

CHAPTER FOUR

PUBLIC FACILITIES ELEMENT

PURPOSE

The purpose of this element is to provide for necessary public facilities and services correlated to the future land use projections. The Town of Malabar sold its Water Utility to Palm Bay in 2012 with conditions that Malabar customers would be billed no differently than Palm Bay customers; Palm Bay Utility Department (PBUD) would be permitted to operate within all existing Malabar rights-of-way and utility easements; and would pay to Malabar a Franchise fee of 6% for the right to operate within Malabar. PBUD is the provider for sanitary sewer and potable water services. Most Malabar residences use potable water wells and septic systems. The Town does maintain the drainage system except for the Melbourne-Tillman Canal and provides solid waste pick up under contract. The following shows the providers of these services.

TABLE 4-1: TOWN OF MALABAR SERVICE PROVIDERS

Sanitary Sewer	Palm Bay Utilities Department
Solid Waste	Brevard County Solid Waste Management Department Waste Management Inc.(household trash, yard pick up)
Drainage	Town of Malabar Public Works Melbourne-Tillman Drainage District St Johns River Water Management District (SJRWMD)
Potable Water	Palm Bay Utilities Department
Ground Water Aquifer Recharge	Town of Malabar Public Works St Johns River Water Management District (SJRWMD)

Source: Town of Malabar, July 2018

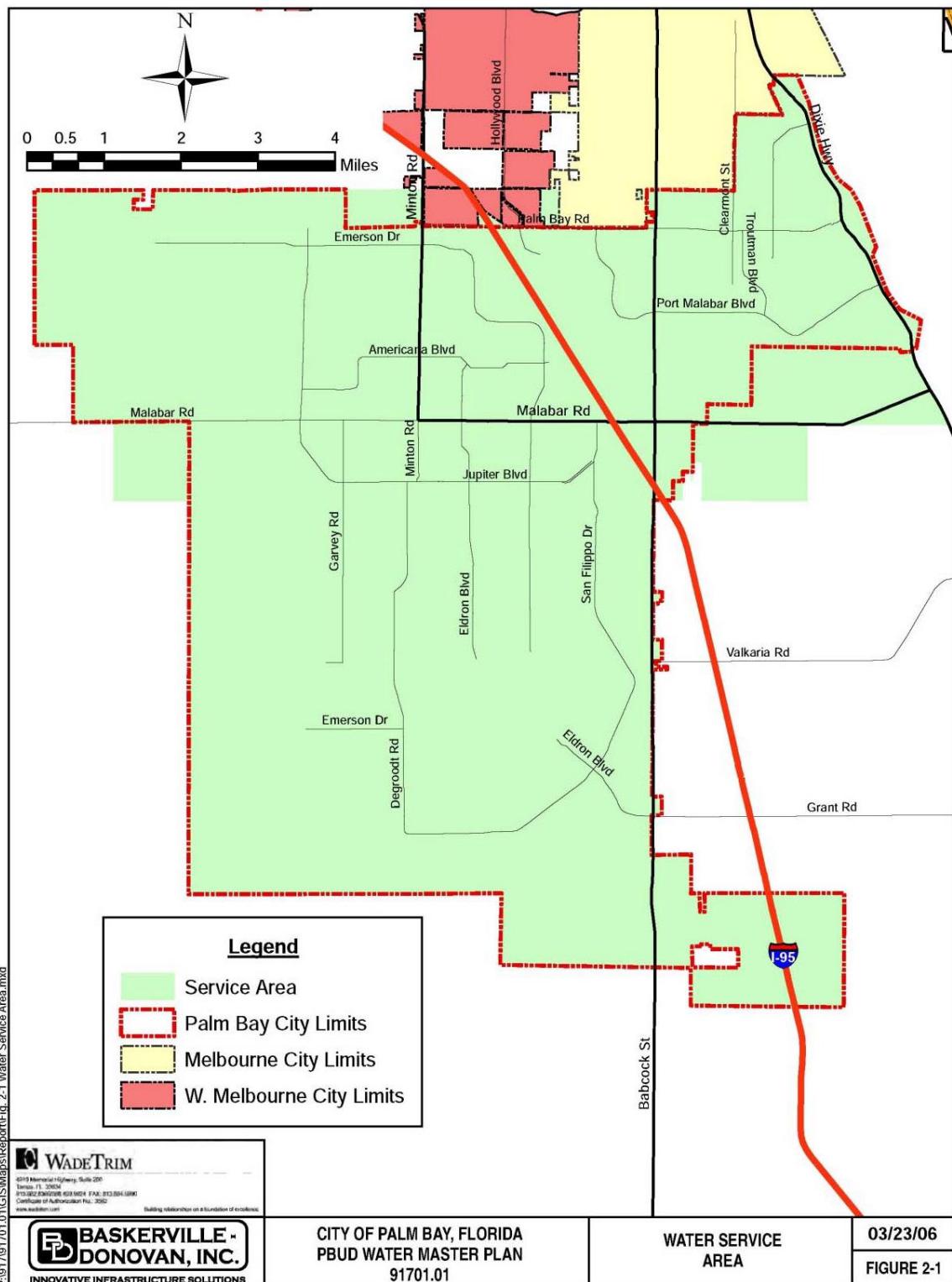
This report is organized to provide analysis information about each area of service. The element conclusion contains the goals, objectives and policies for all the utilities services.

EXISTING CONDITIONS AND DATA

Sanitary Sewer Analysis

Sanitary sewer facilities are defined in §9J-5.003(82), F.A.C., as: "structures or systems designed for the collection, transmission, treatment, or disposal of sewage and includes trunk mains, interceptors, treatment plants and disposal systems." The Florida Department of Health, through Brevard County Environment Services Department maintains administrative control over permitting of septic tanks and package treatment plants. The Department monitors these systems for compliance with quality control standards of the Florida Department of Environmental Protection (FDEP).

FIGURE 1: PALM BAY UTILITY DEPARTMENT SANITARY SEWER SERVICE AREA



Geographic Service Area

The Town of Malabar provides sewage collection for approximately 13% of residents within the Town limits. See Figure 1 for the service area boundary. Areas not served by sewage collection are served by private lift stations or by package treatment plants.

Types of Land Uses Served

As shown in the Future Land Use Element, forty-eight percent (48%) of the land area in the Town of Malabar is designated for residential development (3067.68 land acres). Commercial uses comprise six percent (6%) of the Town (409.22 acres) and light Industrial use designations make up one percent (1%) of the land area within Malabar (53.26 acres). Vacant/undeveloped Conservation lands, rights-of-way, Institutional lands, and park lands undesignated make up the remaining land uses in the Town (33% or 2135.77 acres). Table 1-1 of the Future Land Use Element provides the general land uses, by acreage, for the Town of Malabar.

Capacity, Demand and Level of Service

The Town of Malabar sold the transmission lines to Palm Bay Utility Department (PBUD) for the portion of the Town where sewage collection is provided. PBUD operates the Troutman Waste Water Treatment Plant (WWTP), a 4.0 Million Gallon per Day (MGD) plant located on the east side of Troutman Boulevard and the Troutman Water Reclamation Facility (WRF), a 1.2 MGD plant on the west side of Troutman Boulevard. The discharge of treated wastewater from the WWTP is accomplished by a 3000-foot Deep Injection Well (DIW). The DIW has a permit to discharge 5.0 MGD, and a design capacity of 10.0 MGD. The PBUD is designing a 2.0 MGD WRF to be sited at update the South Regional Utilities Campus. This is sufficient to serve the PBUD service area in excess of the 10-year planning period. The discharge of treated wastewater from the WRF is accomplished by a non-restricted public access reuse system that supplies irrigation for several locations and cooling water to the Harris Corporation and Intersil Corporation. The Palm Bay Utility Corporation has projected the following flows based upon population projections. There flows account for the entire Palm Bay service area, including the Town of Malabar. Based upon the projected flow, the PBUD has sufficient capacity for the growth projected within their service area through the year 2018 update.

TABLE 4-2: FLOWS BASED ON POPULATION PROJECTIONS

Year	Total Average Daily Flow (MGD)	Existing and Planned Treatment Capacity (MGD)
2008	3.71	5.20
2009	3.85	5.20
2010	4.00	7.00
2011	4.14	7.00
2012	4.29	7.00

2013	4.43	7.00
2014	4.89	7.00
2014	5.35	7.00
2016	5.82	7.00
2017	6.28	7.00
2018	6.74	7.00
2019	7.42	7.00
2020	8.11	7.00
2021	8.79	7.00
2022	9.48	7.00
2023	10.16	7.00
2024	10.84	7.00
2025	11.53	7.00
2026	12.21	7.00
2027	12.90	7.00
2028	13.58	7.00

Source: Palm Bay Utilities Department

Package Treatment Plants

Four private wastewater package treatment plants service three mobile home parks and the Harris Corporation. The permitted capacity of the treatment plants are as follows:

TABLE 4-3: PERMITTED CAPACITY OF TREATMENT PLANTS

<u>Package Treatment Plant</u>	<u>Permitted Capacity</u>
Harris Corporation	35,000 GPD
Enchanted Lakes Mobile Home Park	10,000 GPD
Camelot Mobile Home Park	20,000 GPD
Southern Comfort Mobile Home Park	15,000 GPD

Wastewater treatment methods utilized by each plant are as follows:

TABLE 4-4: WASTEWATER TREATMENT METHODS

<u>Package Treatment Plant</u>	<u>Treatment Method</u>
Harris Corporation	Attached Growth Biological Contractor with two percolation ponds
Enchanted Lakes	Extended Aeration
Camelot	Extended Aeration
Southern Comfort	Extended Aeration

According to the Florida Department of Environmental Protection, the plants have had no detrimental impacts on the environment.

Septic Tanks

The remaining developments within the Town are served by private septic tanks and waste disposal drain fields. Septic tanks are regulated by the Florida Department of Environmental Protection (FDEP) and the Florida Department of Health, Brevard County.

Solid Waste Analysis

Solid waste is defined in §9J-5.002(88), F.A.C., as: “sludge from a waste treatment works, water supply treatment plan, or air pollution control facility or garbage, rubbish, refuse, or other discarded material, including solid, liquid, semi-solid, or containing gaseous material resulting from domestic, industrial, commercial, mining, agricultural, or governmental operations.”

Solid waste facilities are defined in §9J-5.002(89), F.A.C., as “structures or systems designed for the collection, processing or disposal of solid wastes, including hazardous wastes, and includes transfer stations, processing plants, recycling plants, and disposal systems.”

Solid waste collection is provided to the Town under contract with Waste Management Inc. Hazardous wastes are discussed in the Conservation Element. The Town coordinates with Brevard County on solid waste issues, including landfill issues herein discussed. The DEP enforces State standards governing environmental and public health and water quality control standards.

Geographic Service Area/Types of Land Uses Served

Solid waste handling and disposal is provided by Waste Management Inc. for the entire Town.

Design Capacity of the Facility

Solid waste handling and disposal is performed by the Solid Waste Department of Brevard County. The County owns and operates the Central Disposal Facility, Sarno Transfer Station and Landfill, Mockingbird Mulching Facility and the Titusville Transfer Station. The Central Disposal Facility has permitted capacity for nearly 10 years. There is an additional 16 years of capacity in the southern expansion area. The Central Disposal Facility is used for Class I and Class III materials. The County is investigating extending the useful life of the Sarno Road Landfill. The County is currently obtaining the required permits to construct a new solid waste facility on County owned property on US-192.

Current and Future Demand and Level of Service

The Level of Service for solid waste collection is 6.85 Pounds per Capita per Day (PCD). The transfer station serving the Town will be able to maintain this LOS for the duration of the 10-year planning period. The following table illustrates the approximate solid waste

volume generated by the Town, based on the population projections and the anticipated level of service.

TABLE 4-5: TOWN OF MALABAR SOLID WASTE VOLUME

Year	Population	Solid Waste Generation (Lbs. per day)
2005	2,842	19,468
2010	3,142	21,523
2015	3,426	23,468
2020	2,933	25,256
2025	2,992	26,886
2030	3051	28,393

Source: Calvin, Giordano & Associates Inc.

Impact on Adjacent Natural Resources

No solid waste facilities such as transfer stations or landfills are located within the Town's corporate limits. Therefore, the Town experiences none of the potential adverse environmental impacts which these facilities frequently generate on natural resources.

Drainage Analysis

Drainage facilities are defined in §9J-5.003(24), F.A.C., as "as system of man-made structures designed to collect, convey, hold, divert or discharge stormwater, and includes stormwater sewers, canals, detention structures, and retention structures."

Drainage within the Town of Malabar is provided by a system of swales, ditches, inlets and pipes that convey runoff into the Indian River Lagoon and Turkey Creek. The Town has been divided into three large drainage basins called Turkey Creek Basin, Goat Creek Basin and the Indian River Lagoon. Turkey Creek Basin is further divided into 9 sub-basins; Goat Creek Basin has 5 sub-basins and the Indian River Lagoon has 2 sub-basins in the Town.

The Town of Malabar signed an inter-local agreement with Brevard County to join the Brevard County Stormwater Utility Program in 2000. Funding for the stormwater program is collected on tax bills via the non-ad-valorem process and has averaged around \$50,000 annually since 2000. The Town increased the fee in 2017 to \$52 per ERU and will increase it to \$64 per ERU in 2020 to fund the Utility. The Town contracts with the County to administer the Utility, perform annual inspections for credits and submit the information to the County Tax Office for billing. Stormwater projects are discussed or proposed by the Town. Through this program, the County acts as the stormwater administrator for the Town, ensuring that the procedures and policies enacted in the Town are consistent with that of the County. This partnership has proven to be a more efficient and cost-effective approach to stormwater management.

The Town Council has paid civil engineering persons to produce projects that would result in the most beneficial impact for the dollar. Malabar Council then held workshops and prioritized these projects, assigned estimated costs and has included them in their annual budgets and Capital Improvement Plans since 2014. As the stormwater assessment fees accrue, projects are scheduled.

Types of Land Uses Served

Land use within the Town of Malabar is primarily comprised of low density rural residential development.

Design Capacity and Level of Service

The Town's stormwater management and flood protection ordinance was updated in 2014 to comply with FEMA and the Flood Plain Management regulations set forth in 44 C.F.R. part 60 and the flood-resistant construction requirements in the Florida Building Code. These are explained in the Coastal Management Element but will reduce the flood risk and associated losses due to flooding. It requires a minimum on-site stormwater management system based on a 10-year frequency, 24-hour duration storm event. Off-site stormwater management system improvements must be based on a 25-year frequency, 24-hour duration storm event. The Town requires retention or detention with filtration of the run-off from the first one (1) inch of rainfall. The on-site retention or detention must be designed so that the additional stormwater generated by development will not exceed the peak pre-development run-off rate generated by the site prior to the proposed development unless there is a legal positive outfall available which has sufficient capacity to accommodate the additional run-off.

The National Flood Insurance Program administered by the Federal Emergency Management Agency (FEMA) has identified the following flood zones within the Town:

TABLE 4-6: FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD ZONES

Zone	Description
A	An area inundated by 1% annual chance flooding, for which no base flood elevations (BFE's) have been determined.
AE	An area inundated by 1% annual chance of flooding, for which BFEs have been determined.
X	Areas determined to be outside the 500-year floodplain, determined to be outside the 1% and 0.02% annual chance floodplains. Areas of minimal flood hazard from the principal source of flood in the area.
X500	Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood. An area inundated by 0.2% annual chance of flooding.

Source: Federal Emergency Management Agency (FEMA)

Map FLU-4 *FEMA Flood Zones*, locates the flood zones within the Town. Nearly the entire Town is classified as zone X, which is defined as areas determined to be outside the 500-year floodplain and determined to be outside the 1% and 0.2% annual chance floodplains. This is an area of minimal flood hazard from the principal source of flooding in the area. Existing land uses found within the floodplain are illustrated in the Future Land Use Element.

Impact on Adjacent Natural Resources

The stormwater flowing from the Town northward into Turkey Creek enters Turkey Creek tributaries north of the Town limits. Prior to entering Turkey Creek, the run-off from the Town merges with run-off from the extensive Melbourne-Tillman Water Control District system.

Furthermore, tests of water quality within Turkey Creek cannot provide valid indicators of water quality within the run-off volumes generated by the Melbourne-Tillman Water Control District, as volumes generated by drainage ways within the Town include run-off from the Interstate Highway I-95, Highway 1, State Road 514 (Malabar Road) and both the Town of Malabar and City of Palm Bay.

The Town's drainage system includes two outfalls into the Indian River Lagoon. These outfalls are located approximately one-quarter (1/4) mile south of Malabar Road and near the junction of U.S. 1 and Rocky Point Road, respectively. Florida Department of Environmental Protection (FDEP) and Brevard County have no data available regarding potential point source pollutants generated by these outfalls. However, the Town maintains a Coastal Preservation zone which limits development east along a large portion of Indian River Lagoon frontage.

Potable Water

Potable water facilities are defined in §9J-5.003(67), F.A.C., as "a system of structures designed to collect, treat, or distribute potable water, and includes water wells, treatment plants, reservoirs and distribution mains."

The Town of Malabar's potable water is primarily derived from on-site shallow wells, which withdraw water from the surficial aquifer. The private wells within the Town are owned by individual homeowners and may require some treatment within the household to remove sulphur and salts. The Harris Government Systems development operates and maintains a private water treatment plant. The three mobile home parks within the Town also maintain private water treatment facilities. The characteristics of these facilities are herein discussed.

Geographic Service Area

Approximately 20% of the population is served by public water supply mains. See Figure 2 for the service area boundary. Areas not served by water distribution are served by private wells or by package treatment plants.

Types of Land Uses Served

As shown in the Future Land Use Element, twenty six percent (26%) of the land area in the Town of Malabar is made up of residential development. Commercial uses comprise less than three percent (3%) of the Town and light industrial use make up less than one percent (1%) of the land area within Malabar. Vacant/undeveloped lands, right-of-ways and park lands make up the remaining land uses in the Town. Table 1-1 of the Future Land Use Element provides the general land uses, by acreage, for the Town of Malabar.

Capacity, Demand and Level of Service

The Town's Public Works Department owns and maintains a water distribution system that purchases its water from the PBUD under a thirty-year contract signed May 5, 1993. PBUD operates the Troutman Water Treatment Facility and the South Regional Water Treatment Facility. The Troutman Water Treatment Facility has both a Lime Softening (LS) Water Treatment Plant (WTP) and a Reverse Osmosis (RO) WTP. The LS WTP withdraws water from 35 Surficial Aquifer wells and one Floridan Aquifer well that is used for blending during peak demand.

The permitted withdrawal rates for this plant are 4.7 MGD declining 0.1 MGD per year until 2021, when the withdrawal rate will be 3.4 MGD for the Surficial Aquifer wells and 0.72 MGD for the Floridan Well. The RO WTP has 3 Floridan Aquifer wells permitted to withdraw 2.61 MGD. The current capacity of the TO WTP is 1.5 MGD with the ability to expand to 3 MGD. The South Regional Water Treatment Facility is an RO facility with five Floridan Aquifer wells with a permitted withdrawal of 5.09 MGD in 2007 expanding to 10.49 MGD in 2021. There is sufficient capacity for the 10-year planning period. There are also seven private water treatment plants located within the Town. The level of service provided by the PBUD is 75 GCD for residential property and 7,500 GCD for commercial and industrial property.

Although the Town of Malabar falls within the jurisdiction of the St Johns River Water Management District, they have been exempted from the requirement to develop a 10-year Water Facilities Supply Plan because the Town lies outside the "Priority Resource Cation Area."

Private Water Treatment Plants

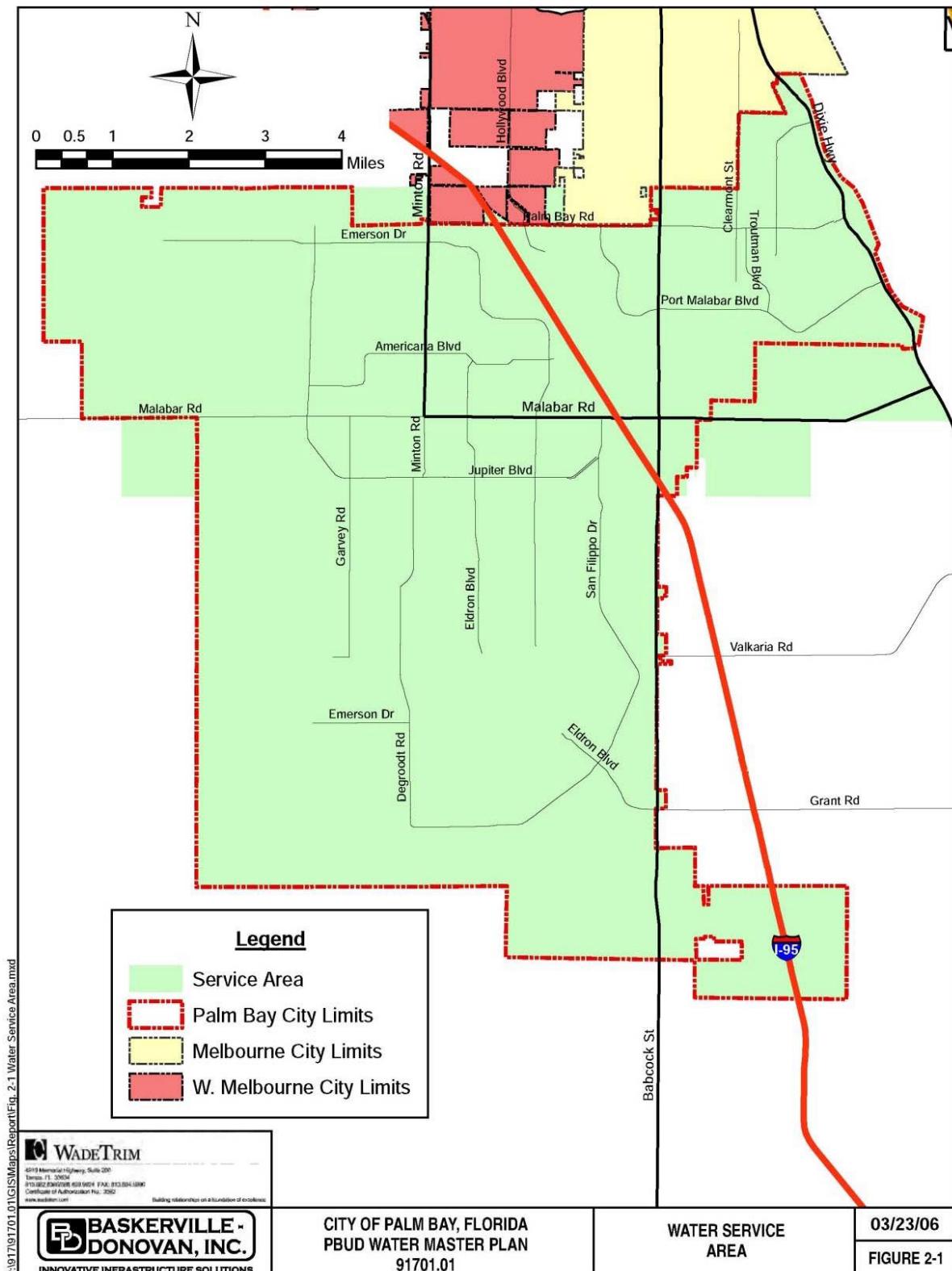
The designed capacity and estimated flow of the seven private potable water treatment plants are shown below:

TABLE 4-7: POTABLE WATER TREATMENT PLANTS DESIGNED CAPACITY AND ESTIMATED FLOW

<u>Private Water Treatment Plant</u>	<u>Designed Capacity</u>	<u>Estimated Current Flow</u>
Bayside Discovery Center	28,000 GPD	230 GPD
Harris Corporation	128,000 GPD	22,000 GPD
Enchanted Lakes Mobile Home Park	86,000 GPD	14,200 GPD
Camelot Mobile Home Park	37,440 GPD	10,500 GPD
Southern Comfort Mobile Home Park	57,000 GPD	12,500 GPD
Data Management Associates	12,000 GPD	1,250 GPD

Source: FDEP

FIGURE 2: PALM BAY UTILITIES DEPARTMENT POTABLE WATER SERVICE AREA



All the private water treatment plants employ chlorination methods in the purification of water drawn from the surficial aquifer. According to permit records maintained by the Florida Department of Environmental Protection, all plants are currently in compliance with State regulations.

No abnormal impacts are presently caused by any of these facilities. Although each facility draws water from the surficial aquifer, no detrimental impacts to groundwater levels or quality have been identified.

Each facility will adequately serve the residents or industry during the next five-year and ten-year planning period. As shown in the above table, all facilities have sufficient remaining capacity to handle any additional water demands created during this period.

Private Wells

The remaining developments within the Town are served by private wells.

Impact on Adjacent Natural Resources

No comprehensive data is available to quantify the cumulative impacts of private wells. As development pressures mount, and the Town approaches the future land use and population projections identified in the land use analysis, the Town should investigate potential area wide problems of groundwater depletion and the possible degradation of water quality caused by the proliferation of private wells.

Natural Groundwater Aquifer Recharge Areas

No areas within the Town have been adopted by the St Johns River Water Management District as prime groundwater recharge areas for the Floridan aquifer. The Floridan aquifer is recharged in eastern Osceola County and very little down migration of water is possible due to two factors: 1) a confining layer of silt and clay and various other materials separates the surficial and deep (Floridan) aquifer; and 2) the potentiometric surface of the aquifer is approximately +30 feet NGVD (National Geodetic Vertical Datum); this upward pressure will not permit recharge except under extremely high head conditions. There are no deep aquifer recharge areas within the Town of Malabar.

The top of the surficial aquifer within Malabar is generally located between five (5) and ten (10) feet below the ground surface but may be much closer to the ground surface depending upon the amount of rainfall which is present. The rainfall in the area recharges the surficial aquifer, and as such, the water table depth fluctuates with the amount and intensity of the rainfall.

Existing Natural Drainage and Recharge Area Regulations and Programs

The Town's adopted regulations in the Flood Prevention Code, General Provisions, Subdivisions, Required Improvements, Site Plan, Surface Water Management and Concurrency Management Articles in the Land Development Regulations that provide for

maintaining and preserving groundwater recharge areas. The purpose and intent of the zoning regulations, stormwater management and subdivision ordinances are briefly described herein.

Zoning Regulations

These regulations define the type of development that may occur on a given site, and further determine the maximum lot coverage.

Stormwater Management and Flood Protection Ordinance

This ordinance requires on-site stormwater management planning that, in part, will enhance groundwater recharge. In recharge areas, developers must limit run-off from the proposed site to the greatest extent practical. Requirements for stormwater retention include facilities which have the capacity to retain the first inch of run-off from the site. Requirements that provide for the maintenance of existing watercourses, so that the flood carrying capacity is not diminished, are also included. Further requirements as described in Florida Statutes 163.3177.

Subdivision Ordinance

The Ordinance establishes standards of subdivision design which encourage and lead to the development of sound and economically stable communities, and the creation of healthful living environments. In addition, provision which place the cost for needed improvements on the developer are included so the Town will not have to bear the costs of supplying services to poorly planned subdivisions.

The Town's zoning regulations, stormwater management and flood protection and subdivision ordinances accomplish an adequate degree of protection for natural drainage and recharge areas. Malabar's existing land use has generally developed in a manner favorable to natural groundwater recharge and natural flood protection.

PUBLIC FACILITIES ELEMENT GOAL, OBJECTIVES, AND POLICIES

Goal 4-1:

Insure availability of needed public facilities in a manner which protects investments in existing facilities and promotes orderly, compact growth.

4-1.1 Objective:

Insure Available Public Capacity. The Town shall adopt procedures to ensure that at the time a development permit is issued, adequate facility capacity is available or will be available when needed to serve the development.

4-1.1.1 Policy:

Level of Service Standards. The following level of service standards are hereby adopted and shall be used as the basis for determining the availability of facility capacity and the demand generated by a development.

Sanitary Sewers:

300 gallons per day per dwelling unit;
150 gallons per day per mobile home unit;
1089 gallons per day per acre for commercial/light industrial

Solid Waste:

6.85 pounds per capita per day

Drainage:

Off-Site: 25-year, 24-hour design storm
Off-Site: 10-year, 24-hour design storm

Potable Water:

Residential – 100 gallons per capita per day;
Commercial/Industrial – 7,500 gallons per day per gross acre.

To ensure that these levels of service standards are maintained, methodologies for determining available capacity and demand shall incorporate appropriate peak demand, co-efficient for each facility and for the type of development proposed.

4-1.1.2 Policy:

Compliance with Level of Service Standards. All improvements for replacement, expansion or increase in capacity of facilities shall be compatible with the adopted level of service standards for the facilities. Issuance of development orders or permits shall be conditioned upon demonstration of compliance with applicable federal, state, and local permit requirements for Potable Water Supply.

4-1.1.3 Policy:

Demand and Supply Information System. The Town shall develop procedures for updating facility demand and capacity information and shall prepare annual summaries of capacity and demand information for respective facilities and/or service areas.

4-1.1.4 Policy:

Coordination Between Future Land Use and Potable Water/Wastewater System needs. The Town shall adopt land development regulations which insure that incremental decisions by the Town concerning potable water and wastewater system needs, plans and the location and timing of improvements shall be consistent with land use and conservation resource management policies stipulated in the Comprehensive Plan.

4-1.1.5 Policy:

Planning for Potable Water and Wastewater Systems. The Town shall coordinate with Brevard County and the City of Palm Bay in order to establish the potential for preparing and implementing an areawide management plan for achieving cost effective areawide potable water and wastewater systems.

4-1.1.6 Policy:

Stormwater Management for new development. All new development shall be required to construct entire stormwater management improvements on site.

4-1.2 Objective:

Maintaining a Schedule of Public Facility Capital Improvement Needs. The Town shall develop and maintain a five-year schedule of capital improvement needs for public facilities and shall annually update the schedule as stipulated in the Capital Improvements Element.

4-1.2.1 Policy:

Capital Improvement Schedule. The Town Council, after considering the recommendations of the Planning and Zoning Board, shall annually evaluate and rank capital improvement projects proposed for inclusion in the five-year schedule of capital improvement needs.

4-1.2.2 Policy:

Public Facility Evaluation Criteria. Proposed capital improvement projects shall be evaluated and ranked according to the following priority level guidelines.

- a. “Level 1”: Whether the project is needed to:
 - Protect public health and safety.
 - Fulfill the Town’s legal commitment to provide facilities and services
 - Preserve or achieve full use of existing facilities.
- b. “Level 2”: Whether the project accomplishes the following:
 - Increases efficiency of existing facilities.
 - Prevents or reduces future improvement costs.
 - Provides service to developed areas lacking full service or promotes in-fill development.
- c. “Level 3”: Whether the project:
 - Represents a logical extension of facilities and services in a manner consistent with future Land Use Element goals, objectives and policies, including the Future Land Use Map.

4-1.3 Objective:

Procedures and Standards for On-Site Wastewater Treatment Systems. The Town shall assist in assuring implementation of State regulations imposing mandated standards for inspections, operation, and maintenance of on-site wastewater treatment systems.

4-1.3.1 Policy:

Use of On-Site Wastewater Treatment Systems. Use of on-site wastewater treatment systems shall be limited to the following conditions:

- a. Existing septic tank and package treatment plants may remain in service until such time as centralized service is made available.
- b. Use of septic tank systems for new development shall be restricted to sites on which the Brevard County Environmental Services Unit

- renders a finding that the site and facility design is in compliance with State and local regulations governing the same.
- c. Use of package treatment plans shall comply with applicable laws governing the location, use, and design of the facility. Package treatment plants shall be designed in a manner which facilitates integration into an areawide or regional system in the future.

4-1.3.2 Policy:

Coordinate with the Brevard County Environmental Services Unit. The Town's land development regulations shall require that all proposed development which impacts an existing septic tank or generates need for a new septic tank be required to provide evidence of approval by the Brevard County Environmental Health Unit prior to receiving a development order or permit from the Town. Any such approval by the Town shall be conditioned upon the applicant's compliance with Brevard County requirement for ongoing facility maintenance and operation.

4-1.3.3 Policy:

Conditions Governing Development Orders or Permits. Issuance of development orders or permits shall be conditioned upon demonstration of compliance with applicable federal, State, and local permit requirements for on-site wastewater treatment systems.

4-1.3.4 Policy:

Compliance with On-Site Wastewater Treatment and Water Quality Regulations. The Town shall coordinate with appropriate federal, State, and County agencies and amend local ordinances to require that issuance of permits for replacement or expansion of existing on-site wastewater treatment systems is conditioned upon compliance with current regulatory requirements and water quality standards.

Goal 4-2:

The Town shall assure that existing deficiencies in public facilities are corrected by undertaking the following projects:

4-2.1 Objective:

Reconcile Existing Deficiencies, The Town shall assure that existing deficiencies in public facilities are corrected by undertaking the following projects:

- a. Wastewater System Projects. The Town shall coordinate with Brevard County and the City of Palm Bay in order to assess the potential for an areawide management plan for achieving a cost effective areawide wastewater

- system(s), including wastewater reuse through such programs as use of "graywater" for spray irrigation. No existing deficiencies have been identified.
- b. Solid Waste Projects. The Town shall coordinate with Brevard County's South County landfill site acquisition study efforts. In addition, the Town shall continue coordination and efforts to meet or exceed a thirty percent (30%) reduction in solid waste volumes by 2013.
 - c. Potable Water System Projects. The Town shall coordinate with Brevard County, the City of Palm Bay in order to assess the potential for an areawide management plan for achieving a cost-effective area-wide potable water system(s).

The Town shall work with appropriate County and State public agencies in order to initiate a periodic County or State monitoring program of groundwater. This program is desirable since the Town relies on private wells withdrawing from the shallow surficial aquifer, on septic tanks for sewage treatment and has areas of poorly drained soils. The monitoring program will check possible contamination from septic tank leakage.

Also, the Town shall work through the St. Johns River Water Management District to initiate a SJRWMD program or other appropriate areawide approach designed to analyze existing or potential future problems surrounding existing practices of withdrawing potable water resources. Any needed areawide improvements shall be investigated on an areawide basis.

- d. Drainage Projects: Prepare an engineered master plan for stormwater management and drainage facilities by 2013. The master plan shall incorporate the following:
 - Engineered analysis confirming the natural sub-drainage basins within the Town together with major tributaries within each sub-basin.
 - Identification of floodways, drainage corridors, and other features comprising the Town's natural and manmade drainage system.
 - Analysis and recommendations concerning needed land acquisition and/or identification of lands which should be specifically regulated in order to preserve floodways together with drainage corridors and achieve effective stormwater management

- Include a schedule of requisite improvement projects together with assigned priorities and costs.
- Recommended implementation program for funding, managing, and continually maintaining the stormwater management system. The implementation program should include a management framework for achieving equitable assessments required to implement the stormwater management program.
- Recommended land use restrictions, including changes to existing stormwater management and flood prevention regulations.

4-2.1.1 Policy:

Compliance with Capital Improvements Element. All major public facility projects shall be undertaken in accordance with the schedule provided in the Capital Improvements Element of this plan as may be hereinafter amended.

4-2.1.2 Policy:

Priority for Correcting Existing Deficiencies. In developing the annual schedule of capital improvement projects, the Town shall assign the highest priority to those projects required for purposes of correcting existing deficiencies.

4-2.1.3 Policy:

Existing Deficiencies Not to be Increased by New Development. The Town shall issue no development order for new development which would result in an increase in demand on deficient facilities prior to completion of improvements needed to bring the respective facility up to standard. The Town shall include an adequate facilities requirement as part of the updated Land Development Code. The adequate facilities ordinance shall mandate that future applications for development shall include a written evaluation of the impact of the anticipated development on the levels of services for the water and wastewater systems, solid waste system, drainage, recreation, and the traffic circulation system. Prior to issuing a building permit the Town shall (1) render a finding that the applicant has provided written assurance that the proposed development shall be served with each of the above cited facilities with a level of service at least equal to that level of service stipulated in Policy 4-1.1.1; and (2) consult with the Palm Bay Utilities Department and the Town's Utilities Department to determine if adequate water supplies will be available to serve the development by the anticipated

date of issuance of a certificate of occupancy or its functional equivalent. The developer's application shall include written assurances that any required improvements shall be in place concurrent with the impacts of the development (i.e., by the time a certificate of occupancy is granted by the Town).

4-2.1.4 Policy:

Coordinate with Brevard County Hazard Waste Planning Efforts. The Town shall help Brevard County as the County assesses and plans for hazardous Waste management in a manner consistent with the provisions of §403.7265, F.S.

4-2.2 Objective:

Meeting Projected Public Facility Demands to 2018. The Town shall meet projected public facility demands through the year 2018 by undertaking the following projects:

- a. Wastewater System Projects. The Town shall participate with the City of Palm Bay Utility Department in implementing and updating as necessary, their master wastewater system. This plan shall:
 - Identify an area-wide organizational framework for managing the area-wide system;
 - Describe and prioritize sub-area service boundaries;
 - Establish an engineering system of wastewater facility improvement needs; and
 - Estimate the cost of engineering and constructing the requisite area-wide system improvements.
- b. Solid Waste Projects. Coordinate with Brevard County to ensure capacity for the Town at the County owned and operated southern expansion area.
- c. Potable Water System. The Town shall coordinate with the Palm Bay Utility Department in the implementation of their master potable water system plan. This plan shall:
 - Identify an area-side organizational framework for managing the area-wide system;
 - Describe and prioritize sub-area service boundaries;
 - Establish an engineered system of potable water facility improvement needs; and
 - Estimate the cost of engineering and constructing the requisite area-wide system improvements.

4-2.2.1 Policy:

Coordinate with Capital Improvements Element. A public facility project shall be undertaken in accordance with the schedule provided in the Capital Improvements Element of this Plan.

4-2.2.2 Policy:

Public Facility Planning and Management Efficiency. In scheduling the location, timing and staging of public facility improvements, the Town Council shall use the following criteria:

- a. Minimize disruption of services;
- b. Prevent duplication of labor; and
- c. Maintain service levels for all respective facilities.

4-2.2.3 Policy:

Additions of Public Facility Project Approvals. All required federal, State, and County permits shall be obtained before the Town undertakes or authorizes contractors to undertake construction and/or operation of facilities.

4-2.2.4 Policy:

Maintain Maintenance Records. The Town shall keep an accurate and up to date log of maintenance records for improvements and repairs throughout their facilities.

4-2.3 Objective:

Meeting Projected Demands for the Year 2008 through the Year 2013. Specific improvement surrounding wastewater, potable water, and drainage systems for the year 2008 through the year 2013 shall be predicted on the master plans for the respective public facilities schedule for completion during the five-year increment: 2002-2007.

4-2.3.1 Policy:

Evaluate Needs for Existing Facility Improvements. The Town Council shall use the annual summaries of facility capacity and demand information to evaluate the needs for the timing and location of projects to extend or increase the capacity of existing or planned future facilities. As these studies and projects are completed, scheduling and prioritization of needed facilities will be incorporated into the annual Capital Improvements Program.

4-2.3.2 Policy:

Scheduling Needed Capital Improvements. The Town Council shall assure that projects required to meet projected demands for the years 2008 through 2013 shall be in the Capital Improvements Element of this plan in accordance with the requirement of §163.3177(3), F.S.

Goal 4-3:

Provide adequate stormwater drainage in order to protect against flood conditions and prevent degradation of quality of receiving waters.

4-3.1 Objective:

Protect Natural Drainage Features. The Town shall adhere to the stormwater drainage and flood prevention regulations as well as Comprehensive Plan level of service standards as needed in order to protect natural drainage features and insure that future development utilizes stormwater management systems compatible with the Town's master stormwater drainage plan which is scheduled for completion by 2013. The Town shall amend development regulations to incorporate the following considerations:

- a. Consistent with ECFRPC policy, the Town shall coordinate with the ECFRPC, FEDP, and the SJRWMD in identifying any urban drainage systems which are not compliant with Chapter 17.25, F.A.C. Where such non-compliant systems are found to contribute significantly to the degradation of surface waters, the Town shall coordinate with the FEDP, SJRWMD, and Brevard County in order to achieve a regional approach to improved drainage and retrofitting as may be appropriate;
- b. Existing stormwater engineering, design and construction standards for on-site systems should be evaluated and amended as needed;
- c. Specific standards for erosion and sediment controls to be used during development should be provided; and
- d. Periodic inspection of on-site systems should be required to assure continuance of system design and maintenance.

4-3.1.1 Policy

Buffer Zone Requirements. The Town shall develop buffer zone requirements for areas adjacent to natural drainage features. Such regulations may be required prior to the completion of the master drainage plan. If so, the buffer zone requirements shall reflect an interim standard recommended by the Town Engineer. The buffer zone requirement may be

superseded by regulations predicated on the findings of the master stormwater drainage plan.

4-3.1.2 Policy:

Managing Land Use in the Floodplain. The Town shall prepare and adopt necessary revisions to the Town's stormwater management and floodplain regulations based on the findings of the master stormwater drainage plan within one (1) year after adoption of the stormwater master plan. These regulations shall address necessary restrictions on encroachment, alteration, and compatible use of the floodplain and major drainage corridors.

4-3.1.3 Policy:

Implementing Master Drainage Plan. The Town shall establish a program and funding mechanisms necessary to implement the adopted master stormwater drainage plan, including, but not necessarily limited to:

- a. Plans for protecting natural drainage corridors and other natural drainage features, including acquiring necessary drainage easements;
- b. Funding mechanisms necessary for achieving drainage improvements within each sub-basin; and
- c. Special consideration of the impacts of existing and future land development adjacent to the Indian River Lagoon which is an "Outstanding Florida Water". The master drainage plan shall address the fact that state requirements mandate that the level of treatment for stormwater discharging directly into this water is fifty percent (50%) above normal FDER standards cited in 17-25.035(i)(I), F.A.C.
- d. Organizational structure and funding mechanisms for carrying out necessary operation and maintenance programs.

4-3.1.4 Policy:

Inspection and Maintenance of Drainage Systems. As part of the master stormwater drainage plan implementation program the Town shall insure that major drainage systems are inspected and receiving required maintenance on at least an annual basis.

4-3.1.5 Policy:

Project Funding. The Town shall seek funding for stormwater management projects through state and federal agencies such as TMDL grants through the FDEP.

4-3.1.6 Policy:

Low Impact Development. The Town shall investigate the feasibility of incorporating LID (low impact development) techniques into future development.

Goal 4-4:

The functions of natural groundwater aquifer recharge areas within the Town shall be protected and maintained.

4-4.1 Objective:

Coordinate Issues Surrounding Aquifer Recharge. The Town shall coordinate with Brevard County and the St Johns River Water Management District in providing for maintenance of aquifer recharge area functions.

4-4.1.1 Policy:

Protect Surficial Aquifer Recharge Areas. Although the Town has no prime deep aquifer recharge areas which have been identified by the St Johns River Water Management District, the Town has abundant surficial aquifer recharge areas. Requirements shall be incorporated into the Town's land development regulations which require retention of open space for all development in order to preserve the quality and quantity of water resources within the surficial aquifer.

4-4.1.2 Policy:

Deep Aquifer Water Conservation. In order to protect the quality and quantity of deep aquifer water resources, the Town shall coordinate with the St Johns River Water Management District and other applicable regulatory agencies in identifying free flowing deep aquifer wells and in requiring corrective measures, including capping, plugging, or installing regulatory devices which control the discharge of water from the deep aquifer.

4-4.1.3 Policy:

Retain Run-off to Maximize Recharge. The Town shall amend the stormwater management regulations in order to require retention of stormwater run-off to maximize groundwater recharge.

4-4.1.4 Policy:

Coordinate with Other Recharge Protection Programs, The Town will coordinate with local, State, and federal agencies to achieve regional aquifer recharge protection objectives.