

CONSUMPTIVE USE TECHNICAL STAFF REPORT
18-Aug-2014
APPLICATION #: 11339-6

Owner: Gainesville Regional Utilities
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Project Name: Murphree WTP - GRU
County: Alachua

Located in CFCA: No
Objectors: No

Authorization Statement:

The District authorizes, as limited by the attached permit conditions, the use of 10,950.0 million gallons per year (mgy) (30.0 million gallons per day (mgd) annual average) of groundwater from the Upper Floridan aquifer for public supply use (includes residential, commercial/industrial, water utility uses, fire protection and unaccounted for losses), to serve a projected population of 234,843 in 2034.

Recommendation: Approval

Reviewers: Jay Lawrence; Lance Hart

WATER USE SUMMARY:

Recommended Permit Duration and Compliance Reporting:

The applicant has requested, and staff is recommending, a 20-year duration permit with a ten-year compliance report, pursuant to section 373.236(4), Florida Statutes. In addition to the submittal of a compliance report, the permittee is also required to comply

with, and submit all information and data required by, the limiting conditions set forth in the permit.

This application is for a timely renewal of an existing permit. The applicant is not requesting any changes in the groundwater allocations or sources.

PROJECT DESCRIPTION:

Location and Background

Gainesville Regional Utilities (GRU) is a multi-service utility owned by the City of Gainesville. GRU's potable water service area is located in Alachua County and serves areas both within and outside the City of Gainesville's municipal boundary as well as areas known as the Urban Cluster and the Urban Reserve. Although their service area is contained wholly within Alachua County, there are portions of the service area located within both the St Johns River Water Management District (SJRWMD) and Suwannee River Water Management District (SRWMD) jurisdictional boundaries.

GRU provides potable water to approximately 84,507 residential units and proposes to serve approximately 101,309 residential units by year 2034. It also serves a large commercial/industrial base, along with the Kelly Power Generating Plant, and the University of Florida.

Water Supply System

GRU's water supply system consists of sixteen existing Upper Floridan aquifer wells located at the Murphree wellfield. The wellfield and water treatment plant are located in northeast Gainesville, just north of N. 53rd Avenue. Fifteen of the existing wells are located within the SJRWMD and one is located in the SRWMD.

The water treatment plant process includes lime softening, filtration and disinfection prior to distribution. GRU is permitted by the Florida Department of Environmental Protection (FDEP) to treat 54.0 mgd of water at this facility for potable uses.

Wastewater generated throughout the service area is collected and sent to one of two wastewater treatment facilities (WWTFs). The Main Street Water Reclamation Facility (MSWRF) is located on the south side of the City of Gainesville and has a permitted plant capacity of 7.5 mgd. The plant sends treated wastewater to the Paynes Prairie wetland and sheetflow restoration project, with ultimate discharge to Alachua Sink, which recharges the Floridan aquifer.

The second WWTF, the Kanapaha Water Reclamation Facility (KWRF), is located on the southwest side of the City. KWRF has an FDEP permitted plant treatment capacity of 14.9 mgd and an injection capacity of 10.0 mgd. The KWRF supplies public access reclaimed water to residences, commercial sites, environmental enhancement, and golf courses within the service area. The remainder of the wastewater treated at this facility is injected into the lower Floridan aquifer via four recharge wells.

Water Use Description

Water uses within the service area include household, urban landscape irrigation, commercial/industrial, water utility, and essential use (fire protection).

PERMIT APPLICATION REVIEW:

Section 373.223, Florida Statutes (F.S.), and section 40C-2.301, Florida Administrative Code (F.A.C.), requires a consumptive use applicant to establish that the proposed use of water:

- (a) is a reasonable beneficial use;
- (b) will not interfere with any presently existing legal use of water; and
- (c) is consistent with the public interest.

In addition, the above requirements are detailed further in the District's Applicant's Handbook: Consumptive Uses of Water, August 14, 2014, A.H. District staff have reviewed the consumptive use permit application pursuant to the above-described requirements and have determined that the application meets the conditions for issuance of this permit.

As previously mentioned, a portion of GRU's service area is located within the SRWMD. On June 20, 2006, SJRWMD and SRWMD entered into an interagency memorandum of understanding (MOU) that delegates authority for consumptive use permitting review of the GRU permit to SJRWMD. The MOU was revisited and updated in mid 2013. To date, SRWMD has received all permit application correspondence has been in regular contact with district staff and has been engaged in the review of the application. A summary of the staff review follows.

REASONABLE BENEFICIAL USE CRITERIA

Economic and Efficient Utilization - Section 2.3(a):

GRU has been permitted to withdraw 29.5 mgd since 2001 and has been permitted to withdraw 30 mgd since 2009. It is anticipated that the population within the service area will increase from 195,892 in 2014 to 234,843 through the permit term. This is based on the District's 2014 Water Supply Plan Water Use Projections and Bureau of Economic and Business Research (BEBR) information provided by the applicant. The per capita household water use within the service area is 76 gpd and is projected to remain steady throughout the twenty-year permit duration. The per capita value is low compared to other utilities throughout the District because, in part, this is a varied community demographically and the utility has implemented multiple water conservation projects.

Commercial/Industrial use is a substantial component of the overall water use within the service area and has increased at a rate proportional to the household use rate. Bureau of Water Supply Planning and Regulation staff reviewed the domestic and commercial/industrial projections and have determined that they are in agreement with District planning projections. There is also a component of water use associated with this permit that is supplied to the University of Florida. The University maintains a secondary consumptive use permit for this portion of the use. This water use is projected to increase over the duration of the permit at a rate comparable to the domestic and commercial/industrial uses. Both District and GRU staff reviewed these projections to

ensure that the increase in use by the University was consistent with the University of Florida CUP No. 1671, issued in December of 2007. Based on SJRWMD's latest demand projections, GRU has demonstrated a need for approximately 34 mgd. However, GRU is only requesting that its existing allocation of 30 mgd be renewed. Therefore, staff believes that GRU has successfully demonstrated the need for an average daily demand of 30.0 million gallons through the duration of this permit.

WATER CONSERVATION

As part of the criteria for determining that a proposed use is reasonable-beneficial, section 2.2.2.5 of the CUP Applicant's Handbook sets forth a water conservation requirement. Specifically, the rule requires that an applicant implement a standard water conservation plan, as described in Section 2.2.2.5.1.A or a goal-based water conservation plan, as described in Section 2.2.2.5.1.B. For this permit renewal, GRU elected to implement the Standard Water Conservation Plan. The rule requires that the proposed water conservation plan shall allow no reduction in, and increase where environmentally, technically, and economically feasible, overall utility-specific water conservation effectiveness.

The water conservation plan submitted by GRU, and approved by District staff, follows the Conserve Water Florida Clearinghouse (CWFC) EZ Guide for public supply users in accordance with Section 2.2.2.5.1.A and includes the following:

1. Water Conservation Public Education Program

GRU's water conservation plan includes each of the elements (a) to (i) identified by the District in Section 2.2.2.5.1.A.1, A.H. A brief summary of some of this information previously provided is provided below.

(a) Water conservation public service announcements.

GRU has made numerous public service announcements and press releases regarding cold weather precautions, the Paynes Prairie Restoration Project, water conservation and creative water conservation competitions. Throughout the duration of the renewed CUP, GRU will continue these types of announcements at the historic frequency.

(b) Water conservation speakers, posters, literature, videos and/or other information provided to schools and community organizations.

GRU operates a speaker's bureau and regularly meets requests for speakers. Additional information on the Speaker's Bureau is available on the GRU website.

GRU has also provided a number of water conservation-related videos to the schools and the public library system. Titles include: Home Energy Survey, The Water Cycle of Alachua County, Boulware Springs, and The Rehabilitation of the Boulware Springs Water Works Building. In addition, a number of YouTube videos have been posted for the public to view on GRU's YouTube account. YouTube titles include: "Energy and Water Savings Tips", "Start Saving Today: Taking Simple Steps to Conserve", and "Start Saving Today: Protecting the Environment".

GRU also places water-related and water conservation posters and other media for distribution and on display in the lobby of its Administration Building in downtown Gainesville. Throughout the duration of the renewed CUP, GRU will continue these types of activities at the historic frequency.

(c) Public water conservation exhibits.

GRU regularly participates in the annual Spring Garden Festival at Kanapaha Botanical Gardens at which GRU presents various water-related information. In addition, GRU sponsored a cooperative exhibit with the Florida Museum of Natural History and Florida's Eden on water conservation efforts and the spring systems in Alachua County. The exhibit ran from August through November of 2010. Throughout the duration of the renewed CUP, GRU will continue its participation in similar public water conservation exhibits at the historic frequency.

(d) Water conservation articles and/or reports to local news media.

GRU routinely releases articles through the monthly newsletter, A&I, regarding pertinent energy and conservation information and GRU efforts to provide and conserve environmental resources. Topics include the Paynes Prairie Restoration Project, water conservation tips, irrigation rules, landscaping tips and community events regarding water conservation and information. Since 2010, GRU has produced over 40 articles. Throughout the duration of the renewed CUP, GRU will continue to produce articles and reports at the historic frequency.

(e) A water audit customer assistance program which addresses both indoor and outdoor water use.

In addition to the information provided above, GRU will perform (and has performed) a regular review of high water users of both the residential and non-residential customers. Any customer that is found to have statistically abnormal water consumption is reviewed and, if needed, approached for an energy & water survey to reduce their water consumption. Throughout the duration of the renewed CUP, GRU will continue a water audit customer assistance program.

(f) Water conservation information provided to customers regarding year-round landscape irrigation conservation measures.

GRU broadcasts information about landscape irrigation ordinances and GRU participates in customer education via enforcement of these requirements. Throughout the duration of the renewed CUP, GRU will continue to provide its customers with information regarding year-round landscape irrigation conservation measures.

(g) Water conservation information posted on GRU's website.

GRU's website - GRU.com - contains extensive information about water conservation. GRU also utilizes other internet media such as YouTube and Facebook and has a robust presence online. Throughout the duration of the renewed CUP, GRU will continue to post water conservation information to its website.

(h) The construction, maintenance, and publication of water efficient landscape demonstration projects.

The buildings and landscaping at the new Eastside Operations Center were designed to follow LEED standards in order to have minimal impact on the inclusive and surrounding

wetlands. There is a demonstration project on the roof of the Safety & Training building near the entrance where tours and signage are offered to explore the green roofing system that is now well established. GRU provides customers information on water-efficient landscaping and has sponsored several water conservation demonstration gardens. Reclaimed water is used at multiple sites for aesthetic uses (Kanapaha Botanical Gardens, Chapman's Pond, the Veterans Park, and at a demonstration garden at Kanapaha Middle School). Throughout the duration of the renewed CUP, GRU will maintain water these and other efficient landscape demonstration projects.

(i) Water conservation information provided in customer bills or separate mailings.

GRU presents informational bills to its customers to allow them to track their individual water use. In addition, once a year, GRU prepares and mails a robust report to all customers which has information about their source of water and provides water conservation metrics to the community. Throughout the duration of the renewed CUP, GRU will continue to distribute this type of water conservation information at the historic frequency.

2. Outdoor Water Use Reduction Program

GRU's water conservation plan includes elements (a) to (f) identified by the District in Section 2.2.2.5.1.A.2, A.H. A brief summary of these elements previously provided is provided below.

(a) Adoption of a landscape irrigation ordinance or condition of service consistent with District Rules.

In 2009, Alachua County adopted ordinance 09-08 which created Alachua County Irrigation Standards and Management Practices consistent with District rules. The ordinance also provides for enforcement and penalties. The City of Gainesville adopted the same ordinance for consistency.

(b) Adoption of an ordinance or condition of service requiring the use of Florida-Friendly landscaping principles, Florida Water Star, or other outdoor water conservation program.

Alachua County currently restricts irrigation in spring protection areas and is in the process of expanding these outdoor water conservation requirements across its jurisdiction. Upon enactment, the City will consider whether or not these requirements would enhance GRU's water conservation program.

(c) The adoption of an ordinance or condition of service relating to automatic landscape irrigation systems.

Building codes applicable to GRU's service area require the use of a rain-sensor or other shut-off device.

(d) Provide landscape irrigation audits and irrigation system operating instructions to businesses and residents.

On-site residential and commercial energy and water surveys are available free to all GRU customers. During these surveys trained staff inspects the home or business and

checks windows, doors, ductwork, insulation, appliances and other equipment, and then offers customized tips for making the home or business more efficient. Customers also have the option to perform a video-guided home survey and an online survey available through the GRU website. Additional information is available on the GRU website. Since 2011, GRU has performed over 400 commercial audits and almost 2400 residential audits. Throughout the duration of the renewed CUP, GRU will continue a landscape water audit customer assistance program.

(e) Education element focused on outdoor conservation.

As described above and in the application, several components of GRU's water conservation program have specific outdoor water conservation elements.

(f) Other outdoor water conservation measures.

GRU has participated in multiple studies of soil moisture sensor effectiveness. Most recently, GRU installed soil moisture sensors in 100 residential properties to evaluate the performance, water savings and customer satisfaction with the technology in cooperation with the University of Florida. GRU has been an active partner with the District, Conserve Florida Water Clearinghouse and the University of Florida on several outdoor water conservation evaluations.

3. Water Conservation Promoting Rate Structure

GRU's water conservation plan includes a rate structure which meets District requirements as presented in Section 2.2.2.5.1.A.3, A.H. A brief summary of some of this information previously provided is provided below. Currently, GRU utilizes the following three-tier incline block, water conservation promoting, rate structure:

Volume Category

Base Residential Meter Water Rate

0 – 6,000 gallons \$2.30/1,000 gallons

7,000 – 20,000 gallons \$3.75/1,000 gallons

20,000 and above \$6.00/1,000 gallons

As part of this renewal application, GRU is not proposing any modification of this existing rate structure which went into effect on October 1, 2013.

4. Water Loss Reduction Program

Though not required because GRU's water losses are calculated to be less than 10 percent, GRU's water conservation plan includes elements from Section 2.2.2.5.1.A.4, A.H. to provide reasonable assurance that GRU's use will reduce water losses to an acceptable amount as presented below:

(a) Water Audit.

GRU completed a water audit of its potable water distribution system for the period January 2012 through December 2012. The CUP application contains a summary of the water audit using the District's Water Audit Form No. 40C-22-0590-3. The results of this water audit indicate that, for the period evaluated, GRU had unaccounted for water totaling 7.8 percent.

(b) Meter Survey.

Based on the results of GRU's water audit this meter survey is not required. However, GRU has implemented a meter survey program to help identify and prioritize meters for repair or replacement. As a result of these efforts and as discussed below, GRU has developed a 5/8-inch meter change out program that replaces meters on an 18-year interval. In addition, GRU tracks its larger meters to assure that they are tested annually as discussed below.

(c) Leak Detection Evaluation.

Based on the results of GRU's water audit this leak detection evaluation is not required. However, since 2002, GRU has operated a leak detection program and has tested over 685 miles of pipe. Based on the flows detected through GRU's ongoing leak detection program, it is believed that the majority of the unaccounted for water is due to apparent losses (i.e., water that is being utilized but not billed for) rather than "real" losses (i.e. water leaking from the system). Sources of apparent losses could include unmetered or illicit connections, meter inaccuracy, and underestimation of legal unmetered uses. In addition to field assessments, GRU is using technology to identify unaccounted-for water in the system. The program has focused efforts on several components including the regular identification of improperly billed water service (e.g., unmetered and under-metered water use), improvement of internal procedures for the identification and repair of stopped meters, improvement of current operating procedures for large meter testing, and improving the accuracy of nonrevenue water use (e.g., well lubrication water, water use for emergency events, and routine hydrant flushing).

(d) Meter Replacement Program.

Based on the results of GRU's water audit, this meter replacement program is not required. However, GRU does have a meter change-out program in which all 5/8-inch meters older than 18 years are automatically targeted for replacement. New meter internal components are made of plastic and Teflon coated, preventing the corrosion issues present in the older models. All 3-inch or larger meters are tested annually.

5. Indoor Water Use Reduction Program

GRU's water conservation plan includes elements (a) to (d) identified by the District in Section 2.2.2.5.1.A.5, A.H. A brief summary of some of this information previously provided is provided below.

(a) Plumbing retrofit rebates.

GRU has initiated a pilot test and replaced 781 toilets. GRU is currently monitoring the water use associated with the retrofits. After the completion of the pilot test and

evaluation of the water savings, GRU will consider implementation of a larger-scale program.

(b) Faucet Aerator and Showerhead Giveaways.

GRU has performed showerhead giveaways on several occasions as part of educational event or audits. Throughout the duration of the renewed CUP, GRU will continue this program at the historic frequency.

(c) Education element focused on indoor conservation.

As described above and in the application, several components of GRU's water conservation program have specific indoor water conservation elements.

(d) Other indoor water conservation measures.

GRU has also implemented all available conservation measures for its own processes and system. GRU has flow meters installed that monitor water usage on all active production wells. The flow meters are checked for accuracy and recalibrated at least once every three years. The most recent accuracy checks were performed in April 2013. Additionally, all treatment process streams at the water treatment plant are recycled and there is no landscape irrigation at the treatment plant facility.

The implementation of these programs has led to quantifiable and significant reductions in water use. For example, the following table illustrates GRU's permitted water use rates compared to the water use rates currently requested:

Year CUP Issued	Residential Per Capita (gpcd)	Gross per Capita (gpcd)
1984	117	147
1992	103	161
2001	101	161
2009	90	150
Requested 2014	76	129

Furthermore, GRU has quantified its water conservation savings since 2001 taking into account increased reuse and changes in weather patterns. This evaluation demonstrates that GRU has reduced its water demand by 28 percent during that time as a result of water conservation and reuse.

Though GRU has been extremely successful in its water conservation efforts, GRU plans to continue performing these water conservation elements, though actual implementation may vary from year to year. In an effort to quantify potential future savings due to water conservation, GRU performed an evaluation using the Conserve Water Florida Clearinghouse (CFWC) EZ Guide online tool (<http://ezguide.conservefloridawater.org>) as described in the CUP application. The CFWC EZ Guide was developed pursuant to the mandate of section 373.227(2)(h), F.S. Based on this analysis, GRU derived a conservative estimate of 0.55 mgd of additional future water conservation savings. This estimate was incorporated into GRU's demand projections as the required water conservation.

GRU's proposed Standard Water Conservation Plan meets all of the applicable SJRWMD criteria and implements all feasible water conservation measures. In addition, GRU has made a significant commitment to further increase its water conservation efforts beyond District requirements.

Public Interest - Sections 2.3(b) and 3.10:

Staff evaluated whether the proposed consumptive use is consistent with the public interest. The proposal to continue to use groundwater from the Upper Floridan aquifer for public supply use has been considered beneficial to the collective well being of the people within the boundaries of the service area. This consumptive use benefits people by providing a potable water supply to residents of the service area, and water for fire protection. The use will not adversely affect water resources, either individually or cumulatively, and it qualifies as a reasonable-beneficial use based on the factors listed in rules 40C-2.301(2), F.A.C. Therefore, staff have concluded that reasonable assurances have been provided that the proposed use is consistent with the public interest pursuant to sections 2.3(b) and 3.10, A.H., provided the permittee complies with the conditions recommended for this permit.

Suitability of the Source – Section 2.3(c):

Staff evaluated whether the source of the water requested is suitable for the consumptive use. Staff considered all other potential sources; surficial aquifer, surface water, and reclaimed water for suitability, and have determined that the Floridan aquifer is the most suitable source for potable use.

Capability of the Source and Interference with Existing Legal Uses – Sections 2.3(d) and 3.6:

District staff performed groundwater modeling analyses using the District's Northeast Florida (NEF) version 3.0 groundwater flow model, built on the USGS MODFLOW platform. This model was used to predict potential impacts on local and regional groundwater levels and flows. Many project specific simulations were conducted by both the applicant's consultants as well as District staff using the NEF model. The simulations included assessment of individual (project specific) and cumulative impacts by applying the District's groundwater use estimates for 1995 and End of Permit (EOP) allocations.

Based on an average daily withdrawal rate of 30.0 mgd, equally distributed between the 16 wells in the wellfield, drawdown in the upper Floridan aquifer rapidly declines from 30 feet in the center of the wellfield to approximately 1.0 feet at 2 miles southwest and 8 miles east northeast. In addition, water quality monitoring of the production wells indicates that there has been no degradation of water quality through the period of record. Based on the NEF groundwater modeling and water quality monitoring, staff have concluded that the Upper Floridan aquifer is capable of producing the requested amount.

Staff reviewed the pending application to determine if the proposed use will cause an interference with any legal uses of water. All of the applicant's wells are constructed into the Upper Floridan aquifer and are located within the same wellfield.

During the previous review of this permit in 2009, staff requested that GRU perform an inventory of wells located within the 2 foot Floridan aquifer drawdown contour. Based on a review of District and Alachua County Health Department files, GRU identified 11 sites where wells were believed to have been constructed in the Floridan aquifer within this 2.0 foot contour line. The majority of the wellfield lies within a 7,000 acre conservation easement; thus, there are very few existing legal users located near the production wells. During a field survey, GRU staff discovered that some of these identified wells did not exist, and for some of the wells that did exist, GRU was unable to obtain pumping information.

The supply well for the Ironwood Golf Course is one of the Upper Floridan aquifer wells located closest to GRU's well field. Based on pumping information for this well, it has been determined that 2 feet of drawdown in the Upper Floridan aquifer could reduce the pumping capacity of this well by approximately 2%. Therefore, it is reasonable to assume that existing upper Floridan aquifer legal users beyond the 2 feet drawdown contour would experience an even smaller loss of well capacity.

Based on a water well completion survey conducted by District staff, staff was unable to find evidence of wells in the area completed in the Hawthorne unit or the surficial aquifer, other than monitoring wells. Drawdowns predicted to occur in the surficial aquifer are minimal, less than 0.09 feet at the well field. Any wells constructed within this aquifer are not likely to be affected by GRU's withdrawals.

Results of groundwater modeling simulations performed by the applicant and District staff, and the results of the well inventory performed by the applicant, indicate that drawdowns in the Upper Floridan aquifer due to the proposed withdrawals are not predicted to be large enough to cause interference with existing legal uses of water from the Upper Floridan aquifer in the area. Historically, there have been no reports of impacts to existing legal uses due to GRU's withdrawals. In addition, as a condition of this permit, if unanticipated interference to existing legal uses of water occurs due to withdrawals authorized by this permit, then the permittee must mitigate for the impact. Mitigation may include installation of a new pump or motor, installation of additional drop pipe, providing new electrical wiring, connection with the existing water supply system, or other appropriate measures. Staff have concluded that reasonable assurances have been provided that the proposed use will not cause an interference with a legal use of water, which existed at the time of the application for the initial consumptive use permit provided the permittee complies with the conditions recommended for this permit.

Lowest Acceptable Quality Water Source – Section 2.3(e):

A portion of the proposed use is for public supply direct human consumption. For that portion of the use, District staff have determined that the upper Floridan aquifer is the lowest acceptable quality water source for this use.

In addition, GRU operates two wastewater treatment facilities, the Main Street Water Reclamation Facility (MSWRF) and the Kanapaha Water Reclamation Facility (KWRF) under current FDEP operating permits. The current permitted capacity at the MSWRF is 7.5 mgd. The current permitted capacity at the KWRF is 14.9 mgd. The capacity at these plants is not expected to change during the twenty-year permit duration. Approximately 70% of GRU's withdrawals are returned to the Floridan aquifer through beneficial recharge and reclaimed water projects.

A majority of the flow from the MSWRF goes to the Paynes Prairie Sheetflow Restoration project. This is a joint project involving GRU, the City of Gainesville, FDEP and the SJRWMD. It involves the reuse of effluent from the MSWRF to restore natural wetlands in Paynes Prairie State Preserve, located southeast of the City. The plan includes upgrades of the MSWRF for additional nitrogen and phosphorus removal, construction of a treatment wetland to intercept and treat the flow from Sweetwater Branch, and restoration of the natural sheet-flow from Sweetwater Branch onto Paynes Prairie. The project will serve to restore over 1000 acres of natural wetlands in the Paynes Prairie Preserve that were degraded due to past channelization. Excess runoff from the wetland from this project follows a decentralized channel to Alachua Sink.

Approximately 20% of the flow generated at the KWRF goes to residential, commercial and golf course irrigation. Approximately 9% of the flow goes to aesthetic water features such as Chapman's Pond, Kanapaha Botanical Gardens, the proposed Kanapaha Middle School recharge wetland, and the proposed Oakmont recharge wetland. The majority of flows from KWRF go to a lower Floridan aquifer injection site located adjacent to the KWRF. Since the majority of new development is occurring within the southwest portion of the utility's service area and in proximity to existing reclaimed water pumping and transmission facilities, GRU has instituted a policy to designate a reclaimed water service territory on the southwest side of the service area in which all new development would be required to connect for irrigation needs. GRU has worked with Alachua County so that this policy can be instituted. Within this designated reclaimed water service territory, GRU will extend reclaimed water lines to serve new development. As a condition of this permit, the permittee will be required to submit a reuse status report on a yearly basis describing what steps were taken over the previous year regarding the implementation of new beneficial reuse projects.

Environmental, Water Resources and Otherwise Harm - Sections 2.3(f) and (g), 3.7 and 4.0, A.H.:

Staff visited the GRU wellfield and reviewed aerial photographs, soils, topography, vegetation, water bodies, and other information. The applicant's wells are located in a pine flatwoods landscape that is interspersed with wetlands, mainly swamps containing cypress, red maple, and swamp tupelo trees. This area has been previously identified as the headwaters for six streams: Hatch Creek, Little Hatchet Creek, Hogtown Creek, Rocky Creek, Lake Montechoa Creek, and Montechoa Creek. The upland soils in the wellfield area are poorly drained spodosols that have a loamy to clayey texture in the lower profile.

As required by the previous permits, GRU has recorded and submitted rainfall and water level data at eight wetlands and one pond. GRU has implemented an ongoing wetland monitoring program beginning in 2000 in conjunction with the issuance of permit number 2-001-11339-3; issued on February 13, 2001. Two of the wetlands that are currently being monitored (Wetlands G and H) were added as a requirement of the previous permit

Staff, in conjunction with the applicant, examined the eight wetlands monitoring sites as well as two additional wetland areas. Staff did not observe any discernible unmitigated harm that could be directly attributable to the applicant's previous withdrawal. As identified by GRU in their application, "monitoring reports do not indicate correlations

between wetland water levels and pumpage". A rainfall deficit has occurred since the monitoring program began in 2000. Based on the groundwater modeling analysis performed by the District, the predicted end of permit draw down will have a negligible effect on the surficial aquifer (less than 0.09 of a foot maximum draw down predicted). However, during site visits conducted in the summer of 2013, District staff observed that the hydrology within some of the monitored wetlands did not appear to be responding to rainfall similar to other wetlands near the wellfield. Because of the conflicting indicators between the observed conditions, the predictive model simulations, and monitoring data, staff is recommending that wetland monitoring be continued.

Staff reevaluated the existing monitoring plan and has determined that two (Wetland A and Wetland H) of the eight wetlands that had been previously monitored can be eliminated from the monitoring plan. Factors contributing to these sites being eliminated are: Wetland A is adjacent to and connected to an upland cut ditch, and Wetland H has a similar community structure and is proximate to other monitored wetlands. In addition, surface water level monitoring in a man-made pond will be discontinued. The applicant agrees with District's staff recommendation to focus monitoring in Wetlands B, C, D, E, F and G. Staff is recommending conditions for the implementation of the monitoring of these six wetlands.

Staff have determined that the immeasurable change in the surficial aquifer would not cause an unmitigated adverse impact to wetlands or other surface waters, including lakes and springs. The closest springs to the GRU wellfield are Glen Spring, located at the Elks Club property in northern Gainesville, about 3.3 miles southwest of the GRU wellfield, and Boulware Springs, located in a city park in southeastern Gainesville, about 5.7 miles south of the wellfield. Staff reviewed topographic and potentiometric surface maps, and the modeled predicted changes in the surficial and Floridan aquifer systems. Staff concluded that both of these springs are derived from the Hawthorne group or Intermediate aquifer system, (not from the Floridan aquifer from which GRU withdraws its water) and that based on the predicted changes in the Intermediate aquifer water at these spring locations, no impacts to spring flows will result from the applicant's projected withdrawals.

GRU's proposed withdrawals and offset recharge projects were modeled using the North Florida Groundwater Flow Model version V1.02 (NF Model) to evaluate the potential for harm to the water resources in the area. The results of the model were reviewed by staff at the SJRWMD and SRWMD in order to assess potential harm to environmental features.

GRU's current and proposed withdrawal quantities were modeled to simulate the impact to river and spring flows in the SRWMD. This modeling also evaluated the recharge benefits of GRU's existing reclaimed water recharge programs. These programs include the UF recharge well, KWRF leaky wetlands project, Alachua sink recharge and KWRF recharge wells. The modeling showed that GRU's existing recharge offsets GRU's impacts. However, due to some modeling uncertainty, GRU has voluntarily proposed to implement two additional impact offset recharge projects to provide additional Lower Santa Fe River (LSFR) benefit pursuant to Section 3.3.2.1, A.H. The first project involves converting an existing stormwater pond into a groundwater recharge wetland system in the Oakmont development in the southwest portion of GRU's service area. The recharge wetland will receive reclaimed water from the KWRF and stormwater. The Oakmont project is estimated to provide 0.5 to 1 MGD of beneficial recharge and is expected to

provide 0.3 to 0.6 MGD benefit to the LSFR based on the NF model. As a result, the Oakmont Project Impact Offset has the potential to make 0.5 to 1 MGD of additional allocation available to GRU. GRU is proposing to complete construction at the Oakmont project and begin recharge operation with reclaimed water within 5 years of the issuance of this permit.

The second impact offset project involves converting an existing stormwater pond into a groundwater recharge wetland system at the Kanapaha Middle School located in the southwest portion of GRU's service area. The recharge wetland will receive reclaimed water from the KWRF and stormwater. The middle school project is estimated to provide between 0.25 to 0.5 MGD of beneficial recharge and is expected to provide 0.15 to 0.3 MGD of benefit to the LSFR based on the NF model. As a result, the Kanapaha Middle School Project Impact Offset has the potential to make 0.25 to 0.5 MGD of additional allocation available to GRU. GRU is proposing to complete construction of the middle school project and begin recharge operation with reclaimed water within 5 years of the issuance of this permit. A permit condition limits the use of groundwater beyond 29.6 mgd, unless these two recharge projects are completed and fully operational. Since 0.4 mgd of the 0.75 to 1.5 mgd made available by these offset projects is proposed to offset the impact, the additional impact offset from these projects may be applied to an MFL prevention/recovery strategy adopted by the District or FDEP that is approved during the duration of this permit.

MFLs are currently in development for the LSFR, Ichetucknee River and associated springs. As a condition of this permit, GRU has agreed to participate in the development of the MFL prevention/recovery strategy for the LSFR.

Based on these data, SJRWMD staff have concluded that the applicant has provided reasonable assurance that the proposed withdrawals will not cause an unmitigated adverse impact on existing off-site land uses including crops, other vegetation and natural systems for the duration of this permit. Additionally, staff from SRWMD examined the proposed withdrawals and recharge projects as they relate to the potential for harm to wetlands and surface waters in the SRWMD and concluded that there was no anticipated impacts.

State Water Quality Standards – Section 2.3 (h):

Staff have evaluated whether GRU's use of groundwater from the Upper Floridan aquifer causes or contributes to a violation of state water quality standards in receiving waters of the state. GRU has current permits from FDEP for the operation of its two wastewater reclamation facilities, Main Street (FL0027251) and Kanapaha (FL0112895), and are subject to the NPDES program requirements. Therefore, the requirements of this section have been met.

Minimum Flows and Levels – Section 2.3(i) and 3.8:

The closest lake to the GRU wellfield with a minimum level established by the District's Governing Board is Lake Wauberg, located about 11 miles to the south. However, due to relatively high transmissivity values within the Upper Floridan aquifer in this area, GRU's calculated drawdown at Lake Wauberg from a 1995 reference condition is less than 0.048 feet. Similarly, GRU's individual drawdown using the 1995 basis at Lake Geneva, located about 15 miles to the east, is less than 0.050 feet. Staff have determined that the

proposed withdrawals of groundwater will not cause water levels in any lakes to fall below any of the MFLs established by the District within the recommended duration of the permit. However, this permit will require GRU to participate in the development of the MFL prevention/recovery strategy for the Keystone Heights Lakes.

Water Reserved From Use – Section 2.3(j) and 3.9:

The SJRWMD Governing Board has established a water reservation of average flow of 35 cubic feet per second (23 mgd) representing approximately 45% of the calculated historic flow of surface water through Prairie Creek and Camps Canal in order to protect the fish and wildlife utilizing Paynes Prairie State Preserve in conformance with Subsection 373.223(4), F.S. Staff have determined that the proposed withdrawals will not affect any water that has been reserved for use.

INTERDISTRICT TRANSFER OF GROUNDWATER:

A portion of the groundwater withdrawn in the SJRWMD is used within the SRWMD, but within the same county (Alachua County), therefore the transport from SJRWMD into SRWMD is not an "interdistrict transfer and use" as that term is defined in subsection 373.2295(1), F.S. However, that subsection provides that such a transport and use of groundwater from one District to another within the same county is still subject to subsections 373.2295(4), (11) and (13). Subsection 373.2295(4) specifies that in determining whether the application is consistent with the public interest, projected populations contained in the future land use elements of comprehensive plans adopted by local governments within the area of withdrawal and use, together with other evidence of future use, be considered. Subsection (4) further states that if the proposed transfer and use meets the requirements of Chapter 373 F.S., and if the needs of the area of use and the area of withdrawal can be satisfied, the permission to transfer and use the water shall be granted. In evaluating the application pursuant to subsection 373.2295(4), staff reviewed the population projections of local governments in the area of withdrawal and use, recognizing that all would seek to obtain additional groundwater. GRU will serve all of those populations except those on domestic self supply wells.

Subsection 373.2295(11), F.S., addresses local land use designations that may need to be changed to allow a proposed use and does so by empowering an applicant for a local land use change to appeal an adverse decision of a local government to the Land and Water Adjudicatory Commission, which can grant exceptions to a local comprehensive plan or ordinance. Subsection 373.2295(13) authorizes the Land and Water Adjudicatory Commission to overturn adverse decisions for local government development permits associated with transport and use. Neither subsection is applicable at this point in time and no adverse local land use decisions have occurred. A copy of the subject application, and any and all subsequent submittals, has been submitted to the SRWMD staff for review and comment. Comments concerning the application were received from the SRWMD staff and have been addressed in the review of this permit.

RECOMMENDATION and PERMIT DURATION:

Staff have concluded that the proposed use, as limited by the permit conditions set forth in this permit, is reasonable beneficial, will not cause interference with existing legal uses, and is consistent with the public interest. Therefore, staff recommends approval for this application for the requested 20-year permit duration.

WELL INFORMATION - Murphree WTP

Wells Detail								
Station ID	Station Name	Casing Diameter (inches)	Casing Depth (feet)	Total Depth (feet)	Capacity (GPM)	Source Name	Status	Use Type
3387	A1	24	173	530	3400	Upper Floridan aquifer	Active	Public Supply
3388	B2	24	185	475	3400	Upper Floridan aquifer	Active	Public Supply
3389	C3	24	217	540	5625	Upper Floridan aquifer	Active	Public Supply
3390	D4	24	190	545	3800	Upper Floridan aquifer	Active	Public Supply
3391	E5	24	190	500	4900	Upper Floridan aquifer	Active	Public Supply
3392	F6	24	189	521	2000	Upper Floridan aquifer	Active	Public Supply
3393	G7	24	181	534	2200	Upper Floridan aquifer	Active	Public Supply
3394	H8	24	180	538	3750	Upper Floridan aquifer	Active	Public Supply
3395	I9	24	180	365	3500	Upper Floridan aquifer	Active	Public Supply
3396	J10	16	180	275	2100	Upper Floridan aquifer	Active	Public Supply
22424	L12	24	167	466	2400	Upper Floridan aquifer	Active	Public Supply
22425	M13	24	209	499	4200	Upper Floridan aquifer	Active	Public Supply
22426	N14	24	180	470	4200	Upper Floridan aquifer	Active	Public Supply
22427	O15	24	177	470	4200	Upper Floridan	Active	Public Supply

						aquifer		
39525	P16	24	175	690	3820	Upper Floridan aquifer	Active	Public Supply
9526	Q17	24	N/A	N/A	N/A	Upper Floridan aquifer	Never Established	N/A
438338	K11	20	180	460	4860	Upper Floridan aquifer	Active	Public Supply

Monitoring Wells Detail						
Station ID	Station Name	Casing Diameter (inches)	Casing Depth (feet)	Total Depth (feet)	Source Name	Status
244317	Wetland B (center)	2	3	13.9	Surficial aquifer	Active
244318	Wetland C (center)	2	3	12.7	Surficial aquifer	Active
244319	Wetland D (center)	2	3	12.7	Surficial aquifer	Active
244320	Wetland E (center)	2	3	10.4	Surficial aquifer	Active
244321	Wetland F (center)	2	3	7.62	Surficial aquifer	Active
244322	Wetland G (center)	2	3	7.62	Surficial aquifer	Active
446921	Wetland B (edge)	2	3	18	Surficial aquifer	Proposed
446922	Wetland C (edge)	2	3	18	Surficial aquifer	Proposed
446923	Wetland D (edge)	2	3	18	Surficial aquifer	Proposed
446924	Wetland E (edge)	2	3	18	Surficial aquifer	Proposed
446925	Wetland F (edge)	2	3	18	Surficial aquifer	Proposed
446926	Wetland G (edge)	2	3	18	Surficial aquifer	Proposed
446927	Cluster MW3 - Surficial	2			Surficial aquifer	Active
446928	Cluster MW3- Hawthorn	2			Intermediate aquifer	Active
446930	Cluster MW6	2			Surficial	Active

	- Surficial				aquifer	
446931	Cluster MW6 - Hawthorn	2			Intermediate aquifer	Active
446932	Cluster MW6 - UFA	2			Upper Floridan aquifer	Active

Conditions

1. With advance notice to the permittee, District staff with proper identification shall have permission to enter, inspect, observe, collect samples, and take measurements of permitted facilities to determine compliance with the permit conditions and permitted plans and specifications. The permittee shall either accompany District staff onto the property or make provision for access onto the property.
2. Nothing in this permit should be construed to limit the authority of the St. Johns River Water Management District to declare a water shortage and issue orders pursuant to Chapter 373, F.S. In the event of a declared water shortage, the permittee must adhere to the water shortage restrictions, as specified by the District. The permittee is advised that during a water shortage, reports shall be submitted as required by District rule or order.
3. Prior to the construction, modification or abandonment of a well, the permittee must obtain a water well permit from the St. Johns River Water Management District or the appropriate local government pursuant to Chapter 40C-3, F.A.C. Construction, modification, or abandonment of a well will require modification of the consumptive use permit when such construction, modification, or abandonment is other than that specified and described on the consumptive use permit application form.
4. Leaking or inoperative well casings, valves, or controls must be repaired or replaced as required to eliminate the leak or make the system fully operational.
5. The permittee's consumptive use of water as authorized by this permit shall not interfere with legal uses of water existing at the time of permit application. If interference occurs, the District shall revoke the permit, in whole or in part, to curtail or abate the interference, unless the interference associated with the permittee's consumptive use of water is mitigated by the permittee pursuant to a District-approved plan.
6. The permittee's consumptive use of water as authorized by this permit shall not have significant adverse hydrologic impacts to off-site land uses existing at the time of permit application. If significant adverse hydrologic impacts occur, the District shall revoke the permit, in whole or in part, to curtail or abate the adverse

- impacts, unless the impacts associated with the permittee's consumptive use of water are mitigated by the permittee pursuant to a District-approved plan.
7. The permittee shall notify the District in writing within 30 days of any sale, transfer, or conveyance of ownership or any other loss of permitted legal control of the Project and/or related facilities from which the permitted consumptive use is made. Where permittee's control of the land subject to the permit was demonstrated through a lease, the permittee must either submit documentation showing that it continues to have legal control or transfer control of the permitted system/project to the new landowner or new lessee. All transfers of ownership are subject to the requirements of Rule 40C-1.612, F.A.C. Alternatively, the permittee may surrender the consumptive use permit to the District, thereby relinquishing the right to conduct any activities under the permit.
 8. A District-issued identification tag shall be prominently displayed at each withdrawal site by permanently affixing such tag to the pump, headgate, valve, or other withdrawal facility as provided by Rule 40C-2.401, F.A.C. The permittee shall notify the District in the event that a replacement tag is needed.
 9. The permittee's consumptive use of water as authorized by this permit shall not significantly and adversely impact wetlands, lakes, rivers, or springs. If significant adverse impacts occur, the District shall revoke the permit, in whole or in part, to curtail or abate the adverse impacts, unless the impacts associated with the permittee's consumptive use of water are mitigated by the permittee pursuant to a District-approved plan.
 10. The permittee's consumptive use of water as authorized by this permit shall not reduce a flow or level below any minimum flow or level established by the District or the Department of Environmental Protection pursuant to Section 373.042 and 373.0421, F.S. If the permittee's use of water causes or contributes to such a reduction, then the District shall revoke the permit, in whole or in part, unless the permittee implements all provisions applicable to the permittee's use in a District-approved recovery or prevention strategy.
 11. The permittee's consumptive use of water as authorized by the permit shall not cause or contribute to significant saline water intrusion. If significant saline water intrusion occurs, the District shall revoke the permit, in whole or in part, to curtail or abate the saline water intrusion, unless the saline water intrusion associated with the permittee's consumptive use of water is mitigated by the permittee pursuant to a District-approved plan.
 12. The permittee must implement the Water Conservation Plan submitted to the District on October 11, 2013, in accordance with the schedule contained therein.
 13. The permittee's consumptive use of water as authorized by the permit shall not cause or contribute to a violation of state water quality standards (existing at the time of permit issuance) in receiving waters of the state, as set forth in Chapters 62-3, 62-4, 62-302, 62-520, and 62-550, F.A.C., including any anti-degradation provisions of paragraphs 62-4.242(1)(a) and (b), subsections 62-4.242(2) and (3), and Rule 62-302.300, F.A.C., and any special standards for Outstanding

National Resource Waters set forth in subsections 62-4.242(2) and (3), F.A.C. If violations occur, the District shall revoke the permit, in whole or in part, to curtail or abate the violations, unless the violations associated with the permittee's consumptive use of water are mitigated by the permittee pursuant to a District-approved plan.

14. All consumptive uses authorized by this permit shall be implemented as conditioned by this permit, including any documents incorporated by reference in a permit condition. The District may revoke this permit, in whole or in part, or take enforcement action, pursuant to Section 373.136 or 373.243, F.S., unless a permit modification has been obtained to address the noncompliance. The permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.
15. This permit does not convey to the permittee any property rights or privileges other than those specified herein, nor relieve the permittee from complying with any applicable local government, state, or federal law, rule, or ordinance.
16. A permittee may seek modification of any term of an unexpired permit. The permittee is advised that Section 373.239, F.S., and Rule 40C-2.331, F.A.C., are applicable to permit modifications.
17. All submittals made to demonstrate compliance with this permit must include CUP number 11339-6, plainly labeled on the submittal.
18. This permit will expire on September 10, 2034.
19. Maximum annual groundwater withdrawals from the Upper Floridan aquifer for public supply use (which includes household, irrigation, commercial/industrial, fire protection, water utility, and unaccounted for losses) must not exceed 10,950.0 million gallons (30.0 mgd), except as provided for in condition No. 26 of this permit.
20. All groundwater withdrawal points must remain equipped with totalizing flow meters. These existing sources include: wells A1 (Station ID 3387), B2 (Station ID 3388), C3 (Station ID 3389), D4 (Station ID 3390), E5 (Station ID 3391), F6 (Station ID 3392), G7 (Station ID 3393), H8 (Station ID 3394), I9 (Station ID 3395), J10 (Station ID 3396), K11 (Station ID 438338), L12 (Station ID 22424), M13 (Station ID 22425), N14 (Station ID 22426), O15 (Station ID 22427), and P16 (Station ID 39525), as listed in the application. All flowmeters must measure within +/- 5% of actual flow, be verifiable and be installed according to the manufacturer's specifications.
21. Total withdrawals from existing wells A1 (Station ID 3387), B2 (Station ID 3388), C3 (Station ID 3389), D4 (Station ID 3390), E5 (Station ID 3391), F6 (Station ID 3392), G7 (Station ID 3393), H8 (Station ID 3394), I9 (Station ID 3395), J10 (Station ID 3396), K11 (Station ID 438338), L12 (Station ID 22424), M13 (Station ID 22425), N14 (Station ID 22426), O15 (Station ID 22427), and P16 (Station ID 39525), must be recorded continuously, totaled monthly, and reported to the

District at least every six months for the duration of this permit using Water Use Pumpage Report Form (EN-50). The reporting dates each year will be as follows:

Reporting Period	Report Due Date
January - June	July 31
July - December	January 31.

22. The permittee must have all flow meters checked for accuracy at least once every 10 years, specifically before April 30, 2023, and recalibrated if the difference between the actual flow and the meter reading is greater than 5%. Flow Meter Accuracy Report Form (EN-51) must be submitted to the District within 10 days of the inspection/calibration.
23. The permittee must maintain all flowmeters. In case of failure or breakdown of any meter, the District must be notified in writing within 5 days of its discovery. A defective meter must be repaired or replaced within 30 days of its discovery.
24. By September 30, 2019, or prior to exceeding 29.6 mgd on an 18-month rolling average, whichever occurs first, the permittee shall implement the two impact offset recharge projects identified in the permittee's response dated July 3, 2014, to satisfy the required water supply benefits to the Lower Santa Fe River (LSFR) as measured at the Fort White gage. These projects include:
 1. The Oakmont Recharge Wetland should provide 0.5 to 1.0 mgd of beneficial recharge at this site that will produce approximately 0.3 to 0.6 mgd of benefit to the LSFR, and
 2. The Kanapaha Middle School Wetland Recharge Project should provide 0.25 to 0.5 mgd of beneficial recharge that will produce approximately 0.15 to 0.30 mgd of benefit to the LSFR.Within 30-days of completion of each of the projects, the permittee shall notify the District in writing that the project is operational and the volume of water being directed to each project. If either of the proposed impact offset projects cannot be constructed or has been delayed, the permittee shall not exceed 29.6 mgd based on an 18-month rolling average until the projects are operational or alternative impact offset projects with an equivalent benefit, based on groundwater modeling, to the Lower Santa Fe River Basin have been constructed and are operational. Any additional impact offset that may be realized above the 0.4 mgd from these projects may be applied to an MFL Prevention/Recovery strategy adopted by the District or FDEP during the duration of this permit.
25. The permittee shall continue to implement the reuse of reclaimed water, in order to offset groundwater withdrawals, to the maximum extent possible, unless the permittee demonstrates that implementation is not technically, economically, and environmentally feasible. In implementing the use of reclaimed water to meet irrigation demands, the permittee must consider all feasible measures.
26. By January 31, 2014, and every year thereafter for the duration of the permit, the permittee shall submit an Annual Aquifer Recharge & Water Level Monitoring Report to the SJRWMD. The report must include the volume of water (total gallons) injected into each recharge well on a monthly basis at the Kanapaha Reuse Facility and the corresponding water levels referenced to

NAVD 88, taken on the last day of each month for each surficial aquifer and Floridan aquifer monitor well located on the site. Only essential text, graphs, and tables should be included in the report.

- 27. The permittee shall use the lowest quality water source, such as reclaimed water, surface/storm water, or alternative water supply, to supply the needs of the project when deemed feasible pursuant to District rules and applicable state law.
- 28. The permittee must ensure that all service connections are metered.
- 29. All irrigation shall be in conformity with the requirements set forth in subsection 40C-2.042(2), F.A.C.
- 30. The permittee must conduct hydrologic monitoring at each of the wetland areas listed below:

Monitoring sites:

- a. Wetland B (29° 42' 19" N, 82° 18' 29"W)
- b. Wetland C (29° 43' 21" N, 82° 18' 46"W)
- c. Wetland D (29° 44' 29" N, 82° 19' 03" W)
- d. Wetland E (29° 44' 58" N, 82° 18' 15" W)
- e. Wetland F (29° 44' 03" N, 82° 20' 18" W)
- f. Wetland G (29° 43' 43" N, 82° 18' 60" W)

Data must be collected for each of the sites listed above, and submitted electronically every six months to the District, utilizing the CUP Wetland Monitoring Template through the District's E-Permitting website. If the CUP Wetland Monitoring Template is not available, the data shall be submitted utilizing a District-approved format. Data collected must include:

- a) Weekly rainfall totals, obtained from the Gainesville Airport weather station. Submittal of any other rainfall data collection methods (e.g. available District Doppler radar data) must be pre approved by the District.
- b) Water levels (weekly without data loggers, daily with data loggers) from wetland monitoring wells:

District ID	Station Name
244317	Wetland B (center)
244318	Wetland C (center)
244319	Wetland D (center)
244320	Wetland E (center)
244321	Wetland F (center)
244322	Wetland G (center)
446921	Wetland B (edge)
446922	Wetland C (edge)
446923	Wetland D (edge)

446924	Wetland E (edge)
446925	Wetland F (edge)
446926	Wetland G (edge)
446927	Cluster MW3 - Surficial
446928	Cluster MW3- Hawthorn
446930	Cluster MW6 - Surficial
446931	Cluster MW6 - Hawthorn
446932	Cluster MW6 - UFA

c) Weekly production well water use data (each well) in million gallons.

Data collected January through June must be submitted on or before August 31st of each year. Data collected July through December must be submitted on or before February 28th of each year. Water level data (measured weekly without data loggers or daily with data loggers) must be recorded by the permittee for each wetland monitoring site and must be reported as an elevation relative to North American Vertical Datum (NAVD) of 1988.

31. The permittee must conduct hydrologic monitoring at the wetland areas identified in Wetlands B through G, as defined in condition 32. Water level monitoring must be initiated at all new monitoring locations by June 30, 2015.

New monitor wells for wetlands B through E, and wetland G must be located in uplands near the upland/wetland interface. The monitoring well design and specific locations must be approved in writing by District staff prior to well construction. Monitoring well depths must be at least 15 feet below the seasonal high water elevation unless prohibited by subsurface geologic conditions. The monitor wells must be installed by or under the supervision of a licensed water well contractor. All monitor wells shall be surveyed for top of casing (TOC) vertical elevation to an accuracy of +/- 0.01 foot relative to the North American Vertical Datum (NAVD) of 1988, and horizontal position in degree minute second (DMS) coordinates (YY⁰YY'YY.YY" North latitude, XX⁰XX'XX.XX" West longitude) relative to the North American Datum (NAD) of 1983.

32. Within 60 days upon completion of wetland site monitoring well installations, a Water Well Completion Report shall be submitted that includes for each well:

- a) Latitude/longitude degree minute second (DMS) coordinates (YY⁰YY'YY.YYYY" N, XX⁰XX'XX.XXXX" W relative to NAD 1983),
- b) Top of casing elevation (feet NAVD 1988),
- c) Ground surface elevation (feet NAVD 1988),
- d) Top of screen depth (feet below ground surface),
- e) Bottom of screen depth (feet below ground surface),
- f) Depth to groundwater (feet below ground surface),
- g) Total depth of well (feet below ground surface),
- h) Mapped well location and
- i) Lithologic description of subsurface soil profiles.

33. By August 31, 2015, the permittee must submit to the District a detailed baseline monitoring report of the wetland hydrology and overall conditions, for wetlands (B) through (G), for the period from date of permit issuance to June 30, 2015, for all monitored wetlands. The baseline wetland monitoring report shall be submitted to the District utilizing the CUP Wetland Monitoring Template available through the District's E-Permitting website. If the CUP Wetland Monitoring Template is not available, the baseline report shall be submitted utilizing a District-approved electronic format. The purpose of the monitoring will be to document and assess the physical and hydrologic condition of the wetlands. The permittee must coordinate with District staff to provide the following information:
- a. Certified survey of location and elevation of limits of surface waters/wetlands as verified by District staff, pursuant to 62-340, Florida Administrative Code (FAC) at multiple points (typically a minimum 3 points) around perimeter of the wetlands to be monitored.
 - b. Complete description of vegetation, hydrologic indicators and hydric soil indicators of each delineated point.
 - c. Complete soil profile description at each surface water/wetland delineated point. (Reference "Field Indicators of Hydric Soils in the United States"; USDA, NRCS).
 - d. Identification and delineation of the landward extent of where a hydric soil indicator occurs at the soil surface, if it is not at the wetland boundary point. A complete soil profile description must be provided. Certified survey of location and elevation must be submitted.
 - e. Identification and delineation landward extent of where a muck soil indicator (if present) occurs at the soil surface, if it is not at the wetland boundary point. A complete soil profile description must be provided. Certified survey of location and elevation must be submitted.
 - f. Identification of ordinary high water elevation (typically minimum of 3 data points) at each surface water/wetland boundary point. Certified survey of location and elevation for each data point.
 - g. Photo documentation of items 1 through 6 above, including photographs of the surrounding area at each cardinal direction (e.g. north, east, south and west).
 - h. Weekly rainfall data collection for monitoring period.
 - i. Continuous recording of groundwater elevations from the wetland monitoring piezometers, for stations equipped with data loggers and weekly recording for stations measured manually.
34. A recurring hydrological and vegetative wetland monitoring report shall be submitted to the District every five (5) years subsequent to the baseline monitoring event. The five-year reports shall be submitted no later than August 31 of the submittal year and include the information, as described in as described above. The five-year reports shall be submitted to the District utilizing the CUP Wetland Monitoring Template through the District's E-Permitting website. If the CUP Wetland Monitoring Template is not available, the five-year reports shall be submitted utilizing a District-approved format.

The recurring hydrological and vegetative wetland monitoring reports must include graphs summarizing the water level data, collected rainfall data and wellfield pumpage data. The elevation of the upland/wetland interface must be

indicated on the graphs. In addition, the report must include a brief analysis and discussion of trends and wetland health as well as any changes occurring at the location of the hydrologic data points identified above. A double mass analysis and/or a time series analysis of rainfall, well levels, and elevations of data collection points must be included for each well and monitoring location.

35. By September 30, 2019, and every five years thereafter, the permittee must meet with District staff to confirm the approach and specifics of the wetland monitoring plan for the next five year period. By February 28, 2020, and every five years thereafter, if proposed, the permittee must provide any changes to the wetland monitoring plan to the District for review and written approval. Any reevaluation of the wetland monitoring plan shall be completed using the most recently collected well and aquifer data for comparative purposes and may require using a District approved model to reevaluate impacts of predicted drawdown within the surficial aquifer in the area of the wellfield to substantiate the need for any modifications of the monitoring plan.

36. If the permittee is unable to obtain or maintain legal access to any of the monitoring sites referenced above, the permittee must notify SJRWMD in writing within 15 days of concluding that access to any specific site is not possible. Within 45 days of this notification, the permittee must submit an alternative site to modify the monitoring network. Within six months of SJRWMD approval of the monitoring network modification, the permittee must implement the approved change(s).

37. Within 60 days upon completion of wetland site monitoring well installations, monitor wells Wetland A (center) Station ID 244316 and Wetland H (center) Station ID 244323, must be properly abandoned by a licensed water well contractor. A water well completion report must be submitted after completion of the work.

38. The permittee is on notice that following the adoption of the Minimum Flows and Levels (MFL) for the Lower Santa Fe River, Ichetucknee River and Associated Springs that this permit is subject to modification, during the term of the permit, upon reasonable notice by the District to the permittee, to achieve compliance with any approved MFL recovery or prevention strategy for these waterbodies.

39. The permittee shall participate in developing and implementing any MFL prevention/recovery strategy approved by the Governing Board for the Clay/Putnam Lakes (i.e., Lakes Brooklyn, Geneva, Grandin and Cowpen) or approved by the Florida Department of Environmental Protection for the Lower Santa Fe River and Ichetucknee Rivers and Associated Priority Springs. The permittee's participation in developing and implementing an approved MFL prevention/recovery strategy shall be limited to offsetting or mitigating the impact of the permittee's groundwater allocation and shall not extend to offsetting or mitigating the impact of other water uses or changes and structural alterations to the watershed, surface water, and aquifers and the effects that such changes or alterations have had or will have, and the constraints that such changes or alteration have placed or will place, on the hydrology of the affected watershed. If

approved as part of the regional water supply plan or plan amendment, and adopted by rule, if required, such a prevention/recovery strategy may include without limitation any of the following actions or combinations of them:

- a) Identifying and developing additional water supplies and other actions, consistent with the authority granted under chapter 373;
- b) Promulgation of a rule or orders setting forth phasing or a time table, which will allow for the provision of sufficient water supplies for all existing and projected reasonable-beneficial uses, including development of additional water supplies and implementation of conservation and other efficiency measures concurrent with, to the extent practical, and to offset, reductions in permitted withdrawals, consistent with the provisions of chapter 373;
- c) Actions taken by the District or water users, which cause any lake with in the Clay/Putnam area to meet their minimum levels established in rule chapter 40C-8;
- d) Elimination or reduction of permitted water uses; or
- e) A lake impact avoidance/mitigation plan approved by the District, which by surface water augmentation, groundwater recharge, alternative water supply sources or other means offsets or mitigates the impact of the permittee's groundwater allocation on any Clay/Putnam area lake.

The District shall revoke the permit in whole or in part, if the permittee fails to implement its portion of any approved prevention/recovery strategy for any of these waterbodies in accordance with the schedule included in the strategy, as required by this condition.

40. The permittee shall submit to the District a compliance report pursuant to subsection 373.236(4), Florida Statutes, ten years from the date of issuance of this permit. Specifically, the compliance report shall be submitted by September 9, 2023. The report shall contain sufficient information to demonstrate that the permittee's use of water will continue, for the remaining duration of the permit, to meet the conditions for issuance set forth in the District's rules that existed at the time the permit was issued for 20 years by the District. At a minimum, the compliance report must:

(a) Meet the submittal requirements of section 4.2 of the Applicant's Handbook: Consumptive Uses of Water, [insert date of current AH];

(b) Verify that the permittee is using all available lowest quality sources of water to supply the needs of the project;

and

(c) Demonstrate that the allocation is needed for efficient water use.