

DAVIE WATER ADVISORY BOARD
NOVEMBER 21, 2000
5:30 P.M.

1. ROLL CALL

The meeting was called to order at 5:35 p.m. Board members present were Chair Dean Alexander, Vice-Chair Don Zane, Tom Green (arrived at 6:20 p.m.), Robert Hoth, Daniel Lavrich, Gail Ling and Ronald Phillips. Also present were Utilities Director Daniel Colabella and Board Clerk Jenevia Edwards recording the meeting. James Aucamp, Sr., Stuart Lieberman and Dan Pignato were absent.

2. APPROVAL OF MINUTES: September 19, 2000

Mr. Hoth made a motion, seconded by Vice-Chair Zane, to approve the minutes of September 19, 2000. In a voice vote, with Mr. Aucamp, Mr. Green, Mr. Lieberman and Mr. Pignato being absent, all voted in favor. **(Motion carried 6-0)**

3. PRESENTATION

3.1 Water Shortage and Restrictions - Jim Karas, Planning Manager, South Florida Water Management District

Mr. Karas explained that there was a serious problem with the water supply. He indicated that based upon rainfall during the "wet season", this year's water supply was further behind than it was in previous years creating a situation that should be cause for concern by Broward County. Mr. Karas indicated that his work involved long range planning and some of the Everglades Restoration as well as water supply planning. He commented that a long term water supply plan was approved, indicating that there was enough water to go around for the next 20 years of expected growth in the County. However, certain investments in the County's infrastructure would have to be made and those were not presently in place.

Mr. Karas commented that earlier this year, there was an inundation of flooding problems from rainfall; however, it was almost December and there was the chance for a drought which would be as severe as it was 10 years ago. He indicated that based on the present data, the month of May presented the lowest deficit of rainfall in Florida in 106 years. During June and August, it was below average while July, September and October was above average. Mr. Karas commented that in spite of rainfall and a hurricane during the month of October, the water supply was still not where it should be and the situation was very bleak. He indicated that Lake Okeechobee supplied both systems and through a series of canals water could be moved into urban areas and water levels could be replenished to a certain extent. Mr. Karas explained that this was not the answer, but Lake Okeechobee was the largest reservoir at the County's disposal. He commented that based on the graph, since March and into the wet season, the water was descending when it should have been ascending. At the moment, the water level in Lake Okeechobee was at a 35 year all time low for this time of year. Mr. Karas commented that going into the dry season, the water level should have been at least 13 feet but it had presently fallen below 12 feet. He indicated that the County would be faced with serious problems if this trend continued.

Mr. Karas commented that the South Florida Water Management District was presently faced with criticism stemming from action taken by its Governing Board to release water from Lake Okeechobee. He indicated that the lake had been at an all time high for approximately four years, but the decision was made to allow water to drain from the lake in order to restore the environmental health of the lake, and to allow the vegetation to recover in order to combat the problem with phosphorus that was still affecting Lake Okeechobee.

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Mr. Karas explained that in May, the Governing Board adopted a shared adversity plan to drain water from the lake, recognizing that this would mean some adversity for the receiving bodies such as the coastal areas in Fort Myers and the St. Lucie area where too much fresh water could damage the coastal estuaries. He commented that a foot of water was drained over a 30 day period, but the water level kept dropping at a more rapid rate due to low rainfall and huge transpiration that caused the water level in the lake to decline. Mr. Karas indicated that even if that foot of water was to be added to the lake today, it would still be at a critical level. He referred to the graph indicating that the level of 12.18 had dropped to 11.77 and it was continuing to fall into critical areas which meant that the County and the lower east coast were presently faced with a water shortage warning. Mr. Karas commented that Lake Okeechobee was at the low end of the graph indicating critical levels of water. He stated that the Lake had the capacity to supply water to the urban areas through the system of canals and restore water levels in the urban areas. Mr. Karas referred to the Water Conservation areas 1, 2 and 3 in South Florida which were managed like a reservoir, and commented that 2 and 3 were alive within the County and if the water levels were doing well, it would be easier to take water from those areas and move it to the urban areas. He stated that the Water Conservation Areas were doing well and the water was at or above average levels for this time of the year. However, the areas did not have the storage capacity that Lake Okeechobee had because they were small and more shallow. Mr. Karas stated even if water was removed from those areas, it would provide temporary relief as water levels would continue to drop in the urban areas. He commented that the County and the lower east coast would be in Phase I of a water shortage restriction as early as December 2000 and possibly January 2001. The Governing Board would be meeting on December 14th, to discuss the water shortage situation. Mr. Karas indicated that up to this point, the County was requesting voluntary cutbacks of 10 percent normal water consumption. He commented that if Phase I of the restriction went into effect, it would require 15 percent cutback of normal water consumption and this would apply to all the areas in the lower east coast and Palm Beach, Broward and Dade Counties.

Mr. Karas again referred to another graph in his handout which indicated that the current water level in Lake Okeechobee was already at 12 feet. He referred to the three scenarios in the graph which were above average wet during the dry season, average dry season and dry, dry season. The lines were extrapolated to indicate where Lake Okeechobee's level would go during the dry season and into next September or October. Mr. Karas explained that if the dry season was drier than normal, the water level in Lake Okeechobee could decrease below 10 feet and at that level, it would be difficult moving water out of the lake at that time. He commented that it was very unusual for Lake Okeechobee to be that low. Mr. Karas indicated that the Modified Supply Side Management on the graph was a regulatory line used to determine whether or not the County would be forced into mandatory cutbacks. He stated that the Governing Board had been adjusting that line according to the conditions and where there would be more flexibility to the residents served by the South Florida Water Management District. It was anticipated that there would be mandatory cutbacks for the Lake Okeechobee service area that would affect water users surrounding Lake Okeechobee particularly the cities of Clewiston and Okeechobee and all the agricultural users.

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Mr. Karas explained that there were administrative rules adopted by the agency when Phase I of the water restriction was instituted. This information was available on the agency's web site as well as information regarding water levels, forecasts and water restriction rules. Rules and regulations regarding the Phase I Water Use Restrictions were indicated in the handout.

Mr. Karas explained that the enforcement of mandatory water restriction in homes was the responsibility of all law enforcement officials. He commented that residents could be ticketed for improper irrigation as well as other violations and these were regarded as misdemeanors. Mr. Karas commented that the rules were designed to protect life saving uses of water for hospitals and fire departments. He indicated that the District was contemplating organizing a workshop to be held at the Emergency Operation Center in December to advise all municipalities to share the knowledge of the impending water shortage problem with residents, what was expected to take place for mandatory cutbacks, and also how the enforcement would be carried out.

In addition to taking steps to try to move water out of Lake Okeechobee, Mr. Karas indicated that the Governing Board had also allocated emergency funds in the amount of \$300,000 to carry out additional public outreach. This would be accomplished by way of public service announcements, billboards, and pamphlets which would be also be available in a few weeks. Mr. Karas indicated that the agency would be working with municipalities and utility companies around the County to try to get the word out to residents with the hope that they do voluntary cutbacks. In the meantime, the Water Management District had provided, on an expedited basis, funds in the amount of \$3,000,000 to install pumps around the southern rim of Lake Okeechobee in order to withdraw additional water from the lake and move it into the canals with the possibility of moving it into the urban areas. Mr. Karas explained that the purpose of this exercise was to lessen the discomfort that would be felt during the dry season, because if the water in the lake got too low, it would no longer be able to gravity feed water out and it would not do so as at a rate fast enough to make a difference. He stated that the District's strategy was to forward pump water from Lake Okeechobee into the regional canals and to move some of this water into the urban areas.

Vice-Chair Zane commented that the water level in all the canals was very high. Mr. Karas indicated that he had received a variety of reports from around the County but he had not looked at the urban water levels. He believed that they were on average and the ground water levels in the urban area were not yet at a critical stage.

In summarizing, Mr. Karas indicated that based on the present water shortage situation, the main thing that the Town could do was to first inform the public with the hope of voluntary cutbacks and secondly, in the event that there was mandatory restriction, assist the District to enforce water cutback rules and to assist in achieving the 15 percent cutback. He indicated that the third idea was complicated and costly and probably would not apply to Davie. Mr. Karas stated that the agency had looked for areas in the County where it could interconnect a canal or lake system with the well field to allow water to get back into a wellfield and help it recharge in its production. He commented that there were huge wellfields in the City of Fort Lauderdale and if all of its well were up and running, that would account for up to 50 million gallons of water in the next 10 years. Mr. Karas commented that the well could go 20 feet below sea level when it was pumping all the way at the height of the dry season. He reiterated that the cutbacks and restriction would only be effective by

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informing the public of interconnections, enforcement and cooperation from municipalities in addition to praying for rain. Mr. Karas commented that the system in Florida depended 99 percent on rainfall and was not like other parts of the country that had fresh water springs. He stated that there were alternative technologies installed in the County such as Aquifer Storage and Recovery and although Davie had some of those wells in place, they were not enough to supplement the majority of the demand for water.

Mr. Karas reiterated that on December 14th, the Governing Board would be discussing the water shortage issue and would be doing so on a monthly basis. In addition, there was an internal team that lead weekly meetings on the subject. He commented that on December 6th, the District's Lower East Coast Water Supply Planning Committee would hold a meeting in the West Palm Beach office and suggested that members of the Town's staff, as well as Board members, might want to attend this meeting. Mr. Karas indicated that the purpose of this meeting was to discuss the latest decisions regarding cutbacks and shortages.

Chair Alexander commented on Mr. Karas' statement that the reason for the drop in the lake level was due to phosphorus and inquired if the source of the phosphorus was due to sugar burning. Mr. Karas responded that if the health of the lake could be improved by the recovery of submerged aquatic vegetation that came in around the edge of the lake when it was naturally at a low state, that helped to take up the phosphorus levels. He commented that in the past, there was a practice of back-pumping when flooding conditions existed in the sugar cane and vegetable growing areas, but that practice was extremely rare these days. Mr. Karas indicated that the run-off from agricultural operations had improved by 50 percent, but there was still a lot of phosphorus in the lake that was contained in the sediment. He commented that there were discussions as to how to rid the lake of phosphorus whether by plant or biologic techniques. Another plan was to dredge the lake by removing the muck and placing it in another area. Mr. Karas stated that this plan was remote and very costly and was a frustrating problem with regard to the water quality in Lake Okeechobee, not the quantity.

Chair Alexander commented that years ago, the main source of phosphorus was from detergents and the State fought to have this taken out of detergents which was supposed to have alleviated most of the problem, but apparently the problem still existed. Mr. Karas indicated that he was more familiar with research that was conducted relating to dairy farming, cattle and run-off from waste in the Kissimmee River, as well as fertilizer run-off from agricultural operations. Chair Alexander commented that there was talk regarding the Florida forever funds and most of those funds would be directed towards keeping water levels up and holding ponds in conservation areas. He inquired what the future plans were. Mr. Karas indicated that the South Florida Water Management District had in excess of \$8 billion worth of projects planned in the next 20 to 30 years. He stated that these plans had been passed by Congress and the agency was awaiting the President's signature. This was a federal project that was being done in concert with the federal government to re-engineer the majority of the entire Everglades eco-system. Canals would be changed, storage systems would be built, lands would be acquired in the western the County area and water quality improved. Mr. Karas indicated that what Chair Alexander referred to was the Florida Forever Act that was passed by the State which was an \$800,000,000 project that would be completed in 2010. He commented that the basic frustration of water management in South Florida was not whether or not there was enough water, but rather how to store it and distribute it to the places that needed it. Mr. Karas stated that new storage areas were being

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built as well as underground storage referred to as Aquifer Storage and Recovery where water would be injected when it was plentiful and withdrawn during a drought. He indicated that there was hope that in 10 years, there would be no recurring drought problems.

Chair Alexander commented that one thing instituted by this Board, and being pushed through the Town Administrator, was the installation of rain sensors on sprinkler systems. He indicated that there was an ordinance in the County that required rain sensors to be installed on all sprinklers systems on structure erected since 1989. Chair Alexander stated that the Board was pushing for compliance at least in the Town, and he felt that in retrospect, there should be Code enforcement for buildings erected during that period to see whether or not sensors existed.

Mr. Karas indicated that in preparation for the presentation, he had examined the permit for the Town's utility and noticed that the average per capita use was under 100 gallons which was a compliment for the Town. He stated that that was the lowest he had seen in any municipality. Mr. Karas commented that another option was reclaimed water which was an expensive option and something that utility companies and municipalities shied away from. He indicated that reclaimed water could be used for irrigation and there would always be a ready supply available; however, it was expensive to be processed and there was also the expense of delivering the water to where it was needed. Although this economy was not the greatest, this was another option. Mr. Colabella indicated that the Town was presently using 100 percent reclaimed water for waste water management. He commented that the effluent was given to the City of Hollywood because the Town did ocean disposal along with Hollywood. Mr. Colabella explained that the City of Hollywood used the Town's effluent for sprinkling golf courses.

Vice-Chair Zane inquired if there was any mechanism in place for the Town's Utility Department to inform homeowner's association of the upcoming water restrictions, and if not, how would they be notified. Mr. Colabella stated that the homeowner's association would be notified through the Davie Update, information would be included with water bills and information could be published in the Sun-Sentinel. Mr. Karas concluded that every water user would be receiving notification regarding the required cutbacks.

Humberto Alonso, Jr., Director of the Broward Service Center of the South Florida Water Management District, indicated that he had worked more on flooding issues rather than on water shortage issues. Mr. Hoth inquired what was being done to combat flooding in Davie. Mr. Alonso explained that Davie, Cooper City and the Central Broward Drainage District had pooled their resources and hired the firm of Craven Thompson to prepare a drainage assessment of the C-11 Basin area that flooded as a result of Hurricane Irene. He commented that a draft report had been prepared by Craven Thompson and a meeting would be held next week to discuss some of the findings and potential recommendations from the report for improvement. These improvements could be individual neighborhood improvements, and improvements along the C-11 by the Central Broward Drainage District which could include pumps to pump water from the drainage district into the Water Management District canals. Mr. Hoth commented that water from his development did not drain into the C-11 but into the New River Canal and whenever there was a heavy flash storm, there was flooding in the development. He stated that in Shenandoah, water drained rapidly especially since the reverse gate was placed there.

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Mr. Alonso indicated that independent of Craven Thompson's assessment, the engineer for Central Broward Drainage District had also done some computer modeling of the different lakes in Vista Filare. He commented that the engineer found that some of the connections and inter-connections between the lakes that would allow the system to balance quickly, was not there. Mr. Alonso indicated that there were specific recommendations that were made to increase some of the connections between the lakes to allow them to balance quicker. He commented that even though individual subdivisions had adhered to the general plan, some of the subdivisions that were built later had less storage than some of the subdivisions on the eastern side of the Florida Power and Light right-of-way. The problem was not one of storage, but balancing the storage between the subdivision on west side and the east side of the FP&L easement. Mr. Alonso commented that the issue now was whether the Town and the homeowner's association of Vista Filare would address the improvements. It was a question of who was willing to pay for the improvements.

Chair Alexander indicated that he recalled some years ago that residents were told not to plant trees in swale areas. He commented that at a recent Council meeting, someone had recommended that residents plant trees in the swale area every 15 feet. Chair Alexander stated that it was his understanding that the swale area should be used for parking. He commented that the swale served two purposes, parking and drainage, both of which would be defeated if trees were planted. Mr. Alonso commented that he knew that the purpose of the swale was for parking and they were not intended for drainage. He indicated that in older subdivisions, the swale was typically the only way to move water from the neighborhood which would be compromised if the swales were blocked. Mr. Phillips commented that he did not believe that trees were being planted in the bases of swales but in the area between the low point of the swale and the street. He indicated that he resided in a new development and there were trees planted in the swale outside his house. Following a lengthy discussion, Mr. Alonso commented that the best solution would be to check with both drainage districts to determine if planting trees in the swale was permissible.

Vice-Chair Zane inquired if swales were in Mr. Green's criteria for Central Broward with Mr. Green responding in the affirmative. Chair Alexander commented that it was being mandated. Mr. Green explained that a swale was not mandated except as part of the drainage plan. Vice-Chair Zane commented that the Town was now requiring that residents plant trees on swales which would interfere with drainage. Mr. Green indicated that the problem was not the trees, but the swales were filled in by residents. Mr. Lavrich indicated that the purpose of a swale was two-fold, to store water and to convey water if conveyance of water was in the drainage plan. He commented that whether the purpose of the swale was for conveyance or storage, planting a tree in it placed a restriction on the area. Mr. Lavrich stated that whoever was requiring the planting of trees in swales should give it serious thought as this was a drainage issue and the Town's Engineering Department should be involved. He commented that swale was being discussed in general terms and as an engineer, he and the common person would refer to a swale in different ways. A swale meant anything from the street to the driveway of a house. Chair Alexander indicated that he was not looking for finality, but he felt that it was an issue that should be discussed. He indicated that he would discuss it with Interim Town Administrator Tom Willi to find out whether or not there was conflict or a problem.

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Ms. Ling commented that there were residents in the Vista Filare development who were changing the elevation by placing sand in the swale areas and inquired what steps could be taken to prevent it. Mr. Alonso commented that that was an enforcement issue and should be brought to the Town's attention because a homeowner did not have the right to change the elevation. Mr. Green commented that there was no permit requirement in Vista Filare because it had not been a requirement by Central Broward in the past. He stated that Central Broward was having permitting and renewal permit every five years and residents would have to show that they had not interfered with the drainage system. Mr. Green stated that step one was getting permit and the renewals and step two would involve the older developments. He commented that individual homes were the ones that created the most problem because in the past, Central Broward required that the water be kept on the property and be sent to the City. However, Davie had not done anything that required homeowners to keep water on the property. Mr. Green commented that he had called the Town's Code Compliance Division on numerous occasions and complained but nothing had been done. He indicated that with the permitting and renewals, the Central Broward Drainage District would have the power to do something. Ms. Ling commented that she was pleased because there were residents in Vista Filare who complained about flooding, but they were the ones guilty of changing the elevation on their property. Mr. Green commented that there was a problem in Vista Filare because some of the lakes were higher than others. Mr. Phillips inquired how often the homes flooded in Vista Filare with Ms. Ling responding that this happened every time there was heavy rainfall. Ms. Ling indicated that after the heavy rainfall of Hurricane Irene, the National Guard had to be sent to assist residents. A lengthy discussion ensued regarding flooding in Vista Filare and Shenandoah with Ms. Ling commenting that she was told by her builder that most of the homes in the community had french drains. Mr. Alonso commented that he did not believe that the community had french drains, but rather catch basins going directly into the lake.

Mr. Hoth commented that the problem was that the final two developers, New Providence B and Vista Filare, should have dug the canal deeper, but they chose not to do so. He stated that part of the development had been a lake that was filled in. Mr. Alonso commented that an engineer for Central Broward had completed a comprehensive study regarding modeling, remodeling and interconnection of the pipes, the lakes, the volumes and storage capacity. He indicated that this report verified specific improvements in order to get the system to work properly in the way it was designed, and suggested that Mr. Hoth contact his homeowner's association to get a copy of this report.

Chair Alexander inquired if the Board would direct him to discuss the problem of the swales with Mr. Willi, with the Board responding in the affirmative. Mr. Green also suggested that he discuss the reason for planting oak trees under power lines.

Ms. Ling indicated that she understood that Vista Filare was zoned industrial prior to rezoning because it was supposed to be part of the truck stop. She inquired if the water requirements for drainage was different for industrial and if they had changed. Chair Alexander commented that they would have changed when the area was rezoned, but he would look into it. Ms. Ling commented that she was told the area was still zoned industrial for water issues.

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4. OLD BUSINESS

Michael Setzer, 10670 SW 23 Street, who had previously attended a meeting requesting information on potable water for his neighborhood was informed that he would have to present a letter with signatures from residents who were interested in having water from the City of Sunrise. Mr. Setzer presented the letter to the Board and inquired as to the process of the special assessment. Mr. Colabella explained that the petition would be presented to Council. He also explained that a letter would be sent to the residents informing them when there would be a public meeting. Mr. Colabella indicated that he would meet with Town Attorney Monroe Kiar to discuss whether or not there were any changes in the special assessment rules and regulations.

5. NEW BUSINESS

Vice-Chair Zane referred to an e-mail from resident M. Rosier which was part of handout from Utilities Director, Dan Colabella and noted that Mr. Colabella had responded to this e-mail. He asked why the Town's resolution was not referenced in the response which indicated that no action could be taken in Oakhill without a vote by the residents. Chair Alexander commented that this resolution was passed four years ago which specifically stated that there would be no water in Oakhill without a vote by the majority of the residents. Vice-Chair Zane commented that a petition would not work for the Oakhill area and inquired if Mr. Rosier resided on a street that had access to water. Mr. Colabella stated that there was a project to the north of Mr. Rosier's street but it was not his service district. He commented that the City of Sunrise refused to extend lines to Mr. Rosier's home to provide him with service.

Chair Alexander referred to the handout regarding the Board's accomplishments. He indicated that the reason behind this was that a Board member had indicated that they were planning to resign because the Board did not do anything. Chair Alexander indicated that what the Board did would vary from time to time, depending on whether there was something to be done. He commented that that was the reason the Board met on alternate months rather than every month.

Mr. Colabella indicated that he would be preparing a list to indicate things that he had brought to the Board. This list would indicate the Board's accomplishment and this would be in a booklet form. He inquired if notes from all the meetings should be included as well. Chair Alexander explained that the reason he had brought up the matter was because the Board member was obviously not on the Board for any length of time and was concerned that things were not moving fast enough. He commented that in addition to the eight items on the list, extensive surveys and maps would also be included in the booklet. Chair Alexander stated that the Board had also supported the litigation against the City of Sunrise which, unfortunately, went "poofed" unexpectedly due to the vote that was taken. However, the Board would be involved in the eminent domain proceedings and would provide support and information.

Chair Alexander inquired if Mr. Colabella had any information on the water main break involving the City of Sunrise. Mr. Colabella responded that the Sunrise's Engineer, Don Biller, was no longer with Sunrise and he had not been able to get any information. Chair Alexander indicated that he wanted to know if there was a procedure in place, and if not, whether or not one should be established with regard to main breaks and emergencies.

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This involved notification with regard to health issues to inform residents if there was a boil water order the way in which it was carried out in Dade and other counties. Mr. Colabella indicated that it was the Health Department's responsibility to notify the public. Mr. Hoth remarked that maybe the County did not take any action because it was not informed by Sunrise. Chair Alexander indicated that some type of mechanism should be established to require enforcement. Mr. Colabella indicated that he would have Thomas Mueller, Environmental Engineer Director with the Broward County Health Department, attend the next Board meeting to provide some answers.

Chair Alexander commented that he wanted to know that if there was a main break and the Fire Department could not be supplied with water, that department should be informed immediately so that other provisions could be made. He also indicated that if there was an order to boil water due to bacterial problem, resident should be informed immediately as well, instead of two days after the fact.

6. COMMENTS AND/ OR SUGGESTIONS

There were no comments or suggestions.

7. ADJOURNMENT

Vice-Chair Zane made a motion, seconded by Mr. Hoth, to adjourn. There being no objections, with Messrs. Aucamp, Lieberman and Pignato being absent, the meeting adjourned at 6:45 p.m.

Approved

Chair/Board Member