



Infrastructure - Potable Water Sub-Element

GOAL: To provide sufficient volume of potable water at adequate pressure from the supply source to consumers for domestic use, irrigation, industrial, firefighting and sanitary purposes by providing facilities that consist of collection, storage, transmission, pumping, distribution and treatment works.

OBJECTIVE 1: Upon adoption of the “Water Facilities and Supply Plan” prepared by Barnes, Ferland and Associates, Inc. of 2006, updated 2007, ensure that when a development permit is issued, adequate facility capacity is available to serve the demands created by the development. Development orders are subject to the adopted concurrency management system (LOS). The City shall verify the availability of both public facility capacity and water supply capacity. Adequate water suppliers and potable water facilities shall be in place and available to serve new development no later than the issuance by the local government of a certificate of occupancy or its functional equivalent.

POLICY 1.1: A unit average daily flow (ADF) demand rate of 350 gallons per day per Equivalent Residential Connection (ERC) has been established as the level of service standard for the potable water system and shall be used as the basis for determining the availability of facility capacity and the demand generated by a development.

The potable water system fire protection level of service is established as providing a minimum of the domestic maximum daily flow (MDF) plus a required fire flow (RFF) of at least 500 gallons per minute (GPM) in existing single family residential areas, 1000 GPM in existing duplex residential areas, and a required fire flow (RFF) as established in accordance with Annex H, Fire Flow Requirements for Buildings, NFPA 1 as adopted in the Florida Fire Prevention Code which shall be modified periodically per Chapter 633, Florida Statutes, for all new residential subdivisions, multi-family dwellings, and commercial developments. The fire flow shall be measured at a minimum rate of 25 psi residual pressure.

When determined by the City that the adopted fire flow requirements cannot be met, the City shall have the authority to accept alternative methods as it deems appropriate.

POLICY 1.2: By December 2006, the City shall develop regulations, specifications and standards for water system construction to ensure that water systems to be owned, operated and maintained by the City are designed and constructed in accordance with minimum requirements of the City. Examples of minimum requirement criteria include fire flow capability, distribution system looping for reliability and hydraulic efficiency, and minimum system pressures under different flow conditions (i.e., peak hour) as well as current Federal and State regulatory standards which may apply.

POLICY 1.3: All improvements for replacement, expansion or increase in capacity shall be compatible with the adopted level of service standard for the water facilities.

POLICY 1.4: Provision of water service shall be consistent with the future land use growth policies of the City, and shall be limited to the existing service area, or the projected service area where the City has a legal commitment to provide service.

POLICY 1.5: The City shall continue to update demand on facilities and capacity information.

POLICY 1.6: The City shall coordinate and, when necessary, negotiate interlocal agreements with local governments adjacent to its service area to ensure that their Comprehensive Development Plans and procedures are compatible with the City's regarding water service and service areas.

POLICY 1.7: The City shall continue to negotiate agreements with private enterprises to ensure that their procedures are compatible with the City's Comprehensive Development Plan regarding water service and service areas.

OBJECTIVE 2: Upon adoption of this Plan, provide potable water system improvements and expansion in a timely, cost effective and equitable manner in accordance with the Water Facilities and Supply Plan prepared by Barnes, Ferland and Associates, Inc. in 2006, as updated October 2007 and as provided in Exhibit A of the Infrastructure – Potable Water Sub-Element, Water Supply Work Plan.

POLICY 2.1: The City shall maintain consumption-based user fees which generate sufficient revenues to ensure proper operation and maintenance, expansion, development and perpetuation of the water system as well as maintenance of the water utility's financial integrity.

POLICY 2.2: The City shall require that future users of the water system shall be responsible for expansion and/or construction costs of production facilities, transmission/distribution mains and any other related improvements resulting from their impacts. These improvements shall be constructed in accordance with the City's standards and deeded to the City at no prior cost for operation and maintenance.

POLICY 2.3: The City shall operate the potable water system in an efficient manner to optimize reliable water production and delivery in accordance with all standards and regulations governing public water systems.

POLICY 2.4: Water system improvements and expansions shall be given priority for implementation using City funds based on the following criteria:

- * Public and City personnel health and safety
- * Current regulatory requirements
- * System reliability
- * System growth

POLICY 2.5: The City shall continue to coordinate with applicable Water Management District(s), the Florida Department of Environmental Protection, and other public and private utilities on the development and implementation of alternative water supply sources, solutions, conservation measures, and or reuse measures that will be needed to help meet future water supply demands in accordance with the SJRWMD CUP Conditions for the City and applicable state law.

POLICY 2.6: The City shall continue to coordinate with water management district(s), state and federal regulatory agencies, other public and private utilities to develop and implement cooperative solutions for development and implementation of regional alternative water sources, solutions, conservation measures, and or reuse measures that will be needed to help meet future water supply demands necessary to supplement groundwater supplies consistent with the SJRWMD Regional Water Supply Plan in accordance with the SJRWMD CUP Conditions and applicable state law.

POLICY 2.7: The City will maintain a water facility and supply work plan and participate in development of updates to the WMD's water supply assessment and District Water Supply Plan, and participate in other water supply development-related initiatives facilitated by the WMD that affect the City, consistent with Policy 5.12 and 5.13 of the Intergovernmental Element.

OBJECTIVE 3: With the adoption of this Plan, provide existing and future users the highest quality of potable water available through prudent resource management.

POLICY 3.1: The City shall require all development to be serviced by a centralized water system and shall discourage the use of private wells for potable water supply.

POLICY 3.2: The City shall continue to actively support and join State and county efforts to define recharge areas, and to control the type and intensity of development in these areas so as to protect and conserve the City's groundwater resources.

POLICY 3.3: The City shall protect the City's water supply wells by ensuring that no chemical, biological or radiological waste is disposed of in a manner which could contaminate or harm the City's groundwater resources.

POLICY 3.4: The City shall maintain a water system cross connection control program for the purpose of detecting and preventing cross connections that create or have the potential to create an imminent and substantial danger to the public health.

POLICY 3.5: The City shall continue agreements to maintain its Potable Water Service Area within the Planning Area.

POLICY 3.6: The City shall monitor chemicals in the water supply and shall ensure safe use of chemicals.

POLICY 3.7: The City shall research alternative uses to chemicals for its water treatment.

OBJECTIVE 4: Consistent with Objective 10 of the Conservation Element, the City shall maintain a program of water conservation.

POLICY 4.1: The City will continue to use conservation measures such as those historically implemented and referenced as part of the 1997 and 2006 SJRWMD consumptive use permitting process and or pursue alternate water conservation approaches, consistent with POLICY 10.6 of the Conservation Element.



Potable Water Well 6A



Well 6A located at the City of Maitland's Ballfield Complex west of Keller Road.



EXHIBIT A
Water Supply Work Plan

The City's operation of the water treatment facilities that serve the City are permitted by the Florida Department of Environmental Protection. The withdrawal of ground and surface waters as a source of raw supply water for treatment is governed and permitted by the St. Johns River Water Management District (SJRWMD). In June 2006 the City received Consumptive Use Permit (CUP) No. 50258 (Formerly #2-095-0090) which authorizes, as limited by the permit conditions, the use of 1,422.0 mgy (3.896 mgd) of ground water from the Floridan aquifer to serve an estimated population of 12,940 through year 2016 for household, commercial/industrial, landscape irrigation and water utility type uses, 32.5 mgy (0.089 mgd) of Upper Floridan groundwater for urban landscape irrigation and the use of 15 mgy (0.041 mgd) of surface water from Lakes Lily, Minnehaha, Maitland, Lucien, and Sybelia for urban landscape irrigation through year 2016. More specifically, the annual groundwater withdrawals authorized by CUP No. 50258 for public water supply are as follows:

1272.76 million gallons (3.487 mgd average) in 2006
1288.82 million gallons (3.531 mgd average) in 2007
1304.51 million gallons (3.574 mgd average) in 2008
1320.21 million gallons (3.617 mgd average) in 2009
1336.27 million gallons (3.661 mgd average) in 2010
1351.23 million gallons (3.702 mgd average) in 2011
1366.20 million gallons (3.743 mgd average) in 2012
1381.16 million gallons (3.784 mgd average) in 2013
1396.13 million gallons (3.825 mgd average) in 2014
1410.00 million gallons (3.863 mgd average) in 2015
1422.04 million gallons (3.896 mgd average) in 2016

As part of the SJRWMD permitting effort, historical flow information was reviewed and used to develop the above requested allocations based on projected service area populations as shown in the Table on the next page.



PROJECTED WATER USE

Year	Projected Population (1)	Household Per Capita Usage (gpcd) (2)	Household Avg. day (mgd)	Household Max. Day (mgd)	Commercial/Industrial Avg. day (mgd)	Commercial/Industrial Max. day (mgd)	Irrigation (urban landscape or common areas (mgd) (ave. day)	Irrigation (urban landscape or common areas (mgd)(max. day)	Water Utility (mgd)	Unaccounted for water (mgd)	Total Projected Annual Avg. day (mgal) (3)	Total SJRWMD Permitted Annual Avg. day (mgal)	Total Annual Max day (mgal)	Total SJRWMD Permitted Annual Allocation (mgal)
2006	11,583	156.088	1.808	2.306	1.248	1.592	0.244	0.311	0.038	0.150	3.487	3.487	4.447	1272.76
2007	11,727	156.088	1.830	2.334	1.264	1.611	0.247	0.314	0.038	0.152	3.531	3.531	4.502	1288.82
2008	11,871	156.088	1.853	2.363	1.279	1.631	0.250	0.318	0.038	0.154	3.574	3.574	4.558	1304.51
2009	12,015	156.088	1.875	2.392	1.295	1.651	0.253	0.322	0.039	0.156	3.617	3.617	4.613	1320.21
2010	12,159	156.088	1.898	2.420	1.310	1.671	0.256	0.326	0.039	0.158	3.661	3.661	4.668	1336.27
2011	12,295	156.088	1.919	2.447	1.325	1.689	0.259	0.330	0.040	0.159	3.702	3.702	4.720	1351.23
2012	12,431	156.088	1.940	2.474	1.340	1.708	0.261	0.333	0.040	0.161	3.743	3.743	4.773	1366.20
2013	12,567	156.088	1.962	2.501	1.354	1.727	0.264	0.337	0.041	0.163	3.784	3.784	4.825	1381.16
2014	12,703	156.088	1.983	2.528	1.369	1.746	0.267	0.341	0.041	0.165	3.825	3.825	4.877	1396.13
2015	12,832	156.088	2.003	2.554	1.383	1.763	0.270	0.344	0.042	0.166	3.863	3.863	4.927	1410.00
2016	12,940	156.088	2.020	2.576	1.394	1.778	0.272	0.347	0.042	0.168	3.896	3.896	4.968	1422.04

- (1) These figures are from the GIS Overlay Work performed by Richard Doty under a SJRWMD contract.
- (2) Calculated using Maitland's utility billing data (2001-2003) and SJRWMD Water Supply Assessment 2003 population information. Only the 2001-2003 data was used due to the fact that they reflect current conservation efforts that are in effect i.e., inclined utility rate structure and use of surface water for irrigation of public urban landscape areas.
- (3) Projected water use was determined based on the average gross per capita (of 301 gpcd) calculated between the years 2000-2003 multiplied by the population projections from the District's 2003 Water Supply Assessment Study. 2004 data was not used due to the unusual year given the 4 hurricanes which hit Florida.



Water Supply Strategy

Given the groundwater modeling and permitting results of 2006, the City has demonstrated that they have sufficient supply and facilities to serve the projected growth for the next 10 years, however the SJRWMD Consumptive Use Permit (CUP) permit conditions need to be complied with.

From an overall Water Supply Planning & Management perspective, the City has the following challenge in order to be in compliance with the 2006 SJRWMD issued public supply CUP:

Reducing the quantity of groundwater and potable water use for irrigation. This can be done through the continued development of surface water and stormwater irrigation, the continued implementation of conservation initiatives, continued development of alternative resources, and/or the implementation of mitigation or other means of offsetting groundwater withdrawal impacts such as providing for additional recharge.

The City intends to meet the above compliance and water resource management challenge by utilizing an integrated water resources planning approach by taking advantage of lower quality alternate water resources for non-potable uses, and by partnering with neighboring utilities to implement projects that will benefit the region rather than just the City of Maitland. By utilizing this approach, the City not only meets the SJRWMD long-term plans, but also meets the requirements of new regulations such as the Wekiva Parkway and Protection Act.

The implementation of an integrated water resources planning approach will enable the City to comply with water supply related CUP conditions; Conditions 12, 13, 25 and 26.

Integrated Water Resources Planning Alternatives/Options

As part of the 2006 CUP permitting effort, Barnes, Ferland and Associates, Inc. performed a detailed analysis of potential impacts of the proposed uses of water for the SJRWMD population projections for the City of Maitland's potable water service area through 2016. The original analysis of potential impacts simulated groundwater impacts for both specific and cumulative impacts. CUP Condition 25a requires that Maitland identify the quantities of water necessary to meet the permittee's projected demands through 2025 without unacceptable impacts to water resources and related natural systems. Accordingly the City will need to:

- 1.1 Collect data needed for modeling. Data to be collected to evaluate the cumulative impact will likely include withdrawal information for neighboring utilities such as Altamonte and Eatonville. ENGINEER will need input from City staff as to when the City is intended to be built-out.
- 1.2 Update the analytical model and input data to reflect newly issued CUP information on file with the District.
- 1.3 Perform model runs with projected demands. If impacts are present for 2025 projections then several model runs will be needed to determine which projection figures result in no unacceptable impacts.

The City will then identify potential partners and projects to supply Maitland's 2025 projected demands. Preliminary discussions will center around gathering data from prospective partners and negotiation efforts of any Memorandums of Understanding (MOU) and/or interlocal agreements with prospective partners required to implement potential alternative water supply projects located within the City of Maitland's service area. The preliminary discussion and data gathering effort will enable the City to identify developments within the City's service area and/or City limits where

alternative resources may become available. The next step will be to investigate the possible applications of the resources and the irrigation demands of the neighboring developments/facilities that may be able to make use of the alternative resources in lieu of irrigation with potable or groundwater.

CUP Condition Nos. 25b – 25f will require a detailed feasibility analysis of each potential project. The feasibility analysis will assess reliability, confirm Total Maximum Daily Loads (TMDL) requirements of water bodies, ecological evaluations, and surface water treatability analysis and more. Several potential water supply strategy alternative/options and/or projects have been preliminarily identified as part of this Water Facility and Supply Planning process however further investigation will be needed to determine which are feasible for implementation:

- A reclaimed connection with Altamonte to provide APRICOT reclaimed supply to Lake Destiny Ball Park and Maitland Center.
- Dual distribution system for irrigation using non-potable treated (filtration/chlorination) surface water for several neighborhoods near lakes such as Dommerich Hills, Maitland Center, neighborhood near Well A – Minnehaha 2, neighborhood around Thistle well/plant, Maitland chain of lakes, Maitland Branch Canal, Lake Waumpi. Currently Dommerich Hills is scheduled for sanitary sewer system upgrades. As such, dual piping and conversion of the existing Casselberry water distribution system to be served by Maitland becomes more palatable to the residents from a disruption stand-point and to the City from a financial feasibility/funding stand-point in that the roads will already be torn up for the sewer installation. The purchase of the Dommerich Hills water service area from Casselberry will need to be investigated further.
- Surface water ASR using Maitland chain of lakes, Maitland Branch Canal, Lake Waumpi.
- The development of an ordinance requiring the use of stormwater or surface water for irrigation of commercial developments as the primary source with an irrigation well intended to be available for backup. An associated land development code language and/or standard detail may also need to be developed for the construction for such a system.
- The possible development of an ordinance and associated land development code to require a property owner to connect to a reclaimed water system within 365 days of its availability.
- The possible development of an ordinance to implement a reclaimed water or non-potable water utility. A financial analysis will be needed in order to determine the appropriate user rates and connection fees for non-potable water service.
- Minimize Upper Floridan withdrawals by using the Lower Floridan wells more and or develop/convert an Upper Floridan well or wells to a Lower Floridan. Drilling existing wells deeper may impact the well diameter, production and in some cases the water quality of a well. CUP Condition No. 26 requires that the standby Minnehaha–2 well be abandoned by December 2006. The City’s adopted 2008-2012 Capital Improvements Program (CIP) calls for the Thistle Well 4 to be drilled deeper. The SJRWMD is in need of more Lower Floridan water quality information. The City may want to consider approaching the District regarding the conversion of the Minnehaha public supply well to a SJRWMD Lower Floridan monitoring well. This step may enable the City to determine if it will be able to convert their nearby Upper Floridan public supply wells to Lower Floridan public supply withdrawals.

- Continue working with the City Altamonte Springs, OUC, Apopka, FDOT, SJRWMD, Orlando, City of Winter Park, and the City of Casselberry to further the development of Project RENEW APRICOT. Currently Maitland provides raw wastewater that is treated by Altamonte and converted to APRICOT reclaimed supply, as such, the City of Maitland is in essence participating in RENEW APRICOT.

The City has developed a Work Plan which includes capital and operating improvements and alternative resource development for its potable water treatment facilities, potable distribution system and non-potable water system implementation which are presented in the following list combined with the Council approved 2008-2012 Capital Improvements Program. The potable water system capital improvements will be funded by the City and or committed funding sources such as but not limited to tax revenues, State and Federal funding, developer contributions, impact fees, ad valorem taxes, and bonds. It is anticipated that the City will be able to apply for District, State and/or Federal funding in part for the development and installation of non-potable and or regional supply projects once they are deemed feasible and designed.

Based on the City's CUP the following items need to be implemented as part of the overall water resources planning strategy and will likely lend to the development of future projects to be budgeted for between 2013 and 2020:

2007-2020 POTABLE WATER FACILITIES WORK PLAN

Year	Scheduled Activity	Estimated Cost
October 2006 Start, December 2007 Completion	Identify viable, potential water supply partners including those that could provide water supplies or partner with in the development of water supplies. In addition, identify potential water supply projects that could be implemented with these partners to secure the quantities of water necessary to meet permittee's projected demands through 2025 without unacceptable impacts to water resources and related natural systems. The City shall contact these potential partners to determine the viability of developing partnership agreements with them for the identified potential water supply projects. A written description of the potential partners and projects along with a description of the contacts between the City and the potential partners and the viability of the development of partnership agreements shall be submitted to the SJRWMD.	\$32,000
December 2007 Start, June 2009 Completion	The City will prepare a comprehensive written report of an evaluation of the technical, economic, and environmental feasibility of implementing the identified viable projects and partnerships. The evaluations reported shall be performed to acceptable professional standards. The City will also identify the project(s) and partnership(s) that it proposes to implement to secure the quantities of water necessary to meet projected demands through 2025 without unacceptable impacts to water resources and related natural systems.	\$20,000
June 2009 Start, Completion June 2010	The City will execute partnership agreement(s) for implementation of the project(s) of choice and shall have scheduled a pre application conference with SJRWMD staff to discuss the development of a consumptive use permit application for the identified project(s).	\$15,000
June 2010 Start, June 2011 Completion	Preparation of SJRWMD CUP application for the identified project(s).	\$30,000
2013	Design Phase – Maitland portion of SJRWMD Regional Water Supply Project (If necessary)	\$30,000
2014	Permitting (FDEP), Bidding, Construction – Maitland portion of SJRWMD Regional Water Supply Project (If necessary)	\$30,000
2017	Design – Reclaimed water mains to Lake Destiny Ball Field and Keller Road Public Works Yard (Ballfields currently served by Lake Destiny surface water irrigation, and Keller Road is currently serviced by City of potable water).	\$40,000
2020	Construction – Reclaimed water mains to Lake Lake Destiny Ball Field and Keller Road Public Works Yard (Ballfields currently served by Lake Destiny surface water irrigation and Keller Road is currently serviced by City of potable water). This price assumes 6" or 8" FDOT required jack and bore of SR414 with 12" or 18" steel casing – full-time City site inspector, and restoration.	\$700,000 (Estimate)

2008-2012 Capital Improvements Program





**CITY OF MAITLAND
CAPITAL IMPROVEMENTS PROGRAM
FY 08 – 12**

PART I. (Public Works Department)

A. **Project Name:** Water Transmission/Distribution Improvements

B. **Project Number:** WA001 303-06

C. **Project Description:** This program provides for production and distribution of potable water where, and when, requested; and the upgrade of 2” water pipes to 6” water mains to provide better service and fire protection.

FY 2008 includes design and construction of water mains on Hollie Court; replacing the 1989 Kubota tractor; Town Square required improvements; and for increased security measures at the water plants, the fence around WTP #4 (Thistle Lane) will be repaired.

FY 2009 provides for Well #4A to be drilled deeper to provide a better quality of water.

FY 2010 includes the design and construction of 6” water mains on Minnehaha Circle and Bucher Road; and Druid Area Phase II design.

FY 2011 includes design and construction of 6” water mains on Galahad Lane, Lamorak Lane, Horatio Avenue, and Gem Lake Drive; and the high service pump at WTP #6 will also be replaced.

FY 2012 includes design and construction of water main upgrades on Algonquin Trail and Choctaw Trail; and replacing the emergency generator assembly and transfer switch at WTP #4 (Thistle Lane).

D. **Estimated Useful Life:** 30+ years

E. **General Information**

1. Federal/State Agency Mandated?

Yes	X	No
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2. Time of the essence?

Yes	No	X
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3. Subsequent phase of previously approved project?

Yes	X	No
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F. **Existing Level of Service (without project):** Considered below acceptable LOS for fire service in select areas due to water flows in areas not achieving acceptable flow rates.



**CITY OF MAITLAND
CAPITAL IMPROVEMENTS PROGRAM
FY 08 – 12**

Level of Service with Project: By 2020, at proposed pace, should achieve acceptable LOS Citywide.

G. Priority Group Classification: First Priority Group

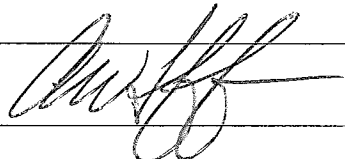
H. Implementation Schedule: The individual projects are spread over five years and are coordinated with other utility upgrades or street resurfacing so that the disruption during construction is minimized.

I. Estimated Costs: see attached table.

Explain how costs were derived, including sources: DRMP estimated the costs for each separate project, and the individual jobs were aggregated to the summary total. Construction of water main upgrades to a minimum of 6-inches is currently estimated (2007 dollars) at \$98/linear foot, including survey, design, permit and construction costs. For projects under \$500,000 a 30% escalation rate has been added.

J. Targeted Revenue source(s): Enterprise Fund - \$ 2,575,600

Submitted By:



Date:

10-3-07

PART II. (Community Development Department)

K. Goal, objective(s), or policy to be accomplished by project (reference City Comprehensive Development Plan): Fire Protection level of service is established to provide a minimum of the domestic maximum daily flow (MDF) plus a fire flow of at least 500 Gallons Per Minute (GPM) in single family residential areas, and 2500 GPM in (multi-family, commercial, etc.)

L. Ranking of Project both within category (i.e., 1 of 4 etc.) and priority group: 2 of 13 (infrastructure) and 2 of 4 (1st Priority Group)



**CITY OF MAITLAND
CAPITAL IMPROVEMENTS PROGRAM
FY 08 – 12**

Justification for ranking and priority group: This is considered a system deficiency; however, service has a better fire flow and pressure, so the need is mixed.

M. What city agency or agent will be responsible for completion of project?

The Public Works Department, Water Division

N. Other comments: Since water main upgrades have been completed for the main “system loops”, the focus is on a program of replacing two-inch “pipes” with six-inch water “mains” to upgrade fire service within the City.

O. Decision-making criteria:

1. Does this project eliminate or assist in the elimination of a public hazard?

Yes	X	No
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2. Does this project eliminate or assist in the elimination of existing capacity deficits?

Yes	X	No
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3. What percent of the City’s five-year capital funding is necessary to complete this project?

26 % of Enterprise Fund		
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4. Should this project be coordinated with any projects being undertaken by state agency, water management district, or the City?

Yes	X	No
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If coordination should take place, explanation and detail time is necessary. Projects will be coordinated with other non – emergency infrastructure and utility improvements. In neighborhoods where pavement or sewer projects are proposed, water upgrades are scheduled for same, or prior, year.

5. If not already stated, what benefits will be gained from the purchase of this capital item? Please quantify as much as possible. This project will provide better flow in established service areas, upgrading pressure to the minimum service adopted for emergency services.

6. What service will be provided as a result of this item? Security at the water treatment plants will be evaluated and improved as a result of Congress’ Bio Terrorism Act of 2002.

7. Identify any risk areas or uncertainties associated with the project: Increased pipe sizing should be evaluated annually using field data and modeling to determine efficiency and cost effectiveness of system upgrades.



**CITY OF MAITLAND
CAPITAL IMPROVEMENTS PROGRAM
FY 08 – 12**

FISCAL YEAR 2008

Hollie Ct - water main upgrade	1,000	6 - inch	191,000
WTP Security Enhancements (fence repairs)		Water Plant 4	20,000
Town Square required improvement	1,200	10 - inch	185,000
Replace Kabota Tractor (1984)			24,000
TOTAL	1,000		\$420,000.00

FISCAL YEAR 2009

Drill Well 4A deeper (430' to 1000')		Water Plant 4	\$ 550,000
TOTAL	1300		\$550,000.00

FISCAL YEAR 2010

Minnehaha Circle - water main upgrade	2000	6 - inch	\$ 390,000
Bucher Road - water main upgrade	700	6 - inch	\$ 136,500
Druid Area Phase II - design			125,000
TOTAL	2,700		\$651,500.00

FISCAL YEAR 2011

Galahad Lane - water main upgrade	700	6 - inch	\$121,100.00
Lamorak Lane - water main upgrade	700	6 - inch	\$121,100.00
Horatio Ave (Independence to Orlando Ave) - upgrade	400	6 - inch	\$69,200.00
Gem Lake Drive - water main upgrade	600	6 - inch	\$103,800.00
125 HP High Service Pump		Water Plant 6	\$150,000.00
TOTAL	2400		\$565,200.00

FISCAL YEAR 2012

Algonquin Tr (Dommerich Dr. To Pawnee Tr) - upgrade	1000	6 - inch	\$199,000.00
Choctaw Trail (Dommerich Dr. To Pawnee Tr.) - upgrade	700	6 - inch	\$139,300.00
Generator/Transfer Switch		WP 4	\$50,600.00
TOTAL	1700		\$338,300.00

Over the term of the work plan for the purpose of off-setting potable water demand, the City of Maitland will maintain, update or enact water conservation practices such as those provided within the Objectives, Policies, and Standards stated within the Conservation Element such as shown below.

OBJECTIVE 10: Considering that water consumption in the region shall increase with population increase, and urbanization shall result in a loss in areas for recharge, and that Maitland is a high recharge area for the region, the City shall maintain its program of water conservation. This program is to protect water resources through conservation measures.

POLICY 10.1: The City shall continue to investigate sources of high water use in the City in order to focus on methods for water conservation.

POLICY 10.2: The City shall continue to request assistance from St. John's River Water Management District in development of a water conservation program.

POLICY 10.3: The City shall research the feasibility to develop methods for reuse of stormwater, and treated wastewater.

STANDARD 10.3.1: By the end of December 2009, submit a report on feasible reuse and other non-potable supply programs to the St. Johns River Water Management District.

POLICY 10.4: If feasible, the City shall begin implementation of reuse program.

STANDARD 10.4.1: Begin implementation by the end of December 2010.

POLICY 10.5: The City shall assess projected water needs and sources for at least a 10 year planning period considering the St. Johns River Water Management District's regional water supply plan.

POLICY 10.6: The City will continue to use conservation measures such as those historically implemented and referenced as part of the 1997 and 2006 SJRWMD consumptive use permitting process and or pursue alternate water conservation approaches. The City's historical conservation efforts included:

- Water Audits - The City performs internal audits of its water systems annually. The City completes a system wide audit every three years as required by the CUP.
- Leak Detection
- Water Saving Devices and Fixtures - New irrigation systems incorporate rain sensors to deactivate the irrigation systems in the event of rainfall
- Customer Education and Public Awareness
- Water Conservation Rate Structure
- The City of Maitland to continue use of surface water as an alternate source for irrigation at City facilities when feasible.
- Landscape Code includes irrigation standards which promote conservation standards.
- Development Plans are reviewed through City Development review processes for compliance with City Code including the landscape code.
- Large User Audit Program for both domestic and irrigation use.
- Maitland Code of Ordinances adopts by reference the Florida Building Code Appendix B, C, D, E and F Plumbing Volume.
- Reclaimed Water - The City continues to send untreated wastewater to facilities which provide reclaimed water for wide-spread urban landscape irrigation.

Water Supply Source Protection Practices

The City has provided for water supply source protection via the following Comprehensive Development Plan, Objectives, Policies, and Standards that provide source protection practices:

Source Protection Practice	Comprehensive Plan Element Objectives, Policies and Standards
Wellhead Protection	Conservation Element - Objective 11 and Policies 11.1-11.10
Aquifer Recharge Protection	Conservation Element - Objective 9, Policy 9.1, Standard 9.1.1; Policy 9.2, Policy 9.3, Standard 9.3.1; Policy 9.4, Policy 9.5, 9.5.1; Policy 9.6, Standard 9.6.1.
Aquifer Protection	Conservation Element - Objective 1 and Policy 1.1, Policy 1.2, Standards 1.2.1, 1.2.2; Policy 1.3, Standards 1.3.1, 1.3.2, 1.3.3.
Aquifer Recharge Protection	Infrastructure - Potable Water Sub-Element Policies 3.2 and 3.3

Non Maitland Potable Water Service Details

Orange County and the City of Maitland have maintained a Joint Planning Area Agreement since 1989. Since then, the City has systematically annexed over eighty percent of the properties in the Study Areas approved for annexation. All areas listed below are within the Joint Planning Area.

Mayo Avenue Area Annexation - Ordinance No. 799 - Effective date January 1, 1993.

The Mayo Avenue area was annexed by the City of Maitland via Ordinance 799, which established a date for referendum as December 1, 1992 and an effective date of annexation as January 1, 1993. This area is east of US 17-92, west of The Oaks of Maitland Subdivision and south of the Seminole County Line. The area included approximately 87 acres. The area housed 164 residents at the time of annexation based upon the 1990 U.S. Census, and included 64 tracts or lots, with all but four residential lots or tracts developed. The majority of land in the area was residential, with only one non-residential tract vacant at the time of annexation. This vacant tract became the location of an automotive repair business constructed in 2005. The other non-residential property remains the location of the Home Builder's Association.

The City of Casselberry provided water service for the area at the time of annexation. However since that time, the City has extended water lines and services to a portion of the annexation area, along Bentley Lane and Mayo Avenue. Properties on Terra Place, Fair Oaks Lane, Quinwood Lane, and Silver Palm Lane remain serviced by Casselberry. Please refer to Figure 1 - Water Service Area Map, provided in the Water Facilities and Supply Plan.

Druid Isle, Druid Hills, Druid Hills Estates, Oakland Shores Second Addition, Battaglia Properties, Ltd. May 1995.

The area of annexation included approximately 250 acres. At time of annexation the area included 123 single family residential dwelling units and orange groves to the north and south of Maitland Boulevard, owned by Battaglia Properties, Inc., and part of a DRI known as Maitland Concourse. At the time of annexation the northern residential portion of the annexation area was served by Utilities, Inc. of Florida for potable water. The annexation report envisioned the City transferring the franchised customers and residents on wells to the City system. This has now occurred, as the City does serve this area with the exception of approximately 15 residential lots situated between Lakes Hope and Charity.

Winfield Annexation Area Ordinance No. 970 - Effective date September 24, 1999. The area included 225 single-family homes (224 in Winfield and one on Fennel Street just east of Winfield) and 364 multi-family residential units. The area also included two hundred and thirty-three total lots or tracts. At the time of annexation, all residential tracts or lots were developed or were under construction. The remainder contained 120,000 square feet of office space, a hotel, and one vacant tract and one that supported an agriculture use with a farmhouse and livestock. Since the time of annexation, these two tracts have been developed. One tract is under construction, and platted as Maitland Village with 88 units of multi-family residential development. The other was acquired by the City of Maitland and is currently a portion of the Public Works Yard and Fire Station west of 1-4.

At the time of annexation the developed areas received potable water services and sanitary sewer services from Orange County Utility Services. As such, no change in this service was proposed for existing development. The two tracts (Maitland Village and City Public Works/Fire Station) tracts on Fennel Street are serviced by the City system on Fennel Street and Keller Road.

RDV Annexation - Ordinance No. 984 enacted November 22, 1999, with an effective date of December 30, 1999.

As per an annexation agreement with the RDV Sportsplex, the existing uses on the property at that time, which consisted of the Sportsplex and Tennis Facility, were connected to Orange County's water and wastewater facilities and Orange County provided water and wastewater services to those uses. It was agreed that Orange County would continue to supply water and wastewater services to those existing uses on the property, as well as any new or expanded uses of the property, unless the property owner determined, at its sole discretion, to connect to City facilities. This area remains serviced by Orange County utilities as listed above. This area was also a part of the Summit DRI which stipulated water and wastewater service to be obtained from Orange County.

Dommerich Hills Annexation – Ordinance No. 1023 – Effective date October 1, 2002.

The Maitland City Council adopted ordinance Number 1023 calling for the annexation into the City of Maitland certain land area generally described as Dommerich Hills, Dommerich Hills First, Second, Third, and Fifth Addition Subdivisions and contained approximately 219 acres. This annexation occurred via referendum in April of 2002, with an effective date of October 1, 2002. The area contains approximately 433 single-family homes, with a majority constructed in the middle 1960's. The area annexed contained 443 land parcels or tracts. At the time of annexation all residential tracts were developed with the exception of two lots located to the east of Temple Trail and south of Tuscarora Trail. The annexed area also contained Howell Branch Park. The City of Casselberry Utilities retained water service responsibilities of this land area upon annexation.

Summit Annexation Area “A” Ordinance No, 1043 dated December 9, 2002.

The Summit Annexation Area “A” consists of approximately 100.61 acres. No residential properties were included within the annexation. The area included only two tracts that were undeveloped at the time of annexation, however they were approved for future urban development, being a component of the Summit DRI. The remaining lots were developed for office, commercial or support uses (onsite retention-detention facilities) at the time the annexation occurred. This annexation area included The Summit DRI and portions of Willis R. Mungers Land Subdivision. Orange County Utilities retained water service responsibilities of this land area upon annexation.

Summit Annexation Area “B” – Ordinance No. 1044 dated December 9, 2002.

This annexation area included predominately residential development, the Arbors at Maitland Summit consisting of 663 apartment units as well as various tracts platted as part of Maitland Summit Phase One. This area is a part of the Summit DRI and as such the Summit DRI Development Order stipulated water service to be obtained from Orange County. No change of service was required as part of the annexation.

Mechanic Street and Wymore Road Area – Annexation via Resolution (Interlocal Agreement with Orange County for Enclaves) July 2003

East of Interstate 4, only three areas remained in unincorporated Orange County: two churches on Wymore Road south of Oranole Road, twenty-one lots accessed by Mechanic Street west of the railroad tracks and south of Lake Seminary, and approximately thirteen lots south of Adams Drive and east of Northwind Road. The properties on Wymore Road and in the Mechanic Street area met the definition for enclave areas, as defined by Florida Statutes (surrounded by the City). Orange County sent a letter to the City requesting that these areas be annexed to eliminate the enclaves from County jurisdiction. This can be accomplished by Interlocal Agreement for enclaves less than ten acres in size, consistent with Chapter 171, Florida Statutes.

With respect to services, the Wymore Road enclave area, five acres in size, was fully developed with and water service through the City of Maitland.

The Mechanic Street area was not fully developed at the time of the annexation and remains unchanged, with only five single-family residences on approximately 8.6 acres. However the City serves this area with potable water service.





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 Anthony W. Leffin
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September 14, 2007

Mr. Kirby Green
 Executive Director
 SJRWMD
 4049 Reid Street
 Palatka, FL 32177

SUBJECT: Alternative Water Supply Letter of Intent

Dear Mr. Green,

The City of Maitland recognizes the importance and urgency of developing one or more alternative water supply projects to serve the projected demands of our City and the Central Florida region. The City of Maitland also acknowledges that developing new alternative water supplies from sources such as the St. Johns River and the Oklawaha River could help to ensure adequate water supplies will be available when needed, while also protecting our precious environment. Therefore, we are in support of the development of this project; and through this letter, we are requesting to be included in the "Alternative Water Supply Project Preliminary Design Report" efforts. In addition, it would appear that the Yankee Lake Project may be the best suited, geographically, for the City.

In addition to our expression of interest, you have asked the City of Maitland to commit funds toward the cost of the preliminary design efforts. While we understand any expenditure of these fair share funds is contingent on the City Council's approval of an Interlocal Agreement and the adoption of our budget, we cannot make the requested financial commitment at this time. Staff feels that there needs to be further internal discussion on the matter before we are ready to ask our elected officials to make such an important and long term decision. Currently the City's Consumptive Use Permit, as issued June 13, 2006 by the SJRWMD, requires the pursuit of alternative supplies however the time frame stipulated for the required pursuit is four (4) years from the date of issuance. Specifically, CUP condition No. 25 requires the City to:

1. Identify viable potential water supply partners and projects to secure the quantities of water necessary to meet 2025 demands by December 2007 (18 months from date of issuance of permit);
2. Submit a report of an evaluation of the technical, economic, and environmental feasibility of implementing the identified projects and partnerships by June 2009 (36 months from date of issuance of permit) to meet the 2025 demands without unacceptable impacts.
3. Provide evidence of partnership agreement(s) for implementation of the project(s) of choice by June 2010 and schedule a pre-application conference with District staff to discuss the development of a CUP application for the identified project(s).
4. Submit a CUP application for implementation of the identified project(s) by June 2011.

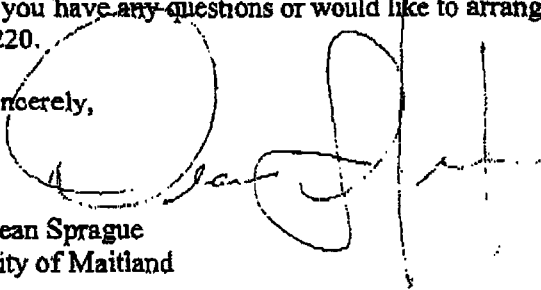
Mr. Kirby Green
September 14, 2007
Page 2

To date, City staff have attended several water supply partnering meetings in an effort to satisfy CUP condition No. 25. Along with other alternative water ideas, the City would also like to explore the possibility of purchasing bulk water from other utilities. We believe that once the regional alternative water source is developed, this would be a way for small utilities such as ours to meet the District's requirements. Given the City's CUP condition and the progress of the Seminole County and Orange County regional water supply planning efforts, the City is planning to proceed with the permitted schedule described above to continue to investigate alternative water supply options.

I would greatly appreciate a meeting with you and your staff to discuss the issues at your convenience. Once we have gained a thorough understanding of the relevant information and are comfortable with the terms and conditions that come with participation, our City Council will make the appropriate decision.

If you have any questions or would like to arrange a meeting date and time, please contact me at 407-539-6220.

Sincerely,



Dean Sprague
City of Maitland

- c: Mayor and Council
- Kristen Rombeck, Barnes, Ferland & Associates, Inc.
- Richard Wells, Community Development Director
- Tony Leffin, Public Works Director