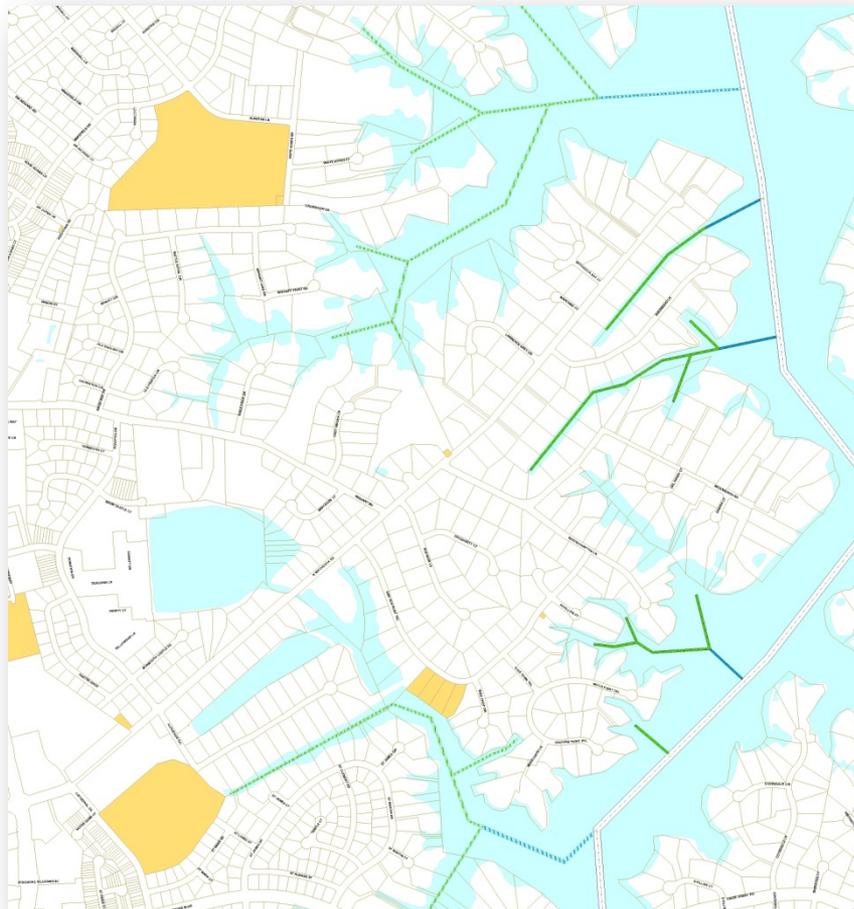




Neighborhood Dredging Program



Briefing for Witchduck Civic League

January 30, 2012

Neighborhood Channel Dredging Program Initiative

- **Supports City Council Goal #4:**
 - **Revitalize Neighborhoods and Plan for the Future**
- **Re-establish Use of Navigable Channels**
- **Improve Water Quality**

Prior Efforts / Reviews

- **1997 Citywide Analysis**
 - **Too big, too long, unaffordable**
- **2004-2005 Series of 4 Council Briefings**
 - **Four potential courses of action identified**
 - **No formal council action**

Historic Alternatives

- **Status quo**
- **Basin wide SSD : +2500 properties, \$3M/yr + 10 years completion, \$30M in 1997 dollars**
- **Expand City main channel projects to include spur channels: no ROI via confirmed neighborhood partners, @40 spurs, + \$4million**
- **Cost sharing on a single dredging basis: 65/35 but not all coves were the same**
- **Fully funded by City: takes ownership = \$35M in 2005 dollars**

Hybrid Alternative:

Adopted by City Council in the FY12 Resource Management Plan (Budget)

- Individual neighborhood SSD's, specific scopes and timelines (3 cycles, 16 years)**
- Includes City - funded Spur Channels (early appropriations allow for 1st dredging in year 2)**
- Financial Partnership - Cost sharing (3 sources)**
- City management of effort – formulation, funding, design, permitting, construction, maintenance**
- Creates a viable solution to reclaim navigation & improve water quality**
- Establishes a reasonable timeline with visible results**

Legal Considerations

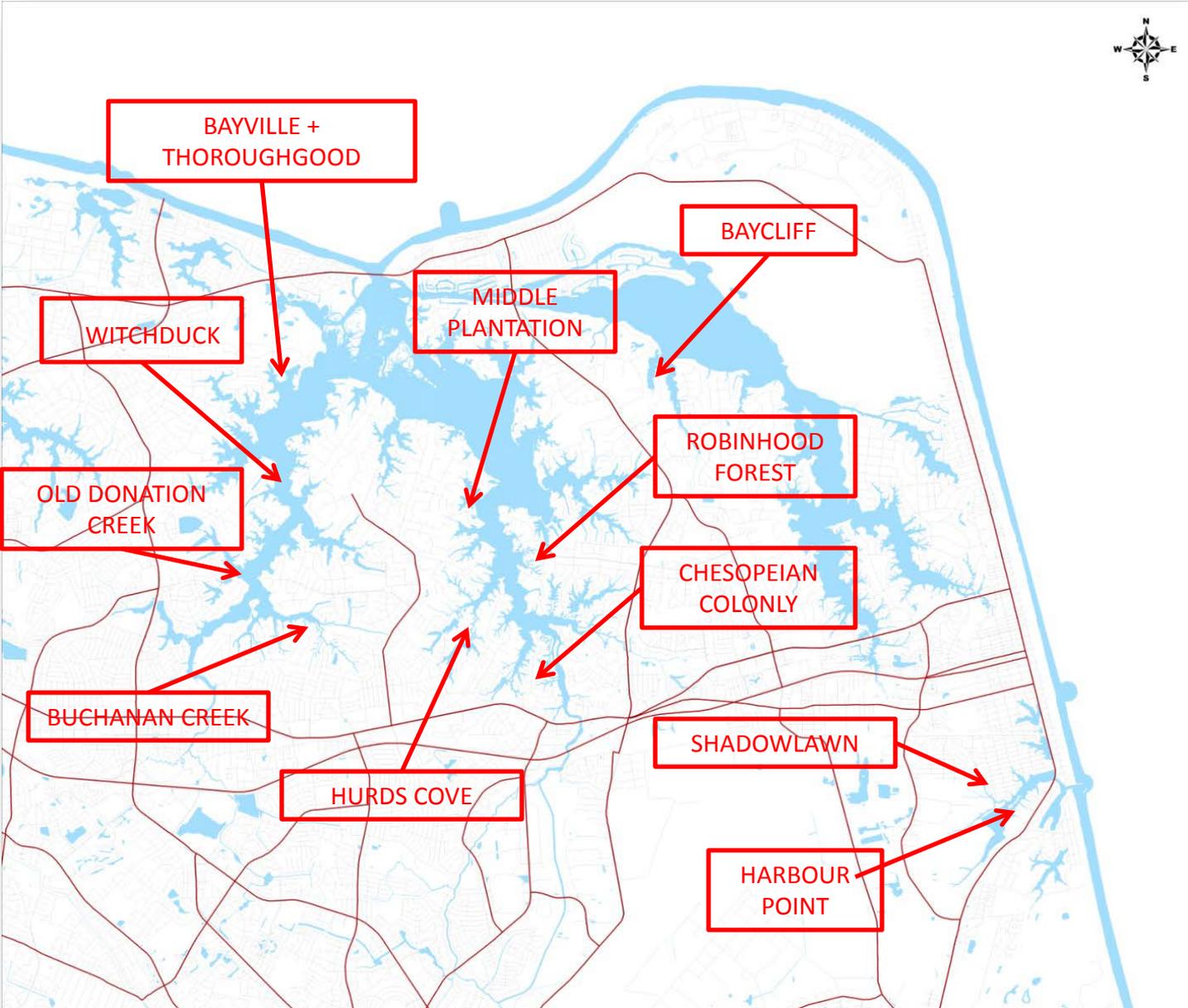
- **VA Code §15.2-2403 Authorizes SSDs for navigation**
- **Minimum of 51% property owner approval**
- **Formal adoption by City Council**
- **Council preference: 80% property owner approval**

Neighborhoods In Play

1. Old Donation Waterway
2. Bayville Creek
3. Robin Hood Forest
4. Thoroughgood
5. Chesopeian Colony
6. Harbour Point
7. Baycliff
8. Hurds Cove
9. Middle Plantation
10. Buchanan Creek
11. Shadowlawn
12. Witchduck

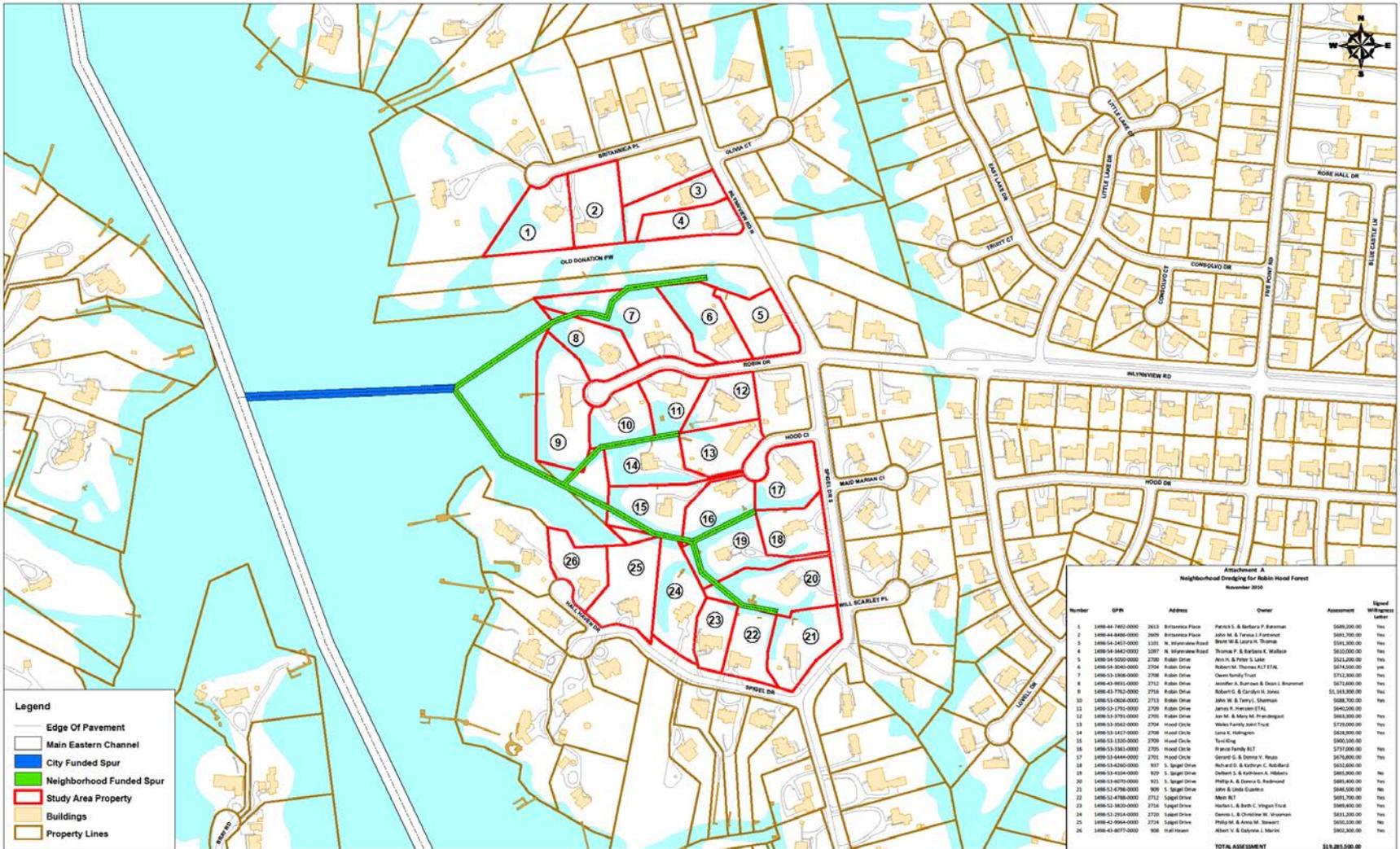


Neighborhoods In Play



Robin Hood Forest

38.7¢



Attachment A
Neighborhood Dredging for Robin Hood Forest
November 2010

Number	UPN	Address	Owner	Assessment	Signed Willingness Letter
1	3488-00-7402-0000	3013 Britannica Place	Francis J. & Barbara P. Stammen	\$685,200.00	Yes
2	3488-04-8488-0000	2829 Britannica Place	John M. & Teresa J. Kaufman	\$591,700.00	Yes
3	3488-04-3487-0000	1331 N. Weyburne Road	Brent W & Laura H. Thomas	\$191,300.00	Yes
4	3488-04-3488-0000	1387 N. Weyburne Road	Thomas P. & Barbara K. Wiltach	\$123,800.00	Yes
5	3488-04-5050-0000	2700 Robin Drive	Wes H. & Peter J. Luber	\$121,300.00	Yes
6	3488-04-3040-0000	2704 Robin Drive	Robert M. Thomas RLT ETAL	\$874,000.00	Yes
7	3488-01-1000-0000	2706 Robin Drive	Oliver Family Trust	\$712,900.00	Yes
8	3488-03-9933-0000	3712 Robin Drive	Jennifer A. Burman & Dean S. Burman	\$672,800.00	Yes
8	3488-03-7702-0000	3716 Robin Drive	Robert G. & Carolyn H. Davis	\$1,183,900.00	Yes
10	3488-01-0000-0000	2713 Robin Drive	John M. & Terri L. Oberman	\$488,700.00	Yes
11	3488-03-1791-0000	2709 Robin Drive	James R. Harrison ETAL	\$442,000.00	Yes
12	3488-03-3791-0000	2700 Robin Drive	John M. & Terri L. Oberman	\$442,000.00	Yes
13	3488-03-3040-0000	2704 Robin Drive	Robin Family Asset Fund	\$720,000.00	Yes
14	3488-03-1427-0000	2708 Hood Circle	Lois K. Hodgson	\$288,000.00	Yes
15	3488-03-1200-0000	2706 Hood Circle	Trust King	\$900,000.00	Yes
16	3488-03-3383-0000	2705 Hood Circle	Robin Family RLT	\$177,000.00	Yes
17	3488-03-4444-0000	2701 Hood Circle	Gerald G. & Doris V. Arato	\$676,000.00	Yes
18	3488-04-4200-0000	1817 S. Spigel Drive	Richard D. & Katherine C. Hubbard	\$422,000.00	Yes
19	3488-03-4324-0000	809 S. Spigel Drive	Deborah S. & Kathleen A. Hubbard	\$685,000.00	No
20	3488-03-4070-0000	911 S. Spigel Drive	Phillip A. & Doris A. Robinson	\$685,000.00	Yes
21	3488-04-4788-0000	909 S. Spigel Drive	John M. & Terri L. Oberman	\$442,000.00	No
22	3488-02-4788-0000	3712 Spigel Drive	Robin RLT	\$691,700.00	Yes
23	3488-03-3850-0000	3714 Spigel Drive	Richard S. & Beth C. Vinpoe Trust	\$585,000.00	Yes
24	3488-03-2954-0000	2700 Spigel Drive	Devin L. & Christine M. Wrayman	\$631,300.00	Yes
25	3488-04-8994-0000	2704 Spigel Drive	Philip M. & Anna M. Stewart	\$650,300.00	No
26	3488-04-4077-0000	368 Hill Street	Robert V. & Debra J. Mervis	\$403,300.00	Yes
TOTAL ASSESSMENT				\$13,283,200.00	

A:\Projects\04-13\Projects\04-13\Robin Hood Forest\04-13 Robin Hood Forest Dredging Map\Robin Hood Forest\Robin Hood Forest.dwg



Robin Hood Forest Neighborhood Dredging



Bayville Creek

36.3¢



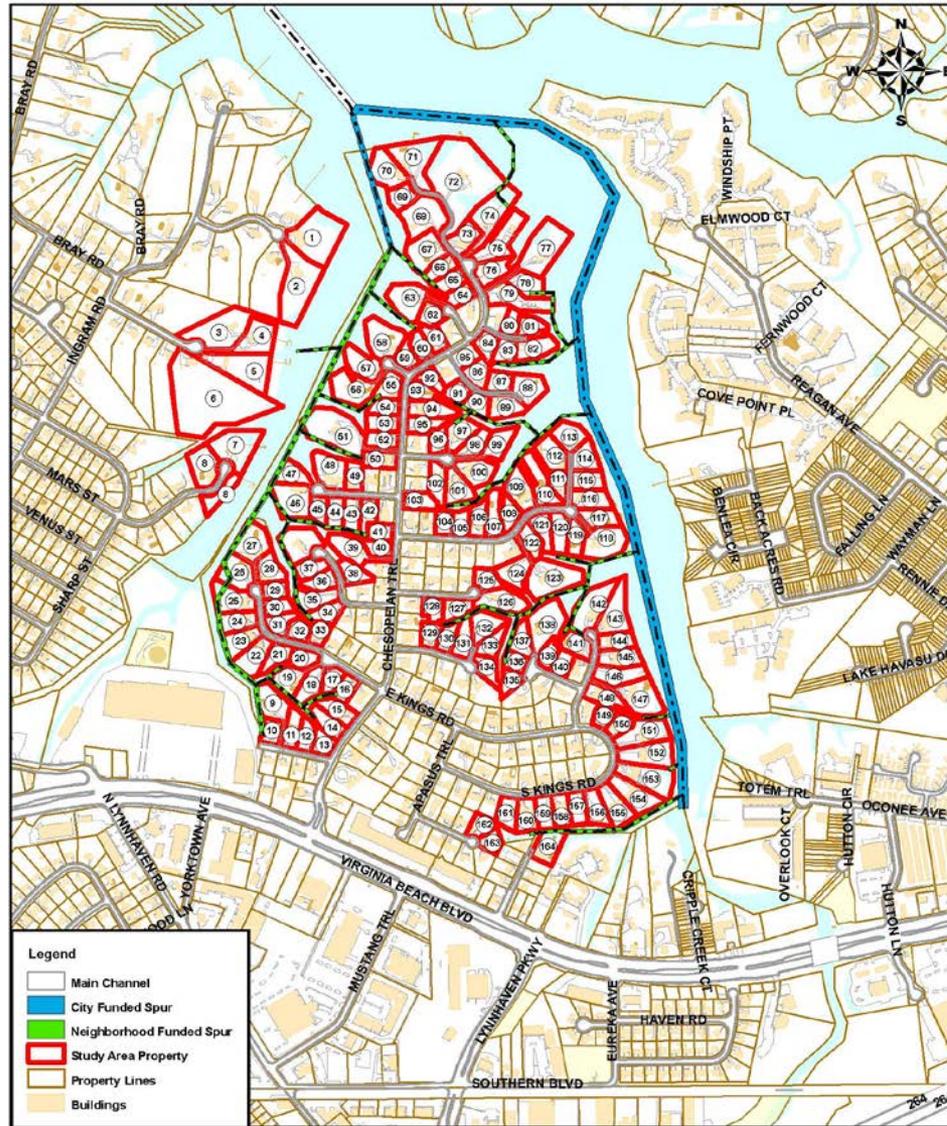
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Bayville Neighborhood Dredging
Attachment A



Chesopeian Colony

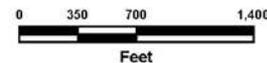
21¢



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Rev. 4-20-2011

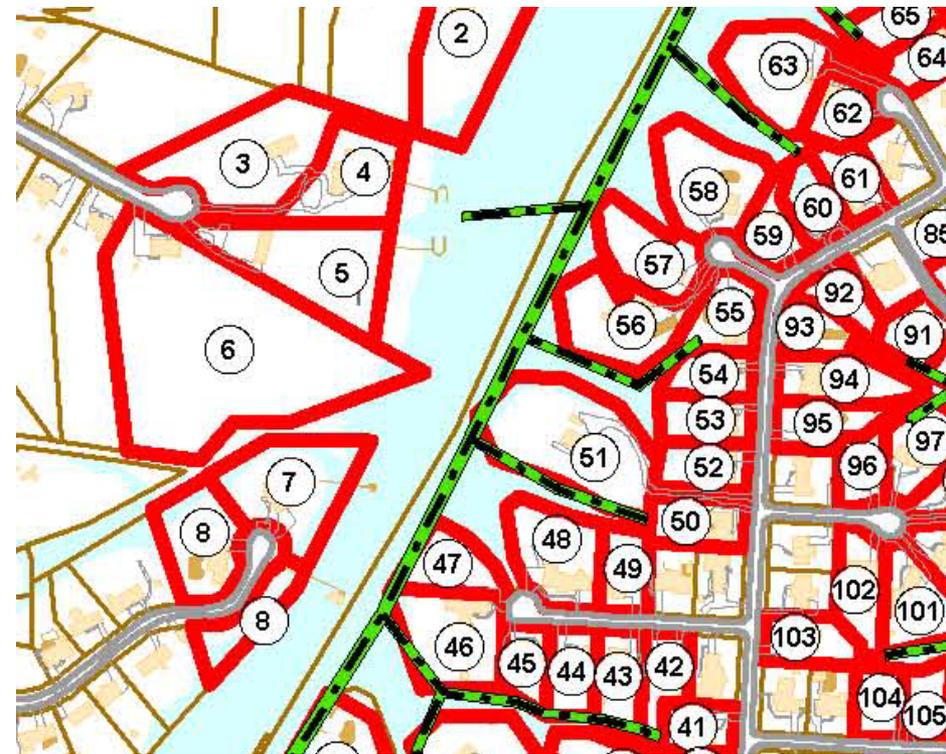


Chesopeian Colony Neighborhood Dredging
Attachment A



Real Estate

- **Voluntary Dedication of Construction Easements and Rights-Of-Way**
- **Obtain consent from owner of bottomland**



Process

- Initiation
- Discovery
- Analysis
- Adoption
- Pre-execution
- Execution

Attachment C

SUMMARY OF COSTS FOR COMMUNITY AND CITY CHANNEL DREDGING - ROBIN HOOD FOREST

Special Services District based on 46 cents SSD rate

Community Channel Dredging	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16
Sources:																
SSD Revenue	75,716	75,716	75,716	75,716	75,716	75,716	75,716	75,716	75,716	75,716	75,716	75,716	75,716	75,716	75,716	74,918
City Contribution**	68,284	68,284	68,284	-10,994	-10,994	-10,994	-10,994	-10,994	-10,994	-19,841						
Yearly Contribution	144,000	144,000	144,000	64,722	64,722	64,722	64,722	64,722	64,722	55,876	55,876	55,876	55,876	55,876	55,876	55,078
Cumulative Contribution	144,000	288,000	432,000	496,722	561,444	626,166	690,888	755,610	820,332	876,208	932,084	987,960	1,043,835	1,099,711	1,155,587	1,210,665
Cumulative Contribution years 1 - 3 (1st Dredging)			432,000													
Cumulative Contribution years 4 - 9 (2nd Dredging)								388,332								
Cumulative Contribution years 10 - 16 (3rd Dredging)																390,333

** The City has to front the first 3 years, but the SSD can return funding to the General Fund beginning in year 4 (shown as negative number above)

City Channel Dredging	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16
Sources:																
City Contribution	26,000	26,000	26,000	11,256	11,256	11,256	11,256	11,256	11,256	9,698	9,698	9,698	9,698	9,698	9,698	9,698
Cumulative Contribution	26,000	52,000	78,000	89,256	100,512	111,768	123,024	134,280	145,536	155,234	164,931	174,629	184,327	194,025	203,722	213,420
Cumulative Contribution years 1 - 3 (1st Dredging)			78,000													
Cumulative Contribution years 4 - 9 (2nd Dredging)								67,536								
Cumulative Contribution years 10 - 16 (3rd Dredging)																67,884

Combined City Channel and Community Channel Dredging	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16
Sources:																
SSD Revenue	75,716	75,716	75,716	75,716	75,716	75,716	75,716	75,716	75,716	75,716	75,716	75,716	75,716	75,716	75,716	74,918
City Contribution	94,284	94,284	94,284	262	262	262	262	262	262	-10,143						
Total Combined Sources	170,000	170,000	170,000	75,978	75,978	75,978	75,978	75,978	75,978	65,574	65,574	65,574	65,574	65,574	65,574	64,776
Cumulative Combined Sources	170,000	340,000	510,000	585,978	661,956	737,934	813,912	889,890	965,868	1,031,442	1,097,015	1,162,589	1,228,162	1,293,736	1,359,309	1,424,085
Cumulative Combined Sources years 1 - 3 (1st Dredging)			510,000													
Cumulative Combined Sources years 4 - 9 (2nd Dredging)								545,868								
Cumulative Combined Sources years 10 - 16 (3rd Dredging)																545,817

ASSUMPTIONS:

SSD Rate 46.0 cents
 Total Assessments \$16,460,100

Revised February 11, 2011

Current Proposal

Financing
Strategy

- Neighborhood channel funded by SSD
- City cost share's by funding spur channel
 - Individual funding of turn basins
 - City management of project
 - Economies of scale
 - Defined schedule
 - Sunset duration

Funding
Sources

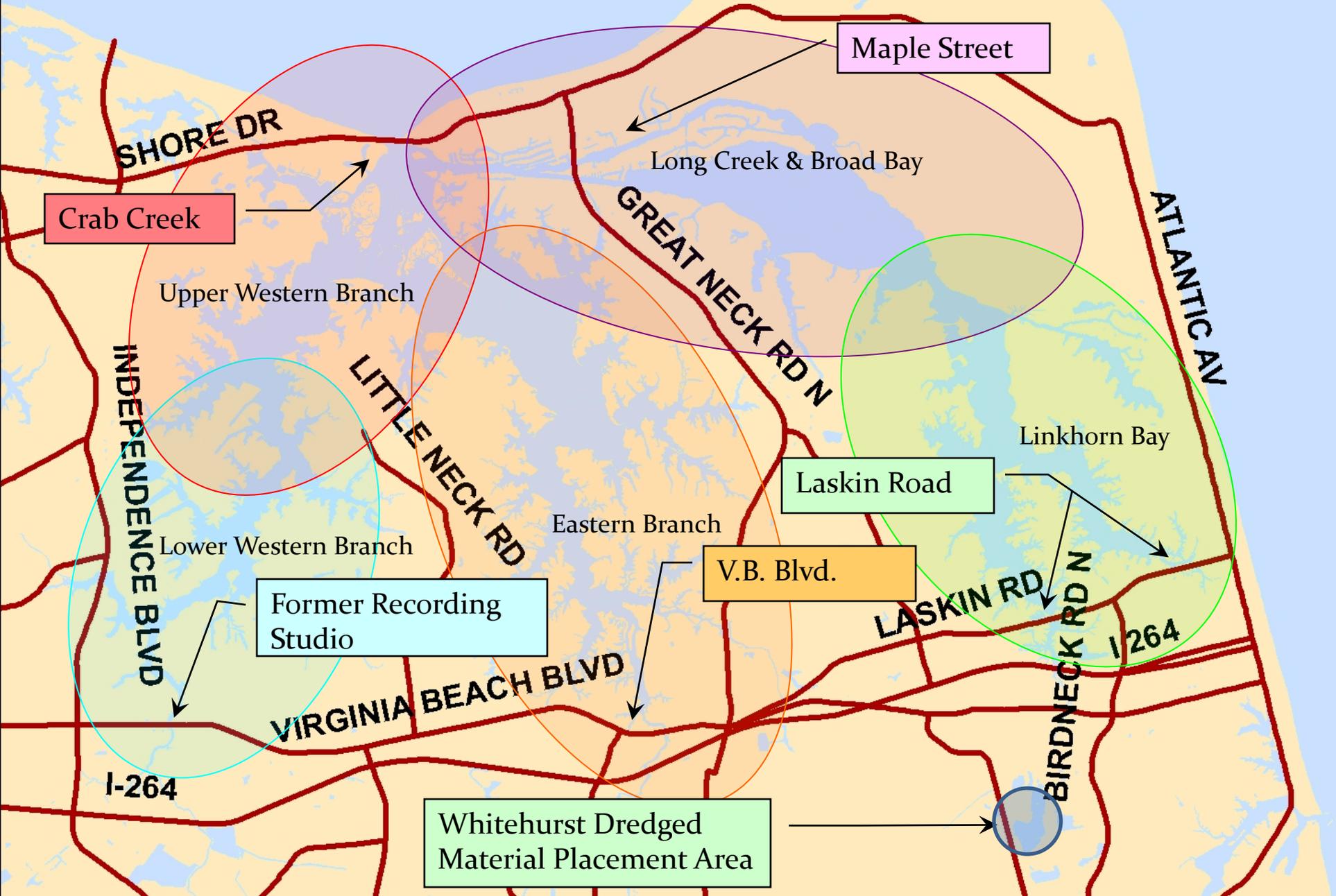
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Project Format

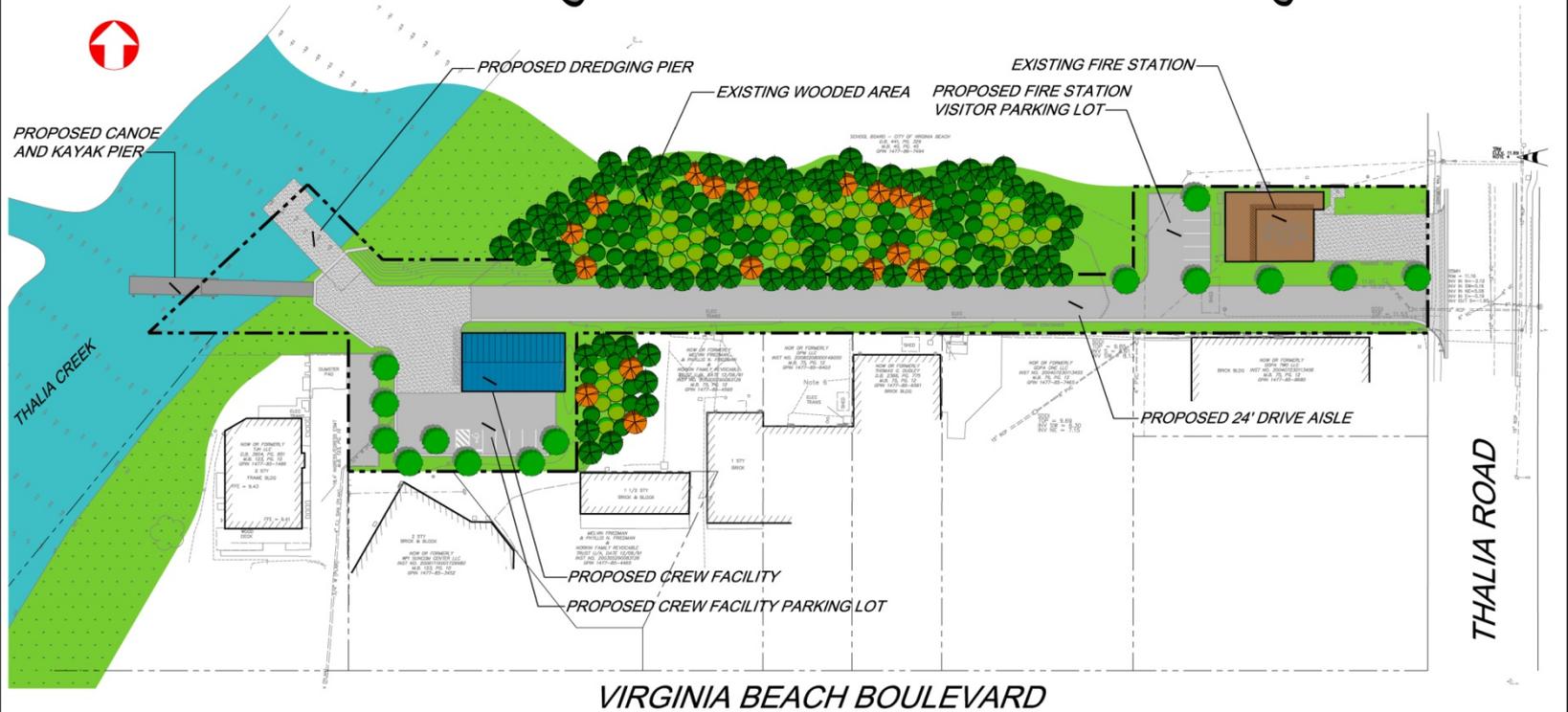
- **Mechanical Dredging**
- **Potential for neighborhood dredged material transfer**
- **City Dredged Material Transfer Site Network**
- **Deposition at City Disposal Area: Whitehurst Borrow Pit**



POTENTIAL MECHANICAL DREDGING TRANSFER SITES



Thalia Dredged Material Transfer Facility



CITY OF VIRGINIA BEACH
DEPARTMENT OF PUBLIC WORKS

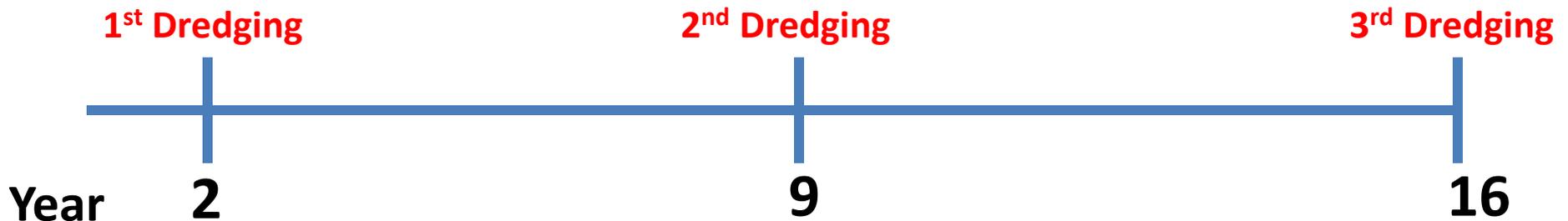
Waterway
Surveys & Engineering, Ltd.
 Virginia Beach, VA

Blakeway Corp
 surveying | engineering | project management

LIBERTY ENGINEERING, P. C.
 4321 E. Honeycreeper Rd #108 Phone: (757) 499-2791
 Virginia Beach, VA 23465 Fax: (757) 499-7994
STRUCTURAL ENGINEERING

Dredging Cycles

- Initial dredging: 2 years after SSD adoption
- Projected cycle: 7 years
- 2nd cycle anticipated at 70% of initial volume
- 3rd cycle anticipated at 50% of initial volume



Old Donation

1st Dredging Cost Estimate

- **City Portion: \$103,212**
- **SSD Portion: \$393,480**
- **Individual Channels: \$5,000 average**
- **1st Dredging engineering and construction contract could reach \$1,000,000**
- **Includes design, administrative costs, survey, construction and navigation aids**

Old Donation

Life Cycle Estimated Costs

City Portion

<u>Cycle</u>	<u>Volume</u>	<u>Cost</u>
1	2,667 CY	\$103,212
2	1,867 CY	\$90,064
3	<u>1,334 CY</u>	<u>\$90,557</u>
	5,868 CY	\$213,420

(includes 5% cost escalation)

(\$30, \$40.20, \$56.57)

Old Donation

Life Cycle Estimated Costs

SSD Portion

<u>Cycle</u>	<u>Volume</u>	<u>Cost</u>
1	10,330 CY	\$393,480
2	7,233 CY	\$348,920
3	<u>5,167 CY</u>	<u>\$350,757</u>
	22,730 CY	\$1,093,265

(includes 5% cost escalation)

Old Donation Appropriations Schedule

<u>Cycle</u>	<u>Year</u>	<u>Design</u>	<u>Construction</u>
1	1	\$100,000	
	2		\$400,000
2	8	\$80,000	
	9		\$420,000
3	15	\$80,000	
	16		\$400,000
Total		\$260,000	\$1,220,000

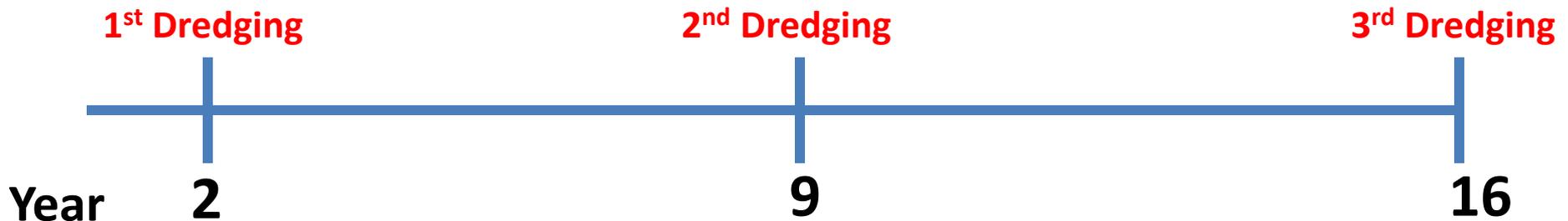
16 Year Pro Forma: 1) Financials; 2) Appropriations

Old Donation SSD Data

- **Total SSD assessed value: \$37,310,900**
- **62 properties in the neighborhood district**
- **Each penny surcharge raises \$3,731/year**
- **SSD rate covers costs for 16 year life: 18.4¢/\$100 of the
FY12 assessed value**
- **Average property contributes \$1,107/year**
- **Review rate at end of every 4th year**

Timeline

- 2 years from SSD adoption to first cycle of dredging for engineering, real estate and permits
- 2nd and 3rd cycles each 7th year thereafter
- Review costs, assessments and SSD rate every fourth year
- Sunsets in 16th year



Funding/Financing

- Escrow SSD funds for 2 years before 1st dredging
- General Fund underwrites first dredging
 - SSD payback within 16 year life, zero interest
- Revisit SSD rate every 4th year
- Pro Forma Statements
 - SSD Financing
 - Appropriations
- Audited with annual CAFR

Risks

- **Environmental permits**
- **Encroachment approval**
- **Real estate dedication**
- **Real estate valuation changes**
- **Cost escalation assumption (5% annually)**

Neighborhood Project Development Format

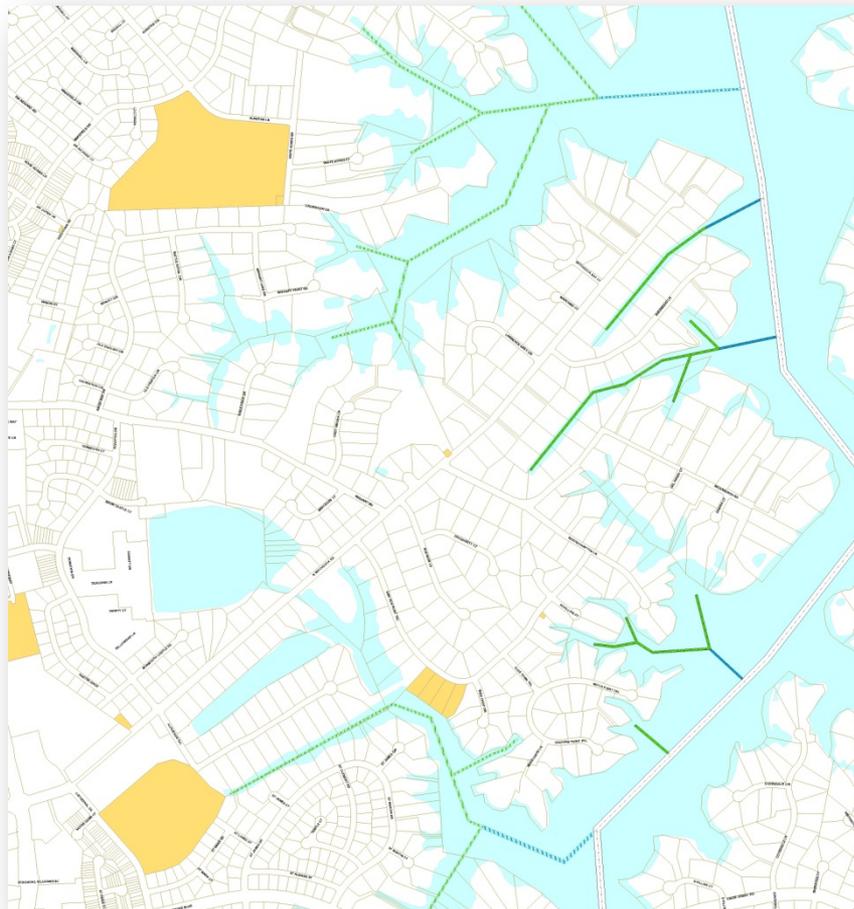
- Civic league establishes dredging committee
- Provide historical documents
- Define initial channel layout
- List of waterfront properties/owners
- Prepare preliminary engineering estimates
- Review the calculation assumptions & formulas
- Provide the initial SSD estimate ($\text{¢}/\$100$ assessed value)
- Determine neighborhood project interest

Neighborhood Project Formal Actions to Establish

- **Brief City Council on project**
- **Staff authorization to petition**
- **Execute documentation to reach 80%**
- **Public hearing**
- **City Ordinance establishing SSD**



Neighborhood Dredging Program



Questions?