

Implementation of Section 373.4597, F.S.

The Geneva Freshwater Lens Protection Act

Prepared by
St. Johns River Water Management District
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Executive Summary

The Task Force provided recommendations to several different entities, including the following:

- Florida Legislature
- Florida Department of Environmental Protection (FDEP)
- Florida Department of Health and Rehabilitative Services (HRS)
- St. Johns River Water Management District (SJRWMD)
- Seminole County
- Florida Department of Agriculture and Consumer Services (DACS)
- Florida Department of Transportation (FDOT)

This report provides a brief update on recommendations that were directed to the SRJWMD. In addition, comments are included that were received from DEP regarding recommendations that were directed to that agency.

Status of SJWMD Implementation of Section 373.4597, F.S.

Section 373.4597, F.S., directs SJRWMD to delineate the Geneva Freshwater Lens by rule. On this issue the Legislature deviated from the recommendation of the Task Force. The Task Force recommended using the 20 foot NGVD contour from the USGS quadrangle map as a preliminary boundary, to be used as a starting point in delineation of the actual boundary of the freshwater lens. However, the statute describes the boundary of this area being the 20 foot NGVD contour on the USGS quadrangle map. In other words, the Legislature has already set forth with great specificity the boundary of the Geneva Freshwater Lens and further clarity would not be provided by SJRWMD adopting this map by rule.

The Legislature further directed SJRWMD to continue to implement the recommendations contained in the Task Force report. Many of the Task Force recommendations were for actions that would have required specific statutory authority, but section 373.4597, F.S., did not provide such specific statutory authority. Other recommendations requested funding from the State for different activities. Funding requests were prepared and submitted, but no funds were forthcoming from the State.

Although the SJRWMD was not able to implement some of the Task Force rule making recommendations due to lack of specific statutory authority, the major issues identified by the Task Force have been addressed. SJRWMD has constructed monitoring wells in the Geneva Freshwater

Lens area in order to better understand the aquifer characteristics in this area (See Task Force recommendation 17). Also, the SJRWMD has developed a regional groundwater flow model that includes all of Seminole, Orange, and Volusia counties that is used to evaluate the cumulative impact of groundwater withdrawals in central Florida (see Task Force recommendation 5). This work goes far beyond the Task Force recommendations, and comprehensively addresses their concerns over the potential for cumulative impacts of groundwater withdrawals in the Geneva Freshwater Lens area. This model was used to develop the regional water supply plans for 2000 to 2020 and 2005 to 2025 time periods. The model is used in the evaluation of applications for consumptive use permits in east central Florida and the model was used as the basis of recent consumptive use permit (CUP) rule revisions that require major water users in the Central Florida Coordination Area (CFDA) to implement alternative water supplies by 2013. The CFCA includes all of Seminole County, the portions of Osceola and Orange Counties within SJRWMD, and the southern portion of Lake County. Notably, the CFCA rule is intended to implement a regulatory strategy to limit groundwater withdrawals in order protect against adverse impacts on the water resources of central Florida (including in the Geneva Freshwater Lens area) due to the consumptive use of water. Saltwater intrusion was a primary consideration in the CFCA rule provisions.

Background

In 1993, the Legislature recognized the importance of the Geneva Freshwater Lens and the need to coordinate and possibly modify the management actions of local, regional and state government entities. The Legislature created the Geneva Freshwater Lens Task Force was created by CS/HB 1343 (1993) to prepare a report to the Legislature to evaluate the adequacy of current planning, regulatory and other programs and make recommendations for future management of the Geneva Freshwater Lens, including:

1. Whether any additional studies are needed to assess the resource and its protection needs.
2. Whether any additional planning, regulatory, or other measures are needed to properly manage the resource.
3. Whether any legislation is needed to authorize those measures.

In December 1993, the task force submitted their report to the Legislature. This report contains 52 specific recommendations. The report's Executive Summary states in part:

The overall management of the Geneva Freshwater Lens for the public benefit will be best served through the timely implementation of all of the Task Force recommendations. Certain of these recommendations are most critical, requiring the special attention of the Legislature (Section 4.1).

Recommendation 17 is one of the most critical elements in the report. The development and implementation of the hydrogeologic investigations are necessary for building sound management strategies for the Geneva Freshwater Lens, as identified in several other Task Force recommendations, including the following:

- *Delineation and monitoring of the freshwater-saltwater interface;*
- *Location of confining units that separate the surficial and Upper Floridan aquifers;*

- *Identification and protection of specific recharge features,*
- *Development of an interactive hydrogeologic model for use in cumulative impact analyses of ground water withdrawals*

The Task Force recommends that the Legislature direct the St. Johns River Water Management District to initiate these investigations (outlined in Appendix E), and for the Legislature to support the accelerated implementation schedule through the allocation of funds to the District for the express purpose of completing these investigations in a timely manner.

The Task Force has recognized that the Geneva Freshwater Lens is an isolated, sole source aquifer in the rapidly growing Central Florida region, and that the exportation of this limited resource outside the Geneva Freshwater Lens area is not a desirable management practice. Currently, if an applicant demonstrates consistency with the criteria of the consumptive uses of water regulatory program (Chapter 40C-2, F.A.C.), the St. Johns River Water Management District does not have the statutory authority to deny such exportation. The Task Force recommends that the Legislature consider an amendment to Part II of Chapter 373 of the Florida Statutes to give the District the specific authority to implement Recommendation 2 for the Geneva Freshwater Lens. . . .

In 1995, the Legislature enacted section 373.4795, Florida Statutes, which directs state agencies (note that SJRWMD is not a state agency) to act by July 1, 1996 upon recommendations of the task force that require rule amendments, unless otherwise noted in the report. The legislation directs the St. Johns River Water Management District to:

1. Delineate the Geneva Freshwater Lens by rule, based upon the 20 foot NGVD contour of the recharge area prior to development, using a static line and based on the quadrangle maps referenced in the United States Geological Survey Report titled "Water Resources Investigation 86-4078."
2. Continue to implement the recommendations contained in the report.

Other Legislative enactments should also be considered in conjunction with section 373.4795, F.S. In 1995, the Legislature enacted section 70.001, F.S., otherwise known as the "Bert J. Harris, Jr., Private Property Rights Protection Act," which makes regulatory entities responsible for reimbursement of certain costs to the public of new regulations that inordinately burden existing property rights. In 1996, the Legislature enacted a comprehensive revision of Chapter 120, F.S., the Administrative Procedures Act (APA). Among other things, the revision to the APA provided that specific statutory authority is needed for an agency (such as SJRWMD) to adopt a rule. (See sections 120.52(8) and 120.536(1), F.S.). In 1997, the Legislature enacted section 373.0361, F.S., which requires the water management districts to develop regional water supply plans.

Task Force Recommendations

The recommendations (and commentary) from the Task Force report directed to SJRWMD or FDEP are quoted below (appearing as indented/italicized paragraphs). Following each quoted recommendations/commentary is the status of implementation for that item by SJRWMD

(appearing as un-indented paragraphs). Where appropriate, comments from FDEP are also provided.

3.0 ISSUES AND RECOMMENDATIONS

The Task Force, after hearing technical presentations, discussing the technical issues and receiving testimony from the residents of the Geneva Freshwater Lens area, evaluated the issues and developed a series of recommendations for the management and protection of the Geneva Freshwater Lens. The first, and most basic issue to be acted upon by the Task Force was the delineation of the Geneva Freshwater Lens. All of the other recommendations, generally, are grouped in two categories - water quantity and water quality. All of the issues and recommendations are summarized in the matrix found in Appendix D.

3.1 Preliminary Lens Recharge Area Delineation

Recommendation 1. That the "Preliminary Lens Recharge Area Delineation" be based on the 20 ft (NGVD) contour prior to development, using a static line, based on the quadrangle maps referenced in the United States Geological Survey Report titled "Water Resources Investigation 86-4078" and that within the 20 foot contour line that delineates the lens recharge area additional resource sub-areas be identified, as further information is obtained.

This preliminary delineation (Figure 1) is based on the information that is available today, generally that the 250 mg/l chloride isochlor has a close correlation to the 20 ft contour elevation. The Task Force recognizes that a preliminary delineation is necessary to implement any other recommendations, but that additional field data, and the refinement of hydrogeologic models may result in adjustments to this delineation, and the identification of resource sub-areas, such as areas of highest recharge, areas lacking distinct confining materials between the surficial and Upper Florida aquifers, or natural features like sinkholes.

Status on Recommendation 1: The Legislature defined the Geneva Freshwater Lens with such specificity, by referencing the 20 foot NGVD contour on the USGS quadrangle map, that further explanation or refinement of the delineation by rulemaking was unnecessary.

3.2 Water Quantity

This group of recommendations revolves around the central issue of managing the Geneva Freshwater Lens as a water supply. The characteristics of withdrawals, recharge and changing land uses could affect the quantity of water available in the future. The relationships between the District's Consumptive Uses, Water Well Construction and Surface Water Management regulations (40C-2, 40C-3 and 40C-4 F.A.C.) and the County's Comprehensive Plan and Land Development Code are critical to the recommended management strategies.

Recommendation 2. That the exportation of water from the Geneva Freshwater Lens Recharge area to outside of the recharge area be prohibited, unless previously permitted or adjudicated. (Legislative Action required)

Exportation from the Geneva Freshwater Lens area will result in a net reduction in supply within the area of the lens. Currently the SJRWMD does not have statutory authority to prohibit exportation of water, if consumptive uses of water permitting criteria are met. Legislative action would be required to implement this recommendation.

Status on Recommendation 2: The Legislature did not act on this recommendation. In 1997, the Legislature enacted the “Local Sources First” requirement of in section 373.223(3), F.S., that provides additional regulatory requirements for transfer of water from one county to another, but there are no such limitations for transfers of water from one area to another within a county. Nonetheless, the SJRWMD has developed a regional water supply plan for areas including the Geneva Freshwater Lens which evaluates proposed water supply needs within a 20 year planning period and which lists potential sources of water to meet these needs. Within all of Seminole, Orange and Volusia Counties the SJRWMD currently projects that alternative sources of water (other than fresh ground water) will need to be developed by 2013 in order to provide sufficient water for future growth. SJRWMD has recently adopted consumptive use permit (CUP) rule revisions that require major water users in central Florida (the Central Florida Coordination Area or “CFCA”) to implement alternative water supplies by 2013. Notably, the CFCA rule is intended to implement a regulatory strategy for protecting against adverse impacts on the water resources of central Florida (including in the Geneva Freshwater Lens area) due to the consumptive use of water, which addresses a major concern of the Task Force.

DEP comment on Recommendation 2: Prohibiting exporting water from the Lens recharge area - as noted this requires legislative authority. I (Jim S.) am not aware that DEP or the District or the legislature has ever proposed legislation providing such authority. The only thing I can find in my legislative tracking records back to 1995 is the 1995 act.

Recommendation 3. That prior to the issuance of any surface water management or consumptive use permit (by the SJRWMD or FDEP), applicants must obtain a certification from Seminole County that the proposed project is consistent with the comprehensive plan and any zoning ordinances; and prior to issuance of any final development orders or building approvals by Seminole County, the County will require that applicants obtain any necessary surface water or consumptive use permits from the SJRWMD (or FDEP.) (Require changes to SJRWMD rules & Seminole County ordinances)

Better coordination between the SJRWMD and Seminole County will result in better resource management. The Task Force looked to a similar provision in the SJRWMD's regulations regarding the Wekiva River Hydrologic Basin, which requires "Local Government Notification".

Status on Recommendation 3: The Legislature did not provide SJRWMD with specific statutory authority to implement this recommendation. In section 373.415(2), F.S., the Legislature set forth specific statutory authority for such a requirement for the Wekiva River Protection Area.

Recommendation 4. That the SJRWMD develop a model of the ground water system of the Geneva Freshwater Lens area to implement in the Consumptive Use permitting program for the consideration of cumulative impacts to the Geneva Freshwater Lens area. (Requires changes to SJRWMD rule)

Status on Recommendation 4: SJRWMD developed a regional-scale ground water flow model of the east-central Florida (ECF) area that has been used by the Consumptive Use Permitting Program to estimate potential cumulative impacts throughout Orange and Seminole counties, including the Geneva Freshwater Lens (Lens) area. The results of numerous predictive simulations indicated no significant lowering of the Upper Floridan aquifer potentiometric surface within the Geneva Lens area due to projected future withdrawals located outside of the Lens. Documentation of the ECF regional model can be found in SJRWMD Technical Publication SJ2002-3 available at: <http://www.sjrwmd.com/technicalreports/tpubs1.html#2002>. Model datasets are also available from the SJRWMD website at: <http://www.sjrwmd.com/groundwaterassessment/models.html>.

Under existing SJRWMD CUP rules, permit applicants must demonstrate that their proposed use of water will not cause or contribute to unacceptable harm due to cumulative impacts. SJRWMD staff and permit applicants use the ECF regional model or other equivalent models to evaluate potential harm due to cumulative impacts of their water withdrawals. Therefore, SJRWMD's existing rules are adequate to address the intent of this recommendation.

Recommendation 5. That the SJRWMD develop specific criteria for the evaluation of cumulative impacts in the Geneva Freshwater Lens area through the Consumptive Use (CUP) rule (40C-2, F.A.C.) including (a) the movement of the saline-freshwater transition zone, and (b) impacts to legal existing users. Furthermore, the Task Force recommends that these cumulative impact criteria be established in 40C-2, F.A.C. within one (1) year of the completion of the revisions to the ground water model of the Geneva Freshwater Lens. (Requires changes to SJRWMD rule)

A limiting factor for water supply in the Geneva Freshwater Lens area is the chloride concentration of the ground water. The distribution and amount of withdrawals could affect existing legal users of the lens. An active model, based on improved data collection, would be an important tool in evaluating the possible impacts of withdrawals. Once the model is developed, it can be a strong tool in the SJRWMD's efforts to evaluate the possible impacts of proposed uses of the Geneva Freshwater Lens.

Status on Recommendation 5: The SJRWMD has developed a regional groundwater model of east central Florida, including the Geneva Freshwater Lens area, in order to assess cumulative impacts of water withdrawals. Existing SJRWMD rules have comprehensive criteria that prevents significant salt-water intrusion and interference with existing legal uses. Therefore, the intent of this recommendation is being met by existing rules. No further rulemaking is required.

Recommendation 6. That the SJRWMD and Seminole County cooperate to distribute materials on xeriscaping to residents of the Geneva Freshwater Lens area.

Status on Recommendation 6: SJRWMD provided materials to Seminole County soon after enactment of the Geneva Freshwater Lens Protection Act (section 373.4597, F.S.) and understands that the County distributed these materials.

Recommendation 10. That when a proposed project, which requires a surface water management permit (MSSW or stormwater discharge) and a CUP, the surface water management permit should be issued only upon issuance of the CUP. (Requires changes to SJRWMD rules)

The Task Force recognizes that regulatory coordination is important in resource management. In the case of the Geneva Freshwater Lens, availability of water is the critical issue, and the SJRWMD should organize its regulatory efforts accordingly.

Status on Recommendation 10: In section 373.4597, F.S. the Legislature did not provide specific statutory authority for SJRWMD to implement this recommendation. For example, in section 373.427, F.S., the Legislature authorized SJRWMD to concurrently process Environmental Resource Permits and authorizations to use state owned submerged lands under chapters 253 and 258, F. S.

Recommendation 11. That the SJRWMD and Seminole County delineate areas of high recharge and storage within the Geneva Freshwater Lens, and that the SJRWMD, Seminole County and appropriate state agencies develop appropriate protective measures for these areas, as they are delineated. (Requires rule/ordinance changes for County, SJRWMD, FDEP, and HRS)

Certain natural features within the Preliminary Lens Recharge Area Delineation are most important for recharge and the storage of surface water. This recommendation reinforces the recommendation, made within the Task Force's recommended delineation, to continue to investigate the nature of the recharge area, and delineate sub-areas. The proposed hydrogeologic study of the Geneva Freshwater Lens will refine the delineation of the lens and sub-areas within the lens. Any resource protection/management strategies that result from the hydrogeologic study will need to be specific to the Geneva Freshwater Lens, while recognizing any recharge criteria developed by the Statewide Recharge Task Force. The development of additional protective measures should consider the degree to which (a) changes in land use affect the quantity of recharge; (b) stormwater retention and detention systems can provide for recharge of rainfall runoff resulting from changes in land use without resulting in unacceptable water quality impacts; and (c) varying land use practices in recharge areas affect the quality of ground water.

Status on Recommendation 11: The SJRWMD district-wide map of recharge areas and rates of recharge to the Floridan aquifer published by Boniol et al (1993) was updated in 2005. The updated map is available for download at:
<http://www.sjrwmd.com/groundwaterassessment/recharge.html>. A county-level map of

significant recharge areas, prepared in 2001, is also available, in addition to a county-level map of rates and areas, titled Recharge Areas of the Floridan Aquifer: Seminole County, Florida (1996). These maps have been provided to Seminole County. These maps are considered adequate to meet the requirements for a local map of recharge rates and areas, and specific sub-areas within the Geneva Lens, as described in the recommendation. Current SJRWMD rules include adequate protective measures for these areas.

DEP comment on Recommendation 11: Identify and protect recharge areas - In order to apply any additional protection measures the Department would need to adopt by rule areas delineated as high recharge and storage. It also appears that the Task Force wants to impose more stringent protective measures on the “Preliminary Lens Recharge Area Delineation” while they refine and adjust the delineation and identify sub-areas. It would be very difficult to adopt a preliminary zone.

Recommendation 12. That the SJRWMD modify its MSSW rule (40C-4, F.A.C.) to prevent the reduction in recharge to the Geneva Freshwater Lens. (Requires changes to SJRWMD rules)

Surface water management practices could affect the recharge characteristics of a site. Certain designs protect recharge characteristics. Recommendation 12 is meant to provide interim measures for reasonably maintaining recharge quantity and quality, as related to proposed land development, until the comprehensive effort of Recommendation 11 is completed.

Status on Recommendation 12: In the enactment of section 373.4597, F.S., the Legislature did not provide specific statutory authority for the SJRWMD to adopt a rule to prevent a reduction in recharge to the Geneva Freshwater Lens. However, on October 3, 1995 the Environmental Resource Permitting (ERP) rules took effect within SJRWMD. These rules require that surface and ground water quality standards adopted by the FDEP not be violated by the construction, alteration, operation or maintenance of a surface water management system. The most common form of stormwater treatment utilized in the Geneva Freshwater Lens area is retention. Retention ponds work by collecting stormwater from developed areas and infiltrating the water into the aquifer. This serves to protect the area’s recharge.

Recommendation 13. That the SJRWMD or Seminole County implement a well registration program, requiring all well owners in the Geneva Freshwater Lens area to register wells in a time not to exceed two (2) years. The well registration should include all relevant information on the wells and their uses. (Requires changes to SJRWMD rules & County ordinances)

Status on Recommendation 13: SJRWMD does not have statutory authority for a “well registration” program. SJRWMD does have authority to regulate the construction of wells, unless the well construction is exempt from regulation. SJRWMD has statutory authority to regulate the consumptive use of water from non-domestic wells and within this existing permitting program SJRWMD collects information on the location and capacities of regulated wells. However, some consumptive uses of water are exempt from regulation and in these instances SJRWMD cannot require the owners to “register” the wells. Also, SJRWMD has granted general permits to many

existing owners of small wells. These general permits were by rule and did not require the submission of applications and therefore it would not be practical to “register” these small wells.

SJRWMD regulates the construction of all wells. For many wells that are less than 6 inches in diameter, a permit application is not required in advance of the construction of the well, but the well must be constructed by a licensed water well contractor, the contractor is required to construct the well in accordance with water well construction rules, and the contractor is required to submit a completion report to the District. The completion report contains all the relevant information on the wells and their uses and essentially acts as a form of “registration.

Recommendation 14. That the SJRWMD modify its Water Well Construction (40C-3 F.A.C.) rule's threshold to a 0 inch diameter, and require that all new wells obtain a water well construction permit. (Requires changes to SJRWMD rules)

Status on Recommendation 14: SJRWMD’s general threshold for water well construction permits is six (6) inches in diameter or greater. When SJRWMD delegates water well construction permitting to local health departments, such delegation is for all wells that are subthreshold (less than six (6) inches in diameter) except those wells for Public Supply or those wells within a DEP delineated area under Chapter 62-524. SJRWMD has developed formal delegation agreements to have the local health departments regulate the smaller wells that are not currently required to obtain a permit from SJRWMD prior to construction. SJRWMD has been negotiating with the Seminole County Department of Health regarding such a delegation. However, this delegation remains incomplete. If SJRWMD can succeed in delegating the regulation of water well construction to the Seminole County Department of Health, such delegation would accomplish the intent of this recommendation.

Recommendation 15. That the SJRWMD develop specific water well construction criteria designed to provide higher levels of protection for wells, which are currently regulated and unregulated by 40C-3 F.A.C., to be constructed within the Geneva lens. (Requires changes to SJRWMD rules)

Status on Recommendation 15: Special well construction criteria for the Geneva Freshwater Lens area have been developed conceptually, and the District is working to develop appropriate maps and rulemaking language to reflect these criteria.

Recommendation 16. That the SJRWMD amend 40C-3 F.A.C. to include special construction criteria for maximum depth, using data collected for the preparation of the analytical model of the lens. (Requires changes to SJRWMD rules)

Currently the SJRWMD's rules do not apply to certain classes of small wells. These types of small wells represent a significant portion of the current withdrawals from the Geneva Freshwater Lens, and it is estimated that these withdrawals will represent an even larger percentage in the future. To better manage the lens, knowledge of these small wells is critical. Well construction methods, including depth, are important in understanding and managing the freshwater - saltwater interface of the Geneva Freshwater Lens. The Task Force recognizes that Recommendations 13 through 16 target small users of water, generally private residences, and that the SJRWMD

should modify the well construction rule with a sensitivity to an efficient, timely process that does not place an undue burden on the regulated public.

Status on Recommendation 16: (Same as 15 above) Special well construction criteria for the Geneva Freshwater Lens area have been developed conceptually, and the District is working to develop appropriate maps and rulemaking language to reflect these criteria.

Recommendation 17. That the SJRWMD develop and implement additional hydrogeologic investigations, including data collection, ground water model development, and the investigation of the relationship between land uses and the rates of recharge for the Geneva Freshwater Lens area, in northeast Seminole County. Any well drilling and testing associated with these investigations should be conducted by the SJRWMD. The SJRWMD shall, also, investigate the feasibility of the installation of metering devices on domestic wells.

Status on Recommendation 17: Two new observation well clusters were located within the Geneva Lens area and constructed in 1996. Each of these monitoring stations contains four observation wells completed at different depths in the surficial, intermediate, and Floridan aquifers. These wells, along with the eight observation wells that existed in 1993, have continued to be monitored for water levels and water quality. Construction reports describing these observation well clusters are available from SJRWMD's Division of Groundwater Programs. Geneva Lens monitoring data is also available from SJRWMD's Division of Groundwater Programs.

The SJRWMD has developed a regional groundwater flow model that includes the Geneva Freshwater Lens area as a task within the overall development of the regional water supply plan development required by section 373.0361, F.S. In the development of this model, the SJRWMD has evaluated the relationship between land uses and recharge rates as well as other hydrologic characteristics of the Floridan aquifer in east central Florida.

Some of the wells in the Geneva area have consumptive use permits, which require the permittee to monitor and report water use. However, the vast majority of wells in the Geneva area are domestic wells that are statutorily exempt from consumptive use permit regulation pursuant to section 373.219(1), F.S., and thus are not required to monitor or report water use. Therefore, the District does not have statutory authority to require metering of these uses by domestic wells.

Recommendation 18. That the SJRWMD develop a plan and budget to carry out the research needs necessary for the implementation of protective measures, and that the Florida Legislature allocate funds to accelerate the necessary collection and analyses of these data.

The Task Force recommends that the SJRWMD develop and implement additional hydrogeologic investigations, including data collection, ground water model development, and the investigation of the relationship between land uses and the rates of recharge for the Geneva Freshwater Lens area, in northeast Seminole County. Any well drilling and testing associated with these investigations should be conducted by the SJRWMD. The SJRWMD should design and implement a pilot

study to investigate the quantities of water used for domestic purposes.

Previous investigations of the Geneva Freshwater Lens have given us the limited knowledge that exists on this resource. The long-term management of the Geneva Freshwater Lens, which is relied upon by the residents of the Geneva Freshwater Lens area, will necessitate refinement of our knowledge. Appendix E contains the draft plan and budget requested by the Task Force. Appropriation of funds by the Legislature would allow the SJRWMD to accelerate these critical investigations.

Status on Recommendation 18: A proposal for additional hydrogeologic investigations, including further lens delineation and ground water monitoring, with a projected approximate budget, was drafted in October of 1993 and included with the Task Force report as Appendix E. The Legislature has not allocated funds to accelerate the necessary collection and analyses. Regardless, observation well clusters and associated testing were completed at two of the three sites proposed in Appendix E of the Task Force Report. SJRWMD was unable to secure an appropriate easement for the third site, which is located on private property. Because of the difficulty in securing an easement and because of the lack of legislative funding, work at the third site has not been accomplished. If SJRWMD can obtain sufficient property easements for the third site, SJRWMD is prepared to perform the additional work. Monitoring at the eight observation wells that were existing at the time of the report has continued. Monitoring data is available from SJRWMD's Division of Groundwater Programs.

Recommendation 20. That the Florida Department of Environmental Protection (FDEP) and/or Seminole County implement a registration program for fuel and other petroleum storage tanks, and that this registration program require tank registration within two (2) years for all tanks that are unregulated or exempt from 17.761 or 17-762 F.A.C. Tank registration should include size, use and approximate age of tanks. (Requires changes to FDEP rule and County ordinances)

DEP comment on Recommendation 20: Petroleum storage tank registration; #21 - encourage early registration of #20 tanks; and DEP amend 62-761 and 762 to provide for the most stringent criteria - The Rule citations are incorrect. 62-761 and 62-762, F.A.C. are the correct citations. The scope of the program in #20 needs to be clear. Is the scope to be fuel related or petroleum derivatives? The Department has authority to regulate stationary storage tank systems. If the intent is to include portable tanks that needs to be clarified so we know if gas tanks, portable totes and similar movable tanks with a minimum specified size are included in the registration effort. For the current regulated tanks, a \$50.00 per tank registration fee is charged. Is this to be allowed to help defray costs? I am assuming that the registration effort only applies to Seminole County or would the change in 62-761 and 62-762, F.A.C. have this cover the entire State? If the program is for only Seminole County, Chapter 376.317, F.S. will need to be amended since it requires more stringent requirements beyond the tank rules have to be approved by the Department.

Recommendation 21. The Task Force further recommends that FDEP or Seminole County develop, within the tank registration program, incentives for early registration of tanks. (Requires County or FDEP Policy)

DEP comment on Recommendation 21: Petroleum storage tank registration; #21 - encourage early registration of #20 tanks; and DEP amend 62-761 and 762 to provide for the most stringent criteria - The Rule citations are incorrect. 62-761 and 62-762, F.A.C. are the correct citations. The scope of the program in #20 needs to be clear. Is the scope to be fuel related or petroleum derivatives? The Department has authority to regulate stationary storage tank systems. If the intent is to include portable tanks that needs to be clarified so we know if gas tanks, portable totes and similar movable tanks with a minimum specified size are included in the registration effort. For the current regulated tanks, a \$50.00 per tank registration fee is charged. Is this to be allowed to help defray costs? I am assuming that the registration effort only applies to Seminole County or would the change in 62-761 and 62-762, F.A.C. have this cover the entire State? If the program is for only Seminole County, Chapter 376.317, F.S. will need to be amended since it requires more stringent requirements beyond the tank rules have to be approved by the Department.

Recommendation 22. That FDEP amend chapters 17-761 and 17-762, F.A.C. to require that the most stringent criteria and requirements in these regulations be implemented in the Geneva Freshwater Lens area, and that any exemptions afforded in these rules that are less protective be considered for deletion. (Requires changes to FDEP rules)

Storage tanks represent potential sources of ground water contamination. Chapters 17-761 and 17-762, F.A.C. regulate some, but not all tanks. These recommendations are meant to identify unregulated tanks, and to provide the best possible management of those tanks that are regulated under these rules. One approach to implementation of Recommendations 20, 21 and 22, is to amend the appropriate rules and ordinances. The Task Force believes that a viable alternative to rulemaking would be a detailed memorandum of understanding between FDEP and Seminole County addressing tank registration and incentives.

DEP comment on Recommendation 22: All petroleum discharges that are from unregulated sources are to be reported to the Department under the provisions of 62-770, F.A.C. and appropriate clean up actions are to be undertaken. Are there incidents that are not being reported and cleaned up in that area that would warrant this legislation? The responsibility for enforcing the registration requirement needs to be contained in the Statutes.

Recommendation 23. That the SJRWMD amend the Management and Storage of Surface Waters rule (40C-4, F.A.C.) to include specific criteria, including location and size of excavations adjacent to wetlands, sinkholes and lakes, to prevent direct connections to the Floridan aquifer in the Geneva Freshwater Lens area. The Task Force also recommends that Seminole County amend its ordinances, with the assistance of the SJRWMD, to include the same modifications. (Requires changes to SJRWMD rule and County ordinances)

Due to the geology of the Geneva Freshwater Lens area, excavations could pose a threat to the quality of water being recharged into the lens. Specific design criteria for excavations should be developed and codified in the rules of the SJRWMD and Seminole

County. The purpose of these criteria would be to prevent direct connections between the surface of the ground and the Geneva Freshwater Lens, through the removal of the confining materials between the surficial and Floridan aquifers. Rule amendments should include presumptive criteria, and appropriate site-specific hydrogeologic data collection and analyses.

Status on Recommendation 23: On October 3, 1995, SJRWMD implemented the Environmental Resource Permitting rules which included specific provisions that prohibit violations of state water quality standards for both surface and ground waters. Creating a direct connection from surface waters to the Floridan aquifer would result in a violation of ground water quality standards and would not be allowed under these rules.

Recommendation 24. That the FDEP (Central District Office), Seminole County and the SJRWMD initiate a coordinated effort to evaluate existing permits in the Geneva Freshwater Lens area, and conduct coordinated field inspections for compliance with existing, applicable regulations by November 1994.

Status on Recommendation 24: Seminole County, FDEP, and SJRWMD share information regarding compliance of permitted projects and frequently conduct joint inspections.

DEP comment on Recommendation 24: DEP District to evaluate existing permits and conduct inspections - DEP Central District to respond.

Recommendation 26. That the SJRWMD and FDEP design and implement a network to determine, monitor and evaluate the freshwater/saltwater interface of the Geneva Freshwater Lens.

Saltwater intrusion is one of the most fundamental water quality concerns for the Geneva Freshwater Lens. As a part of the over all data collection and monitoring effort, the evaluation of this interface is extremely important. This is a recommendation for the SJRWMD to design and implement a monitoring well network as a component of the hydrogeologic Plan (Appendix E). Implementation would be accelerated with Legislative funding. FDEP would only be involved in the network, as it relates to spills in the Geneva Freshwater Lens area.

Since the Geneva Freshwater Lens area depends only to a limited extent on public water supplies, and since the majority of the population consumes untreated water from private wells, it is necessary that the Lens be viewed as a single source drinking water aquifer, and be protected as such. The Task Force offers the following recommendations regarding this issue. Unless stated otherwise, these recommendations apply to the rules and regulations of FDEP.

Status on Recommendation 26: Observation well clusters and associated testing were completed at two of the three sites proposed in Appendix E of the Task Force Report. SJRWMD was unable to secure an easement for the third site which is located on private property. Because of the difficulty in securing an easement and because of the lack of legislative funding, work at the third site has yet

to be accomplished. If legislative funding is forthcoming, SJRWMD is prepared to try again to identify an appropriate site and perform the additional work. Monitoring at the eight observation wells that were existing at the time of the report has continued. Monitoring data is available from SJRWMD's Division of Groundwater Programs.

DEP comment on Recommendation 26: Monitor freshwater/saltwater interface - Under this recommendation they state "that the Lens be viewed as a single source drinking water aquifer, and be protected as such. The Task Force offers the following recommendations regarding this issue. Unless stated otherwise, these recommendations apply to the rules and regulations of FDEP."

In order to be viewed as a single source aquifer, the aquifer would have to be classified as such by the Environmental Regulation Commission following the process outlined in 62-520.410, F.A.C.

Recommendation 27. Land application of treated domestic or individual waste (including sludge) for the purpose of disposal should be prohibited unless the ground water quality criteria (primary and secondary drinking water standards and minimum criteria "free froms") are met at the site boundary without benefit of a zone of discharge (ZOD). The only practical way of compliance with this requirement is to meet the criteria at "the end of the pipe".

DEP comment on Recommendation 27: Land application of treated waste - nothing new permitted since the bill passed

Recommendation 28. All new sanitary landfills and expansions of existing landfills should be constructed with synthetic and composite liners according to the most stringent requirements of chapter 17-701, F.A.C., and no zone of discharge should be allowed for such facilities.

DEP comment on Recommendation 28: Liners for all landfills - Anyone who seeks a permit for a new Class I landfill will be required to put in one of the liner systems in Chapter 62-701. We are not aware of any new landfill permits issued without a zone of discharge (ZOD). Permit applicants still need room to install monitoring wells and collect stormwater. Rule 62-520.470 has provisions for modifying an existing ZOD if continued use could impair a drinking water source. This can include making the ZOD smaller, but uncertain that it has ever been done. It also assumes data has been provided from current use that warrants this change. An applicant could request a reduced size of the ZOD from what our rule allows, however it may be necessary to prove the ZOD would cause groundwater contamination. There may be other provisions of the groundwater rule that would allow this restriction, especially if the Geneva lens is considered a single source aquifer.

Recommendation 29. Zones of discharge for all existing facilities discharging to groundwater should be reviewed for ground water quality standards violations. If violations are found, the ZOD should be modified, or eliminated, according to new monitoring plans designed for these facilities.

DEP comment on Recommendation 29: Compliance data is already reviewed by the Department. If ground water quality standards are violated, action is taken by the Department. An exceedance of a standard within the ZOD is not a violation. If the task force is recommending that

a ZOD be modified or eliminated due to an exceedance within the ZOD, then one can assume all ZODs need to be modified or eliminated. If a facility could meet all standards in the effluent, then they would not need a ZOD. Further, the Department would not permit a ZOD if the facility could not provide reasonable assurance that all standards would be met at the edge of the ZOD.

Recommendation 33. The SJRWMD staff should develop special stormwater rules that will maximize recharge and water quality protection in the Geneva Freshwater Lens. (Requires changes to SJRWMD rules)

Status on Recommendation 33: In section 373.4597, F.S. the Legislature did not provide the SJRWMD with specific statutory authority to adopt rules to “maximize recharge and water quality protection”. However, on October 3, 1995, the Environmental Resource Permitting rules took effect within SJRWMD. These rules require that surface and ground water quality standards adopted by the FDEP not be violated by the construction, alteration, operation or maintenance of a surface water management system. The most common form of stormwater treatment utilized in the Geneva Freshwater Lens area is retention. Retention ponds work by collecting stormwater from developed areas and infiltrating the water into the aquifer. This serves to protect the area’s recharge.

Recommendation 36. Golf courses, nurseries, animal feeding and breeding lots, and mining operations should develop site-specific BMPs for handling their waste streams. Facilities choosing not to develop BMPs should be required to operate under an industrial waste permit from FDEP.

DEP comment on Recommendation 36: Industrial waste permit - nothing new permitted since the bill passed.

Recommendation 37. The SJRWMD and FDEP should cooperate in conducting a study to evaluate the effectiveness of the Zone of Discharge (ZOD) concept in protecting the ground water against contamination from facilities discharging directly or indirectly into the ground water (such as wells sinkholes, and excavations dug into the surficial aquifers) with special emphasis on pesticides, hydrocarbons, and other organic chemicals.

Status on Recommendation 37: FDEP regulations currently provide for a mixing zone for discharges to ground water. This mixing zone requirement is utilized in the permitting of projects which cause discharges to groundwater.

DEP comment on Recommendation 37: General investigation of effectiveness of zone of discharge - The Department already requires ground water monitoring to detect any violations outside of a ZOD, i.e., to evaluate the effectiveness of the ZOD at each site. This requirement has been in place since 1982. I do not believe a separate study is needed.

Recommendation 39. Require DACS, FDEP, Seminole County and SJRWMD to develop and implement outreach programs for Best Management Practices (BMPs) for mixing, loading and storage of chemicals within the Geneva Freshwater Lens area.

Since the Geneva Freshwater Lens area depends on on-site disposal and treatment systems for wastewater treatment, special attention should be placed on the use and monitoring of on-site disposal and treatment systems within the Geneva Freshwater Lens area. The following Task Force recommendations 40 through 43 are directed to these systems, and unless otherwise noted, are directed to the Department of Health and Rehabilitative Services (HRS) for rule amendments.

Status on Recommendation 39: SJRWMD has assisted FDACS in the development of Best Management Practices for several different types of agriculture, including vegetables, citrus and cattle. These BMP manuals contain recommendations regarding mixing, loading and storage of chemicals. The SJRWMD had implemented these BMPs through its agriculture stormwater permitting program in chapter 40C-44, F.A.C. For non-agricultural land uses, existing regulatory programs under part IV of chapter 373, F.S., and chapter 403, F.S., address impacts upon ground water quality associated with the use of such chemicals and these issues are addressed on a case-by-case basis.

4.0 TASK FORCE RECOMMENDATIONS BY AGENCY

*The Task Force recommendations described in Section 3.0 of this report are organized below to indicate which agency would be responsible for implementation. Section 4.1 identifies Task Force recommendations that will require Legislative action for full implementation. If the recommendation directs action from more than one agency, the recommendation is repeated for each agency. Unless otherwise noted in the recommendation, the Task Force recommends that these actions be taken under the following timeframes. **For actions that can be implemented under existing rules, regulations and ordinances, the Task Force recommends that the Legislature direct the appropriate agency to implement the Task Force recommendation by December 31, 1994. For those actions that require amendments to existing rules, regulations or ordinances, the Task Force recommends that the Legislature direct the appropriate agency to implement the Task Force recommendations by July 1, 1995.***

4.1 Florida Legislature

The majority of the Task Force recommendations can be implemented within existing rules and policies of the affected agencies; however, a few critical recommendations would require action from the Legislature. The actions are to provide specific statutory authority to implement the recommendation, or to provide funding support to implement the recommendation.

Task Force encourages the assistance of the Florida Legislature for recommendations 1, 2, 4, 5, 17, 18, 26, 49, 51.

4.2 Florida Department of Environmental Protection (FDEP)

The following recommendations are directed towards the FDEP: 2, 11, 20, 21, 22, 24, 26, 27, 28, 29, 30, 31, 32, 34, 35, 36, 37, 38, 39, 45

4.3 Florida Department of Health and Rehabilitative Services (HRS)

The following recommendations are directed towards HRS: 11, 38, 40, 41, 42, 43

4.4 St. Johns River Water Management District (SJRWMD)

The following recommendations are directed towards SJRWMD: 2, 3, 4, 5, 6, 10, 1.1, 12, 13, 14, 15, 16, 17, 18, 23, 24, 26, 33, 37, 39

4.5 *Seminole County*

The following recommendations are directed towards Seminole County: 3, 6, 7, 8, 9, 11, 13, 20, 21, 23, 24, 25, 38, 39, 44, 45, 46, 47, 50, 51, 52

4.6 *Department of Agriculture and Consumer Services (DACS)* *The following*

recommendation is directed towards DACS: 39