



# TOWN OF PALM BEACH

Town Clerk's Office

## REPORT OF THE PUBLIC WORKS COMMITTEE MEETING HELD ON TUESDAY, MAY 24, 2022

### I. CALL TO ORDER AND ROLL CALL

The Public Works Committee Meeting of May 24, 2022 was called to order at 9:32 AM by Chair Lindsay. On roll call, all committee members were found to be present.

### II. PLEDGE OF ALLEGIANCE

Chair Lindsay led the Pledge of Allegiance.

### III. APPROVAL OF AGENDA

**Motion was made by Member Zeidman and seconded by Chair Lindsay to approve the Agenda. On roll call the Motion passed unanimously.**

### IV. COMMUNICATIONS FROM CITIZENS

Jeff Koons, resident of The Reef Condominium, former City of West Palm Beach and Palm Beach County Commissioner, complimented the Town on a strategic water analysis and spoke regarding the Town's water consumption and supply.

### V. REGULAR AGENDA

#### A. Old Business

1. Update on Green Initiative Progress – Ficus Replacement on Town Property  
*H. Paul Brazil, P.E., Director of Public Works*

H. Paul Brazil, Director of Public Works gave an update regarding progress of the Town's Green Initiative, by providing a brief report on the Town's use of pesticides, treatment of lethal yellowing, Royal Palm Bug, white fly and use of fertilizers. He stated that there was continued treatment of lethal yellowing with an antibiotic but whitefly was treated with a synthetic.

For the ficus canopy, two treatments were administered per year with one being Altus which is a non-neonicotinoid which has allowed the reduction of harmful pesticides in the area by 50%. Due to Town's regulations nitrogen or phosphorus

cannot be used. He explained that all applications are applied at or below label rates using best management practices by a licensed professional. As an experiment, the Royal Palm trees were not treated with any chemicals and no negative impacts were observed. Therefore, all Royal Palm bug treatments have been discontinued throughout the Town.

Director Brazil reported that at the start of the Ficus Replacement Program there were 2,490 linear ft. of ficus to be removed. During FY2021 approximately 831 ft. of ficus had been removed and it is anticipated that another 615 ft. will be removed in 2022. The remainder of the ficus, about 1,044 ft., which will be in Phipps Park and will be removed after the completion of the Preservation Foundation's project in Phipps Park. It was anticipated that about \$600K would be needed for the removal and replacement of the ficus but only \$150-200K will be needed. Director Brazil stated that the low cost was due to the ficus replacement happening along with other construction projects and also the material cost is lower.

Chair Lindsay spoke regarding the Green Initiative and the benefits of promoting native plants and thanked the Garden Club, the Civic and Citizens Associations and the Preservation Foundation for the educational opportunities they have provided for residents.

Responding to Member Zeidman, Director Brazil stated that the Town's Code has certain requirements for screening of a property but there is nothing in the Code specific to whitefly infestation.

Director Brazil gave an overview of the ficus removal program. The committee recommended that the whitefly infestation issue be forwarded to the Town Council for discussion.

Director Brazil reported that Town owned trees are being inventoried by being tagged and the information placed in the GIS database. He stated that not much progress has been made with controlling the growth of trees so as to minimize use of fertilizers, etc. Chair Lindsay expressed her concerns with the Town utilizing certain chemicals as growth regulators.

Chair Lindsay requested a news release be distributed regarding use of pesticides during the summer months.

## B. New Business

### 1. WATER SUPPLY FEASIBILITY STUDY *H. Paul Brazil, P.E., Director of Public Works*

Director Brazil stated that the following topics resulted from discussions with the Town Council and these are individual topics needing further discussion.

Jason Lee, Kimley-Horn and Associates made a presentation regarding the following:

a. Age-Based Condition of Existing Water Supply Infrastructure

This age-based assessment identifies the approximate age of each of the pipelines but is not a condition assessment of the pipelines. An age-based map of the watermain on the island was presented showing ages 1940s or older up to 1960s or earlier. He stated that all the watermain installed prior to 1960 represent cast iron or asbestos concrete which generally have a life expectancy of about seventy (70) years. About 35% of the Town's watermain are either 70 or will be 70 years old at the end of the current franchise agreement. He clarified that when pipelines approach their service life expectancy, it does not mean that a failure is imminent but it does indicate that there is a higher risk of water loss or breaks that would need emergency repairs. Most utilities manage their renewal and replacement programs based on an asset management plan and budget for the replacement of watermain prior to reach their life expectancy. He stated that most watermain installed after 1960 benefitted from improved materials as asbestos concrete and cast iron were being phased out and replaced with ducted iron and PVC which have a greater life expectancy.

Responding to Chair Lindsay's questions regarding the useful life of the current technology and the percentage that contains asbestos, Mr. Lee stated that it's really material specific so before the 1960s it was predominantly cast iron and asbestos concrete pipes which life expectancy is 70 years. These systems would typically have more maintenance and emergency calls. He stated that he did not know the percentage of asbestos but when used as concrete it was in an inert fashion and was only an issue when it becomes airborne. He stated that there is a list of which pipes are asbestos, cast iron and other materials of construction. As to removal, he stated that the material is kept damp and from being airborne and will be removed, bagged, placed in dumpster and taken to landfill. The removal has to be permitted by the County.

Director Brazil stated that if the Town does not renew its contract with the City of West Palm Beach, then the Town becomes the owner of the watermain serving the island. He also stated that the City of West Palm Beach does frequent leak detection so although the pipes are old they are not failing but it would be smart to start the replacement program.

Member Zeidman requested clarification on whether the Town would own the pipes regarding the other non-West Palm Beach options. She was assured that the Town would own the pipes. Chair Lindsay commented on past watermain work in the north end of Town which was very disruptive

and paid for by the Town. Patricia Strayer, Town Engineer, explained the payment process.

b. Summary of Water Supply Infrastructure Improvements Per 1999 Franchise Agreement with the City of West Palm Beach

Mr. Lee explained the terms of the franchise agreement.

Director Brazil responded to Member Zeidman that the cost to restore and replace the watermain would come from the R&R fund unless the City of West Palm Beach chose to accelerate the replacement. Ms. Strayer explained the replacement process using the R&R funds.

Responding to Chair Lindsay, Mr. Lee explained the differences between the age-based water assessment and the watermain that need replacement slides.

Discussion ensued regarding the funding of the water treatment, distribution and transmission system.

c. Discussion of Treatment Methods Used by City of West Palm Beach, Palm Beach County and City of Lake Worth

Mr. Lee reported the water treatment for each agency as follows:

- City of West Palm Beach water treatment plant is rated at 47 MGD and its primary source of surface water is withdrawn from Clear Lake and includes waters from Lake Mangonia, M Canal, Grassy Waters, the EAA and Lake Okeechobee. The primary treatment is line softening and filtration. Over the years, other forms of treatment have been added so currently the process includes powder-activated carbon, lime softening, sedimentation, filtration and UV disinfection.
- Palm Beach County Water Utilities includes treatment plants within the eastern region of the system. Each of the four plants are interconnected with customers receiving water from any of the plants. The northern two water treatment plants (plants 8 and 2) would be the primary plants to provide water to the Town if the Town decided to enter into a partnership with the County. **Plant 8** is located on Jog Road, north of Belvedere Road and south of the Turnpike, rated at 30 MGD and the primary water source is surficial aquifer (shallow ground) water. The treatment is conventional line softening and also includes MIEX Anion Exchange. The Anion Exchange is used to remove organic carbon where the water is sent through a bed of resin which replaces negatively charged

constituents with chloride that needs to be backwashed and regenerated. **Plant 2** is located just south of Forest Hill Boulevard and west of Haverhill Road. This plant is rated at 16.4 MGD and it's surficial wells pull from the shallow surficial aquifer and the treatment is similar to plant 8 utilizing conventional lime softening and MIEX Anion Exchange. **Plant 3** located east of Jog Road and north of West Atlantic in western Delray Beach is rated at 30 MGD. The primary source is shallow groundwater with the treatment being nano filtration which utilizes membranes slightly more porous than reverse osmosis for softening but is effective at removing chemicals up to virus level pathogens from the raw water. **Plant 9** is located in west Boca Raton, east of SR7 and south of West Palmetto Park Road is rated at 26.9 MGD. The primary source is surficial wells drawn from the surficial aquifer and treatment is by nanofiltration.

- Lake Worth Beach water treatment plant located just north of Sixth Avenue South and east of I-95 is rated at 12.9 MGD. The plant is served by 2 water sources which includes surficial wells from the surficial aquifer and deep wells into the Floridian Aquifer. The plant utilizes conventional and brackish water reverse osmosis. The surficial raw water is treated with lime softening and filtration (conventional treatment) and the Floridian Aquifer water treated with brackish water reverse osmosis membranes.

Mr. Lee explained to Member Zeidman that the ion exchange removes organic carbon (color removal) primarily for taste or aesthetics. John Potts, Kimley-Horn consultant explained the organic carbon removal process.

Discussion ensued regarding the proximity to the Town of each treatment plant and the water treatment utilized by each one.

#### Public Comments

John Koons, 2275 S. Ocean Blvd. spoke regarding the extension of the County's consumptive water permit by the South Florida Water Management District.

Ronald Matzner, 3120 S. Ocean Blvd. questioned why the Town was only focusing on four (4) plants and if there other plants that could be blended together.

*End of Public Comments*

Mr. Lee explained the reasons for Lake Worth using conventional and reverse osmosis for water treatment.

#### d. Discussion of Commonly Available Private Home Filtration Systems

Mr. Lee presented different types of home filtration systems utilizing cloth filters, ion exchange softeners, ultraviolet (UV), carbon filters and membranes.

He explained the use and cost of using membrane filters in each home within the Town. He stated that the single point of use fixture which has a capacity of 5-10 gallons per day would cost about \$1,500 for purchase and installation and \$1,000 annually for maintenance. He stated that the main drawback for this system is that for every gallon of water purified three (3) gallons are wasted and these units are generally not large enough to service a shower or tub. The whole home treatment system, 300 gallons per day is assumed to be the average for a home. These systems are limited to domestic use and not irrigation. This would require plumbing modifications to separate irrigation system from the home. About 33-67% of water that is purified is waste. He explained that a tank to store water and a booster pump would be needed as well as disinfection systems to prevent bacteria growth in the plumbing system when the house is unoccupied. The price of these units can range from \$5,000 to \$25,000 depending on the plumbing. There will also be annual maintenance cost of about \$5,000.

#### e. Discussion of Items for Future Public Works Meetings

Director Brazil suggested the following topics for future meetings:

- Drought impacts for various water sources
- SFWMD Regulations – water use impacts to alternative sources
- Utility formation
- Asset Management

Director Brazil suggested having another PW committee meeting before apprising the Town Council of the options.

### VI. SCHEDULE FOR FUTURE PUBLIC WORKS COMMITTEE MEETINGS

A date will be submitted after the options have been summarized.

### VII. ANY OTHER MATTERS

There were none.

VIII. ADJOURNMENT

The Public Works Committee Meeting of May 24, 2022 was adjourned at 11:07 AM by Motion made by Chair Lindsay and seconded by Member Zeidman.

APPROVED:

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Bobbie Lindsay, Chair

ATTEST:

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Pat Gayle-Gordon, Acting Town Clerk

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Date

Attached to this report is an addendum from the Committee Chair, Bobbie Lindsay