# ADDENDUM

## Public Works Committee Report for May 24, 2022

### I. Green Initiative

Pesticide-reduction, Ficus removal on Town Property, PRGs

The Town has reduced toxic chemical treatments of its Phipps canopy on N County Road by half by alternating one biannual treatment with a non-neonicotinoid, resulting in using 50% less toxic chemicals on the Phipps canopy. Ficus *benjamina* and Ficus *microcarpa*, also known as Ficus *nitida*, require toxic neonicotinoid pesticides to control the whitefly infestations.

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The Town ceased treating for Royal Palm Bug island-wide on its many Royal Palms. This action was taken after a trial of 3 years with no chemicals on the Royal Palms at Palmo Park to demonstrate that chemicals weren't needed to maintain healthy trees. Up until last fall, the town's contractors had applied regular preventative Palm Bug treatment with a highly toxic pesticide. The town demonstrated that the treatment was unnecessary, and the contract has been terminated.

Invasive Ficus *benjamina* removal update: 3 years ago, the town committed to removal of all 2490 linear feet of total town-owned Ficus hedges. 831 feet has been removed, at less than budgeted cost. 622 linear ft. more will be removed this year, leaving 1044 linear feet remaining. The last of the ficus is located at Phipps Park (approximately 40%.) Its removal will be completed as part of Phipps Park restoration and construction. $600K was the estimated cost, now reduced to $150K total cost due to opportunistic replacements during other maintenance events.

A discussion was had regarding what should be done about dead or infested ficus hedges on private property. The Town ordinance controls proper screening of privacy vegetation. Enforcement of the ordinance would give owners with dead ficus hedges a citation for improper screening. The committee recommended to place this issue on the council agenda for discussion. The committee hopes homeowners will replace Ficus hedges since they don't want to use toxic chemicals for control. We will also encourage replacement with native material.

Plant Growth regulators (PRGs). Staff was looking at these synthetic hormones to control rate of growth for possible cost savings since the prior meeting, but with the committee's urging, staff agreed to look into the safety and appropriateness of using these additives in consideration of the Town's Green Initiative. Mr. Brazil reported that the more staff researched it, the less comfortable they have become. The committee reported that these synthetic hormones are not regulated, are classified as pesticides, and are reported to have deleterious effects on humans, pets and other animals. The committee recommended staff discard consideration of the program due to information that possible harmful impacts may outweigh any benefits. It is also contrary to the Town's Green Initiative mission. Based on the committee members and its own research, staff readily agreed to remove this item from consideration.

Fertilizer: The town no longer uses phosphorus- or nitrogen-based fertilizers. The Fertilizer Ban on nitrogen and phosphorus fertilizers is in effect starting June 1st. The Committee believes our residents want to do the right thing but may be unaware of the ordinance. It asked staff to contact paper, use our alert system and request our civic partners to remind homeowners and businesses of June 1-September 30 fertilizer ban (Phosphorus and nitrogen). Staff agreed.

## II. Water Supply Feasibility Study.

Topics presented came from requests by Town Council to more deeply research certain options and topics. Jason Lee presented for KH, with John Potts and staff participating. All but one of the options (WPB) currently under consideration requires the town to take control of its water main infrastructure.

Town consultants prepared an Aged Based Water Main Assessment (Attachment 1) of the existing system. These studies are typically used to budget and plan for long term asset management of utilities by towns. The assessment Identifies the approximate age of each of the water mains in town and evaluates approximate life. A more precise evaluation of the water mains would take longer, using ultrasonic examination of the system.

West Palm Beach is monitoring the system with leak detection equipment. Leak detection by WPB shows the monitored water mains are not failing yet, although a number are on the critical list for replacement. There are many water mains older than 70 years, and some of them include major artery stretches on N & S County Roads, N Ocean Blvd., and N.Lake Way.

The majority of our existing water mains were installed in 1940s or earlier, or 1950's or earlier. All of them installed before 1960 are either asbestos-concrete or cast iron and these typically have a life of approximately 70 years. The vast majority of all water mains in the ground will be more than 70 years old at end of franchise agreement, many of those more than 80 years old.

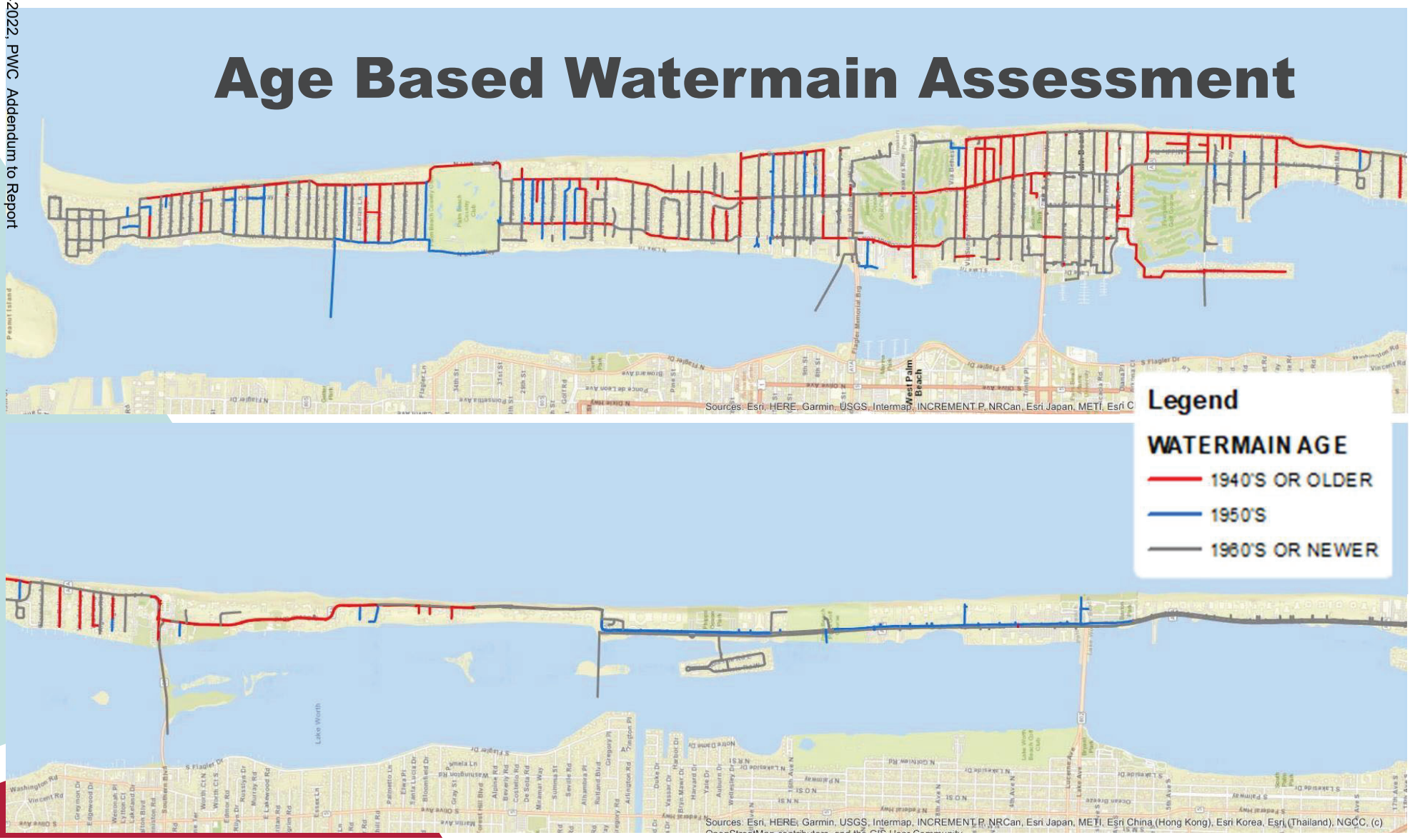
The Town knows where the asbestos-concrete (A-C) water mains are located. The A-Cs will require a permit to replace, as the material has to be removed with a process to keep the asbestos from becoming airborne. The committee asked staff to graphically identify for Town Council all of the A-C and iron pipe locations on the charts as well as quantify the percentages of 60+ , 70+ and 80+year old water mains still in the ground, highlighting percentages of total on both arterials and side streets.

Programmed replacement cost of existing older water mains over a 30 year period is included in all water options under consideration. Selection of certain options that require larger diameter pipes for north-south water distribution would require a highly disruptive accelerated replacement program on our main arterials and some side streets at a cost of approx. $200M.

Staff and Consultants presented, and the Committee discussed what the renewed 30-year franchise agreement of 1999 with WPB included in regard to water main replacement in the ground on Palm Beach. Upon renewal, WPB reviewed 110,000 linear feet of water mains, approximately 28% of all water mains in town. The review resulted in WPB identifying a list of water mains it considered critical for replacement and the agreement obligated WPB to undertake a program to replace those water mains at its cost with a cap of $18M. (See Attachment 2.) Work commenced and the fund was exhausted within the first 5 years of the renewed agreement, before completing the list. Since that time (during the past 21 years) aging water mains have continued to be identified as failing or likely to fail and replaced. The replacement efforts have totaled $29M since the 1999 agreement was renewed, funded through the $18M committed by WPB in 1999 and $11M more over approximately the past two decades paid for out of the Town's R&R fund (which includes a monthly contribution by Town residents added on to their water bill.) There are still a few water mains, mostly in the north end, that were on the 1999

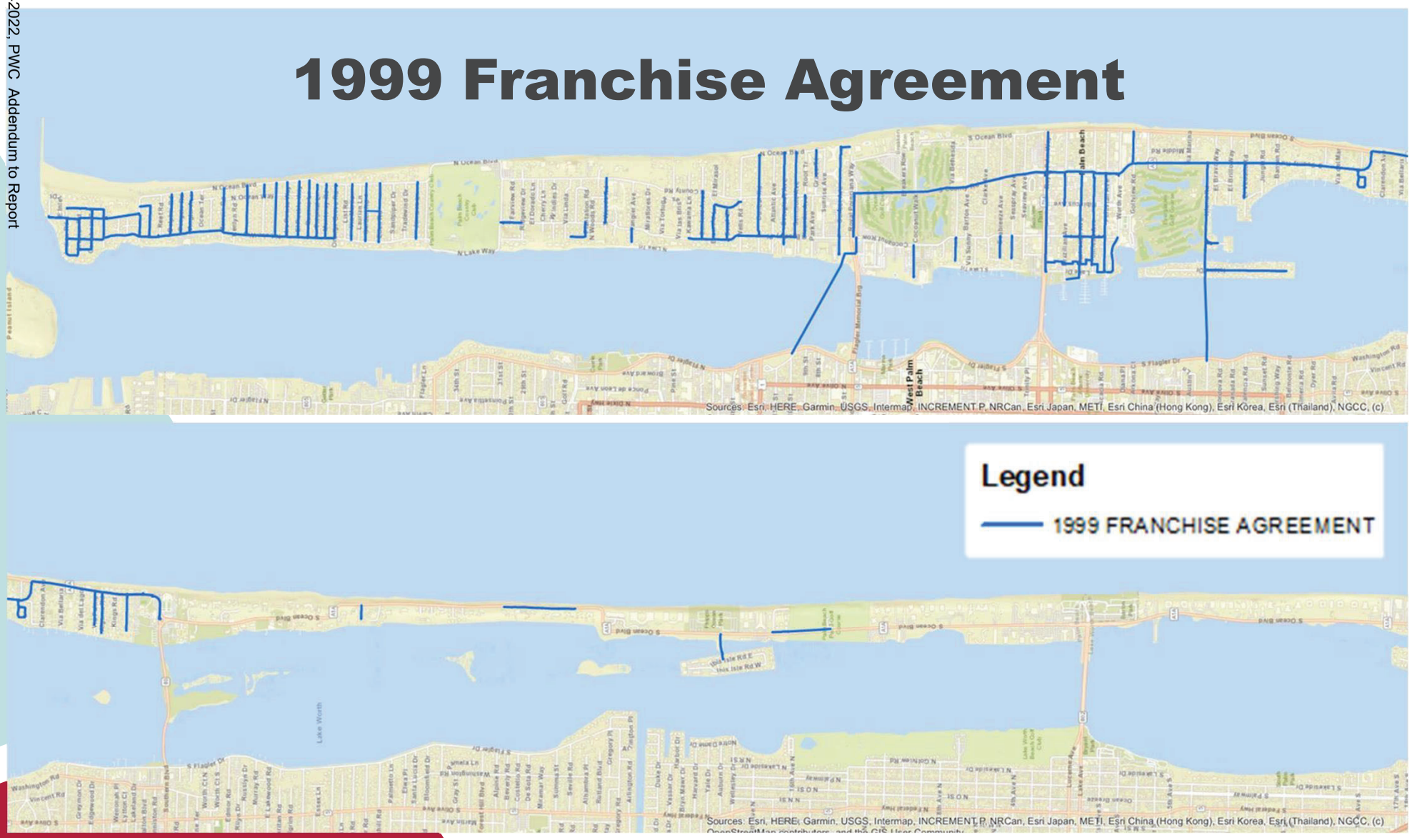
# Exhibit 1




Age Based Watermain Assessment
West Palm Beach
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri C
Legend
WATERMAIN AGE
1940'S OR OLDER
1950'S
1960'S OR NEWER
Lake Worth
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c)

# Exhibit 2




1999 Franchise Agreement
Legend
1999 FRANCHISE AGREEMENT
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c)
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c)

critical list that haven't been replaced. (See Attachment 3.) The R&R fund currently collects approximately $$1M annually. All the additional spending of $11M is a result of a reactive policy of replacing water mains as they are identified by WPB or the town as failing or highly likely to fail.

Staff explained having older infrastructure in the ground and waiting to replace it until failure is not untypical, but acknowledged that had the Town owned the system, it might have taken a more proactive approach. Mr. Potts added the current trend is a more proactive approach to replacement than both utilities and municipalities followed in the past. He said the risk of the older, reactionary approach is that if a lot of failure occurs at once in an older system, a municipality may not have money available to fix it. He suggested that if we stay with WPB, the renegotiation of the agreement should contain a more proactive replacement program.

Staff and the committee agreed that there are insufficient funds in the current R&R program to cover the needed replacement schedule of water mains.

**III. PB County Water System**

The PB County water option was looked at more closely. This option would sell water to the Town as a bulk provider, requiring the town to set up and operate its own billing and collection system. The County's 4 treatment plants are connected and the water from each plant is blended water within the entire system before sending to customers. While the County has some membrane (RO/Nano) technology, because the water is also blended from plants using older technology as well as membrane technology, the water quality is not as state of the art as systems like Jupiter's, where all contaminants are removed through membrane technology.

**IV. Lake Worth Beach Option**

The committee was informed an additional meeting was imminent to discuss the Lake Worth Beach's plans for adopting RO technology. The report on that meeting will be made directly to the Town Council.

**V. In- Home Treatment Water Systems**

Simple, single point of use systems under the kitchen sink for drinking water to more significant Whole House Treatment were discussed.

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| Single Point | |
| Purchase: | $250-$500 |
| Installation: | $1,000 |
| Maintenance/Year | $1,000+ |

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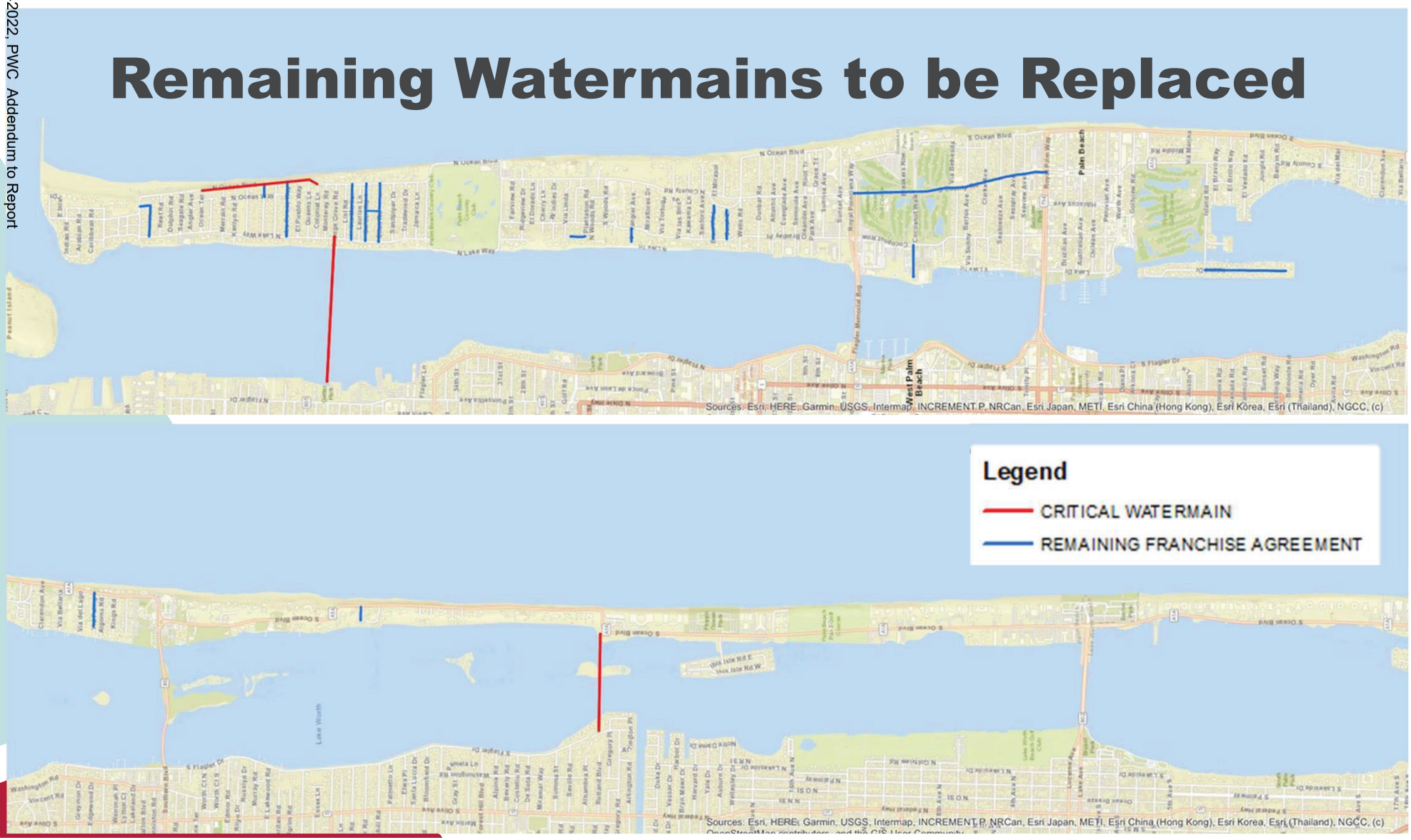
| Whole House: | |
| Purchase: | $5,000 |
| Installation: | $10,000 to $25,000 |
| Maintenance/Year: | $5,000+ |

# Exhibit 3


Remaining Watermains to be Replaced
Legend
CRITICAL WATERMAIN
REMAINING FRANCHISE AGREEMENT
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c)
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c)

**Key Conclusions/Recommendations of the Committee meeting**

1.The dollars Town residents contribute through their water bills for the R&R program administered by the City of West Palm Beach, are insufficient to replace aging infrastructure and likely construction costs. (See $11M additional contribution above.) The Town Council might discuss increasing the town's budget during the next number of years while we are under-grounding, prioritizing those east-west, residential streets identified more than 21 years ago by WPB as in critical need of replacement. It would be helpful to understand why water mains on east-west streets identified as needing replacement 21 years ago in the north end were not replaced during under grounding in that area and whether remaining critical east-west water mains identified on the 1999 Franchise Agreement are scheduled to be replaced when under-grounding occurs in the area.

2. The City of WPB has performed leak detection it considers appropriate for a system it owns. If this was a Town-owned asset, the Town might have done more detection and additional analysis of water main conditions. The current replacement program is based on reaction to failure and is limited by funds in the "R&R bank," not on proactive age-based analysis and/or closely monitored conditions of old infrastructure. The Council should ask staff to consider implementing a more proactive monitoring and replacement program now (leak detection, ultrasound), while being mindful not to replace water mains on north-south arterials, where the diameter of the water mains may be enlarged to support the final water system selection. Mr. Potts said the current trend is to adopt a proactive approach to replace the system over a selected time year period on an annual basis, e.g., 30 years. That is now the recommended approach. Should we renegotiate our franchise agreement with WPB, a key point will likely be the investment WPB makes in replacing water main infrastructure on Palm Beach. *KH and staff estimate that it will cost $200-$300M to replace the existing water main infrastructure. These costs are included in the alternatives. $200M=$6.6 M per year, $300M=$10M per year over a 30 year period.* More cost analysis by our Town staff and experts may be appropriate.

3. A significant majority of our water main infrastructure is vulnerable to failure (more than 70 years old). The Committee has asked staff to show the Age Based Water Main Assessment chart summing the number of miles of arterials and streets in red and blue (NOB, N County, S County and NLW as well as side streets) to quantify how many miles of old infrastructure exist. At the committee's request, for its presentation to Town Council, some information presented at committee will be reformatted to a larger scale map identifying the street and arterial names, as well as percentages of water mains in the different age categories.

4. If and when we leave WPB, we will own a very old water infrastructure system. If we stay with WPB, they will own a very old water infrastructure system in Palm Beach, subject to our negotiations to bring it up to date. Regardless of the option we chose, extensive water main replacement appears to be in the Town's future.

5. The committee recommends Town Council ask staff to continue studying potential water supply options, including deeper analyses or variations of membrane-based options currently under review, including becoming a partner with WPB in building a new plant on the premise of using membrane technology. Only through a careful and thorough review of all membrane-based options and potential locations for same (RO/NANO, including desalination) will a state-of-the-art water system capable of delivering a safe, contaminant-free, water supply become evident.

**Respectfully submitted, Bobbie Lindsay, June 5, 2022**