary types of surface water quality studies. The first is a series of research programs that are designed to address specific water quality problems. The second is a District-wide surface water quality monitoring program that is conducted by the SFWMD in cooperation with the United States Geological Survey and other agencies.

Most of the surface water quality research studies are conducted within the CSFFCD project and are designed to improve management of these water resources. The District has conducted extensive research programs in Lake Okeechobee and the Water Conservation Areas, and to a limited extent in the Hillsboro, C-15, C-16, C-17, C-18 and C-51 coastal basins

Rainfall in the Village, as well as in Palm Beach County, is seasonal with about 70% of the yearly rainfall being deposited in the months of June through October. In prolonged periods of rain, soils become saturated at varying rates depending on their individual texture and the depth to a less impervious layer, with the resulting runoff following topographic features in its movement.

Climatological Data Interpretation. In addition to the monitoring, compiling and archiving of climatologic and hydrologic data, the SFWMD has analyzed these data to determine frequency, duration, and estimated recurrence of extreme hydrologic events, such as excessive rainfall and droughts. The District also publishes an annual summary of hydrologic conditions Two tropical storms (Dennis, during August 16-18, 1981 and Bob, during July 22-24, 1985) and a severe drought (during 1980-82) affected portions of Palm Beach County and were the subjects of special reports by the SFWMD. Since then, hurricane Frances and Jeanne (2005) and Wilma (2006) produced significant amounts of rain.

5.3.4 Existing Conditions

A. Drainage Features

The South Florida Water Management District (SFWMD) is responsible for storm water control within the 16 counties of its defined region. The district owns and operates approximately 215 miles of major canals in Palm Beach County. Lake Okeechobee is the hub of the South Florida flood control and water conservation system. The lake level is maintained by levees and gate structures with discharges into the major canal system. The major canal system is divided into several drainage basins within the County.

Within the Village, a system of ponds and canals located throughout the community provide drainage and retention of stormwater runoff. Lateral canals 27 and 28 along the northern and southern boundaries of the Village (respectively) serve as major collectors of runoff for the area. In addition, numerous ponds and small lakes provide collection and retention of water run-off throughout the residential and recreational areas of the Village. See Figure 12, p. 531 for location of ponds within residential zoning for drainage.

A total of 11.03 acres of the Village's total 553 acres are waterbodies (not including L-27) and serve as run-off drainage collectors while 196 acres are open space/recreational and provide natural percolation.

Lake Worth Drainage District has jurisdiction of canals L-27 thru L-28 and E-3. The majority of the drainage canals have an east-west orientation except for the E-3 canal which has a north-south orientation and is located on the west of Perry Avenue. All these canals were constructed between 1913 and 1927.

B. Drainage District Operating Policies

The following discharge criteria is currently held by the Lake Worth Drainage District. (Allowable discharge limits apply to all developments and/or street or road improvements)

Basin	Rate	Frequency (Years)
Hillsboro Canal	35CSM	25
C-15	70 CSM	25
C-16	62.6 CSM	25
C-51	27 CSM West of Turnpike	10

C51	35 CSM East of Turnpike	25

Minimum discharge culvert shall be fifteen (15) inch diameter.

Invert of the discharge orifice shall be no lower than the maintained elevation in the Lake Worth Drainage District canal.

The minimum orifice shall be a six (6) inch base and six (6) inch height triangular orifice or the equivalent cross-sectional area rectangular orifice.

Any additional control mechanisms to drain off excess water after a storm shall be lockable screw gates. The size and operation of the mechanisms must be approved by the Lake Worth Drainage District.

Minimum road and parking tract elevations shall in no case be any lower than the elevation of the Lake Worth Drainage District design profiles. The backwater effects due to distance from the receiving canal must be considered. These profiles approximate the protection required by Palm Beach County road criteria

Maximum allowable discharge from any newly constructed road or street, or from any road or street improvements, must be limited to two and one-half cubic feet per second (2.5 cfs) per half (1/2) mile section for the twenty-five (25) year storm frequency.

5.3.5 Needs Assessment

A. Capacity Assessment; Impacts of Growth

Currently, spraying of aquatic vegetation occurs monthly. Canal mowing every other month, very minimal dredging is needed. No major structure or control structures are located within the Village of Golf area.

The Village of Golf's Level of Service for drainage is based on the return period, or frequency of a storm and its duration. The Village's Level of Service is to remain consistent with the South Florida Management District standards and require that floor levels be above the 100 year floodplain.

Within the Village, a system of ponds and canals located throughout the community provide drainage and retention of stormwater runoff. Lateral canals 27 and 28 along the northern and southern boundaries of the Village serve as major collectors of runoff for the area. In addition, numerous ponds and small lakes provide collection and retention of water run-off throughout the residential and recreational areas of the Village. The ponds on the Country Club of Florida Golf Course and those located on individual properties serve as the primary drainage for the entire residential area of the Village.

The Lake Worth Drainage District (LWDD) canals, L-27 through L-28 and E-3, serve as secondary drainage for the present and future development of the 11 vacant lots within the Village.

B. Performance Assessment

The present surface water drainage system, consisting of a series of canals, drainage ditches, swale systems, retention ponds and the natural percolation characteristic of area soils, will continue to provide adequate service if designed and maintained properly. However, due to the increased amounts of surface

runoff generated by developed areas, initial design considerations and proper maintenance techniques are essential for the maintenance of a proper functioning system. In addition, the Village is located on a high sandy area with excellent natural water absorption. The Village maintains review of site plans to insure that landscaping provides sufficient elevation and swaling to prevent water accumulation.

C. Future Drainage System

All future major residential development is required by the subdivision ordinance or Planned Unit Development requirements to provide comprehensive storm drainage facilities. These facilities must be capable of disposing of runoff from rainstorms of maximum intensity predicted for three year intervals. All runoff must be directed to percolation and detention areas for on-site retention of stormwater. Therefore, the majority of the requirements for future stormwater drainage systems will be provided by developers.

As local drainage problem areas are identified, solutions shall be based on specific local conditions and minimal capital costs. In many areas of the Village, minor drainage problems can be relieved to a great extent by improving swale areas. Some areas may only require curb ducts or minor grading in order to direct flow from streets onto swale areas.

Currently, the South Florida Water Management District is developing and pre-paring data documentation for Palm Beach County in order to assist with input to the Palm Beach County Comprehensive Plan. Also, the Lake Worth Drainage District is preparing a plan which sets forth their policies and objectives; the plan is expected to be issued in 1988-1989.

The Country Club of Florida Golf Course was constructed in 1955 and contains several lakes on the 175 acres. In April, 1987, the course was totally renovated. During this program, which was completed in October 1987, the lakes were excavated making them deeper for proper drainage. This was done by The Country Club of Florida after a study by Gee & Jensen, Engineers. There has been on-going maintenance and the golf course was renovated in 2006; however no changes to the lakes were made.

The ponds on the course and those located within individual property owners serve as the primary drainage for the entire residential area of the Village of Golf. The canals are secondary drainage for the present and future development of the remaining vacant private lots. Please see Exhibit 1D

5.4 POTABLE WATER SUB-ELEMENT

5.4.1 Background

5.4.2 Terms and Concepts

A potable water supply system normally consists of a water supply source, a treatment plant, and a distribution and storage network. Either surface water stored in natural lakes or man-made reservoirs, or groundwater, or some combination of the two, usually constitute the supply source for a system. The selection of a source for any system must consider the type and quality of sources available and the cost of developing the source for use. Before being used for public consumption, most water must be treated. Treatment removes impurities from the raw water in order to improve its quality for either public health or aesthetic reasons, or both. The treatment process adds to the cost of supplying water but it also expands the range of raw water sources that can be utilized.

After treatment, the water is supplied to individual users in a community by way of a network of pipes and storage reservoirs. Large transmission lines, called distribution mains, carry water to major demand areas and interconnect with a network of smaller lines which eventually supply individual establishments. Both the distribution mains and distribution network should be interconnected to form flow loops to allow water to circulate from various portions of the system to areas of highest momentary demand.

Water is delivered under pressure within the distribution system in order to ensure adequate flow to meet demands. Demand fluctuates during each day, usually exhibiting peaks during the morning and evening, corresponding to periods of highest residential use. Localized demand peaks also occur when the system is utilized for firefighting purposes. In order to provide adequate quantities and pressure to meet peak use and fire flow demands, storage tanks are linked with the distribution system at strategic locations. During low demand periods these tanks are filled as water is pumped into the system. During the peak demand periods, water flows from the tanks back into the system to augment flows and maintain pressure. Ground level and elevated storage tanks are both commonly used. Elevated tanks (water towers) are the most economical. Many systems also include auxiliary pumps which operate only during peak demand periods.

5.4.3 Regulatory Framework

A. Federal

The federal government has established quality standards for the protection of water for public use, including operating standards and quality controls for public water systems. These regulations are provided in the Safe Drinking Water Act, Public Law 93-523. This law directed the Environmental Protection Agency (EPA) to establish minimum drinking water standards. The EPA standards are divided into "primary" (those required for public health) and "secondary" (recommended for aesthetic quality) categories.

B. State

In accordance with federal requirements, the Florida Legislature has adopted the Florida Safe Drinking Water Act, Sections 403 850 - 403 864, F.S. The Florida Department of Environmental Protection (DEP) is the state agency responsible for implementing this act. In this regard, DEP has promulgated rules classifying and regulating public water systems under Chapter 62 of the F.A.C. The primary and secondary standards of the Federal Safe Drinking Water Act are mandatory in Florida.

The Regional Water Management District (WMD) is responsible for managing water supplies to meet existing and future demands. Regulation of consumptive use is achieved through a permitting system, through which water resources are allocated among the permitted consumers. The WMD rules pertinent to Palm Beach County is: South Florida Water Management District (Figure 13, p. 532).

C. Local

The Environmental Regulation Agency (ERA) of Palm Beach County is responsible for enforcement of the programs required by the DEP regulations. Water quality and production records are submitted to the ERA division for determination of compliance with DEP regulations.

5.4.4 Existing Conditions

A. Inventory

The Village of Golf operates its own water treatment plant, in the form of a combined water treatment facility, water storage and distribution system. In addition to serving the inhabitants of the Village, the facility also provides service to the nearby communities of Delray Dunes, Quail Ridge, Indian Spring, Indian Hill and Brookside.

The Village of Golf incurred a long term debt with the issuance of general obligation bonds in 1970 for the construction of a projected 1.0 MGD water and sewer facility. Because of low facility utilization in the early years, debt service was financed by Village of Golf taxpayers through 1977. With the addition of connections reserved for outside services the facility has been self-supporting since 1978. These bonds have been paid off. The Village again incurred long term debt in 2003 with the construction of a new ultrafiltration membrane water system, necessary to meet new drinking water standards. This facility ~~has~~ was completed and placed in operation in 2003.

5.4.5 Needs Assessment

A. Capacity Assessment

The permitted potable water ~~use~~ allocation for ~~of~~ the Village of Golf's water plant is ~~220~~ 251million gallons a year (MG) which is monitored and allocated through the South Florida Water Management District. A new 5 year permit was issued ~~in March 2008~~ March 28, 2013 and is valid through ~~March 2013~~ March 28, 2033.

The currently approved ~~actual treatment~~ capacity of the wastewater treatment plant is ~~315 million gallons per year or 0.864~~ 1.5 million gallons per day.

Water demand on the Village water plant is well below its capacity and allocated supply.

Currently, as shown in Table 5-6 following, water consumption is well below capacity and the annual demand is below the allocated yearly amount of ~~220~~ 2 5 1 MG (0.69 MGD) ~~(0.6027MGD)~~ permitted for withdrawal by the South Florida Water Management District. The maximum monthly allocation permitted is 28.3 MG. TABLE 5-6, extracted from the May 28, 2013 consumptive use permit for the Village of Golf, projects 20 years out from the permit date to May 28, 2033, which includes the 10 year projections to 2025 for purposes of this water supply plan.

~~**TABLE 5-6**~~

~~**Water Demand**~~

	~~2007~~	~~2010~~	~~2015~~	~~2020~~
~~**Population Served**~~	~~1850~~	~~2821~~	~~2889~~	~~3034~~
~~**Capacity**~~				
~~Daily Total, MGD~~	~~0.863~~	~~0.863~~	~~0.863~~	~~0.863~~
~~Yearly Total, MG~~	~~315~~	~~315~~	~~315~~	~~315~~
~~**Allocated Yearly Supply, MG**~~	~~220~~	~~220~~	~~220~~	~~196~~
~~**Consumption**~~				
~~Average Daily Total, MGD~~	~~0.484~~	~~0.489~~	~~0.501~~	~~0.526~~
~~Yearly Total, MG~~	~~176.66~~	~~178.50~~	~~182.90~~	~~192.00~~
~~Daily Average Per Person, GPCPD~~	~~173~~	~~173~~	~~173~~	~~173~~

TABLE 5-6

Water Demands

Year	Population	PCUR	Recommended Average (MGD)	Average Mo. Use (MG)	Rec. Max. Mo. (MG)	Ratio	Basis For Allocation
2013	2853	194	0.55	16.83	22.7149	1.350	
2015	2921	194	0.57	17.23	23.2563	1.350	
2020	3097	194	0.60	18.26	24.6576	1.350	
2025	3264	194	0.63	19.25	25.9872	1.350	
2032	3512	194	0.68	20.71	27.9617	1.350	
2033	3549	194	0.69	20.93	28.2563	1.350	Y

Source: Village of Golf Consumptive Use Permit No. 50-00612-W, March 28, 2013.

TABLE 5-7
PROJECTED USERS & UTILITY SERVICE

	*Utility Users 7/2008	
	Residen-tial	Commercial
Village of Golf	156	65

Quail Ridge	744	13
Delray Dunes	329	5
Indian Springs	187	8
Brookside	80	2
	–	
	–	
Indian Hills	450	2–
Total	1946	95

* All residential areas have achieved build out except for the 11 remaining lots in the Village.

5.4.6 Performance Assessment/Summary of the Entire Water Utility System

The Village of Golf Utility had an average daily consumption total of 0.484 MGD, in 2007 and a yearly consumption of 166.1MG. Recent population forcasts indicate an average daily rate of 0.511MGD in the year 2015 with a per person consumption rate of 173 gallons per day.

The plant has 3 ground water wells with an approximate depth of 100 feet each, and a capacity of 350 GPM per well.

Storage facilities are important in the event of a temporary interruption of service and to have capacity to meet maximum system demands. The system has 2 ground storage tanks, 1 hydropneumatic and 1 clearwell storage facility. See Table 5-8.

TABLE 5-8

STORAGE FACILITIES

	Capacity
Ground 1	.2 MG
Ground 2	.3 MG
Hydropvermatic	4000 Gallons
Clearwell	4040 Gallons

The most recent Palm Beach County Health Department sanitary survey report indicates that all major components of the water system are in good condition. The operation of the system rates as satisfactory and treated water within the system meets all regulatory requirements.

5.5 NATURAL GROUND WATER AQUIFER RECHARGE SUB-ELEMENT

5.5.1 Background

5.5.2 Terms and Concepts

Aquifers are water-bearing layers of porous rock, sand or gravel. Several aquifers may be present below one surface location, separated by confining layers of materials which are impermeable or semipermeable to water.

The source of water in aquifers is rainfall. Under the force of gravity, rainfall percolates downward through porous surface soils to enter the aquifer strata. Because of the variable permeability of different soil types, the rate of aquifer recharge from rainfall may vary from one location to another. The areas of highest recharge potential are called prime recharge areas. The presence of overlying confining beds also determines which surface areas will be effective recharge areas for a given aquifer, and is another factor in identifying prime recharge areas for the aquifer.

Since aquifer recharge areas are surface features, they are subject to alteration by development. Covering a recharge area with impervious surfaces, such as roads, parking lots and buildings reduces the area available for rainfall percolation, altering the total rate and volume of recharge in that area. Increasing the rate at which stormwater drains from recharge area surfaces also decreases recharge potential.

A second concern related to development within aquifer recharge areas is the potential for contamination of groundwater within the aquifer. Just as with stormwater runoff to surface waters, pollutants picked up by runoff which enters an aquifer can degrade the quality of the groundwater. Since water flows within an aquifer in a manner similar to surface water flow, downstream portions of the groundwater may be polluted over time. This becomes particularly significant when the aquifer is tapped as a potable water supply downstream.

5.5.3 Regulatory Framework

In 1986, the Federal Safe Drinking Water Act (Pl 93-523) was amended to strengthen protection of public water system wellfields and aquifers that are the sole source of drinking water for a community. The amendments for wellfield protection require states to work with local governments to map wellhead areas and develop land use controls that will provide long-term protection from contamination for these areas.

The aquifer protection amendments require EPA to develop criteria for selecting critical aquifer protection areas. The program calls for state and local governments to map these areas and develop protection plans, subject to EPA review and approval. Once a plan is approved, EPA may enter into an agreement with the local government to implement the plan.

A. State

In implementing the Florida Safe Drinking Water Act (Chapter 403, F.S.), DEP has developed rules classifying aquifers and regulating their use (F.A.C.). These rules are currently being amended to strengthen protection of sole source aquifers and wellfields tapping them. DEP has also established regulatory requirements for facilities which discharge to ground-water (in the F.A.C.) and which infect materials directly underground (F.A.C.).

The task of identifying the nature and extent of groundwater resources available within the state has been delegated to the regional water management districts Each district must prepare and make available to local governments a Groundwater Basin Resource Availability Inventory (GWBRAI), which the local governments are to use to plan for future development in a manner which reflects the limits of available resources. The Criteria for the inventories, and legislative intent for their use, are found in Chapter 373, *Florida Statutes*.

The Florida Legislature has also directed local governments to include topographic maps of areas designated by the water management districts as prime recharge areas for the Floridan or Biscayne aquifers in local comprehensive plans, and to give special consideration to these areas in zoning and land use decisions (Section 163.3177(6)(c), F.S.).

B. Local

The Palm Beach County Department of Environmental Resource Management, through the County's Wellfield Protection Ordinance, provides the regulatory framework for protecting groundwater within the County.

5.5.4 **Existing Conditions**

A. Natural Groundwater Aquifer Recharge Areas

The groundwater system underlying Palm Beach County (the Village of Golf area) generally consists of two aquifers: (1) the surficial or water table aquifer; (2) the upper Floridan aquifer. The water table aquifer lies just below the land surface and extends throughout the county. It is open to infiltration from rainfall in varying degrees, depending on the percolation characteristics of surface soils and the extent of impervious surfaces which have been created in the urban areas of the county. The water table aquifer and surface water systems are interconnected throughout the county, with the aquifer contributing to bare flow levels of the surface waters. The majority of rainfall infiltrating the water table aquifer travels in a southeasterly direction from higher elevations to natural discharge areas such as lakes, streams or manmade canals.

The upper Floridan aquifers lie below the water table aquifer, and separated by confining layers with relatively low permeability. About 50% of the county's average annual rainfall percolates through the

confining layers into the Floridan aquifer. In comparison to other areas of the state, recharge to the Floridan aquifer in Palm Beach County is high.

The Palm Beach County Department of Environmental Resource Management requires protection of the wellfield area to prevent contamination of the aquifers. There have been no reported incidents of aquifer contamination from permitted household wells in the Village of Golf.

5.5.5 Needs Assessment

A. Summary and Recommendations

At the present time, sufficient information is available to allow the Village to institute a site-specific comprehensive aquifer recharge area protection program. This is governed by the South Florida Water Management District.

The Pamlico sand, Anastasia formation, Calooshatchee marl, Tamiami formation and the Hawthorn formation are the main hydrogeologic units beneath the Village of Golf. The surficial aquifer system covers all of the Village and is the primary source of groundwater. The Hawthorn formation underlies the surficial system, consists of semipermeable to impermeable clays and silts and separates the surficial and Floridan systems. The Floridan aquifer system is artesian and has poor water quality
The pattern of development within the county is expected to remain relatively stable during the next few years, with urban development occurring in the western portion of the county, supported by regional water and sewer facilities. The mayor impact in the urban area will come from reduction of the area available for recharge to the water table aquifer. To offset this impact, the county stormwater drainage regulations emphasize the preservation of natural drainage features and the use of drainage retention structures to maximize aquifer recharge. For all new development, the County incorporates provisions in its land development code requiring conservation of areas with the greatest recharge potential, based on the soil survey for the county.

In addition to recharge areas within the county, the Village of Golf is cooperating with the South Florida Water Management District in protecting prime recharge areas of the Floridan aquifer affecting county water supply sources.

IIA SANITARY SEWER

Goals, Objectives and Policies

Goal: 1.0.0 Continue to provide cost effective wastewater treatment services.

Objective: 1.1.0 Monitor and periodically review the municipal plant operation as to its' efficiency and cost effectiveness.

Policies: 1.1.1 Through review of financial statements and reports, rate structures, and surrounding development, insure that economies of scale are maximized within the constraints of the municipal plant's capacity and the service area.

1.1.2 Maintain a liaison with regulatory and other bodies involved with maintaining information on new and developing technology.

1.1.3 Based on the current level of service of the Utility, future service will be provided at a level equal to at least 350 gallons per equivalent residential connection (ERC) per day average daily flow.

1.1.4 An annual maintenance program will identify system needs for renewal and replacement and improvement of the system Capital improvements considered necessary to maintain the system in good working condition will be prioritized.

Objective: 1.2.0 New Development will be responsible for facilities extension as covered in Chapter II of Ordinance No 44. New Development will execute a standard Developer's agreement and pay which will consist of among several items but not limited to:

Reservation of Capacity Facility Capacity Charges Application and Plan Review etc.

Fire Connection Service Water Distribution Lines Wastewater Collection System

Policies: 1.2.1 Development and redevelopment will be encouraged in areas presently served adequately by existing sanitary sewer facilities.

1.2.2 New development will be required to install sewer lines according to Golf's specifications in order to receive development approval Pursuant to Ordinance No. 44, the new lines will be deeded to Village of Golf.

Objective: 1.3.0 The Village will extend wastewater collection services to new areas only when such extensions are economically feasible discouraging urban sprawl and are of benefit to the health, safety, welfare and maximum use to the community

1.3.1 The Village shall not extend wastewater collecting services to developments which would exceed either the adopted levels of service or capacity standards of the Village's wastewater collection services.

Objective: 1.4.0 Water Conservation. The Village of Golf will minimize demands for water to reduce system expansion costs and the need for increased waste water collection.

Policy: 1.4.1 The Village of Golf will continue to enforce the Water Shortage Ordinance No. 42 when necessary as advised by the South Florida Water Management district.

IIB SOLID WASTE

Goals, Objectives and Policies

Goal: 1.0.0 Continue to provide cost feasible trash collection to the Village.

Objective: 1.1.0 So long as it is feasible, continue to provide solid waste disposal for the Village through contractual agreement.

Policies: 1.1.1 Periodically review the cost of solid waste collection and specifications of contracts providing such, to determine if changes in contractual agreements will provide better or lower cost service, (i.e. length of contract, etc.).

1.1.2 Maintain full coordination with the county-wide Solid Waste Authority to provide for a future cost-effective option to the current contractual agreement.

IIC DRAINAGE

Goals, Objectives and Policies

Goal: 1.0.0 Encourage development that provides stormwater run-off control.

Objective: 1.1.0 Continue to review site plan and landscaping proposals as to their effect on water drainage on that particular parcel, surrounding areas and the system of ponds and canals throughout the Village.

Policies: 1.1.1 Encourage the continuation of large open spaces and large lot sizes.

1.1.2 Require that site plans specify the flow and control of water through elevation and swales.

1.1.3 Prevent, through zoning controls, the development of smaller lots with lower open space/building area ratios.

Goals, Objectives and Policies

Goal 1.0.0 ~~Implement water supply planning consistent with statutory requirement~~
The Village of Golf hereby adopts by reference the "10-Year Water Supply Facilities Work Plan", dated September 13, 2011, for planning period of not less than 10 years. The Work Plan addresses issues than pertain to water supply facilities and requirements needed to serve current and future development within the Village of Golf service area. The Village shall review and update the Work Plan at least every 5 years within 18 months after the governing board of the SFWMD approves an updated regional water supply plan. Any changes affecting the Village Work Plan shall be included in the annual Capital Improvements Plan to ensure consistency with between the Potable Water Sub-Element and the Capital Improvements Element.

Objective 1.1.0 Approve the 10-year water supply and facilities work plan (Exhibit 1.0) within 18 months following the approval of the regional water supply plan.

Policy 1.1.1 The "10-Year Water Supply Facilities Work Plan" will be revised for consistency with the regional water supply plan within 18 months of the approval of SFWMD Governing Board approval of an update to the Lower East Coast Water Supply Plan.

Objective 1.2.0 Coordinate land use and future land use changes with the availability of water supplies and water supply facilities.

Policy 1.2.1 Water supply concurrency must be established during the building permit stage.

Objective 1.3.0 Revise potable water LOS standards to reflect gallons per capita day that is within the permitted amount.

Policy 1.3.1 The LOS standard will not exceed 173 gallons per capita day.

Objective 1.4.0 Protect the quality of water sources, both traditional and alternative sources.

Policy 1.4.1 Conserve potable water resources through the implementation of reuse programs and conservation strategies and techniques.

Objective 1.5.0 Implement intergovernmental coordination between interested parties in support of regional water supply planning.

Policy 1.5.1 Update water supply information and share with local governmental entities in order to meet ongoing water supply needs.

Policy 1.5.2 Coordinate between local governmental entities the implementation of alternative

water supply projects, establishment of LOS standards and changes in service areas.

Policy 1.5.3 In accordance with Section 163.3180(2)(a), F.S., the Village shall determine whether there will be adequate water supplies to serve the new development prior to approval of a building permit or its functional equivalent. All development is subject to the Village's Concurrency Management system. The Village shall track current water demand and outstanding commitments in order to determine the availability of an adequate water supply for proposed developments. The Village will also ensure that adequate water supplies and facilities are available and in place prior to issuing a certificate of occupancy or its functional equivalent.

Objective 1.6.0 Develop a financially feasible water supply facilities work plan that recognizes land uses within the area.

Policy 1.6.1 Prioritize the replacement of facilities, correction of existing water supply and facility deficiencies and the provision of future water supply and facility needs.

Policy 1.6.2 Identify possible revenue sources to fund water supply and facility projects.

Goal: 2.0.0 Continue to provide cost effective potable water treatment services.

Objective: 2.1.0 Monitor and periodically review the municipal plant operation as to its' efficiency and cost effectiveness.

Policies: 2.1.1 Through review of financial statements and reports, rate structures, and surrounding development, insure that economies of scale are maximized within th constraints of the municipal plant's capacity and the service area.

2.1.2 Maintain a liaison with regulatory and other bodies involved with maintaining information on new and developing technology.

IIE NATURAL GROUNDWATER AQUIFER RECHARGE

Goals, Objectives and Policies

Goal: 1.0.0 The functions of natural groundwater aquifer recharge areas within the Village will be protected and maintained.

Objective: 1.1.0 The Village will coordinate with local, state and federal agencies to achieve regional aquifer recharge protection objectives.

Chapter 6

CONSERVATION

6.1 INTRODUCTION

The purpose of the Conservation Element of the Village of Golf's Comprehensive Plan is to identify strategies and policies which will ensure that the Village's natural resources will be managed, protected and enhanced. The element first provides an overview and assessment of existing natural resources and then sets out a series of goal, objectives and policy statements. These statements are intended to direct both public and private activities which affect the natural environment of the Village.

6.2 NATURAL RESOURCES INVENTORY

6.2.1 Climate

One of the most significant environmental attributes of the Village of Golf and the entire south Florida region is the warm, sub-tropical climate. The climatic conditions of the area play an important role in the overall environmental system of the area due to their effect on air and water resources.

Precipitation, for example, has a direct effect on the supply of water resources in the region and recharge to the Aquifer is almost totally dependent on rain-fall. Annual rainfall averages nearly 60 inches per year, with approximately 45 inches occurring during the summer months.

Seasonal temperature variations, too, play an important role in the environmental system by directly affecting the loss of water to the atmosphere due to evaporation and transpiration. Temperatures in the Village of Golf area are moderated by trade winds. The yearly average temperature range is approximately 20 degrees, from the high 60's during the winter to the mid-80's in the summer.

Winds, due to their influence on the rate of evaporation from surface waters, soils and vegetation, play a significant role in the region's hydrologic process. Area wind velocities are generally calm to slow, although high wind speeds occur with the passing of storms and frontal systems During the summer and fall, prevailing winds are usually from the east, with varying wind patterns during the remainder of the year.

6.2.2 Water Bodies

Water bodies throughout the Village of Golf provide drainage and attractive landscaping.

Ponds and small lakes were made an integral part of the overall development or the Village to provide drainage as well as to add to the 'Recreational' character of the community.

6.2.3 Air Quality

The air quality of urban areas can affect the health and maintenance of vegetation and ecological systems. However, air quality monitoring stations located near Golf have reported good ambient air quality. Most air pollution in the Golf area is generated from automobile emissions.

The United States Environmental Protection Agency (EPA) has regulations establishing minimum air quality. In addition, the Florida Department of Environmental Protection has established and enforces ambient air quality standards The County Health Department monitors air quality locally.

6.2.4 Soil Erosion

This is not a significant issue given the developed nature of the Village.

6.2.5 Natural Habitat and Vegetative Communities

The Village of Golf is located in an area of high sandy lands that were formerly used for cattle grazing and pasture. The most prominent natural vegetation common to this area are pine trees and palmetto bushes Because the Village has developed predominantly with single family homes on large lots, natural vegetation has been used for landscaping throughout the Village and thus, provides continuity of development character. Tall, mature pines provide a landscaping theme as well as provide copious shade in many areas of the community.

6.2.6 Commercially Valuable Minerals

There are no known deposits of commercially valuable minerals in the Village of Golf.

6.2.7 Water Needs and Sources Required by the Entire Water Utility System

The Village of Golf Utility has an average daily groundwater consumption total of 0.557 MGD, and a yearly consumption of 208 MG. A projection indicates an approximate daily increase from 0.554 MGD to 0.602 MGD, in the year 2020 including seasonal occupants. The daily average per capita rate is approximately 191 gallons daily, that is not expected to change over the foreseeable future.

The Village water plant has three (3) ground water wells with an approximate depth of 100 feet each, and a capacity of 350 GPM per well.

Storage facilities are important in the event of a temporary interruption of service and to have capacity to meet maximum system demands. The plant has two (2) ground storage tanks, ~~one (1) hydropneumatic~~ and one (1) clearwell storage facility.

Storage Facilities

	Capacity
Ground 1	.2 MG
Ground 2	.3 MG
~~Hydropneumatic~~	~~4,000 Gallons~~
Clearwell	4,040 Gallons

The most recent Palm Beach County Health Department

sanitary survey report indicates that all major components of the water system are in good condition. The operation of the system rates as satisfactory and treated water within the system meets all regulatory requirements.

6.2.8 Pollution

No significant indicator of pollution has been detected in the Village which suggests the need for tighter controls in the Village area.

6.2 WATER CONSERVATION

The Village of Golf considers the conservation of our natural resources a vital and important issue facing all of south Florida. The Village has taken a very proactive approach to this issue and has adopted policies that validate the Village's commitment to water conservation. The following is a partial list of the efforts that have been made to satisfy the requirements of this water conservation element.

1. No potable water may be used for irrigation purposes in the Village water service area.
2. Reuse water from the Boynton-Delray regional wastewater system is used on all of the six golf courses located in our service area.
3. Only one hose-bib is allowed per house.
4. All new plumbing fixtures are required to meet federal guidelines for water conserving fixtures.
5. Meter readers make notes of any extraordinary water use and investigate. If a problem is found, either the Village or a plumber repairs it, depending on its location and the customer is notified.
6. All landscape plans are reviewed and approved contingent upon the plant palette being appropriate for the existing soil conditions.
7. No daylight hours watering is allowed from any water source.

The Village continues to look at all opportunities for water conservation, including different rate structures and greater recovery rates from wastewater from our water plant.

6.3 GOALS, OBJECTIVES AND POLICIES

Goal:	1.0.0	To preserve and enhance the natural features In the Village of Golf.
Objective:	1.1.0	Undertake programs to help achieve compliance with State Department of Environmental Protection air quality regulations.
Policy:	1.1.1	Continue to require landscaping as a part of new private development and to landscape public areas.
Objective:	1.2.0	Continue to pursue drainage practices and programs that minimize ground and surface water pollution.

Policies: 1.2.1 Continue to review development plans In order to require on-site detention of stormwater runoff.

1.2.2 Continue to assure adequate controls over hazardous wastes.

Objective: 1.3.0 Encourage the preservation and protection of natural vegetation.

Policies: 1.3.1 Through the site plan review process, encourage new home builders to Incorporate existing vegetation into their landscaping plans.

1.3.2 Work with County and State park officials to assure that any park improvements are sensitive to the vegetative and wildlife habitats.

1.3.3 Notify residents of possible danger to mature vegetation, such as diseases, and encourage unified measures of protection when the need arises.

1.3.4 Continue to observe an ordinance that requires Village Council approval for removal of pine or other native trees.

Goal: 1.4.0 Implement water supply planning consistent with statutory requirements and recognize the benefits of implementing conservation and alternative water resources.

Objective 1.4.0 Protect the quality of water sources, both traditional and alternative sources.

Policy 1.4.1 Conserve potable water resources through the implementation of reuse programs, conservation strategies and techniques and the use of alternative water sources.

Policy 1.4.2 The Village will promote water conservation through the enforcement of the adopted Florida Building Code which requires such items as low-volume commodes, water flow restrictions for showers and spigots and similar devices in all new construction and renovations, and will comply with the appropriate water management district water use restrictions.

Policy 1.4.3: The Village will continue to cooperate with the South Florida Water Management District (SFWMD) in its efforts to restrict the unnecessary consumption of potable water, particularly as it relates to irrigation, lawn watering, and car washing during periods of drought, supply reduction, and other emergencies.

Policy 1.4.4: Although irrigation of lawns and landscapes do not utilize the public water supply, the City shall create a lawn and landscape irrigation rule, which limits irrigation to two days per week between the hours of 12 a.m. to 10 a.m. and/or 4 p.m. to 11:59 p.m.

Policy 1.4.5: The Village shall adopt and maintain a Florida-Friendly Ordinance which requires the use water-efficient landscaping in all new development and redevelopment, and require functioning rain- sensor devices on all automatic irrigation systems on both new and existing systems.

Policy 1.4.6: The Village shall inform residents and businesses of, and shall encourage their

participation in, the Palm Beach County's water conservation programs such as Mobile Irrigation Laboratory (MIL) which is provided to educate homeowners and system operators to maximize the efficiency of their irrigation systems, while providing a foundation for protecting water quality and quantity in our area.

Policy 1.4.7: The Village shall coordinate local water conservation education efforts with the SFWMD and the Palm Beach County School Board.

Policy 1.4.8: The Village will promote and encourage the use of low impact development techniques (such as the Florida Water Star™ program, which is a point based, new home certification program for water-efficient developments, similar to the federal Energy Star program)

Policy 1.4.9: The Village shall prepare informational brochures on proper irrigation operating instructions for the public ~~by the end of 2009~~. These brochures will be made available at Village Hall.

Policy 1.4.10: The Village shall develop a leak detection and repair program for all Village facilities ~~by the end of 2009~~. It shall also inform and encourage its businesses and residents to adopt such a program for their own individual properties.

Policy 1.4.11: The Village will ensure that any new regulation to protect water resources is consistent with the South Florida Water Management District's (SFWMD) environmental resource permitting and consumptive permitting use permitting rules.

Chapter 8

INTERGOVERNMENTAL COORDINATION

8.1 INTRODUCTION

This Element offers a review of the various agencies/entities which provide differing levels of service to the residents of Golf, while the majority of these service providers or vendors are governmental agencies, all of the services are provided through the authority of the Village of other governmental entity. This section therefore lists, describes, and analyses each of the services provided within the Village.

Intergovernmental coordination, as applied to local governments in general and specifically to Golf, is a broad term and takes many forms of implementation It ranges from informal understandings which ease the friction of daily conduct of governance to the formal written agreements between the various local governments, agencies and/or entities. Specific attention is restricted here to the types of formal agreements which exist between Golf and other jurisdictions with little or no discussion of the less formal, non-written agreements.

The necessity of coordination and cooperation between governments, long recognized informally, has been formalized in the Florida ~~Local Government Comprehensive Planning and Land Development Regulations~~ Community Planning Act.~~—~~In that Act, the need is recognized to establish and implement specific programs to guide and control future development, not only on the local municipal level, but in the county, region and state as well.

8.2 ANALYSIS

The need for intergovernmental coordination stems from a basic need to provide service in the most effective and efficient manner. As the demands of urban growth rise, the need for intergovernmental interdependence increases Golf's ability to meet the challenge of guiding sound, quality development is dependent upon a spirit of cooperation between the Village and other agencies and levels of government. Thus, it is recognized that positive attitude precedes effective coordination. By working toward resolution of mutual problems and concerns, the Village is better able to manage the complex social organization and all involved benefit from the mutual cooperative effort.

The originators of the Growth Management Community Planning Act intended that municipalities develop various forms of intergovernmental agreements and activities which would maximize their strength and ability to respond to future development. The language of the Act grants considerable latitude to the municipality in spe- cifying proposed and existing intergovernmental agreements and the mechanisms with which the responsibilities of the agreements are carried out.

There are two (2) types of formal agreements. The first are general mechanisms which provide a forum for reaching consensus on areawide issues. The second makes provision for specific functions and services, and type represents the preponderance of Village agreements. They may be categorized as follows:

A. A single government (Golf) performs a service or provides a facility for one or more

jurisdictions,

B. A single government (Golf) receives a service or uses a facility supplied by one or more jurisdictions, or

C. Two (2) or more jurisdictions administer a function or operate a program or a facility on a joint basis.

The Village has developed an effective network of intergovernmental coordination, and has been responsive to development activities in adjacent jurisdictions. The Village coordinates with all levels of government agencies charged with planning and/or review responsibilities. It communicates with adjacent jurisdictions and responds promptly to requests from review agencies for Village evaluations of projects and developments.

Every effort is made to cooperate and coordinate with the City of Boynton Beach and Palm Beach County.

The Village will continue to coordinate its planning and development activities with all levels of local regional and state government in accordance with applicable provisions of the ~~Local Government Comprehensive Planning and Land Development Regulation~~ Community Planning Act.

8.3 PURPOSE

A primary purpose of the Intergovernmental Coordination Element is to identify and resolve incompatible goals, objectives, policies and development proposed in local government comprehensive plans. Identification of existing and potential conflicts is the first step. The second step is to determine the need for developing coordination processes and procedures with adjacent local governments and regional and state agencies.

The effect is to utilize and strengthen the existing role, processes and powers of local government in Florida with the intent to preserve and enhance present advantages and to encourage the most appropriate use of all natural resources, address present governmental handicaps and effectively deal with future problems that may result from these handicaps by proper and adequate planning. Through such planning, it is intended that Florida units of local government can pre-serve, promote and improve the health, safety, appearance and development of their local governmental units.

The goals, objectives and policies of the Intergovernmental Coordination Element will set forth the Village's plan to resolve existing and potential conflicts through coordination procedures. The intent of this element is to inventory existing coordinating mechanisms, analyze their effectiveness, identify the need for additional coordinating procedures in the future, and establish realistic goals and objectives.

8.4 AREA OF CONCERN

The area of concern for a municipality is defined by ~~Chapter 9J-5, Florida Administrative Code~~ Section 163, F.S., to include adjacent municipalities, the county, and counties adjacent to the municipality. For Golf, the area of concern include the City of Boynton Beach, as adjacent municipality, and Palm Beach County, as an additional abutting jurisdictions.

8.5 COORDINATION MECHANISMS AND ANALYSIS

Coordinating opportunities within the area of concern may include intergovernmental agreements, joint planning and service agreements, special legislation and joint meetings or work groups that are used to further intergovernmental coordination. In Golf, the Village Manager has the primary responsibility for intergovernmental coordination.

The following is a listing of organizations and entities affecting the Village of Golf:

8.4.1 United States Government

Of the numerous federal departments having jurisdiction within the Village, Golf officials specifically address the issues and/or areas, as follows:

1. All federal mandates and guidelines are observed by the Village, including non-discrimination and equal opportunity.

8.4.2 Florida, State of

The State has several agencies which have jurisdiction and provide varying levels of service, administration, or funding to the Village. The exact function of these agencies is specified in either the Florida Statutes or the Florida Administrative Code.

A. Florida Department of Transportation.

The Florida Department of Transportation (FDOT) has primary responsibility for coordination of transportation facilities planning and development Planning and development of the State transportation system is of concern to the Village.

The Future Land Use and Traffic Circulation Element will benefit from continued coordination between the FDOT, Palm Beach County, and the Village. The Department of Transportation is required to prepare a comprehensive plan that is coordinated with local government comprehensive plans. This requirement will result in a higher level of coordination between the FDOT and local government planning.

B. Florida Department of Environmental Protection.

The Florida Department of Environmental Protection (DEP) is authorized by Section 375 021, *Florida Statutes*, to develop and implement a comprehensive, multi-purpose, outdoor recreation and conservation plan for the State of Florida.

1. Division of Recreation and Parks

Currently the procedure for coordination on the recreation portion of the State's recreation plan is an informal one. The DEP Division of Recreation and Parks

makes available current listings of recreational facilities to local governments for review and update.

The State's conservation program is administered state-wide by various divisions and bureaus of the DEP. Coordinating mechanisms between the Village of Golf and these agencies in various areas of conservation are discussed in the following sections.

2. Division of Recreation and Parks
Bureau of Environmental Land Management

The Division of Recreation and Parks, Bureau of Environmental Land Management (BELM) is responsible for administration of aquatic preserve management plans.

C. Florida Department of ~~Community Affairs~~ Economic Opportunity.

The Department of ~~Community Affairs (DCA)~~ Economic Opportunity (DEO)is the responsible agency for overseeing implementation of the ~~Local Government Comprehensive Planning and Land Development Regulation~~ Community Planning Act. Formal mechanisms for coordination between the ~~DCA~~ DEO and local governments are set forth in Chapter 163, *Florida Statutes*. ~~and Chapter 9J-5, Florida Administrative Code~~. These include contracts providing for State financial assistance to local government comprehensive planning efforts and for compliance review of local government comprehensive plans by the DCA. The Village of Golf has a current contract with the State for financial assistance in preparation of the Village's Comprehensive Plan. The contract and agreement mechanism has been effective thus far.

Informal mechanisms of coordination include State-sponsored instructional workshops and meetings and provision to local governments of data sources and model methodologies for comprehensive plan elements. Prior to final compliance review, the ~~DCA~~ DEO assists local governments by providing a preliminary review of methodologies and plan elements The ~~DCA~~ DEO has made a preliminary review and comments on contracted work products submitted by the Village. The preliminary review has aided the Village in preparing a comprehensive plan that will comply with State requirements.

In addition to comprehensive planning assistance and review, the ~~DCA~~ DEO also provides local governments with model land development regulations.

All comprehensive plan elements will benefit from continued coordination between the ~~DCA~~ DEO and the Village. The need for additional coordination will be determined as the effectiveness of current mechanisms is measured.

D. Florida Department of Environmental Protection.

The Florida Department of Environmental Protection (DEP) is authorized pursuant to

Section 373 026, *Florida Statutes*, to collect data on and classify surface waters and groundwater, to share information on the use and conservation of water, to be involved in

coastal area management and to monitor the disposal of hazardous wastes. The monitoring of hazardous wastes is performed in conjunction with the Department of Health and Rehabilitative Services.

E. Florida Fish and Wildlife Conservation Commission.

The Florida Fish and Wildlife Conservation Commission (FFWC) is authorized by Chapter 372, *Florida Statutes*, to manage Florida's fish and game resources This responsibility includes both the collection and dissemination of information identifying threatened or endangered species or species of special concern and management of designated wildlife management areas. The information provided by the FFWC on threatened species has been valuable to local government comprehensive planning. There are no State wildlife management lands within the Village of Golf.

F. Other state departments having statutory jurisdictions with which the Village coordinates include:

Department (Sec.) of State
Department of Administration
Water Certification
Bureau of Police Standards
Florida Crime Information Center
State Fire Marshal
Commission on Ethics
Attorney General
Board of Elections
Department of Commerce

8.5 OTHER AGREEMENTS

Specifically, the Village has formal agreements or relationships as follows:

A. The Village provides all necessary reports and financial information to the State Comptrollers' office.

B. The Department of Administration cooperates, assists and provides information to the Village in planning various activities, programs and procedures. In addition, the Village invests a portion of general revenue and Water Department funds through the Department because of the high rate of interest and quick access to funds without the penalty which would be incurred in some other investment procedures.

C. The Department of Commerce receives reports of payroll and employee verification on a quarterly basis from the Village, and all unemployment compensation is coordinated through that Department.

D. The Department of Highway Safety and Motor Vehicles works closely with the Golf Security Department and monthly reports on accidents, citations and other pertinent

information are supplied to that Department.

E. The other thirty-six (36) municipalities, Palm Beach County and various special districts have entered into a Intergovernmental Palm Amendment Review Committee and Issues Forum Agreement to review Comprehensive Plan Amendments and multi-jurisdictional issues.

8.6 REGIONAL PLANNING AGENCIES

Treasure Coast Regional Planning Council

The T.C.R.P.C. has State Statutory jurisdiction over all developments which are deemed to be of regional significance. Additionally it reviews all comprehensive plans within its boundaries for compatibility with adopted regional policies.

The Board of elected officials includes County Commissioners and municipal representatives recommended by the Palm Beach County Municipal League, subject to final selection by the County Commission. Any and all plans developed by the Village under the ~~Local Government Comprehensive Planning and Land Development Regulations~~ Community Planning Act must be reviewed by the Council.

In addition to its Regional Policy Plan, the council also plays a valuable role in preparing regional studies, and collecting and disseminating information for use by local governments in preparing their plans.

The effectiveness of TCRPC review procedures and conflict resolution activities has not yet been determined. No deficiencies have been identified at this time

8.7 WATER MANAGEMENT DISTRICTS

South Florida Water Management District

This is a regional entity that has jurisdiction over all water related utilities within the South Florida region, was established by State Statute, and is a sixteen (16) county taxing district governed by a Board appointed by the Governor, including one (1) member from Palm Beach County.

Coordination and continual planning with this agency is critical to the Village. The District mandates the approved water supplies and amounts available for withdrawal and permits all activities incidental thereto, including consumptive water use, deep well injections, well abandonments and surface water management.

The Future Land Use, Sanitary Sewer, and Conservation Elements all benefit from coordination between the Village and SFWMD No specific needs for additional coordination have been identified.

8.8 LOCAL UTILITY AND SERVICE PROVIDERS

Coordination between the Village and those entities providing service to the Village is necessary to

ensure future provision of essential services. The Village has franchises with the Florida Power and

Light Company and with Southern Bell for provision of electric and telephone service. Adelphia Cable TV is franchised by the Village to provided cable TV service to Village residents The main area of coordination is in necessary facilities improvements within the Village's jurisdiction.

8.9 COUNTY GOVERNMENTS

A. Palm Beach County - Palm Beach County is a charter county and as such has jurisdictional authority over a variety of public services. There is close communication between the Village and the County Golf officials often attend County Commission meetings and are well informed as to the County's activities. In addition, there is coordination between the Village and various departments of County government. The coordination mechanisms for these points of contact are discussed below.

Numerous general activities are coordinated on a county level through various governmental and quasi-governmental agencies. These include, but are not limited to, functions through the various constitutional officers, the County Commission, Palm Beach County School Board, Palm Beach County Construction Industry Licensing Board, Palm Beach County Municipal League, Palm Beach County City Management Association, Palm Beach County Police Chiefs Association and Building Officials Association of Palm Beach County. Activities include assessment of properties, collection of taxes, elections, mosquito control, jail and holding facilities, planning and pertinent statistics and data for same, garbage and collection sites, civil defense, licensing regulation, and support or defeat of specific legislation. Specific County activities include the following:

B. Metropolitan Planning Organization (MPO)

The Palm Beach County, MPO is responsible for planning, and development of the County's public transportation facilities. The upkeep of these facilities are the responsibility of the County. Coordination of needed repairs and maintenance has been effective in the past.

C. Health Department

The Palm Beach Health Department is the responsible agency for reviewing and permitting installation of on-site sewage disposal facilities, to insure that no adverse impact on groundwater sources will result and to insure adequate drainfields for sewage disposal. Coordination in this area has been effective in the past.

D. Solid Waste Authority

The Solid Waste Authority has countywide responsibility for disposition of solid waste Solid waste in Golf is collected by a private contractor which utilizes the County Landfill for disposal. The Village pays a fee based on tonnage for use of the facility.

E. Department of Civil Defense

This Department coordinates hurricane evacuation procedures for the County, including Golf. The Village is responsible during an evacuation to coordinate all activities through the County Emergency Operations Center. The Golf Security Department is the responsible coordinating agency.

Coordination of evacuation procedures in the past has been effective. Any proposed changes in the evacuation routes for Golf, should be coordinated with the County.

F. Other

In addition to those listed above, there are several formal mechanisms of coordination of future development and comprehensive planning issues between the Village and the County. Coordination of the comprehensive plan goals, objectives and policies of these two (2) governments as they prepare their revised plans will help prevent future conflicts.

1. Water Supply: The Village of Golf Utility provides potable water to all its residents.

2. Sheriff's Office: The Sheriff of Palm Beach County agrees to hold prisoners in the County Jail prior to filing charges.

3. Palm Beach County Fire Rescue Department: The Village receives fire protection from Palm Beach County Fire Rescue Department. The services are financed through Village ad valorem tax revenues.

4. Palm Beach County: Palm Beach County assumes responsibility for certain traffic engineering services and functions pertaining to the planning, installation, operation and maintenance of traffic control devices on certain roadways and signalized intersections.

5. South Florida Water Management District: The Village holds a water withdrawal permit for the amount of 0.602 million gallons per day.

6. Palm Beach County and Municipalities: Local Option Gas Tax This agreement authorizes a local option gas tax to be distributed among Palm Beach County and eligible municipalities. A distribution formula for dividing the proceeds was established for a 5-year period beginning September 1, 1983 and has been updated during regular intervals.

7. "208" Plan, Palm Beach County": This agreement resolved to join with other general purpose units of government to develop a 208 Plan resulting in the coordination of a waste treatment management system, and to consider the adoption of Water Quality Management strategies when preparing or revising its Comprehensive Development Plan.

8. Palm Beach County, Palm Beach County Sheriff's Office and other municipalities: The Village participates in the E-911 Emergency System.

9. South County Council of Governments: The Village is an active member of this Council which addresses issues of common interest to all south county Local Governments.

10. Palm Beach County League of Cities, Inc.: The Village is an active member of the League which addresses county-wide issues of common interest to all municipalities.

8.10 ADJACENT LOCAL GOVERNMENTS

Coordination among adjacent local governments is particularly important for resolution of potential land use conflicts along the shared boundary as well as transportation and utility issues arising from land use decisions. In a more positive sense, cooperation among adjacent local governments can contribute to the protection and enhancement of shared natural resources.

The local government of the City of Boynton Beach is the only adjacent near-by municipal jurisdiction.

Issues of potential concern include land use conflicts among these jurisdictions and traffic. They conclude short-term agreements as needed for any joint concerns. Such mechanisms have been generally effective.

The Future Land Use and Traffic elements will benefit from continued cooperation in the future. No specific needs for additional coordination have been identified.

8.11 GOALS, OBJECTIVES AND POLICIES

Goal:	1.0.0	To assure coordination with other governmental entities for the purpose of maintaining the high quality of life for the residents of Golf.
Objective:	1.1.0	To consider the external effects of Village development activities neighboring jurisdictions and the region as an integral part of Village Comprehensive Planning activities.
Policies:	1.1.1	Recognize that planning and zoning initiated by the Village can have diverse effects on neighboring jurisdictions and develop procedures by which such external effects can be assessed.
	1.1.2	Promote compatibility between the Village and adjacent jurisdictions in such matters as traffic regulations, aesthetics, etc.
Objective:	1.2.0	To coordinate with agencies charged with planning and/or review responsibilities at all levels of government.

Policies: 1.2.1 Communicate to adjacent jurisdictions projected impacts of new developments and changes in local development

1.2.2 Respond in a prompt and thorough manner to requests from review agencies for Village evaluations of civic projects, developments, etc which require federal and/or state assistance.

1.2.3 The State Comprehensive Plan should be reviewed for Intergovernmental Coordination implications at the local level.

Objective: 1.3.0 To strengthen existing interlocal mechanisms which provide a means of discussing and implementing social, environmental and service concerns for mutual benefit.

Policy: 1.3.1 Promote the purposes and participate in the functions of such areawide organizations as ~~the Countywide Planning Council, and~~ the Palm Beach County League of Cities, Inc.

Objective: 1.4.0 To continuously develop alternative mechanisms, strategies and methods for obtaining funds through intergovernmental coordination.

Policies: 1.4.1 Ensure that opportunities for acquiring funding or other forms of assistance through intergovernmental relations with municipalities, Palm Beach County and the state or federal government are fully explored.

1.4.2 Direct or indirect contact should be maintained with federal, state and local agencies in order to monitor opportunities for acquiring assistance.

Objective: 1.5.0 To maintain high standards in the execution of service agreements.

Policy: 1.5.1 Assess effects of rezoning, annexation, and development activities on interlocal agreements which exist between the Village and other jurisdictions.

Objective 1.6.0 Coordinate land use and future land use changes with the availability of water supplies and water supply facilities.

Policy 1.6.1 Water supply concurrency must be established during the building permit stage.

Objective 1.7.0 Implement intergovernmental coordination between interested parties in support of regional water supply planning.

Policy 1.7.1 Update water supply information and share with local governmental entities in order to meet ongoing water supply needs.

Policy 1.7.2 Coordinate between local governmental entities the implementation of alternative water supply projects, establishment of LOS standards and changes in service areas.

Objective 1.8.0: The Village will continue to coordinate with State, Regional, and Local entities to ensure consistent level of service standards and updating of information for all public facilities provided.

Policy 1.8.1.The Village will maintain a water supply facilities work plan that is coordinated with SFWMD's District Water Supply Plan and Palm Beach County by updating its own work plan within 18 months of an update to SFWMD's District Water Supply Plan that affect the Village.

Policy 1.8.2. The Village will participate in the development of updates to SFWMD's Water Supply assessment and district Water Supply Plan and in other water supply development related initiatives facilitated by the SFWMD that affects the Village.

Policy 1.8.3. Continue to maintain relationships with the SFWMD and Palm Beach County to maintain or reduce potable water consumption through education, conservation and participation in ongoing programs of the Region and County.

Policy 1.8.4. Coordinate with Palm Beach County and the SFWMD to ensure that the Village's estimates and projections for potable water demand are incorporated into the County's estimates of demand.

Chapter 9

CAPITAL IMPROVEMENTS

9.0 INTRODUCTION

The community character goal, development objectives, and specific policy statements form the premise upon which this element is based. Essentially, the purpose of this element is to determine the cost of public facility improvements proposed for implementation and to demonstrate the ability to fund those improvements.

The feasibility of the Comprehensive Plan depends upon the ability of the community to carry out specific plan policies. To assist in implementing these policies, capital improvements planning outlines current thinking on how major community expenditures are programmed during a specified period. To best integrate capital improvement planning into the current financial structure, it is prepared in conjunction with the annual budget. This allows an independent analysis of both normal operating and maintenance budgets and capital improvement expenditures. The benefits of such analysis are described in the following manner:

A) A priority rating system is created, and revised annually, which programs major expenditures in the manner most beneficial to the community;

B) By initially separating expenditure types, a clear picture results relative to the total amount of community funds available for major expenditures. Therefore, if community needs are such that available funds are inadequate, the need for alternative funding sources is emphasized and;

C) By integrating Capital Improvements planning into the annual budgetary process, capital expenditures programming becomes a continual process of evaluating and re-evaluating how capital improvements funds will be expended during a specified period (i.e. the first year, expenditures for an initial specified period are proposed, the second year, expenditures for the remaining years are re-evaluated and programmed and an additional expenditure year is added, evaluated and programmed, each additional year is approached in the same manner as the second year).

9.1 ECONOMIC ASSUMPTIONS

The economic well being of Golf residents is not linked to the regional economy. Many of Golf's residents are retired individuals, and thus, do not depend on local employment for income. In addition, a large portion of the population is seasonal which also emphasizes the Village's non-dependency on the regional economy.

Because of these conditions and the fact that Golf is a residential community, it is not necessary for the Village to promote employment opportunities for residents through land use distribution and other policies.

Ad valorem taxes are expected to provide the bulk of municipal general fund revenues in the future. Ad valorem taxes provide the Village with its major source of revenues This trend is expected to continue in

the future As development occurs in the Village, the tax base will continue to expand Categories of general government expenditures which can be expected to reach a stable, no growth level (excluding inflation) are

- o Street lighting
- o Solid waste removal o Postal services

The socio-economic characteristics of the Village population are expected to remain a recreation oriented community with a relatively large proportion of its population in retirement age categories Population projections are set forth in the land use element at Chapter 3. See Table 2-3.

9.2 INVENTORY OF CAPITAL IMPROVEMENT NEEDS

The Village of Golf is for all practical purposes developed. All potable water distribution services and sanitary sewer collection facilities are in place. The new reverse osmosis facility is in operation. Continued maintenance of existing equipment facilities and roadways will suffice for existing improvements and be paid for through the budgetary process. This process has worked well for the Village and all infrastructure is currently in good repair. Capital needs for the Village projected through ~~2012~~ FY 2018-2019 are shown on Table~~s~~ 9-1 ~~and 9-2 below~~. The Utilities Department CIP is shown previously in this text on Table 4.

TABLE 9-1

CAPITAL IMPROVEMENT PROGRAM
Fiscal Years 2014/15 - FY 2018/19
General Fund

Department	FY 2014/15	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	Department
Administration-513						
A/C Flow at Village Hall	$0	$6,200	$0	$0	$0	$6,200
Phone System Replacement	0	0	5,000	0	0	5,000
Office Furniture	0	0	0	5,000	0	5,000
Paint Interior Village Hall	0	0	0	5,000	0	5,000
Total Administration	**$0**	**$6,200**	**$5,000**	**$10,000**	**$0**	**$21,200**

Public Safety-521

Awning	$0	$4,000	$0	$0	$0	$4,000
CCTV	0	25,000	0	0	0	25,000
Desktop Computer	0	1,250	0	0	0	1,250
Fibre Optic Cabling	0	0	60,000	0	0	60,000
Flex Gate Arms	0	1,000	0	0	0	1,000
Golf Cart	0	0	7,000	0	0	7,000
Laser	0	0	1,600	0	0	1,600
Office Furniture	0	500	0	0	0	500
Red Alert	0	7,000	0	0	0	7,000
Solar Beam - 24 Towers	0	180,000	0	0	0	180,000
Station Improvements	0	2,500	0	0	0	2,500
Vehicle	0	30,000	0	0	30,000	60,000
Total Public Safety	**$0**	**$251,250**	**$68,000**	**$0**	**$30,000**	**$349,850**

Grounds Maintenance-539

Irrigation East Hedge	$0	$0	$0	$0	$0	$0
Irrigation Park M	0	0	0	0	0	0

John Deere Gator Maint. Shop	0	0	0	0	0	0
Upgrades	0	0	0	0	0	0
Mower Re-placement	0	0	0	0	0	0
Mulch/Debris Bin	0	0	0	0	0	0
Path Replace-ment Park F	0	0	0	0	0	0
Pick Up Truck	0	0	0	0	0	0
Spray Tank Motor Up-grade	0	0	0	0	0	0
Total Grounds Maintenance	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

Post Office-515

Vehicle	$0	$15,500	$0	$0	$0	$15,500
Total Post Office	**$0**	**$15,500**	**$0**	**$0**	**$0**	**$15,500**

Total All Departments	**$0**	**$272,950**	**$73,600**	**$10,000**	**$30,000**	**$386,550**

9.3 FINANCIAL RESOURCES

The Village's major revenues for the FY 14/15 General Fun are derived from ad valorem taxes and the Enterprise Fund from water and sewer fees. Ad valorem taxes constitute ~~71%~~ 69% of general fund revenues while water and sewer fees consisted of 98% of the enterprise fund revenues

The current assessed valuation of the Village is ~~152,478,935~~ 129,457 million dollars with the current millage rate for ~~7.0999~~ 7.5016 mills for operating purposes which includes Fire/Rescue Services. No additional millage has been levied for debt service. This millage rate is expected to generate ~~$1,082,585~~ $922,581, or about 46% of the General Fund revenues for the ~~2006-07~~ 2014-15 fiscal year.

Water and sewer fees generated ~~$1,369,000~~ $1,788,000 in revenue for the fiscal year ending September 30th, ~~2007~~ 2014to the enterprise fund.

9.3.1 Other Revenues

Fees, Licenses and Service Fees. Fees for occupational licenses, building permit fees, beverage licenses comprised roughly ~~11%~~ 12% of Village general fund income.

9.3.2 Intergovernmental Revenues

This category is primarily sales tax revenues transferred from the State as well as other State funding. This provides about 16% of the general fund revenue.

9.3.3 Franchise Tax

This category consists of predetermined percentages of utility billing from Florida Power & Light, Adelphia Cable and Southern Bell Telephone Company is included in "Other Revenues" listed above.

9.3.4 Transfers In

Service fees for services rendered to the enterprise fund by the general fund provided ~~about 14.5%~~ 1 4 % of general fund revenues ~~in 2007~~ 2014.

9.3.5 Miscellaneous Income

The other sources of income are derived from a variety of services, which includes interest income and charges from other local funding sources. This equals 3% of the general revenue and 2% of the enterprise fund.

9.3.6 Historic and Projected Revenues

~~A historical listing of general fund and enterprise fund revenues available to the Village for the past five years is provided in Table 9-3. As illustrated in this Table, yearly growth in revenues has been consistent in most categories. Total revenues in the general fund have increased forty-three percent (43%) in the five (5) year period. Based on the five year averages, the Table also indicates that the relative contribution of each revenue source has also remained fairly constant over the five (5) year period~~. Overall, the FY 2014/15 General Fund revenue projection, including all sources, is $1,350,000; 3% more than adopted FY 2013/14 budget. The total revenue projection is actually less than the $1,452,290 for FY 2007/08 reported in the last water supply plan update. Expenditures have been projected at $1,350,000 reflecting a balanced budget; or, a decrease of 27% from the FY 2013/14 expenditures.

The Utility Fund revenue projection for FY 2014/15 assumes a modest increase of 2.4% from FY 2013/14 for a total of $1,865,000. The total revenue projection represents a modest increase from the $1,838,500 for FY 2007/08 reported in the water supply plan update. Expenditures are projected at $2,628,000 for FY 2014/15 reflecting a 6.3% increase from FY 2013/14. This increase is due to an aggressive Capital Improvement Program that will ultimately require the Village to borrow additional funding to complete needed improvements to the Village infrastructure.

~~TABLE 9-3~~

~~HISTORIC AND PROJECTED REVENUES~~

~~A. General Fund - Historic Revenue~~

FY	Ad Valorem Taxes	% of Total	Transfers In	% of Total (approx)	Licenses & Permits	% of Total (approx)	Other Income (interest etc.)	%	Total General
2006-07	1,028,470	71	25,000	2	159,751	11	232,366	16	1,452,290
2005-06	853,307	68	25,000	2	159,536	13	212,875	17	1,252,207
2004-05	846,911	70	25,000	2	164,486	13	189,792	15	1,265,284
2003-04	640,267	66	25,000	2	135,995	14	174,671	18	970,396
2002-03	570,118	65	25,000	2	132,163	15	158,595	18	881,087
2001-02	454,654	55	25,000	2	191,317	23	166,362	20	831,814

B. Enterprise

FY	Service Charges	% of Total	Interest	% Approximate	Total
2006-07	1,801,730 1,369,006	98	38,770 33,700	2	1,838,500
2005-06	1,352,241	99	14,900	1	1,365,900
2004-05	1,337,304	99	2,020	1	1,350,813
2003-04	1,368,452	98	20,360	2	1,396,380
2002-03	1,417,666	99	3,128	1	1,431,986
2001-02	1,256,198	99	3,521	1	1,269,212

9.4 FUTURE REVENUE PROJECTION

Future revenue projection is based on an analysis of historical average annual growth trends for total Village of Golf revenues. The average increase of total revenues between 2001 and 2006 2014 was only approximately thirty-one (31%) three (3%) for the enterprise fund and approximately forty-three percent (43%) thirty-one percent (31%) for the general fund. Due to recent State legislative actions and economic conditions the former trend may not continue.

In addition to local actions, policy changes of the State or Federal or County Government could affect revenue sharing funds available to the Village of Golf. However, the future revenues should meet future expenses for the five year planning horizon. During the years 2001-2006 the interest varied only from 1% to 2%.

9.5 BONDING CAPACITY/RE-FINANCING

During the ten (10) year planning period, there may a need to address the bonding, or other financial means, of needed infrastructure. The Five (5) Year Capital Improvements Program does not presently reflect that need. In 2012, the Village executed a Loan Agreement with a private bank via a Note in the amount of $1,845,000 to refund its obligations to the Florida Municipal Loan Council (FLMC), in the same amount, which were used to finance capital improvements. there appears to be no requirement for any bond issues in the general or enterprise funds. The Village's general obligation bonds issued in 1974 have been paid off and the Village issued utility revenue bonds in 2002 which enabled it to complete extensive renovations to its utility including a new nano filtration membrane treatment plant. These bonds are more fully described below:

A. Long Term Debt – Enterprise Fund

Long term debt at September 30, 2004 comprises the following: 2002 Revenue Bonds, in the amount of $2,183,457 bearing interest rates ranging from 3.25% to 5.13% due semi-annually; principal installments of $35,000 to $140,000 due annually through May 1, 2032. Bonds are collateralized by non-ad valorem taxes and water and sewer services revenues.

9.6 LEVEL OF SERVICE STANDARDS

The minimum criteria for comprehensive plans requires that Level of Service Standards be included for public facilities described in the plan. The Level of Service Standards for the Village of Golf are in the goals, objectives and policies of this element.

9.7 CAPITAL IMPROVEMENTS IMPLEMENTATION

The Capital Improvements identified in Table 9-2A are proposed for implementation within the next five (5) years. These improvements are being funded within the anticipated revenues available to the Village. No new funding mechanisms are required by the Village of Golf. For this reason, the Capital Improvement listing is fiscally sound.

9.8 GOALS, OBJECTIVES AND POLICIES

Goal: 1.0.0 The Village shall ensure that public facilities and services are provided, on a fair-share cost basis, in a manner which maximizes the use of existing facilities and promotes orderly growth.

Objective: 1.1.0 The Village Manager shall use the Capital Improvements Element to schedule construction and identify funding sources for the Village's capital facility needs in order to accommodate existing and future development, and to replace obsolete or worn out facilities.

Policies: 1.1.1 When reviewing proposed capital improvements expenditures, the following criteria shall be used to rank and evaluate according to appropriate policies adopted in other elements of the comprehensive plan:

a. The improvement is consistent with the appropriate applicable element of the comprehensive plan in addition to the Capital Improvements Element;

b. If elimination of public hazards are addressed;

c. Deficiencies in the current system are addressed;

d. The impact on the local budget is assessed;

e. Locational standards are addressed including compatibility with surrounding land uses;

f. Whether the improvement is intended to accommodate new development or redevelopment;

g. The financial feasibility of the proposed improvement; and

h. Consistency with State and Regional policies.

1.1.2 The Village shall identify its needs for public facility improvements, the revenues required for project funding, and shall itemize the costs for such projects in its 5 year schedule of Capital Improvements.

1.1.3 In setting priorities, the following criteria will be used

- Security implications,
- Level of service or capacity problems,
- Ability to finance, and

- o New development as either a cause or a result.

1.1.4 Continue to pursue a prudent borrowing policy when deemed appropriate.

1.1.5 Commercial development shall be coordinated with provision of concurrent infrastructure (sanitary sewer, solid waste, drainage, potable water etc.) in order to ensure that the levels of service established by the Village of Golf are met.

Objective: 1.2.0 Village officials shall coordinate Land Use decisions with the schedule of Capital Improvements in a manner that maintains the adopted level of service standards and meets existing and future needs.

Policies: 1.2.1 The adopted level of service shall be 350 **(?)**gallons per equivalent residential connection (ERC) per day average daily flow for both potable water and wastewater service.

1.2.2 The Village of Golf's level of service is based on the return period, or frequency of a storm and its duration. The Village of Golf's level of service is to remain consistent with the South Florida Water Management District standards and requires that floor levels be above the 100 year flood plan. Grade level of 18" above the crown of the road is required as part of the Village process.

1.2.3 The Village of Golf shall adopt the level of service (LOS) standards that are utilized in Table 7-1, Table 703, Table 7-4 and Table 7-5.

1.2.4 Require Level of Service "C' for average daily traffic conditions and Level of Service "D" for peak season peak hour traffic conditions in order to maintain acceptable level of service for the consistent, safe, and efficient movement of traffic on the regional roadway network in the Village of Golf, including Golf Road and Woolbright Road. Military Trail is not within the Village of Golf limits.

1.2.5 Future zoning code revisions shall include provisions that assure compliance with level of service standards concurrent with development.

1.2.6 Adopt the maximum level of service standard for Solid Waste of 7 pounds per capita per day.

Objective: 1.3.0 In order to maintain adopted levels of service standards, future development projects shall pay their fair share of the costs of necessary public facility improvements they generate equivalent to the benefits they receive from the improvements.

Policies: 1.3.1 The building permit review process shall continue to require on-site detention and retention.

1.3.2 The Village of Golf shall apply for and secure grants or private funds when available to finance the provision of Capital Improvements.

Objective: 1.4.0 The Village of Golf shall continue to ensure the provision of needed public facilities within the Village limits, based on adopted level of service standards as set forth in the Comprehensive Plan. Public facilities needs shall be determined on the basis of previously issued development orders as well as the Village's budgeting process and its joint activities with Palm Beach County for planning, zoning and concurrency management.

Policies: 1.4.1 A 5 year Capital Improvements program and annual capital budget shall be adopted as part of the Village of Golf's annual budgeting process. This program shall include the annual review, and revision as needed, of the 5 year schedule of Capital Improvements.

1.4.2 The following criteria shall be applied during the preparation of each annual budget for the Village of Golf.

a. The determination of overall revenue bonds as a percent of total debt;

b. The maximum debt does not exceed total revenue; and

c. The maximum ratio of outstanding capital indebtedness does not exceed the property taxes collected by the Village of Golf.

Objective 1.6.0 Develop a financially feasible water supply facilities work plan that recognizes land uses within the area.

Policies 1.6.1 Prioritize the replacement of facilities, correction of existing water supply and facility deficiencies and the provision of future water supply and facility needs.

1.6.2 Identify possible revenue sources to fund water supply and facility projects.

9.9 MONITORING AND EVALUATION

Should the Village, at some time in the future, determine that an expanded capital improvement program process is necessary, the following procedure on the subsequent pages is recommended as a format guide for the preparation of such process.