

Preliminary Planning Report

Septic to Sewer Initiatives



February 24, 2022

Preliminary Planning Report Scope and Purpose of Study

- Identify targeted areas where UCNSB wastewater collection system can be extended to serve on-site septic systems
- Quantify unsewered properties
- Establish methodology for prioritizing projects
- Select areas for final planning and funding
- Prepare report detailing findings
- Public outreach

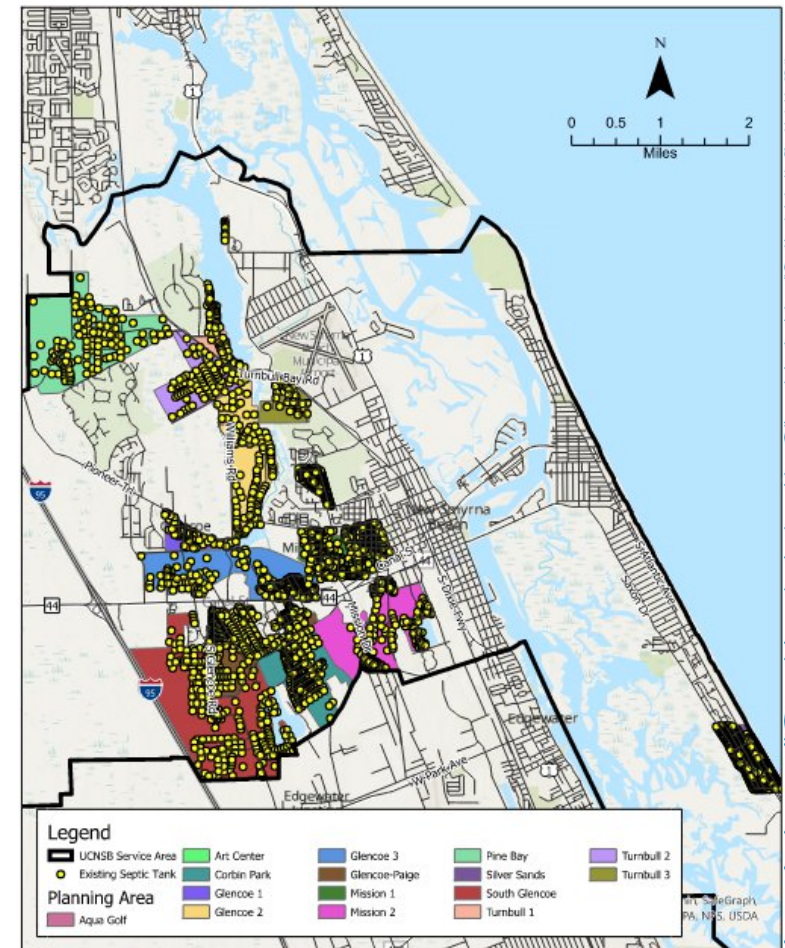
Ranking Priority Analysis Criteria

- Septic Density
- Population Density
- Average Household Size
- Mean Year Built
- Mean Distance to Water
- Mean Surface Elevation
- Mean Hydraulic Conductance
- Proximity to Existing Infrastructure
- Cost Effectiveness

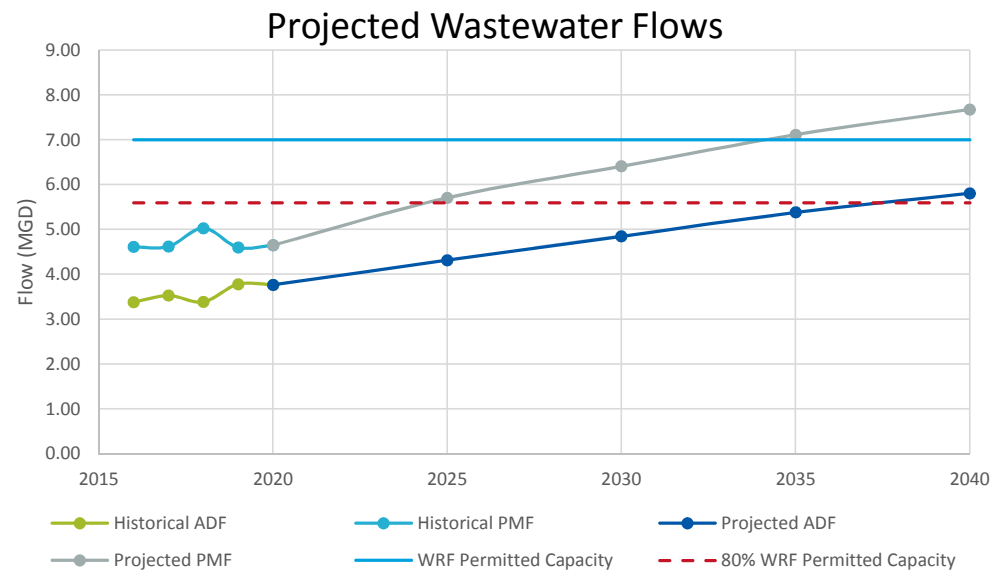
Planning Areas

1. Aqua Golf
2. Silver Sands
3. Glencoe-Paige
4. Mission 1
5. Turnbull 1
6. Corbin Park
7. Art Center
8. Glencoe 3
9. Glencoe 1
10. Mission 2
11. Turnbull 3
12. Turnbull 2
13. Glencoe 2
14. Pine Bay
15. South Glencoe

Approximately 2,682 on-site septic systems were identified within the City and Utilities Commission Planning areas



Projected Wastewater Flows



Year	Estimated Population ¹	Estimated Future ERU's ²	No. of ERU's on Sewer ³	Projected Average Daily Flow (MGD) ⁴	Projected Peak Month Flow (MGD)
2025	63,912	27,788	26,274	4.32	5.71
2030	71,371	31,031	29,517	4.85	6.41
2035	78,829	34,273	32,759	5.38	7.11
2040	84,796	36,868	35,354	5.81	7.68

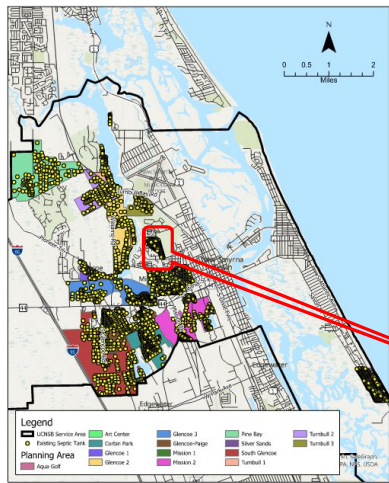
¹Information obtained from the UCNSB CUP permit Application 8747, Section E2 and Section 2 Population and Per Capita Use Planning Projections Table

²1 ERU = 2.3 people

³Assumes no additional septic tanks allowed within the service area

⁴Average daily flow of 164 gpd/ERU

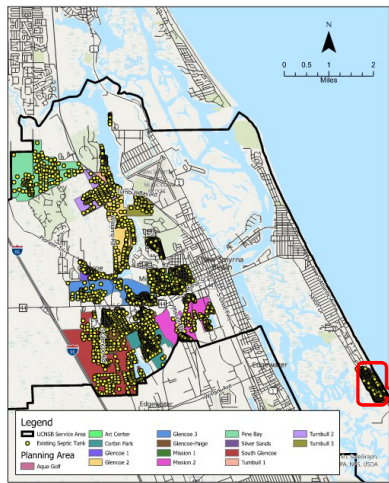
Aqua Golf



Planning Unit Name	Aqua Golf
Area (acres)	49.63
Associated WBIDs	2678
% Impaired	100
TMDL/RAP	N/A
Total Parcels	138
Total Septic Tanks	130
Total Vacant Parcels	3
Total Population ¹	216
Total Households ¹	120
Total Vacant Housing Units ¹	10

¹Data obtained using Census Block data apportioned to the planning unit by parcels.

Silver Sands



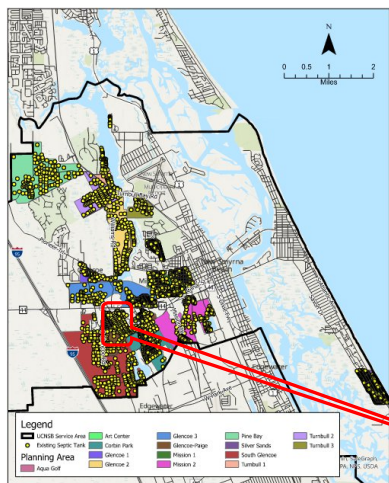
Municipal Status - Unincorporated



Planning Unit Name	Silver Sands
Area (acres)	167.86
Associated WBIDs	2924B2
% Impaired	100
TMDL/RAP	Mosquito Lagoon RAP
Total Parcels	526
Total Septic Tanks	471
Total Vacant Parcels	54
Total Population ¹	881
Total Households ¹	390
Total Vacant Housing Units ¹	333

¹Data obtained using Census Block data apportioned to the planning unit by parcels.

Glencoe-Paige



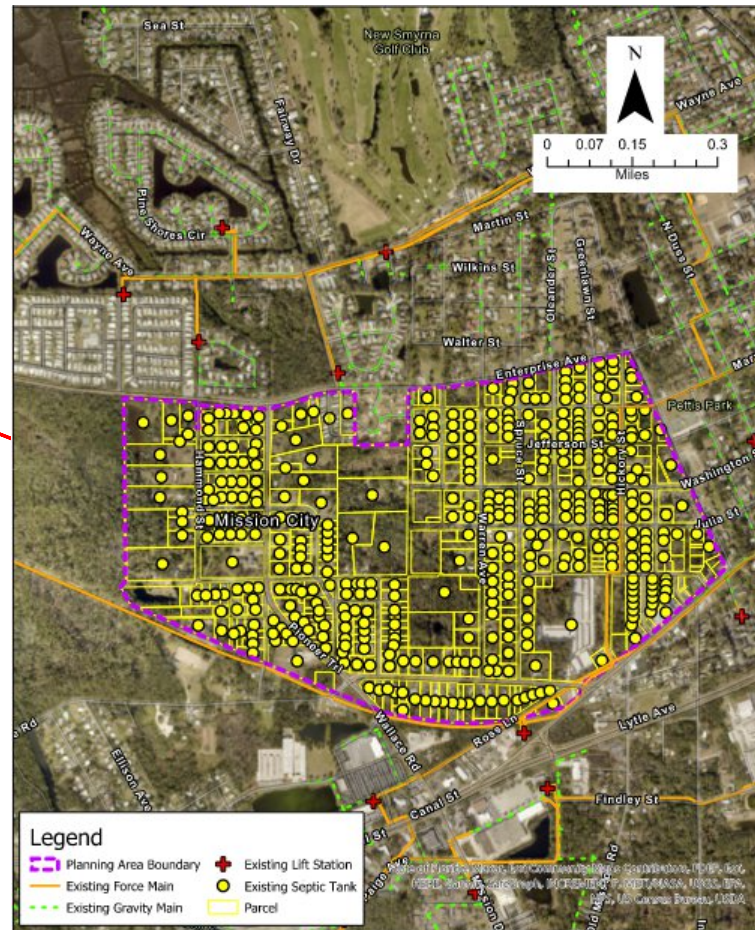
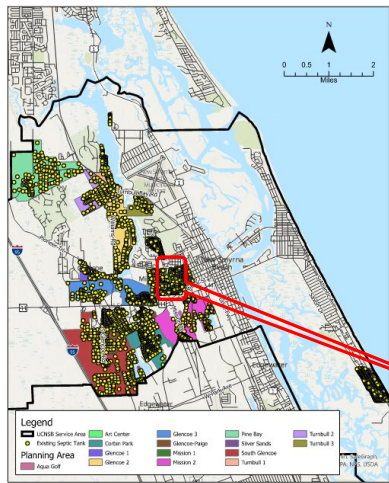
Municipal Status - Combined



Planning Unit Name	Glencoe-Paige
Area (acres)	389.15
Associated WBIDs	2678
% Impaired	100
TMDL/RAP	N/A
Total Parcels	406
Total Septic Tanks	340
Total Vacant Parcels	65
Total Population ¹	1046
Total Households ¹	420
Total Vacant Housing Units ¹	42

¹Data obtained using Census Block data apportioned to the planning unit by parcels.

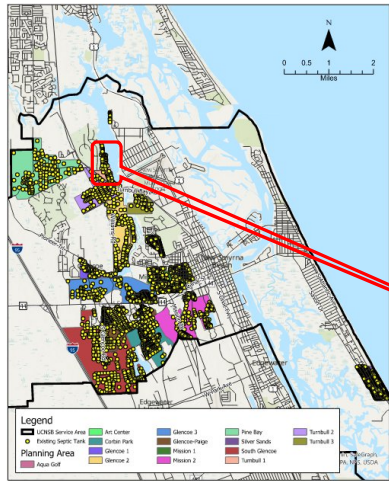
Mission 1



Planning Unit Name	Mission 1
Area (acres)	316.67
Associated WBIDs	2678, 2924B2
% Impaired	100
TMDL/RAP	Mosquito Lagoon RAP
Total Parcels	536
Total Septic Tanks	416
Total Vacant Parcels	115
Total Population ¹	1366
Total Households ¹	489
Total Vacant Housing Units ¹	34

¹Data obtained using Census Block data apportioned to the planning unit by parcels.

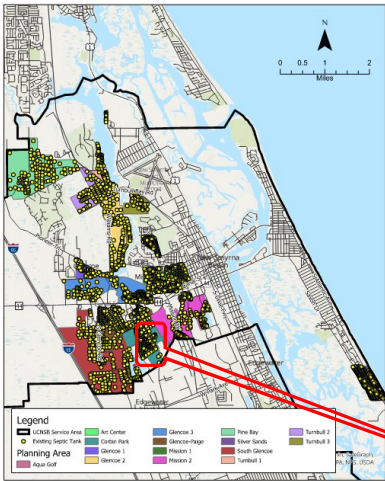
Turnbull 1



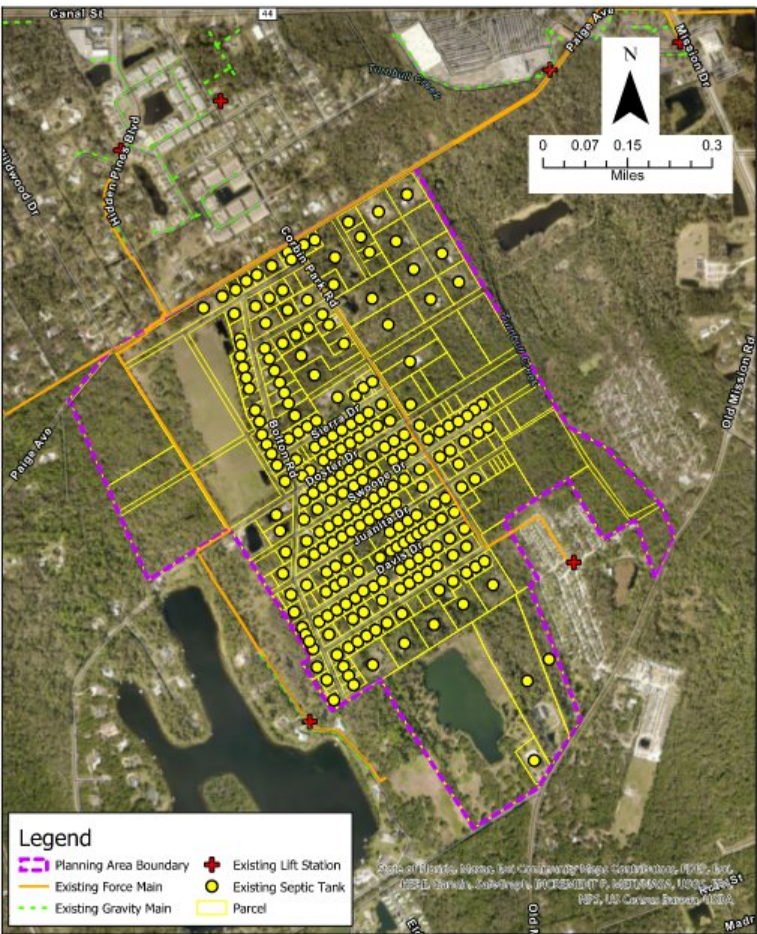
Planning Unit Name	Turnbull 1
Area (acres)	102.42
Associated WBIDs	2678
% Impaired	100
TMDL/RAP	N/A
Total Parcels	77
Total Septic Tanks	57
Total Vacant Parcels	19
Total Population ¹	149
Total Households ¹	66
Total Vacant Housing Units ¹	8

¹Data obtained using Census Block data apportioned to the planning unit by parcels.

Corbin Park



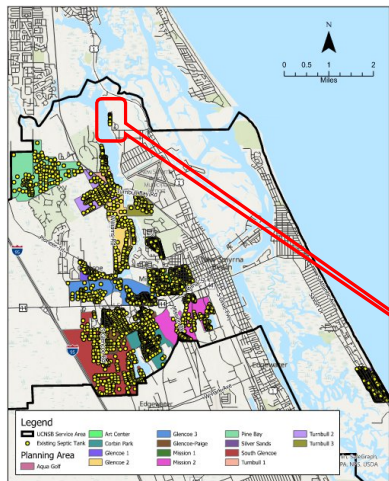
Municipal Status - Combined



Planning Unit Name	Corbin Park
Area (acres)	375.31
Associated WBIDs	2678
% Impaired	100
TMDL/RAP	N/A
Total Parcels	306
Total Septic Tanks	234
Total Vacant Parcels	72
Total Population ¹	389
Total Households ¹	162
Total Vacant Housing Units ¹	44

¹Data obtained using Census Block data apportioned to the planning unit by parcels.

Art Center



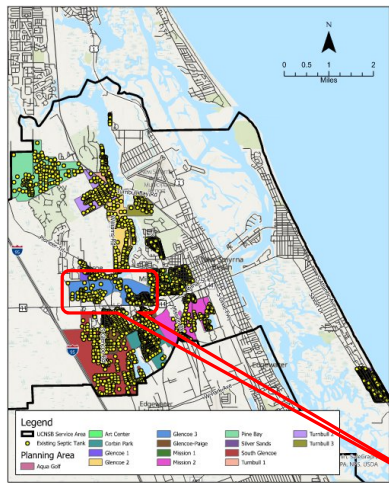
Municipal Status - City



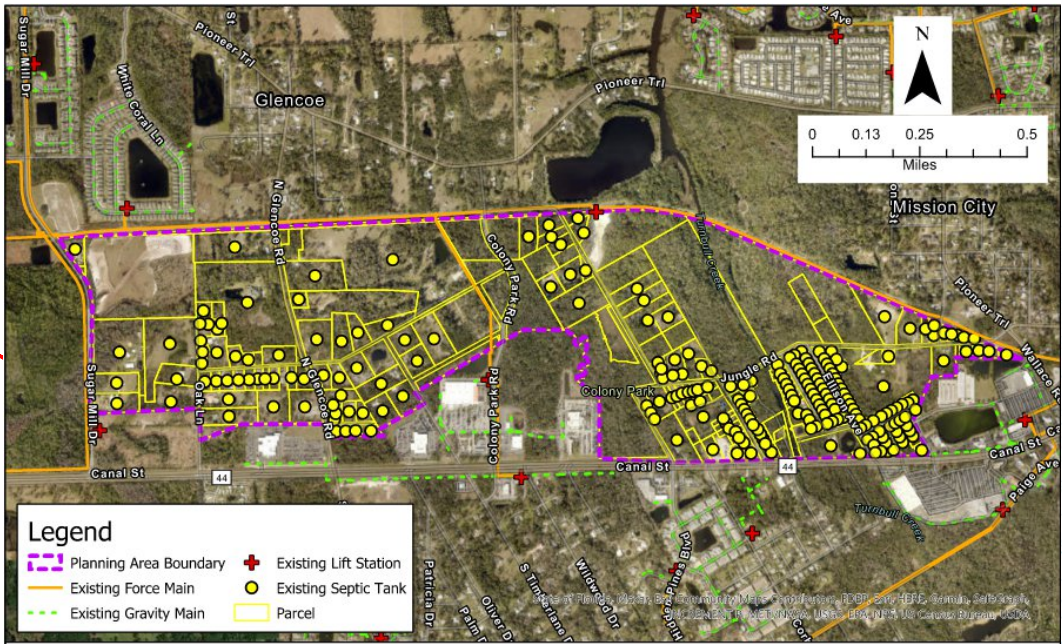
Planning Unit Name	Art Center
Area (acres)	11.24
Associated WBIDs	2678
% Impaired	100
TMDL/RAP	N/A
Total Parcels	12
Total Septic Tanks	10
Total Vacant Parcels	2
Total Population ¹	12
Total Households ¹	5
Total Vacant Housing Units ¹	1

¹Data obtained using Census Block data apportioned to the planning unit by parcels.

Glencoe 3



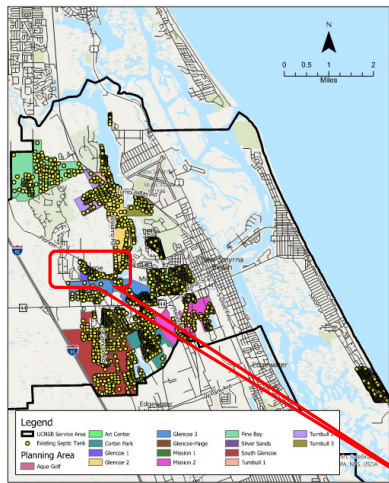
Municipal Status - Combined



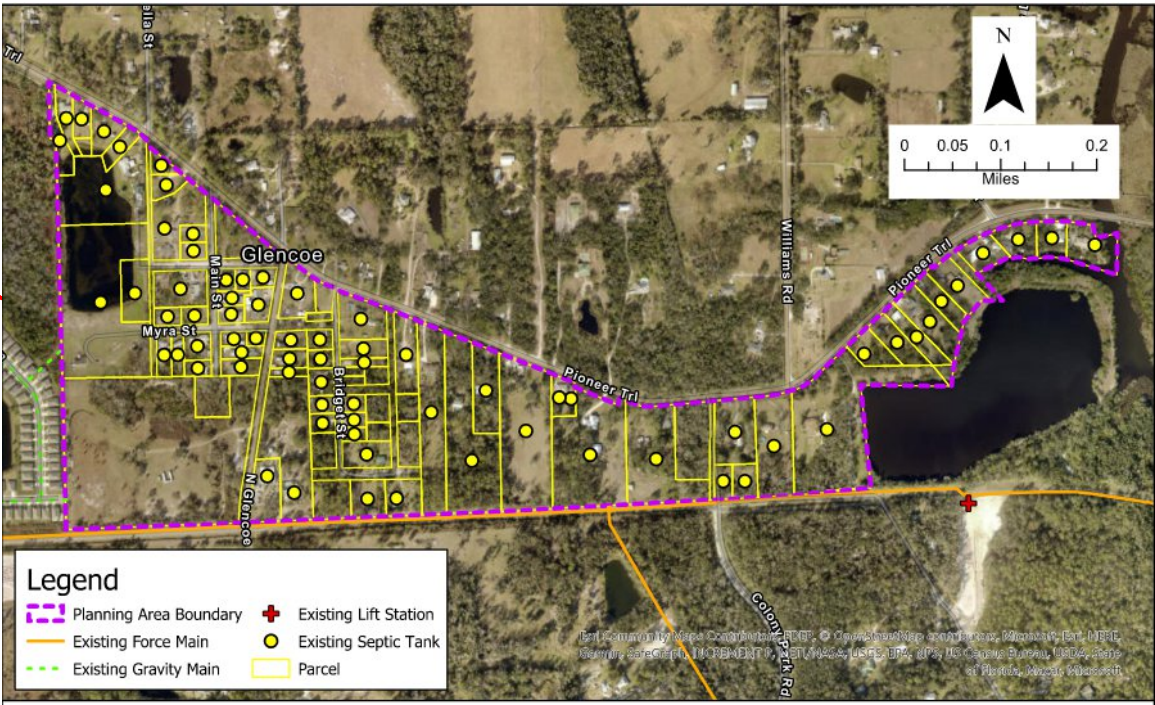
Planning Unit Name	Glencoe 3
Area (acres)	554.51
Associated WBIDs	2678
% Impaired	100
TMDL/RAP	N/A
Total Parcels	272
Total Septic Tanks	233
Total Vacant Parcels	38
Total Population ¹	369
Total Households ¹	148
Total Vacant Housing Units ¹	25

¹Data obtained using Census Block data apportioned to the planning unit by parcels.

Glencoe 1



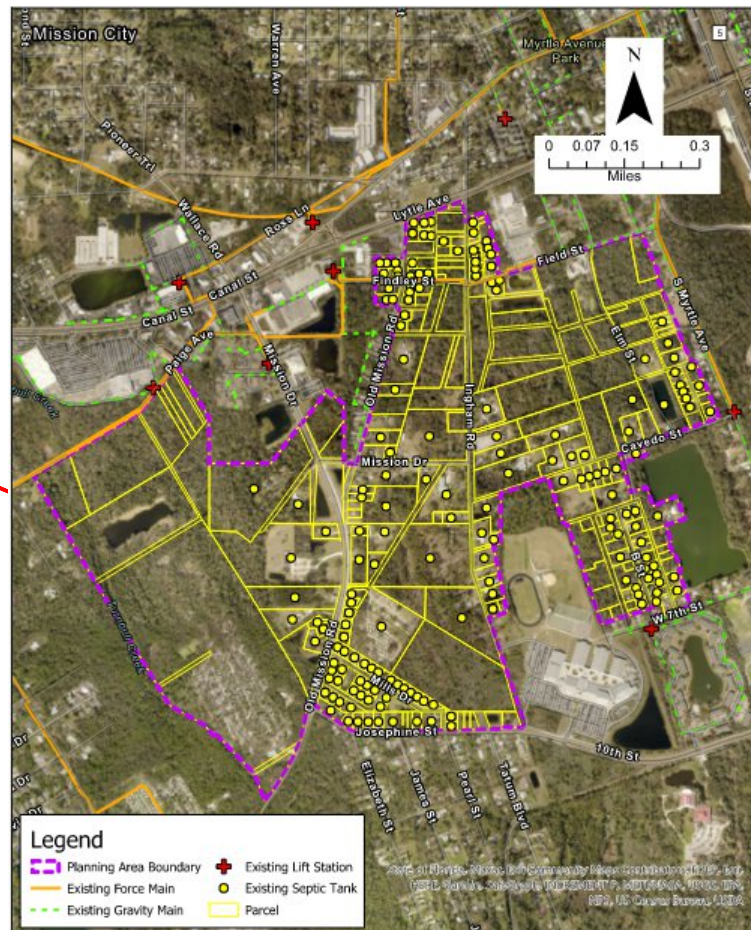
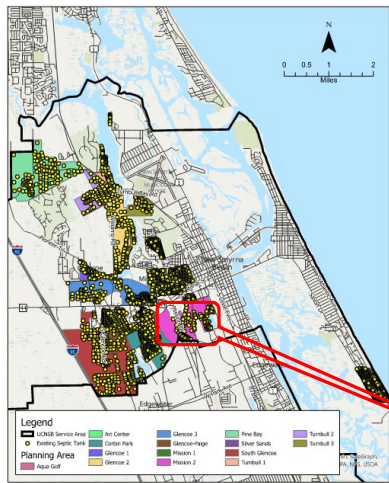
Municipal Status - Combined



Planning Unit Name	Glencoe 1
Area (acres)	126.82
Associated WBIDs	2678, 2681
% Impaired	100
TMDL/RAP	N/A
Total Parcels	93
Total Septic Tanks	74
Total Vacant Parcels	19
Total Population ¹	131
Total Households ¹	53
Total Vacant Housing Units ¹	9

¹Data obtained using Census Block data apportioned to the planning unit by parcels

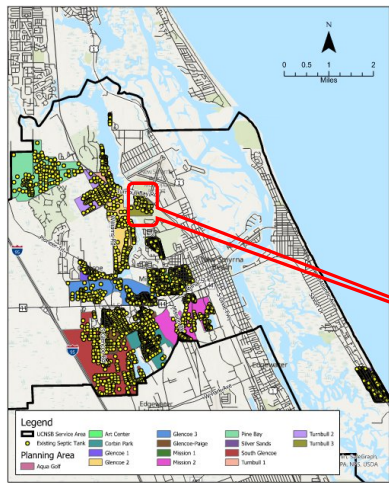
Mission 2



Planning Unit Name	Mission 2
Area (acres)	509.32
Associated WBIDs	2678, 2924B2
% Impaired	100
TMDL/RAP	N/A
Total Parcels	279
Total Septic Tanks	174
Total Vacant Parcels	96
Total Population ¹	531
Total Households ¹	292
Total Vacant Housing Units ¹	52

¹Data obtained using Census Block data apportioned to the planning unit by parcels.

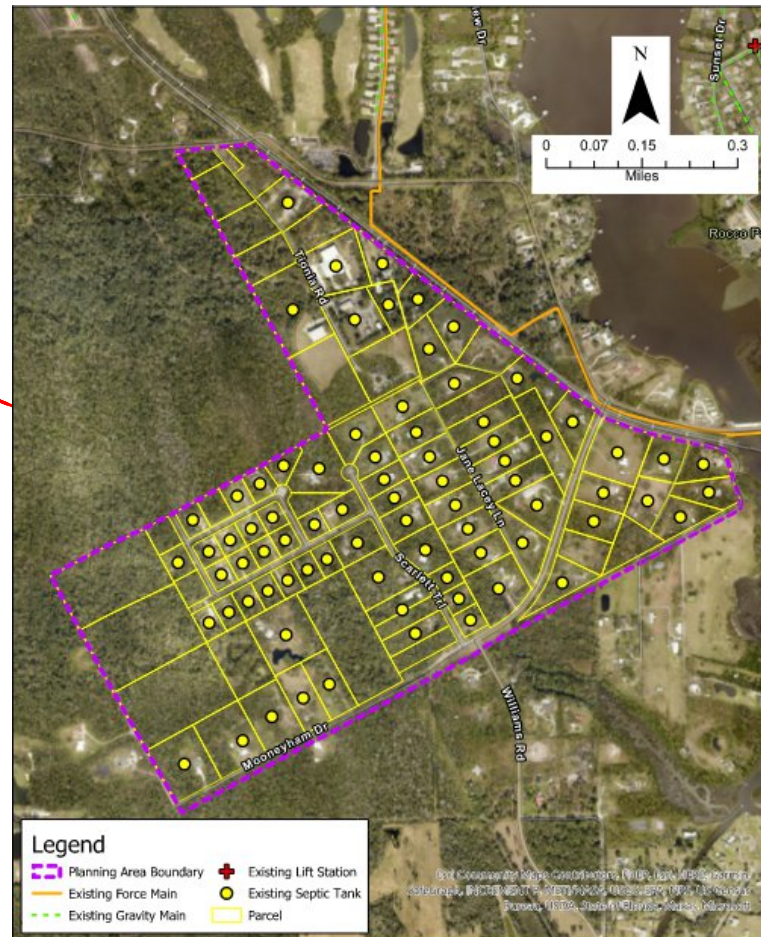
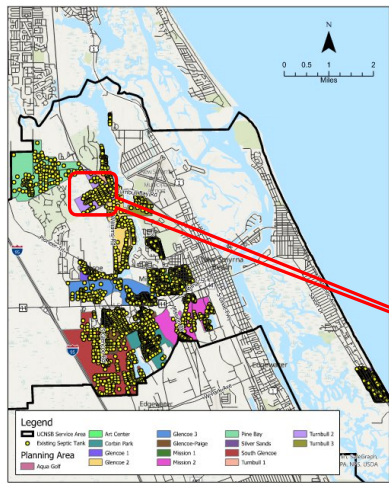
Turnbull 3



Planning Unit Name	Turnbull 3
Area (acres)	132.59
Associated WBIDs	2678, 2924B2
% Impaired	100
TMDL/RAP	Mosquito Lagoon RAP
Total Parcels	67
Total Septic Tanks	44
Total Vacant Parcels	22
Total Population ¹	95
Total Households ¹	53
Total Vacant Housing Units ¹	5

¹Data obtained using Census Block data apportioned to the planning unit by parcels.

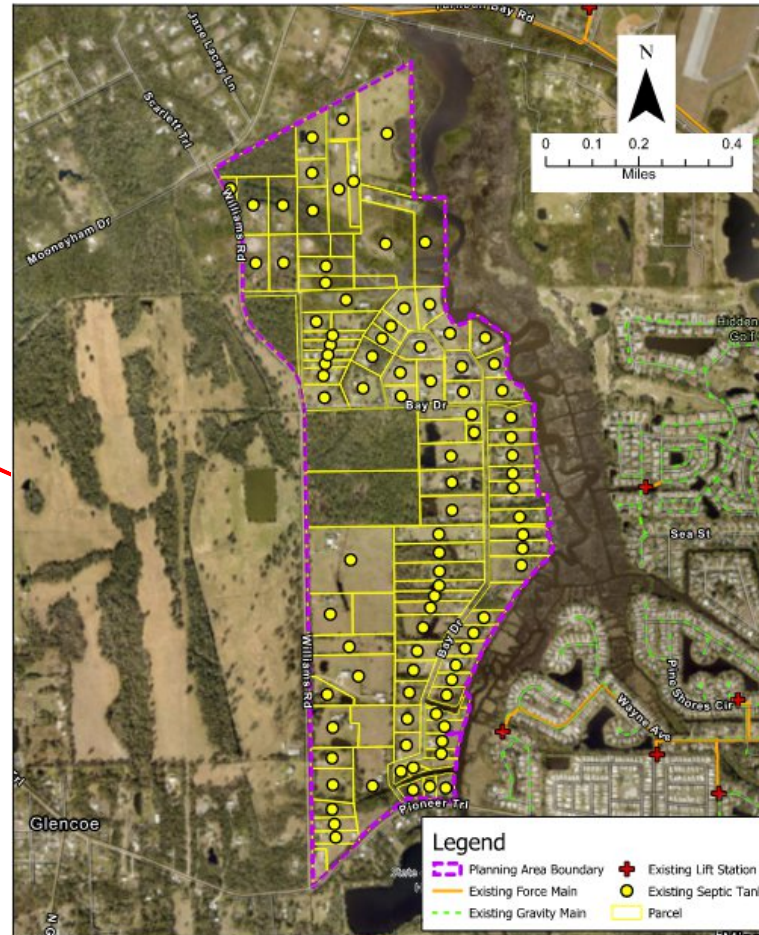
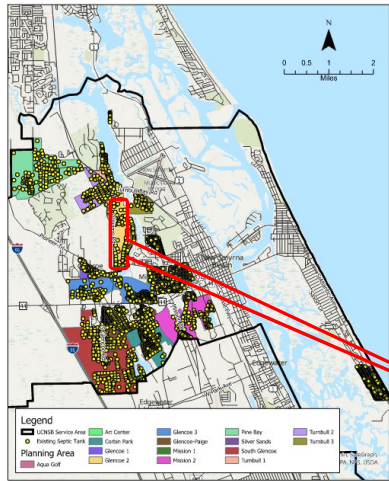
Turnbull 2



Planning Unit Name	Turnbull 2
Area (acres)	305.52
Associated WBIDs	2678, 2681
% Impaired	100
TMDL/RAP	N/A
Total Parcels	101
Total Septic Tanks	78
Total Vacant Parcels	22
Total Population ¹	145
Total Households ¹	60
Total Vacant Housing Units ¹	22

¹Data obtained using Census Block data apportioned to the planning unit by parcels.

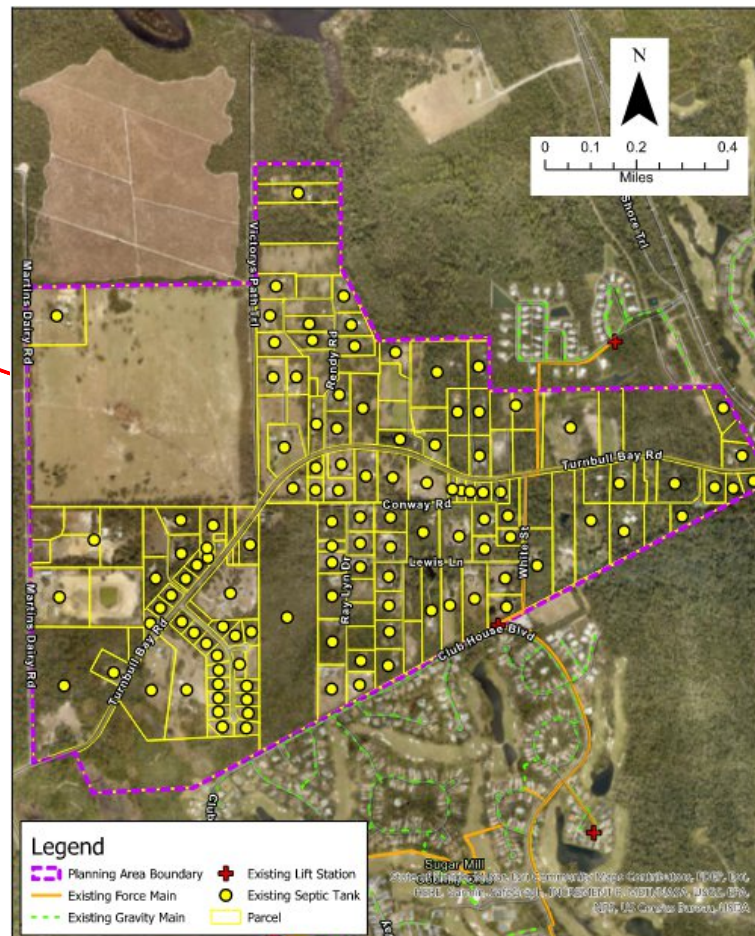
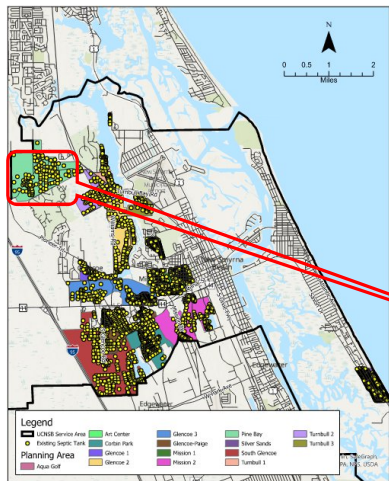
Glencoe 2



Planning Unit Name	Glencoe 2
Area (acres)	420.80
Associated WBIDs	2678, 2681
% Impaired	100
TMDL/RAP	N/A
Total Parcels	109
Total Septic Tanks	93
Total Vacant Parcels	16
Total Population ¹	145
Total Households ¹	61
Total Vacant Housing Units ¹	22

¹Data obtained using Census Block data apportioned to the planning unit by parcels.

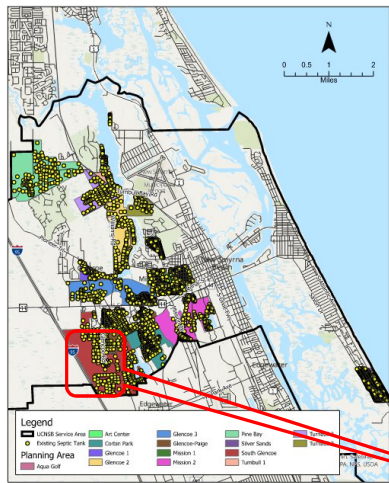
Pine Bay



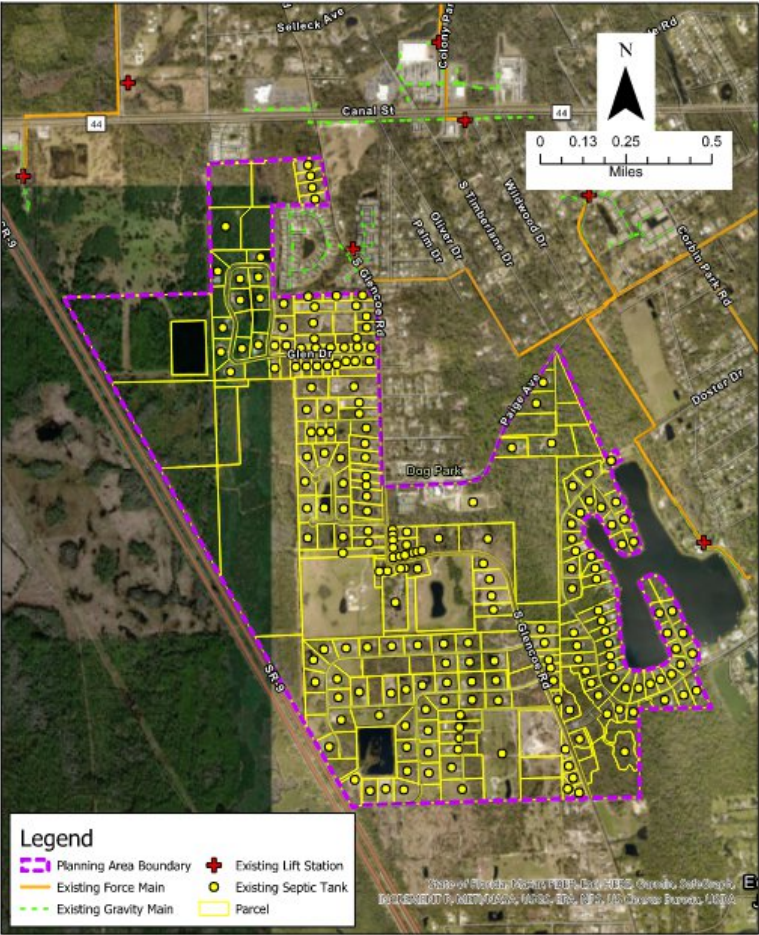
Planning Unit Name	Pine Bay
Area (acres)	781.90
Associated WBIDs	2681, 2679, 2674A
% Impaired	68.2
TMDL/RAP	Spruce Creek TMDL
Total Parcels	159
Total Septic Tanks	116
Total Vacant Parcels	43
Total Population ¹	223
Total Households ¹	93
Total Vacant Housing Units ¹	34

¹Data obtained using Census Block data apportioned to the planning unit by parcels.

South Glencoe



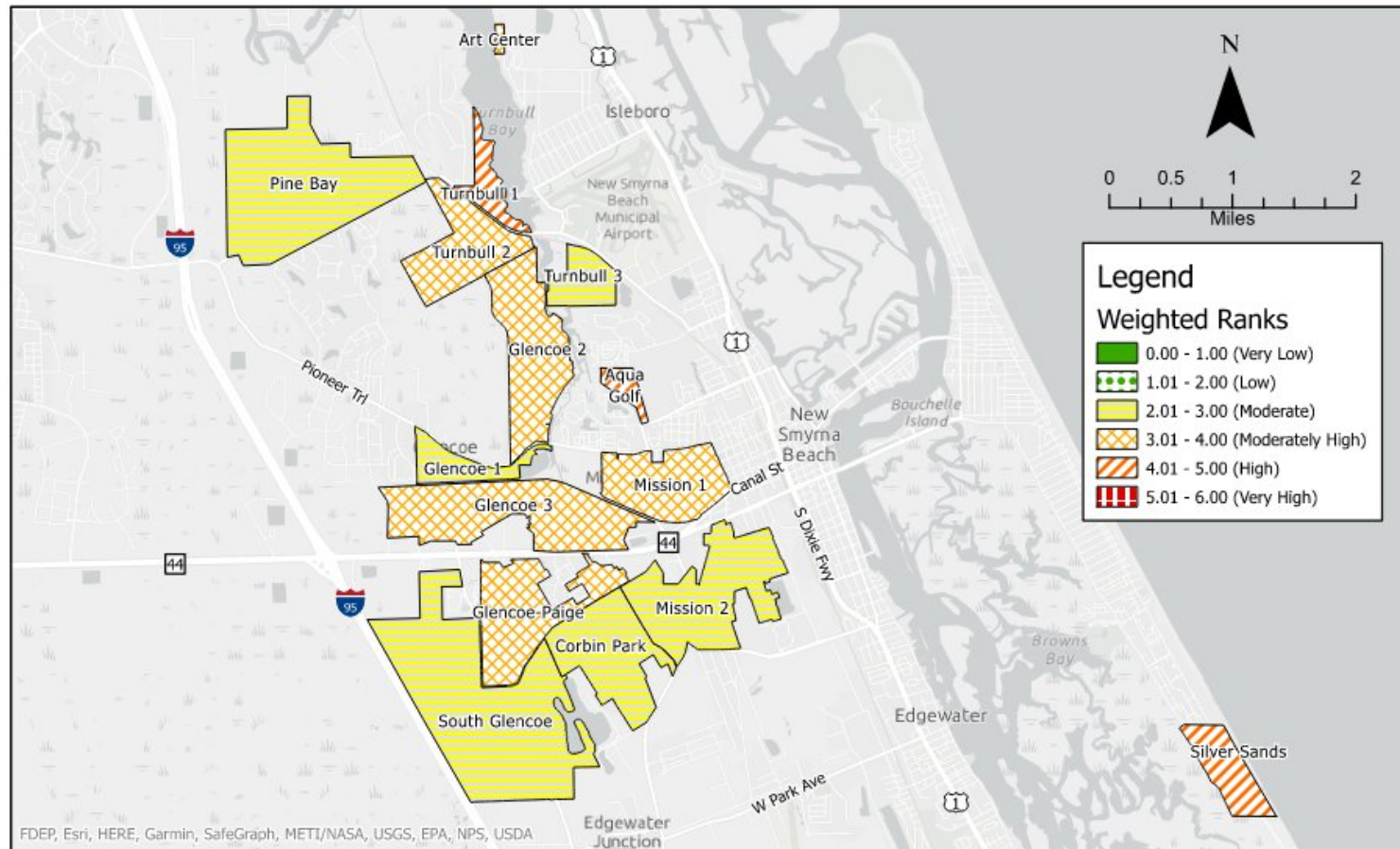
Municipal Status - Combined



Planning Unit Name	South Glencoe
Area (acres)	1046.51
Associated WBIDs	2678
% Impaired	100
TMDL/RAP	N/A
Total Parcels	274
Total Septic Tanks	212
Total Vacant Parcels	60
Total Population ¹	765
Total Households ¹	309
Total Vacant Housing Units ¹	39

¹Data obtained using Census Block data apportioned to the planning unit by parcels.

Pollution Potential



Overall Scoring

Planning Area	Pollution Reduction Potential	Proximity to Existing Infrastructure	Cost Effectiveness	Overall Score
Aqua Golf	5	5	5	15
Silver Sands	5	5	5	15
Glencoe-Paige	4	4	4	12
Mission 1	4	4	4	12
Turnbull 1	5	5	2	12
Corbin Park	3	5	3	11
Art Center	4	3	4	11
Glencoe 3	3	4	3	10
Glencoe 1	3	4	3	10
Mission 2	3	4	2	9
Turnbull 3	3	4	2	9
Turnbull 2	3	3	2	8
Glencoe 2	3	2	2	7
Pine Bay	2	3	1	6
South Glencoe	2	1	1	4

Planning Area Rankings (Highest to Lowest)

Planning Area	Overall Score	Tier	Municipal Status ¹	No. of Parcels
Aqua Golf	15	Tier 1	City	138
Silver Sands	15	Tier 1	Unincorporated	526
Glencoe-Paige	12	Tier 2	Combined	406
Mission 1	12	Tier 2	Combined	536
Turnbull 1	12	Tier 2	Combined	77
Corbin Park	11	Tier 2	Combined	306
Art Center	11	Tier 2	City	12
Glencoe 3	10	Tier 2	Combined	272
Glencoe 1	10	Tier 2	Combined	93
Mission 2	9	Tier 3	Combined	279
Turnbull 3	9	Tier 3	Combined	67
Turnbull 2	8	Tier 3	Combined	101
Glencoe 2	7	Tier 3	Combined	109
Pine Bay	6	Tier 3	Combined	159
South Glencoe	4	Tier 3	Combined	274

¹City = planning area completely within New Smyrna Beach limits

Unincorporated = planning area completely within unincorporated areas

Conceptual Costs for Tier 1 Projects

Aqua Golf

Conceptual Construction Cost \$2M-3M
\$14,500 – \$21,800 per parcel



Silver Sands

Conceptual Construction Cost \$6.5M-7.5M
\$12,400 – \$14,300 per parcel



Potential Funding Sources

- Section 319(h)
- State Water-Quality Assistance Grant (SWAG)
- St. Johns River Management District (SJRWMD)
- State Revolving Fund (SRF)
- Florida State Legislature
- Florida Department of Environmental Protection (FDEP)
- America Rescue Plan Act (ARPA)

Next Steps

- SRF Facility Plan and Funding Activities
 - Federal and State Funding require an approved Facility Plan
 - Shovel ready projects typically receive priority for funding
- Site and Route Surveys
- Design and Related Activities
- Permitting
- Public Participation
- Bidding
- Construction



Thank you.