Elected Officials Present:
Larry Bustle, Mayor
Shirley Bryant, Vice Mayor
Tamara Cornwell, Council Member
Charlie Grace, Council Member
Mary Lancaster, Council Member
Brian Williams, Council Member

Staff and others present:
Attorney Alan Prather
Mary Jean Forrester, Interim City Clerk
Chief Garry Lowe
Mike Hickey, Public Works Director
Diane Ponder, Administrative Assistant

Mayor Bustle called the meeting to order at 4:00 p.m.

Mayor Bustle gave the invocation followed by the Pledge of Allegiance to the United States Flag.

1. AGENDA APPROVAL
Mayor Bustle requested that agenda items #2 and #3 be switched in order.

MOTION: Ms. Williams moved, Mr. Grace seconded and motion carried 5-0 to approve the January 6, 2003 agenda.

2. DISCUSSION - JOINT MEETING WITH CHARTER REVIEW COMMITTEE
Charter Review Committee Chairman Ron Witt discussed Council the committee's desire to efficiently and effectively carry out the duties they have been assigned in evaluating the city's Charter. Mr. Witt spoke of the series of meetings the committee planned after which a revised, proposed Charter would be submitted to Council for their review. He stated the committee had received several of Council Member's written comments concerning areas of the Charter they felt should be reviewed and encouraged the remainder of the Council to submit any comments they may have to the committee. Mr. Witt commented on the proposed resolution Council will consider that not only sanctions the committee but gives the committee directions and time frames in their task.

Mr. Witt spoke of Dr. Susan McManus' role as a guest speaker/facilitator. Council also suggested contacting Florida League of Cities to arrange for a speaker on a city manager type of government. Council requested to be notified of the meetings when outside speakers will be present.

Committee members John Marble, Bob Buchanan, Jim Freeman, Ellen Leonard, Beverly Varnadore, Clyde Boltz, Donna Keefer and Cynthia Fobbs introduced themselves.
3. ASR BRIEFING
Ms. Judy Richtar, Florida Department of Environmental Protection, briefed Council on the technical and regulatory aspects of ASR wells. A copy of the literature she briefly discussed is attached hereto and made a part of these minutes.

Ms. Richtar covered the time frame involved in the application, permitting and testing. Mr. Claude Tankersley, JEA, spoke of the time frame involved in the application phase. From the beginning of the application phase to the completed construction of an ASR well can take up to four years.

Mr. Tankersley informed Council the city has spent $20,000 in collecting and analyzing data. He further stated the city had authorized $100,000 for the project but it was put on hold for funding analysis. Council asked that staff determine the status of funding for the project.

4. RUN FOR RUNAWAYS 6
Lt. Craig Himes reviewed the amended proposed route for the run. Runners will utilize the outside southbound lane of the Green Bridge, exiting at the bottom of the bridge onto the fishing pier. Patrol cars will be placed at the top of the Green Bridge and at Riverside Dr. to control traffic. It was consensus of Council to approve the Special Function Permit for the event.

Chief Garry Lowe presented Martin and Joyce Lawson with a certificate of appreciation recognizing their volunteer hours to the Palmetto Police Department.

Chief Garry Lowe also presented a certificate of appreciation to Tony Toledo. Mr. Toledo helped assist the police in apprehending a suspect.

5. DEPARTMENT HEADS' COMMENTS
Mr. Hickey
The Oakridge paving is expected to be completed this week. The paving for the parking blocks is expected to begin this week.

Chief Lowe
The Law Enforcement Academy is scheduled for February 20, 2003 at 6pm. Chief Lowe requested the council chambers for the first meeting.

6. MAYOR'S REPORT
Mayor Bustle informed Council Zoller & Najjar has not been able to support the city in planning services. Building Official Roger Titus was requested to supply the staff report on the projects going to the Planning & Zoning Board meeting February 10, 2003. The mayor stated he is considering different alternatives for planning services.

The committee to select the consulting engineer has independently reviewed the ten packages submitted. The committee will meet February 12, 2003 at 10:00 to short list to three companies. The three selected proposals will be placed in Council's boxes for review. The three selected companies will be invited to the February 17, 2003 Council meeting to give a maximum ten minute presentation.
7. COUNCIL MEMBERS' COMMENTS

Ms. Cornwell
Received a request the city look at placing a stop sign between 14th and 20th Avenues on 7th Street. The police department will be utilized to slow the traffic by use of radar.

Inquired about the cost of a secretary for the Charter Review Committee as well as the cost of Dr. McManus' services. Staff will determine the funds budgeted for the Charter Review Committee.

Suggested amending the proposed resolution regarding the Charter Review Committee by stipulating the committee would consist of "up to 12 members". Council concurred. Council also discussed adding "approval" in certain areas of the document but allowed "adoption" to remain as acceptable language.

Discussing the ACCORD and adding the Preston property to the UDZ, Ms. Cornwell inquired about the property being a deal breaker in the voting process. Discussion ensued on the difference between the JPO and the UDZ. Discussion also took place regarding impact fees - how they are assessed, collected and utilized. Mayor Bustle stated the Preston property was being exempted from the UDZ because it is largely vacant, undeveloped land. Council requested the ACCORD be placed on the agenda of the February 17, 2003 meeting for discussion.

Ms. Bryant
Stated it was her understanding the long-range plan for the Preston property was that it would be annexed into the city.

Read from the 8th Street meeting minutes dated December 30, 1995, where SWFWMD recommended the adoption of a fill ordinance. Requested the Sarasota fill ordinance be placed on the February 24, 2003 agenda for Council's review and discussion.

The Tropic Isles, 28th Avenue, situation is being dealt with and hopes for a quick resolution. Requested any emails be forwarded to each Council Member.

Mrs. Lancaster
Discussed the consulting fees paid since the purchase of the computer. Mrs. Forrester stated a detail of the expenditures would be provided to Council.

Mayor Bustle will respond to the letter addressed to the Mayor and Council.

Ms. Bryant informed Council she has spoken to Mrs. Chapman about annexations to the city being voluntary.

Staff will contact School for the Arts regarding an answer to Mayor Bustle's letter.

Meeting adjourned at 5:55 pm.

Minutes approved: March 3, 2003

Mary Jean Forrester, Interim City Clerk
Aquifer Storage and Recovery

Background

Aquifer Storage and Recovery (ASR) is a technique for injecting water underground through a well for storage and later recovery (through the same well) for beneficial uses.

ASR currently is regulated by the Department of Environmental Protection through its Underground Injection Control (UIC) Program and by the Water Management Districts through consumptive use permitting.

- The UIC program is federally delegated and, as such, ASR facilities must meet state and federal law (which, in effect, has been incorporated into state law)

ASR wells are required to meet both primary (health based) and secondary (aesthetic based) standards at the point where water is injected into an underground source of drinking water (USDW).

- A USDW is defined under federal law as any aquifer with less than 10,000 milligrams per liter (mg/L) total dissolved solids, regardless of whether the aquifer is used, or will in the future be used, for drinking water. Two points of reference:
  - Waters containing 1200 mg/L total dissolved solids or more are not fit for human consumption without treatment to remove salts, which also would remove most other contaminants.
  - Public drinking water systems must meet the secondary standard of 500 mg/L total dissolved solids.

ASR is an essential water supply development strategy that is promoted, but only where environmental and public health protection can be assured.

FDEP Regulations

State Rules: Chapter 62-528, Underground Injection Control
Chapter 62-520, Ground Water Classes, Standards and Exemptions
Chapter 62-522, Ground Water Permitting and Monitoring Requirements
Chapter 62-610, Reuse of Reclaimed Water and Land Application
Permits Needed

- FDEP -
  - UIC Program / Class V Group 3 Well Construction Permit
  - Domestic Waste Program – substantial modification to facility operation permit

- SWFWMD -
  - Consumptive Use Permit
  - Well Construction Permit

ASR Standards

- Injection into a USDW (underground source of drinking water, < 10,000 mg/L TDS)
  - Primary drinking water standards
  - Secondary drinking water standards
  - May not otherwise adversely affect the health of persons
- Injection into a non-USDW
  - Nonhazardous, otherwise no standards at point of injection
  - Must meet standards if migrating to USDW

Zone of Discharge (ZOD)

- ZOD - a volume underlying a site where an opportunity for treatment, mixture or dispersion of wastes into the receiving aquifer is allowed.
- ZOD for secondary standards and sodium.
- ZOD to the property boundary.

Water Quality Relief Mechanisms

Water Quality Criteria Exemption
- FL secondary standards and sodium
- $6,000 fee per parameter
- Specifies alternative criteria to be met
- Issued concurrent with FDEP UIC permit

Aquifer Exemption
- Minor – TDS of aquifer between 3,000 to 10,000 mg/L
  - Not currently used for drinking water
  - Not reasonably expected to be used
  - $7,500 fee
  - EPA must deny within 45 days
- Major – TDS of aquifer less than 3,000 mg/L
  - Not currently used for drinking water
- $15,000 fee
- EPA must approve
- No timeframe for EPA approval

**Reclaimed ASR Projects in SW District**

- Hillsborough Northwest Regional WRF
- Hillsborough South County WRF
- Hillsborough Faulkenburg WRF
- St. Petersburg Southwest WRF
- Manatee County Southwest WRF
- City of Sarasota WWTP
- Sarasota County Central County WRF
Class V Aquifer Storage & Recovery
FDEP Permit Application
Supporting Documentation

- Location map: proposed injection wells and monitor wells; existing producing wells; injection wells, abandoned wells, surface features, faults (if known or suspected).

- Well inventory (1-mile radius): location map and tabulation of data to include well type, construction, depth, location.

- Maps and cross sections: vertical / lateral limits of all underground sources of drinking water, position relative to injection formation, direction of ground water movement; hydrology and geologic structures in local area; regional geology.

- Engineering drawings of surface and subsurface construction details of the injection well and monitoring system.

- Proposed drilling and testing program.

- Proposed cycle testing program.

- Wastestream analysis.

- Contingency plans to cope with shut-ins or well failure.
UNDERGROUND INJECTION CONTROL PROGRAM

RELIEF MECHANISMS

A. Federal primary drinking water standards.

Aquifer exemption (62-528.300(3), F.A.C., and 40 CFR 144.7)

   a. Minor exemption if affected zones are between 3000 - 10,000 mg/L TDS. May be granted by EPA Region IV or by default if not denied within 45 days after receipt by EPA.
   b. Major exemption if affected zones are less than 3000 mg/L TDS. Major program revision that requires EPA Headquarters approval and notice in the FEDERAL REGISTER.

B. Non-federal primary drinking water standards, secondary drinking water standards and minimum criteria.

   Water quality criteria exemption under Rule 62-520.500,F.A.C.

C. Variances

   The Underground Injection Control Program primacy agreement with EPA does not allow for variances that may allow the application of less stringent standards than federal regulation.

Aquifer Exemption Criteria

NOTE: The following technical requirements were developed by the Department and EPA and are to be used as guidance in reviewing an aquifer exemption petition. Although not directly referred to in state rule or federal regulation the following items are needed in order for the Department and EPA to determine if the aquifer exemption criteria in Rule 62-528.300(3), F.A.C., and 40 CFR 146.4 have been satisfied.

1. The exemption request must demonstrate that the aquifer does not currently serve as a source of drinking water. To demonstrate this, the applicant should survey the proposed exempted area to identify any water supply wells that tap the proposed exempted area. The aquifer exemption request should cover any portion of the aquifer(s) into which injected fluids are expected to migrate as well as any aquifer(s), or portion(s) thereof, where formation fluid quality will be significantly altered due to injection, and a buffer zone of at least one-quarter mile beyond the area. The exemption request should cover the smallest area that will satisfy these requirements. A search should be made of all public records for water supply wells. In addition, attempts should be made to verify the presence or absence of water supply wells. Any water supply wells located
zones or aquifers. The water quality and primary use of all water bearing zones should also be noted, and

k) A cross-section(s) showing the depth at which the 3000 and 10,000 mg/L TDS concentration is encountered throughout the exempted area.

4. A map of appropriate scale should be submitted which shows the boundaries of the exemption request and any cultural or geographical features in the area. A 1:24,000 USGS topographic quadrangle is acceptable. However, if the proposed exempted area is large a scale of up to 1:63,360 may be used. All wells within the proposed exemption area boundaries should be identified. Construction specifics and ground water quality information for all wells within the proposed exempted area should be included.

5. The size of the aquifer portion to be exempted should, at a minimum, take into account the following factors:

   a) Pressure in the injection zone (if applicable),

   b) Total fluid volume to be injected during the life of the facility,

   c) Injected fluid characteristics,

   d) Chemistry of the native formation fluid prior to any injection,

   e) Estimates of the effective migration distance possible from the injection well,

   f) Location of the 3,000 mg/l TDS interface,

   g) Volume of fluid to be recovered on an annual basis (aquifer storage and recovery projects), and

   h) Probability based on modeling that the injected fluids or their alteration products will exceed the proposed exempted area.

6. Information should be submitted regarding the quality and availability of water from the aquifer proposed for exemption. Also, the exemption request must analyze the potential for public water supply use of the aquifer. This may include a description of current sources of public and private water supply in the area, a discussion of the adequacy of current water supply sources to supply future needs, population projections, economy, future technology, and a discussion of other available water supply within the area.
62-520.500 Exemptions for Installations Discharging Into Class G-I or G-II Ground Water.

The Secretary shall, upon petition of an affected person or permit applicant and after public notice in the Florida Administrative Weekly, and in a newspaper of general circulation in the area of the exemption placed by the petitioner, and after opportunity for public hearing pursuant to Section 120.57, F.S., issue an order, which shall be included as a permit modification, for the duration of the permit specifically exempting an installation discharging or designed to discharge into Class G-I or G-II ground water from the standards contained in Rule 62-520.420, F.A.C., or the minimum criteria contained in Rule 62-520.400, F.A.C., upon affirmative demonstration by the petitioner of the following:

(1) **Granting the exemption is clearly in the public interest.**

- Describe in detail the project for which the exemptions are requested.

- Describe why this project is in the public interest for the specific population served by the project.

(2) **Compliance with such criteria is unnecessary for the protection of present and future potable water supplies.**

- Provide information to support that compliance with the established criteria (standards) is not necessary to protect present and future water supplies.

- Provide information as to the location of existing well fields in the area.

- Provide information on future water supplies in the area.

- Provide information as to the treatment necessary to meet the established standard.

(3) **Granting the exemption will not interfere with existing uses or the designated use of the waters or of contiguous water.**

- The designated use of Class G-II ground water is potable use (whether or not it is actually used for this purpose), thus the petitioner must demonstrate that this use will not be interfered with if the exemption is granted.
-Provide information to support that these alternative criteria will not adversely affect the health of persons. This should include a discussion of the cause for the exceedance of certain parameters (color, odor) and any possible adverse effects of the specific parameters and the possible effects at the alternative level proposed. It is not acceptable to just state that these are secondary standards and, as such, do not represent a potential health hazard.

-Provide information concerning all known contaminated sites in the area. Information should include the location of the site and the types of contaminants present as well as the aquifer(s) affected.

-If the supply water for the ASR system is from multiple wells or sources provide water quality data for each source and data concerning the pumping patterns for the wellfield.

-Provide information on the variability of the water quality that is to be injected.

In addition, federal regulations at 40 CFR 144.12(a) state the following:

No owner or operator shall construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR part 142 or may otherwise adversely affect the health of persons. The applicant for a permit shall have the burden of showing that the requirements of this paragraph are met.
## Water Quality Criteria for Class V Injection Wells

<table>
<thead>
<tr>
<th>Ambient Ground Water Quality (TDS Concentrations)</th>
<th>FDEP Injection Criteria</th>
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<tbody>
<tr>
<td>3,000 mg/L</td>
<td>1. Federal Primary DWS</td>
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<td></td>
<td>Relief Mechanism</td>
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<td></td>
<td>Major Aquifer Exemption (USEPA)</td>
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<tr>
<td>3,000 mg/L</td>
<td>2. FL Secondary DWS, “Free-Froms”, or Ambient Ground Water (whichever is poorer)</td>
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<td>Relief Mechanism</td>
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<td>Water Quality Criteria Exemptions</td>
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<tr>
<td>10,000 mg/L</td>
<td>1. Federal Primary DWS</td>
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<td>Relief Mechanism</td>
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<td></td>
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<td>Less Stringent Effluent Water Quality Standards</td>
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Zone of Discharge and Wellhead Protection Setback

**ALLOWED**
ZOD Does NOT Intersect 500 Ft. Radius Around Water Well

**NOT ALLOWED**
ZOD Intersects 500 Ft. Radius Around Water Well
Zone of Discharge Monitoring - Cross-Section View

- Compliance Monitor Well
- Intermediate Monitor Well
- Monitor Wells
- ASR Well

- Overlying Aquifer
- Confining
- ASR Storage Zone
- Confining
- Underlying Aquifer

FDEP 02/2001
AQUIFER STORAGE AND RECOVERY FACILITIES IN FLORIDA

Facilities
1. Tampa-Rome Avenue
2. Tampa-Hillsborough River
3. Hillsborough County NW
4. Lake Manatee
5. Peace River
6. Corkscrew (Lee County)
7. Marco Lakes
8. Collier County
9. Cocoa-Claude H. Dyal
10. Corkscrew Links
11. Palm Bay
12. Taylor Creek (SFWMD)
13. West Palm Beach
14. Boynton Beach
15. Broward County 2A
16. CERP ASR Pilot-Calosahatchee Reservoir
17. Miami-Dade Southwest Wellfield
18. Miami-Dade West Wellfield
19. FKAA - Marathon
20. Sunrise Springtree
21. Miami Beach
22. Palm Beach County System #3
23. Punta Gorda
24. Fiveash
25. Manatee Southwest
26. Delray Beach
27. FKAA-Homestead (Exploratory)
28. Englewood
29. San Carlos Estates
30. Kehl Canal
31. Fort Myers
32. North Reservoir (North Ft. Myers)
33. Olga
34. St. Petersburg SW
35. CERP ASR Pilot-Western Hillsboro Basin (Site 1)
36. Sarasota-Central County
37. North Port-Myakkahatchee Creek
38. Lehigh Acres
39. North Collier County (exploratory)
40. Hillsborough County-Cargill Park
41. Hillsborough County-South County
42. Bradenton - Treated
43. Bradenton - Raw Surface Water
44. Pine Island
45. City of Sarasota Payne Park
46. Eastern Hillsboro Canal
47. CERP ASR Pilot-Lake Okeechobee-Kissimmee River Site
48. CERP ASR Pilot-Lake Okeechobee-Port Myakka
49. CERP ASR Pilot-Lake Okeechobee-Moore Haven

Legend:
- Treated Drinking Water
- Raw Ground Water
- Raw Surface Water
- Reclaimed Water
- Partially Treated Surface Water
- Exploratory or Test Well

Scale: 1 inch = 50 miles

FDEP 10/2002