



Suffolk County Department of Public Works Sewer District No. 3 – Southwest Sewer District Service Area Expansion Project



A Tri-Venture

Dvirka & Bartilucci Consulting Engineers
Gannett Fleming Engineers, P.C.
LiRo Program & Construction Management, P.C.

 In association with
Cashin Associates, P.C.

July 31, 2012

Introductions

Meeting Facilitator and Elected Officials

Suffolk County Dept. of Public Works

Dvirka & Bartilucci / Gannett Fleming Engineers,
PC / LiRo Program & Construction Management
(Joint Venture)

Purpose of Meeting

Project Update

Draft Feasibility Report

Findings and Next Steps

Project Objectives

Five Study Areas - Deer Park, North Babylon, West Babylon, Wyandanch/Wheatley Heights, and West Islip



Scope of Work

Task 1 – Public Education

Task 2 – Feasibility Report

Task 3 – Environmental

Task 4 – Geographic Information System (GIS)

Task 5 – Project Administration

Task 6 – Deliverables

Project Schedule

Public Meeting #1 – February 16, 2012

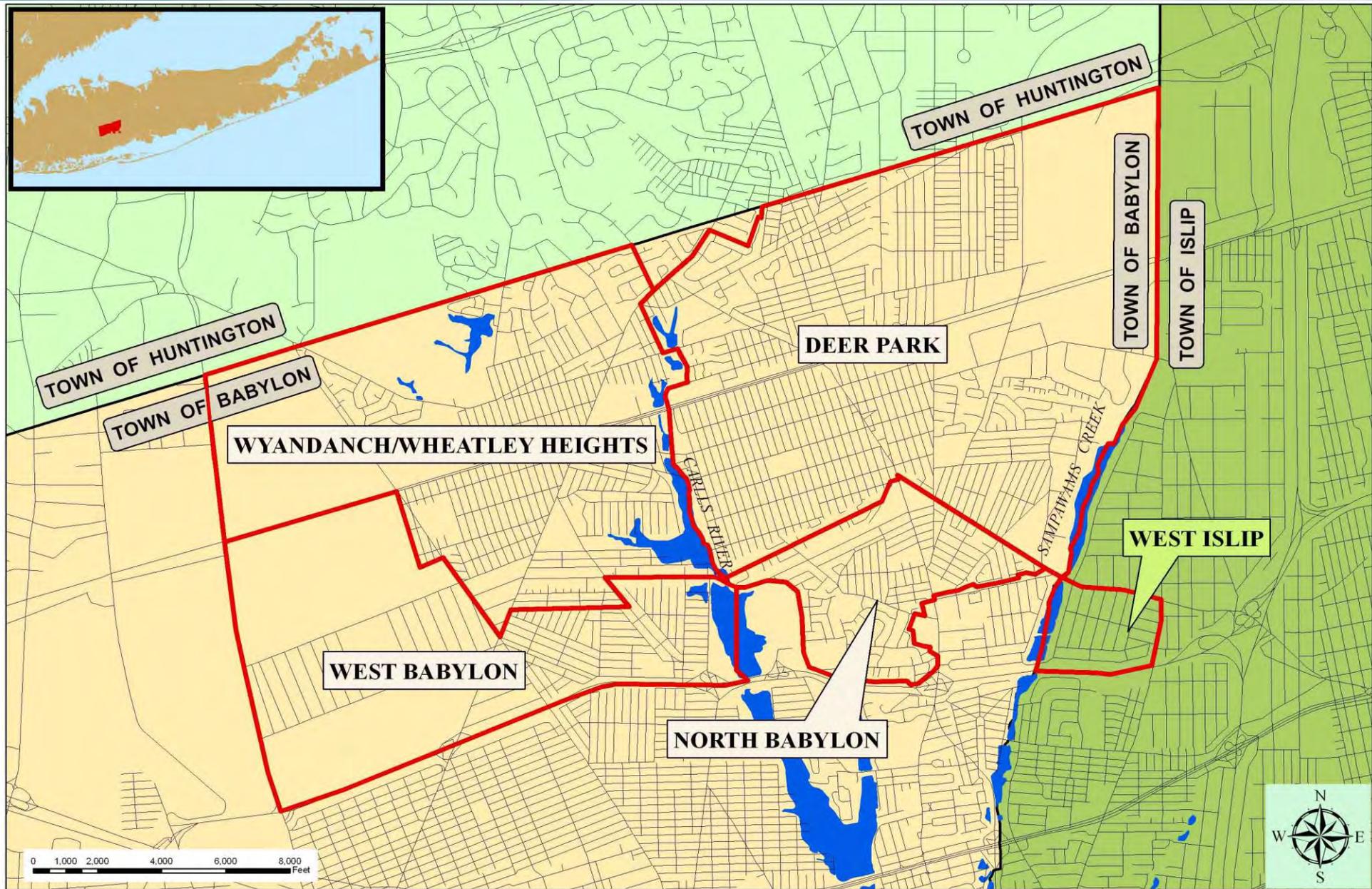
Draft Feasibility Report – July 20, 2012

Public Meeting #2 – July 31, 2012

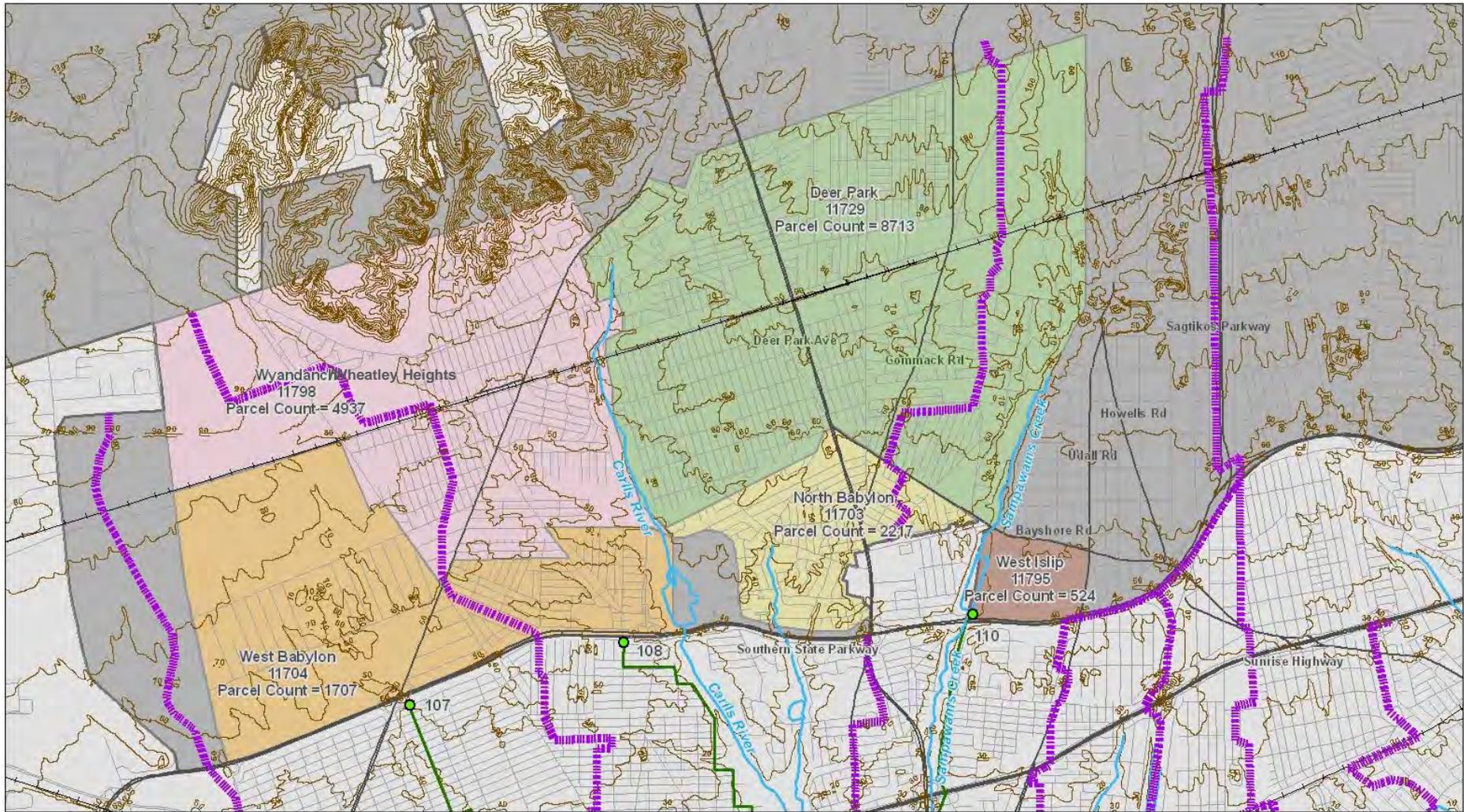
Final Feasibility Report – August/September 2012

Public Meeting #3 – September 2012

Project Location Map



Project Study Area

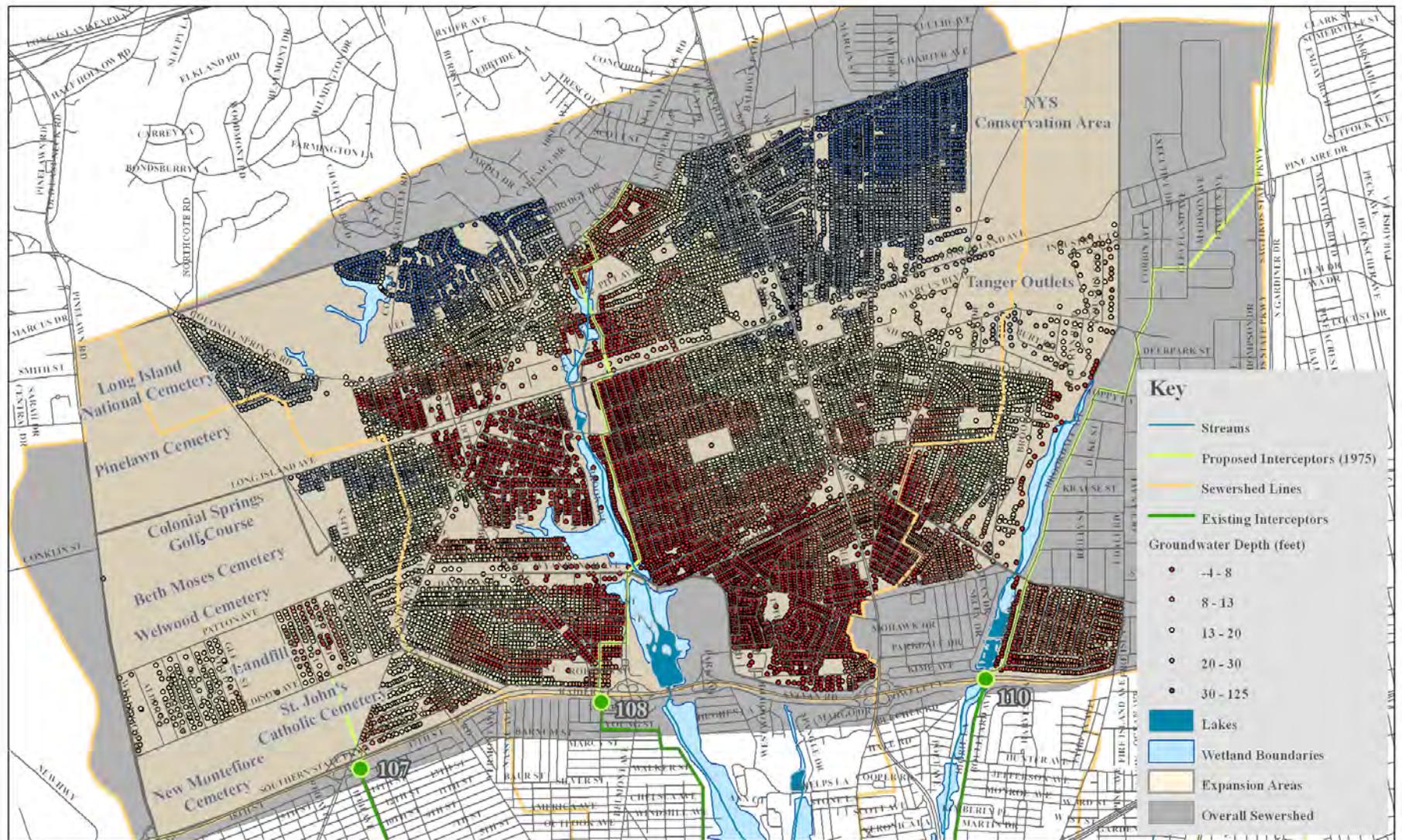


Southwest Sewer District No. 3 Overall Study Area

-  Drainage Basin Limits
-  Interceptors



Project Study Area



Key

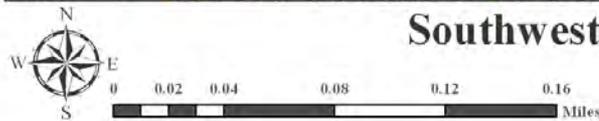
- Streams
- Proposed Interceptors (1975)
- Sewershed Lines
- Existing Interceptors

Groundwater Depth (feet)

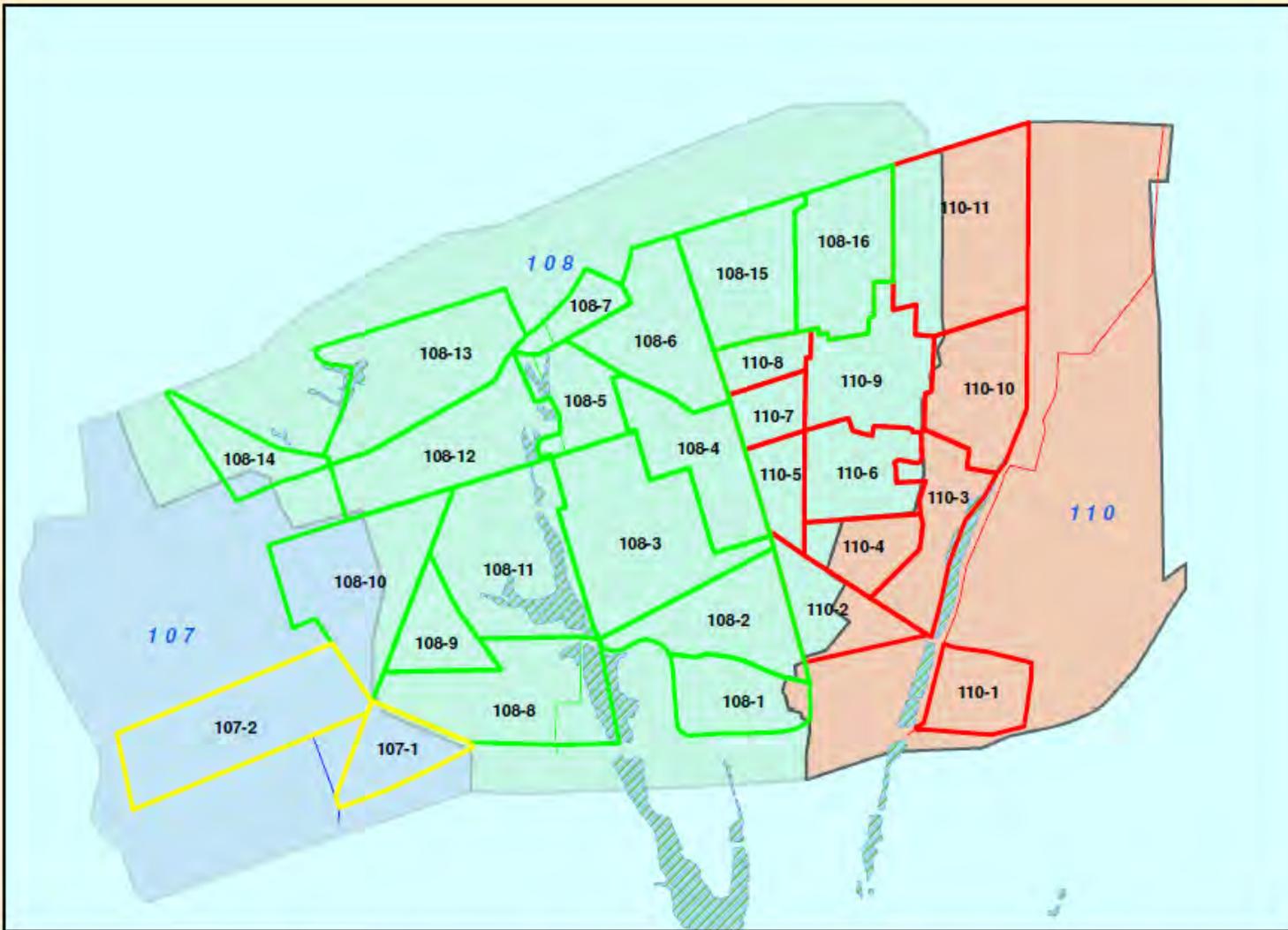
- 4 - 8
- 8 - 13
- 13 - 20
- 20 - 30
- 30 - 125

- Lakes
- Wetland Boundaries
- Expansion Areas
- Overall Sewershed

**Southwest Sewer District No. 3 - Overall Study Area
with Groundwater Depth**



Sewer Sub-Areas



Legend

- 107 Sewershed-Subdivisions Boundary
- 108 Sewershed-Subdivisions Boundary
- 110 Sewershed-Subdivisions Boundary

Sewershed

- Sewershed 107
- Sewershed 108
- Sewershed 110

SCSD 3 - Service Area Expansion
Sewershed Sub-Areas. Figure 3-4



Sub-Area Criteria

Primary Criteria (Maximum Score = 10)

- Depth to groundwater
- Parcel density

Secondary Criteria (Maximum Score = 5)

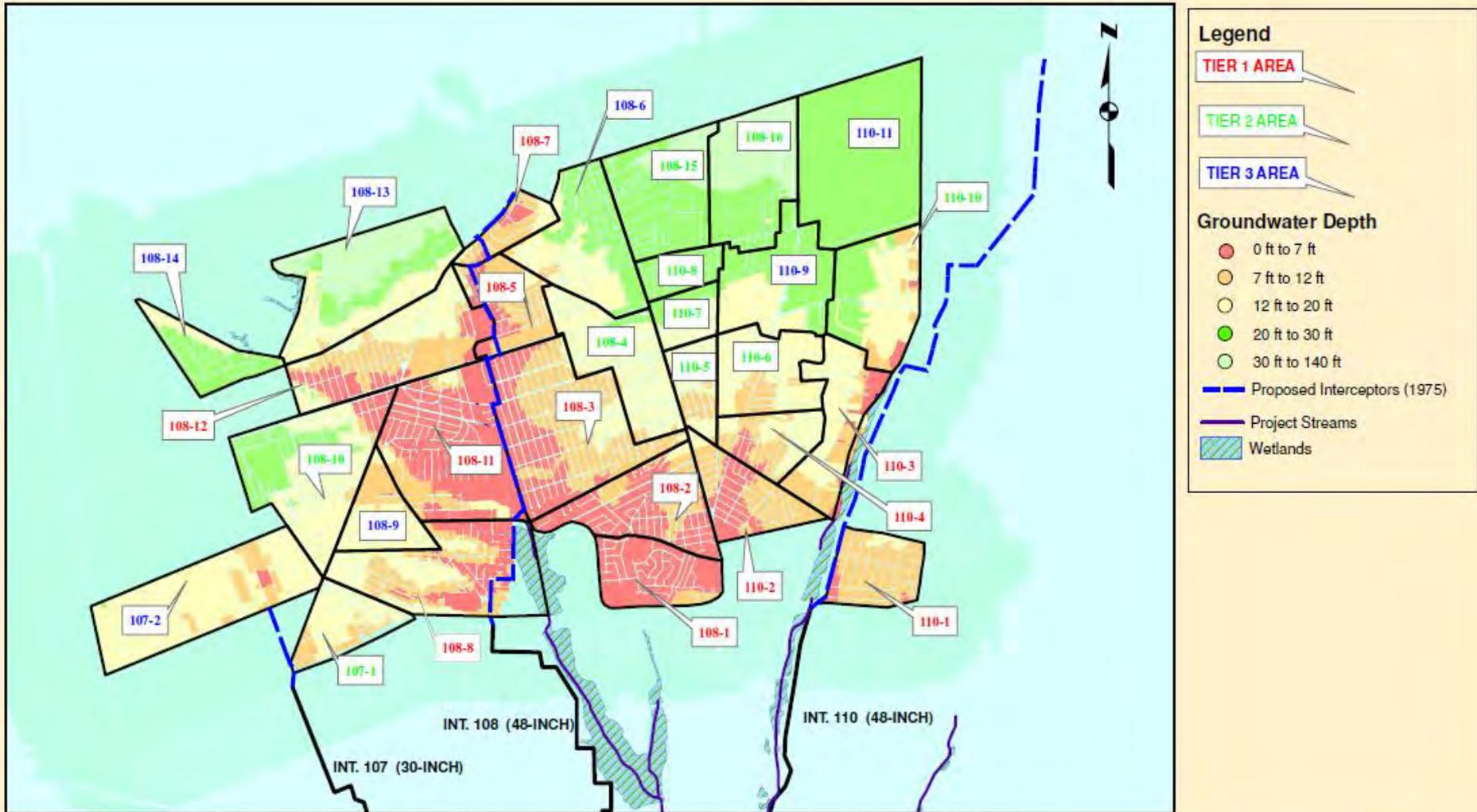
- Proximity to streams and wetlands
- Economic revitalization opportunities

Sub-Area Evaluations

Ranked all 29 sub-areas based on primary criteria

- **Depth to groundwater (Table 3-7 of the Draft Report)**
 - Rating of 10 = 75% of sub-area has groundwater depth of 7 feet, with remainder 12 feet or less.
 - Rating of 0 = Groundwater throughout sub-area is primarily 20 feet deep or more.
- **Parcel density (Table 3-8 of the Draft Report)**
 - Rating of 10 = 90% of developable parcels are $\frac{1}{2}$ acre or less, with at least 50% less than $\frac{1}{4}$ acre.
 - Rating of 0 = Developable parcels are generally greater than $\frac{1}{2}$ acre.

Sewer Sub-Areas with Groundwater Depth



SCSD 3 - Service Area Expansion
Groundwater Depth Map. Figure 3-3



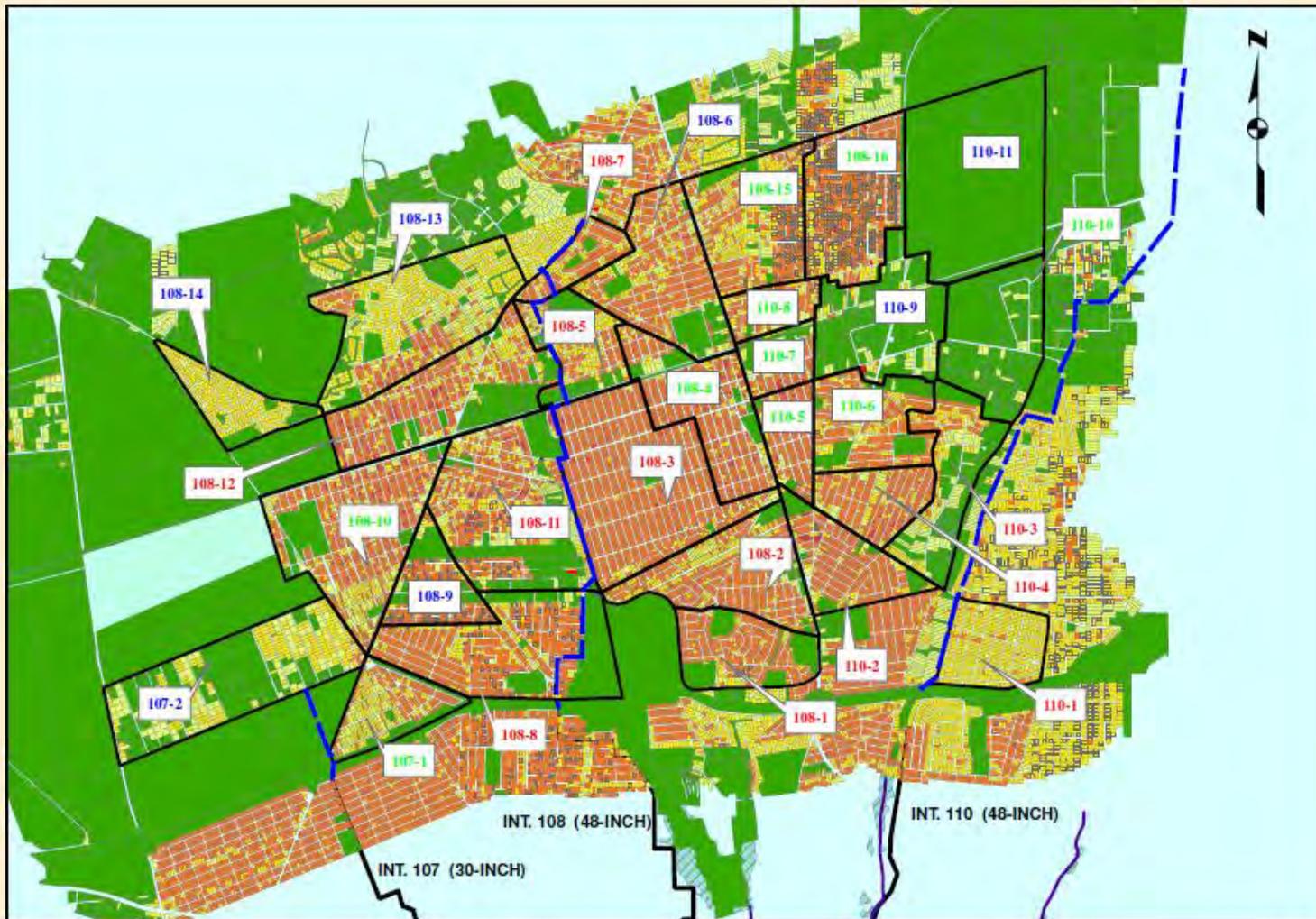
0 1,875 3,750 7,500 11,250 15,000 Feet

Sub-Area Evaluations

Ranked all 29 sub-areas based on secondary criteria

- **Proximity to Streams and Wetlands (Table 3-9 of the Draft Report)**
 - Rating of 5 = Boundary of sub-area is contiguous to a stream or wetland
 - Rating of 0 = Boundary of sub-area is located beyond 4,000 of a stream or wetland
- **Economic Revitalization Opportunities (Table 3-10 of the Draft Report)**
 - Rating of 5 = Approximately 50% of the sub-area is zoned for commercial and industry
 - Rating of 0 = Minimal parcels exist that would be available for future development

Parcels by Acre Size



Legend

- Greater than 1 acre
- 0.5_to_1_Acre
- 0.25_to_0.5_Acre
- 0.125_to_0.25_Acre
- 0_to_0.125_Acre

TIER 1 AREA

TIER 2 AREA

TIER 3 AREA

SCSD 3 - Service Area Expansion
Parcels By Acre Size. Figure 3-8



0 1,875 3,750 7,500 11,250 15,000 Feet

Study Area Land Use

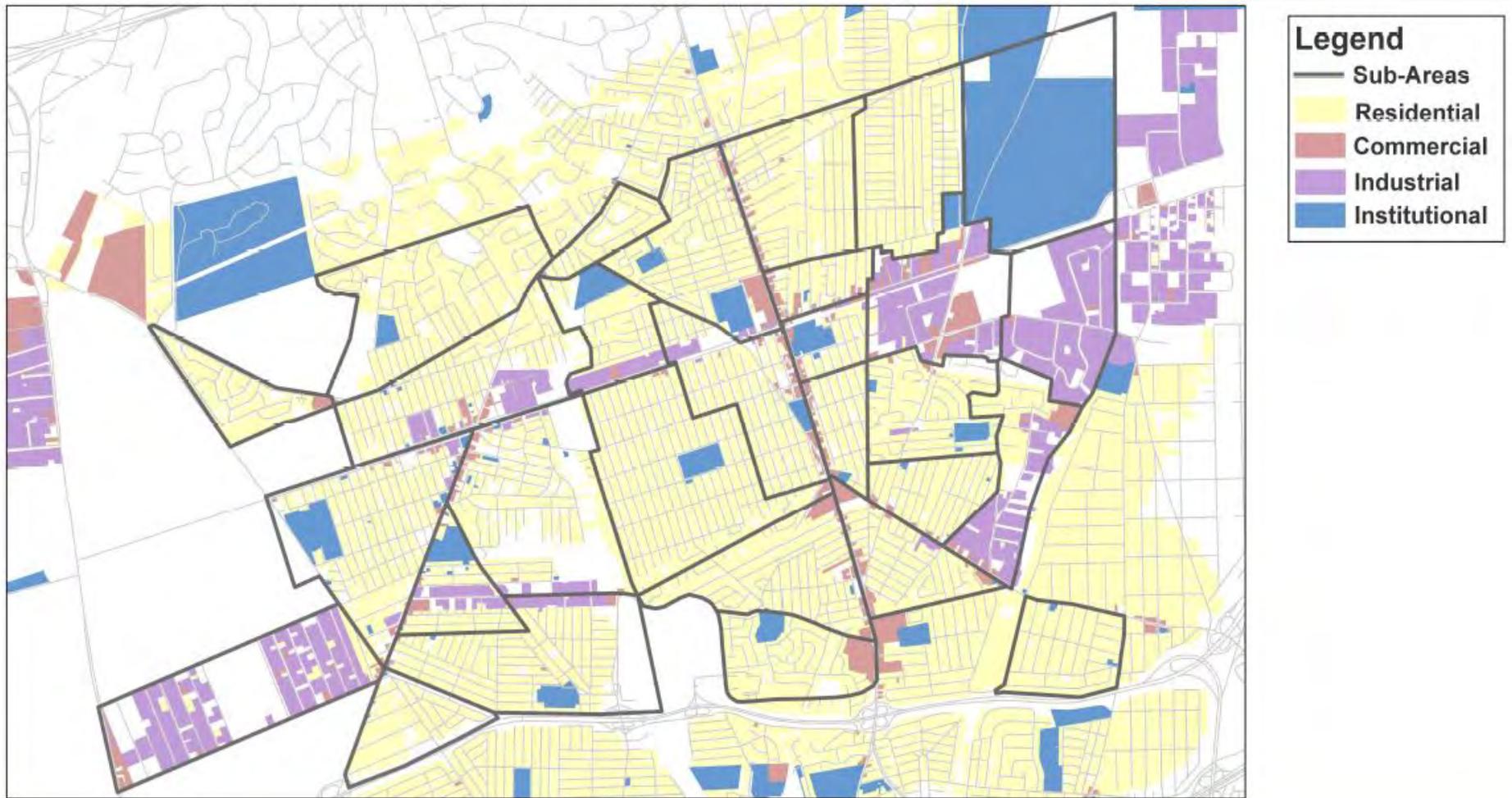


Figure 3-2: SCSD 3 - Land Use

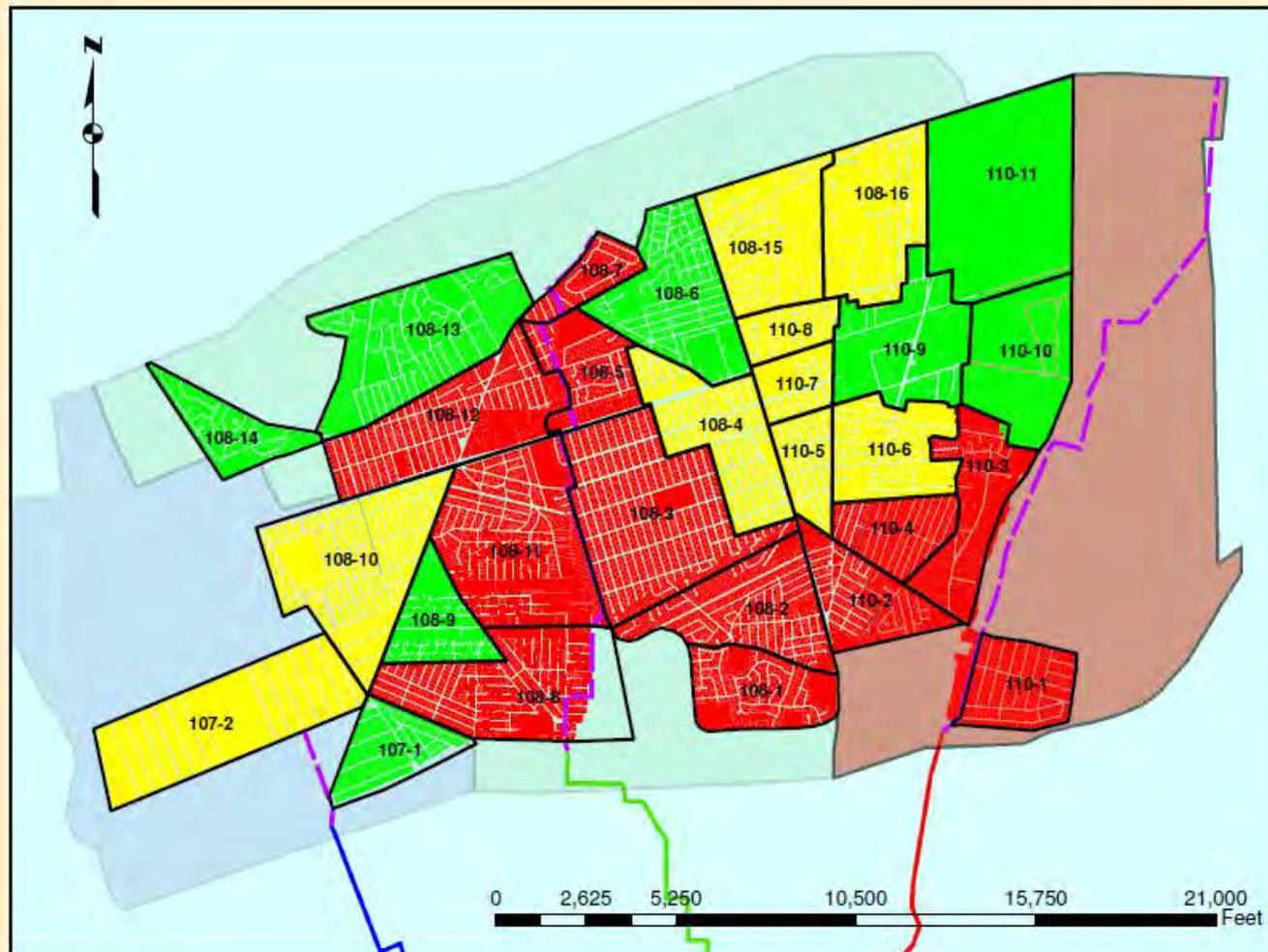


0 1,375 2,750 5,500 8,250 11,000 Feet

Sub-Area Rankings

Tier	Scoring Range (Maximum =30)	# of Sub-Areas
1	14 to 24	12
2	10 to 13	9
3	9 or less	8

Sewer Sub-Areas by Tier



Legend

- TIER 1 \pm 7 MGD
- TIER 2 \pm 4.5 MGD
- TIER 3 \pm 2.5 MGD

--- Proposed Interceptors (1975)

Existing Interceptor

- 107
- 108
- 110

SCSD 3 - Service Area Expansion
Sub Areas by Tier. Figure 3-7



Tier 1 Sub-Area Scoring

Sewershed - Sub-Area	Scoring	Community
108-2	24	North Babylon
110-2	22	North Babylon
108-3	21	Wyandanch/North Babylon
108-1	20	North Babylon
108-11	20	Wyandanch
110-4	17	Deer Park
108-8	16	West Babylon
108-5	15	Wyandanch
108-7	15	Deer Park
110-1	15	West Islip
108-12	14	Wyandanch/Wheatley Heights
110-3	14	Deer Park
TOTAL SUB-AREAS = 12		

Project Costs

Methodology for Cost Projections

- Utilize recent construction cost data templates and formulas
- Cost dependent on:
 - Depth, pipe diameter and length
 - Pumping stations
 - Groundwater depth (dewatering)
 - Environmental conditions (wetlands, adjacent areas)
 - Utility relocation
 - Land acquisition
 - Traffic control costs

Cost Summary – All Tiers

Tier	Sub-Areas	Projected Flow (MGD)	Projected Construction Cost (\$, Millions)
1	12	5.9 – 7.9	\$1,106
2	9	3.9 – 5.2	\$300
3	8	2.2 – 2.8	\$250
Interceptor Extensions (107, 108 and 110)			\$73
Sub-total	29	12.0 – 15.9	\$1,729
20% Engineering, Legal and Administrative			\$346
TOTAL			\$2,075

Cost Summary – Tier 1 Priority Areas

Sewershed/ Sub-Area	Location	Scoring	Projected Sewage Flow (MGD)	Projected Construction Cost (\$, Millions)
108-2	North Babylon	24	.67 - .89	\$142
110-2	North Babylon	22	.41 - .55	\$83
108-3	Wyandanch/North Babylon	21	1.27 – 1.69	\$235
108-1	North Babylon	20	.42 - .55	\$98
108-11	Wyandanch	20	.83 – 1.10	\$100
Interceptor Expansions (108 and 110 only)				\$71
20% Engineering, Legal and Administrative				\$132
TOTAL		3.60- 4.78 MGD		\$861

Cost Summary – Projected Cost by Parcel

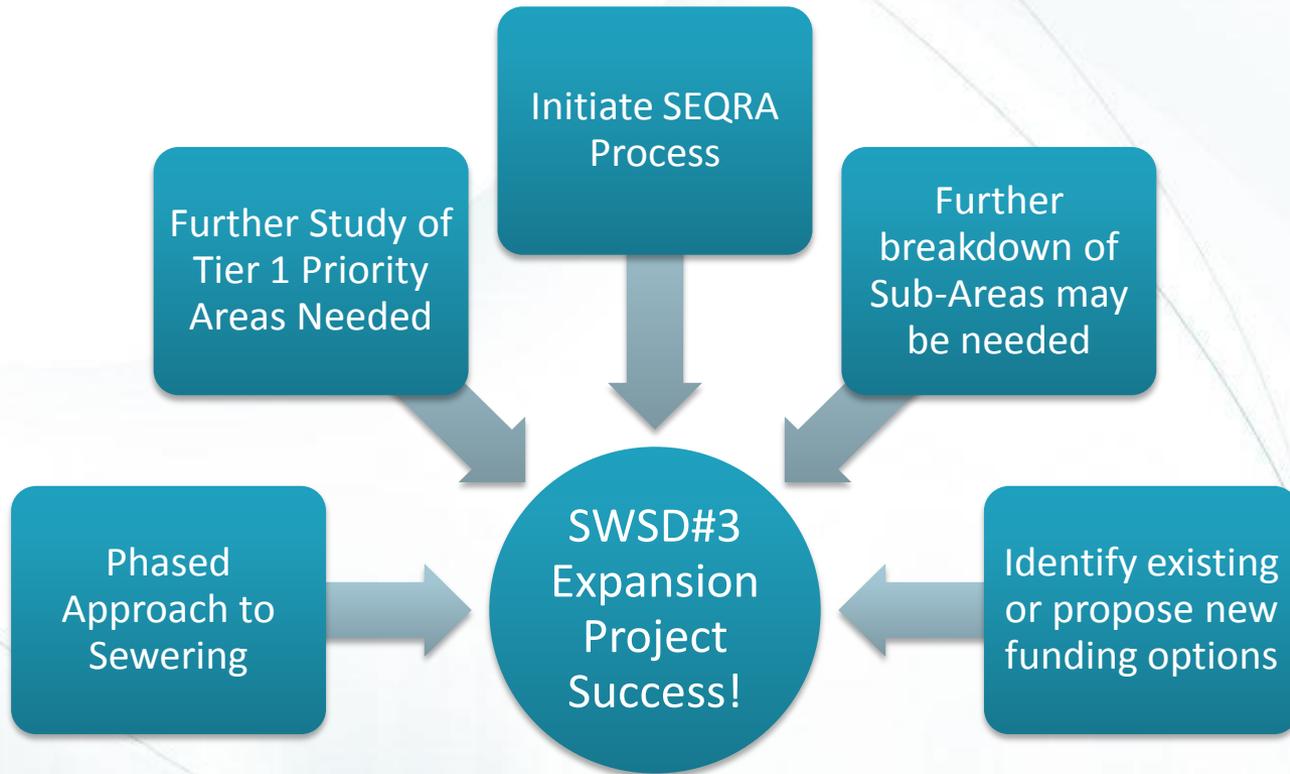
Sub-Area	Location	Parcels	Projected Construction Cost	Cost for 30-year bonding at 2%	Cost for 30-year bonding at 4%
108-2	North Babylon	908	\$861 M	\$1,153 M	\$1,494 M
110-2	North Babylon	619			
108-3	Wyandanch/North Babylon	1,891			
108-1	North Babylon	606			
108-11	Wyandanch	1,082			
Total		5,106			
Projected Sewer Connection Cost per Parcel (Property Line to House)			\$9,000 to \$12,000		
Projected Average Annual Cost per Parcel				\$7,529	\$9,753

Economic Issues

Potential Funding Alternatives

- USEPA Grants
- State Revolving Fund
- Downtown Revitalization Grants
- Transit Oriented Development Grants
- Privatized Sewer District Formation
- Housing Redevelopment Grants
- Industrial Redevelopment Grants

Conclusions and Recommendations



Questions?