

Sussex County 40-Years of Central Sewer Initiatives

Planning & Zoning Commission Presentation

March 8, 2017

Sussex County Sewer Service under Delaware Code, Title 9

- Statutory Authorization is petition driven based on existing need and hence inherently “reactive”.
- Enterprise (Sewer) Fund is subject to Governmental Accounting Standards Board (GASB) which does not allow for “planned” expansion with public money.
- State and Federal funding for remediation projects limits growth potential to “infill” development.
- Development driven expansion can only occur when the proposed project is contiguous to an existing sewer district area.

Purpose of Sussex County's Septic System Remediation Efforts

Conventional on-site septic systems have widely varying total nitrogen (TN) effluent concentrations, however numerous research studies show an average of approximately 55 mg/l.

- Sussex County started in the central sewer business in the 1970ties and has since then remediated or avoided construction of +/- 69,500 on-site systems, primarily in the Inland Bays watershed resulting in the following nutrient reductions:
 - 2,583,800 pounds of nitrogen annually
 - 729,298 pounds of phosphorous annually
- Since 1990 alone +/- 29,000 on-site systems were transferred to Sussex County central sewer service resulting in the following nutrient reductions:
 - 1,078,800 pounds of nitrogen annually
 - 304,500 pounds of phosphorous annually

Challenges to Planned Sewer System Expansion

- Certificates of Public Convenience & Necessity issued by the Public Service Commission “prospectively” to private utilities service on a parcel by parcel basis.
- CPCNs run with the land and private providers can refuse to relinquish certificates w/o compensation since the Public Service Commission is unable to revoke certificates and create more economical service territories.
- Creating contiguous boundaries of County district extensions as required by del Code Title 9 around parcels with CPCNs issued to various private utilities.
- Making remediation projects affordable with new sub-divisions served by private utilities w/o service to surrounding existing improved properties with on-site disposal systems.
- DNREC requirement of PSN3 on-site systems for new installations or failed on-site systems upon property transfer.
- Del DOT’s resistance to add sewer infrastructure in the State maintained right-of-way already burdened with multiple utilities.
- Ever increasing private easement acquisition requirements as well as more complex National Environmental Policy Act (NEPA) compliance.

Septic Remediation Projects Overview

Current Projects

Herring Creek (713 EDUs) in funding application phase
Route 26 Phase III – (91 EDUs) advertised for construction
Angola North – (252 EDUs) advertised for construction
Sea Country Estates II – 10 Existing EDUs
Route 54 West – 43 Existing EDUs in design
Chapel Branch – 385 Existing EDUs in funding application phase

Future Projects

Mulberry Knoll – (88 EDUs) in voter approval phase
Bethany Forest – (93 EDUs) in petition phase
Mallard Creek – (41 EDUs) pending Unified District extension based on petition results

Sewer Treatment Facilities Overview

SCRWF (South Coastal Regional Wastewater Facility)

<u>Permitted Flow:</u>	6.0 Million Gallons per day on monthly average (MGD)
<u>Planned Expansion:</u>	4.0 MGD
<u>Ocean Outfall Capacity:</u>	22.0 MGD
<u>Connected Equivalent Dwelling Units:</u>	+/-28,800

Wolfe Neck Regional Wastewater Facility

<u>Permitted Flow</u>	4.0 MGD
<u>Planned Modification;</u>	Spray on Demand with limited access Parkland
<u>Land Application Area:</u>	+/- 300 acres
<u>Connected Equivalent Dwelling Units:</u>	+/-22,900

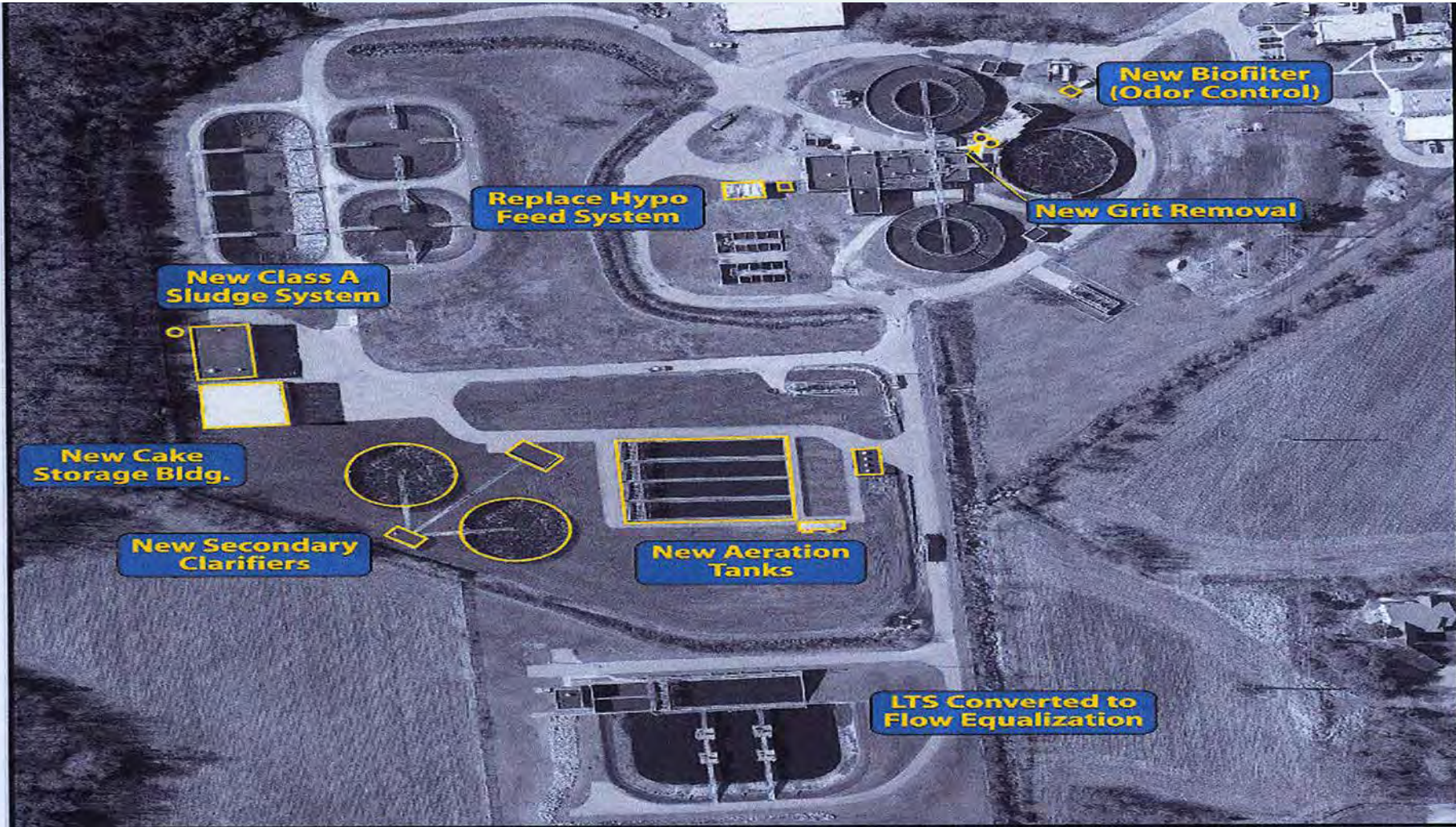
Piney Neck Regional Wastewater Facility

<u>Permitted Flow</u>	0.2 MGD
<u>Land Application Area:</u>	+/- 55 acres
<u>Connected Equivalent Dwelling Units:</u>	+/-1,200

Inland Bays Regional Wastewater Facility

<u>Permitted Flow</u>	2.1 MGD
<u>Planned Expansion;</u>	2.0 MGD
<u>Land Application Area:</u>	+/- 430 acres
<u>Connected Equivalent Dwelling Units:</u>	+/-10,600

SOUTH COASTAL REGIONAL WASTEWATER FACILITY



PINEY NECK REGIONAL WASTEWATER FACILITY



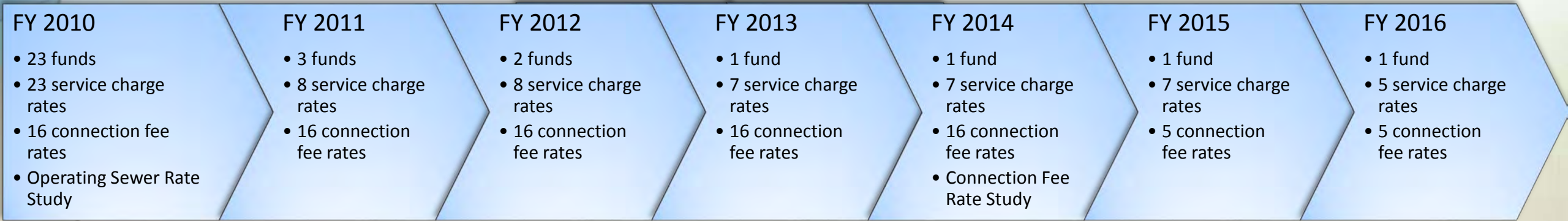
WOLFE NECK REGIONAL WASTEWATER FACILITY



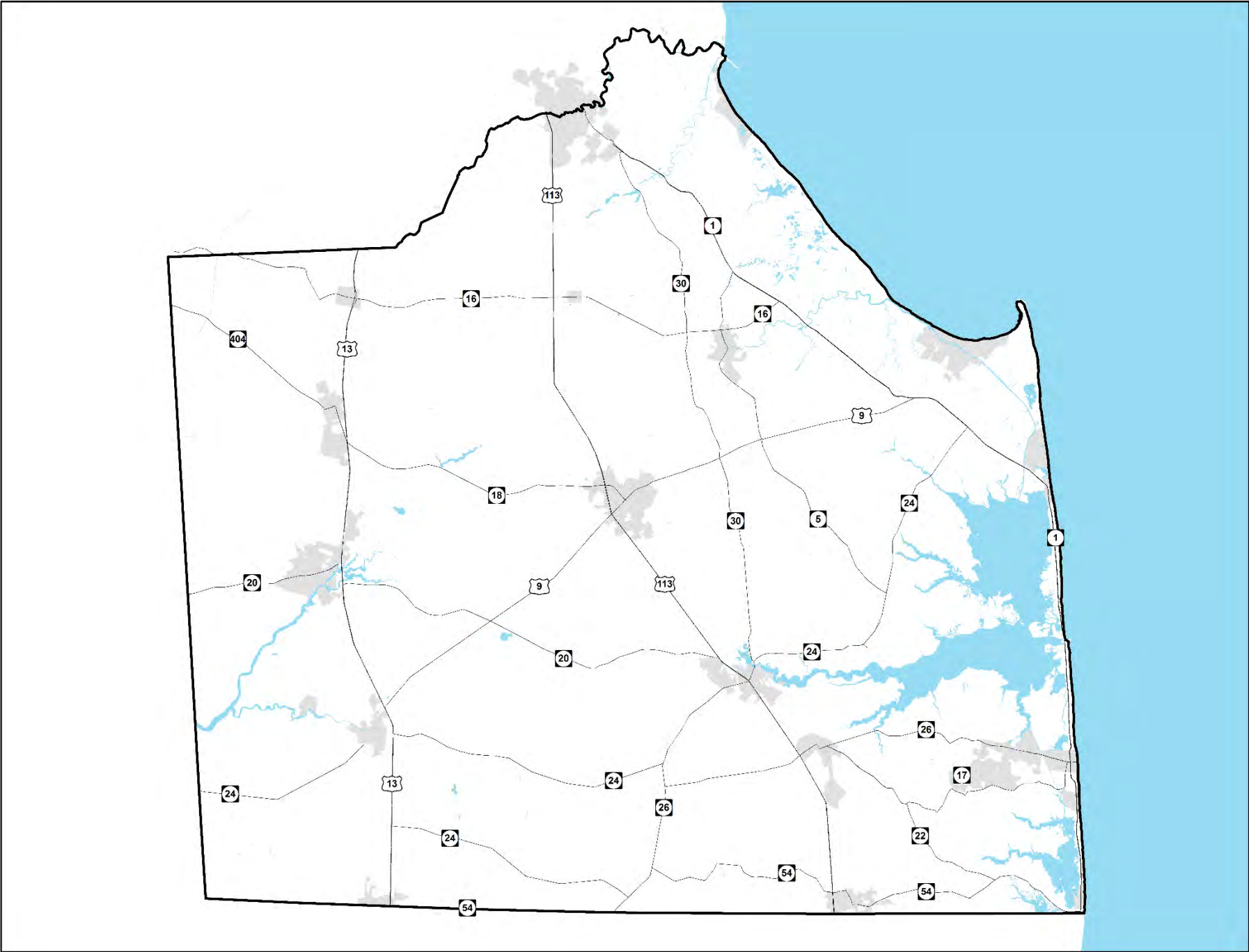
INLAND BAYS REGIONAL WASTEWATER FACILITY



Unified Sewer – Economical with Reduced Complexity and stable Rates

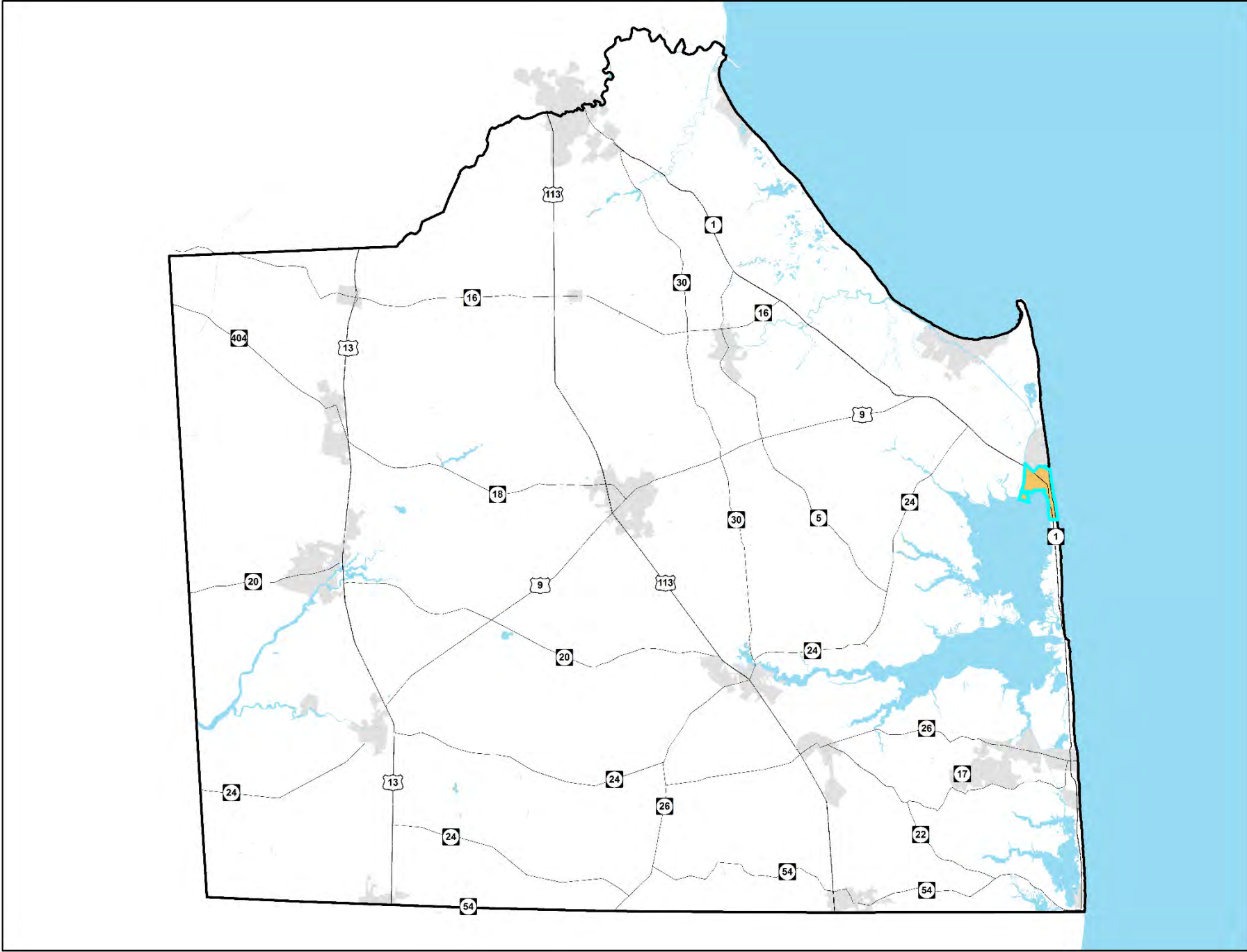


Sussex County



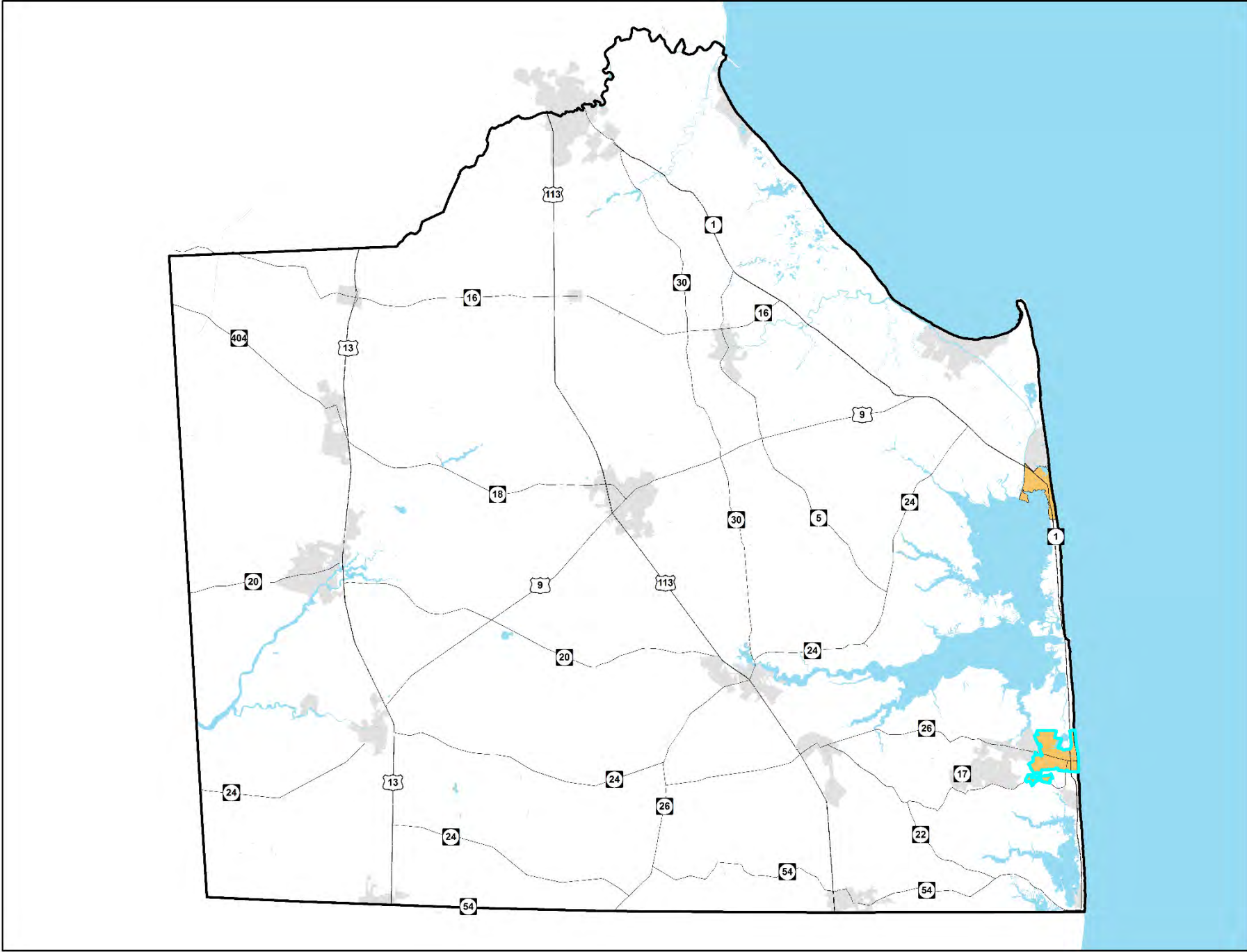
Sussex County

- Dewey Beach



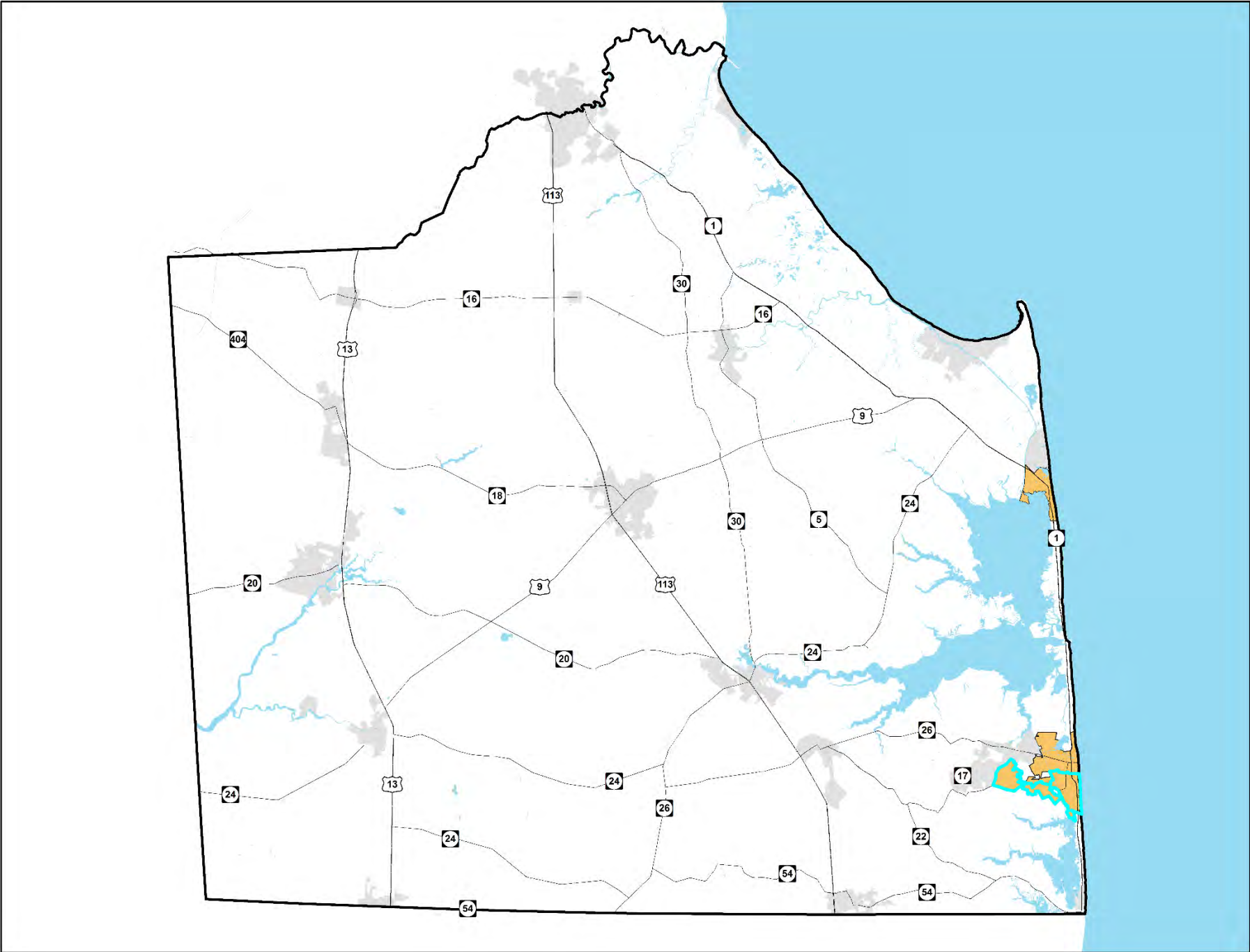
Sussex County

- Dewey Beach
- Bethany Beach



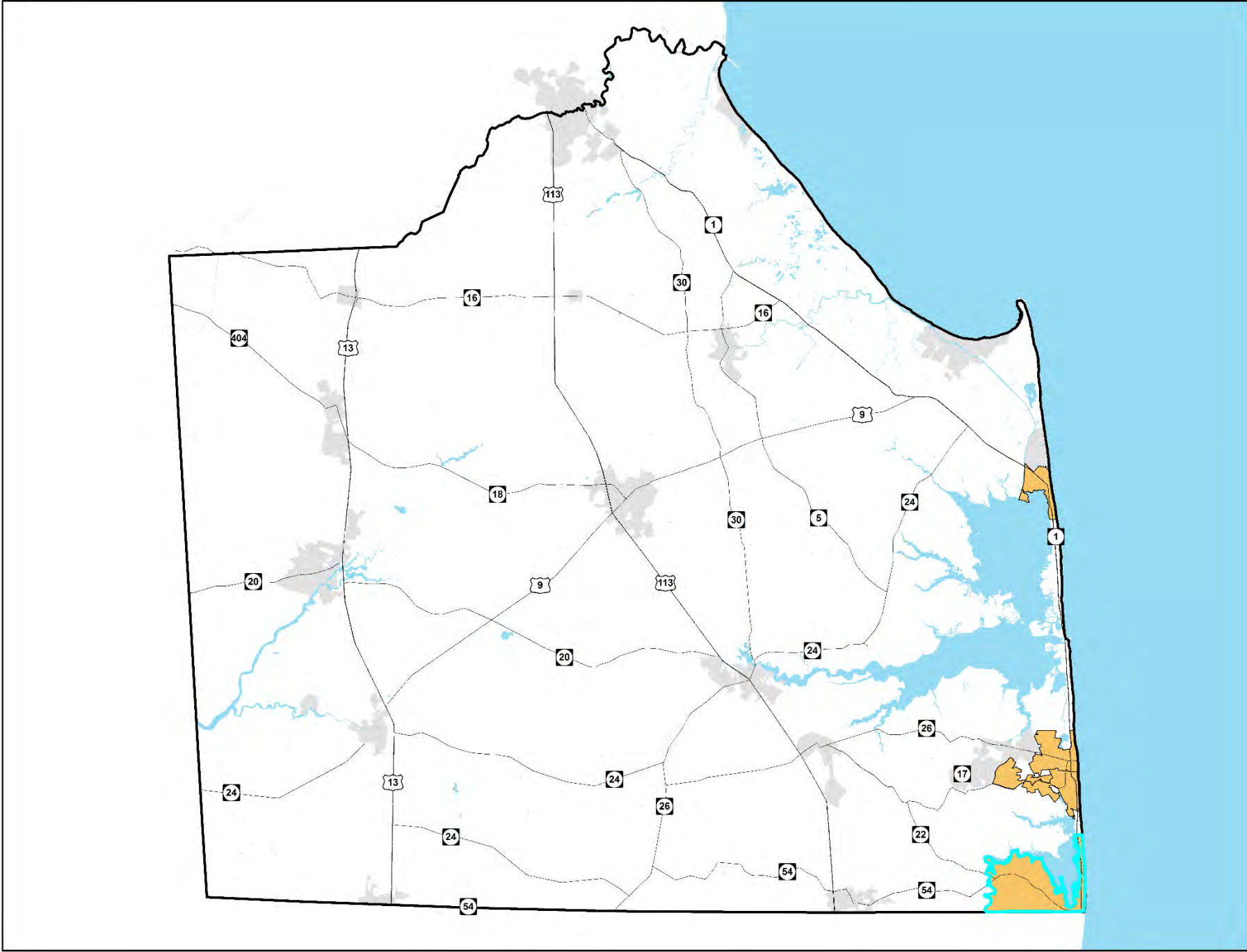
Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany



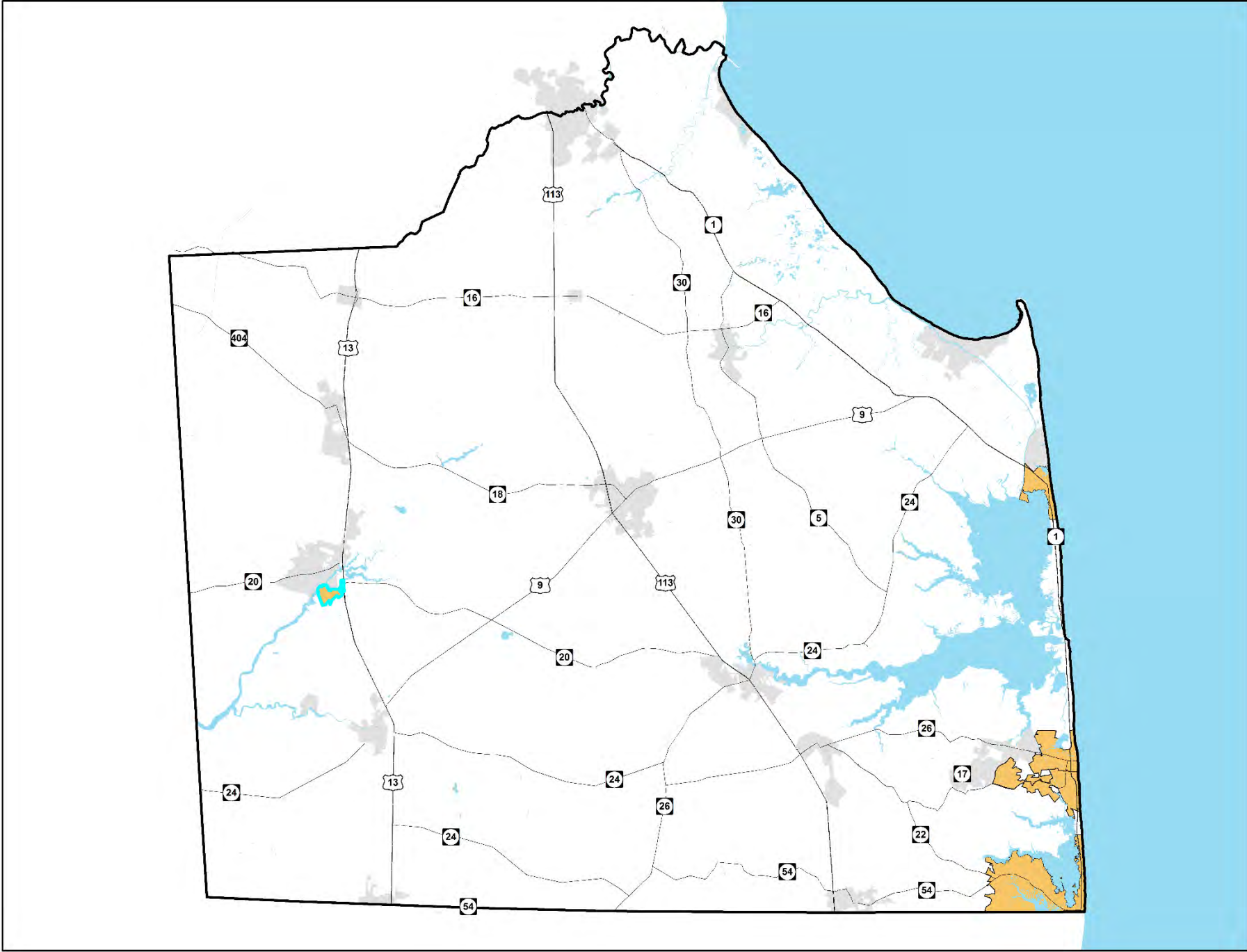
Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany
- Fenwick Island



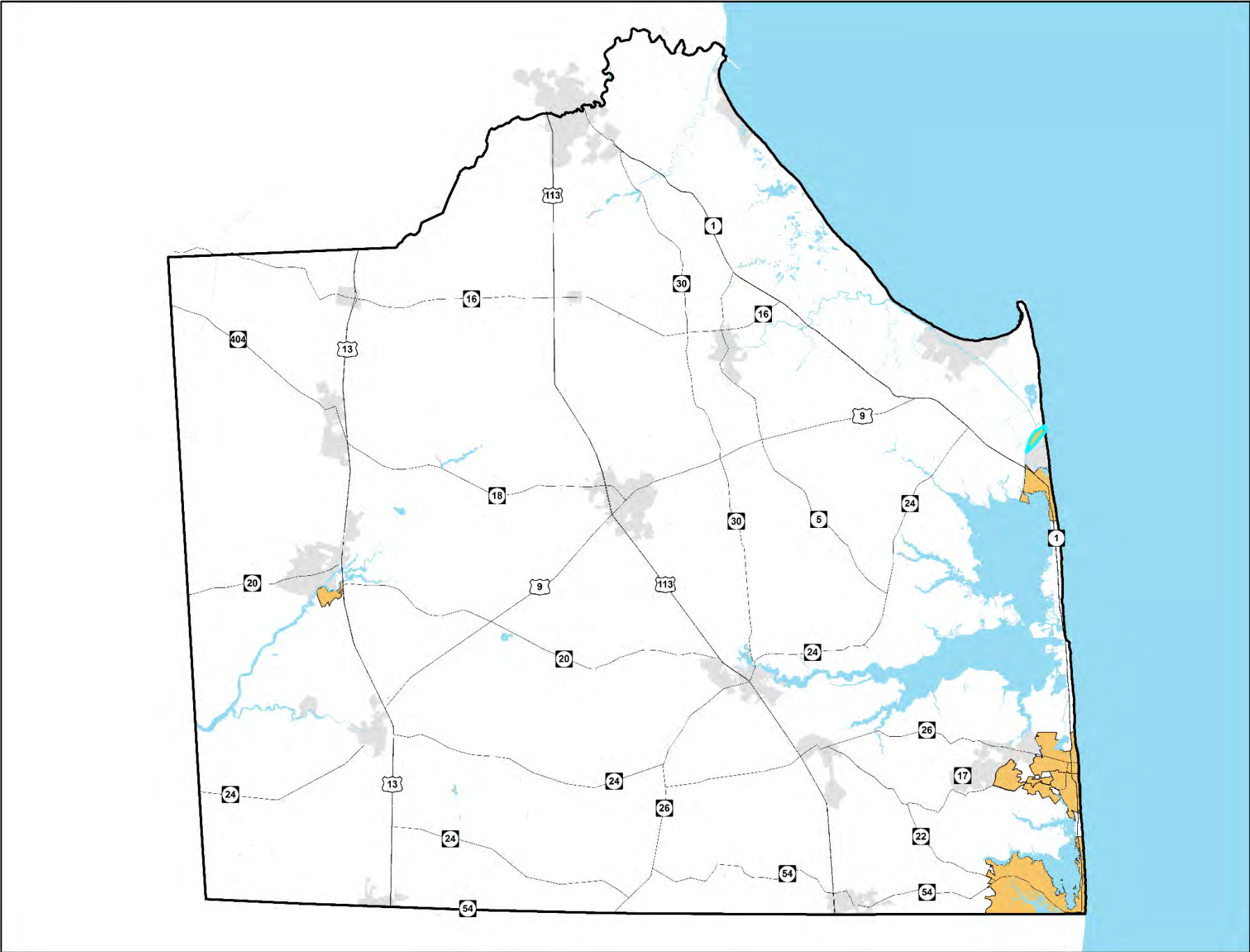
Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany
- Fenwick Island
- Blades



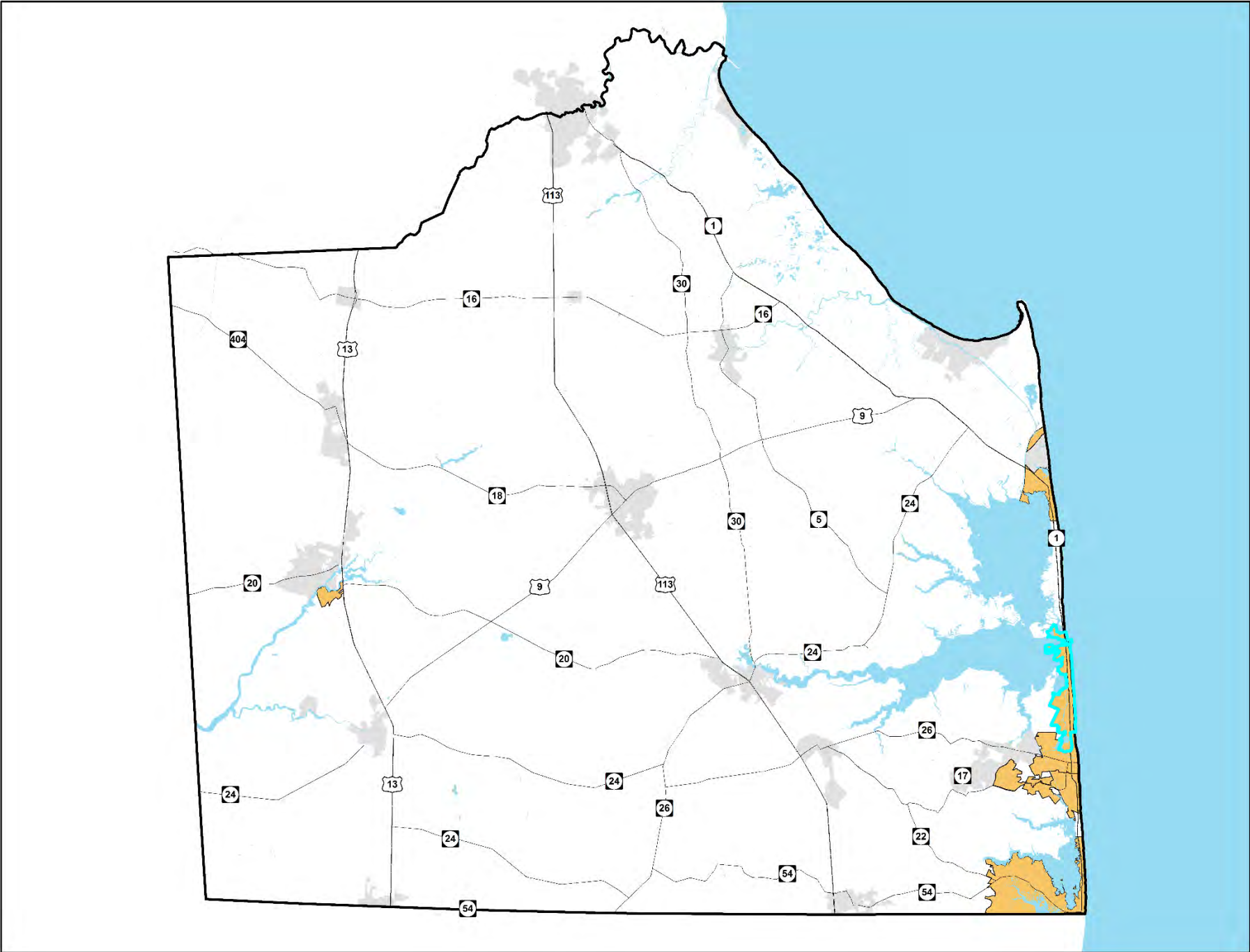
Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany
- Fenwick Island
- Blades
- Henlopen Acres



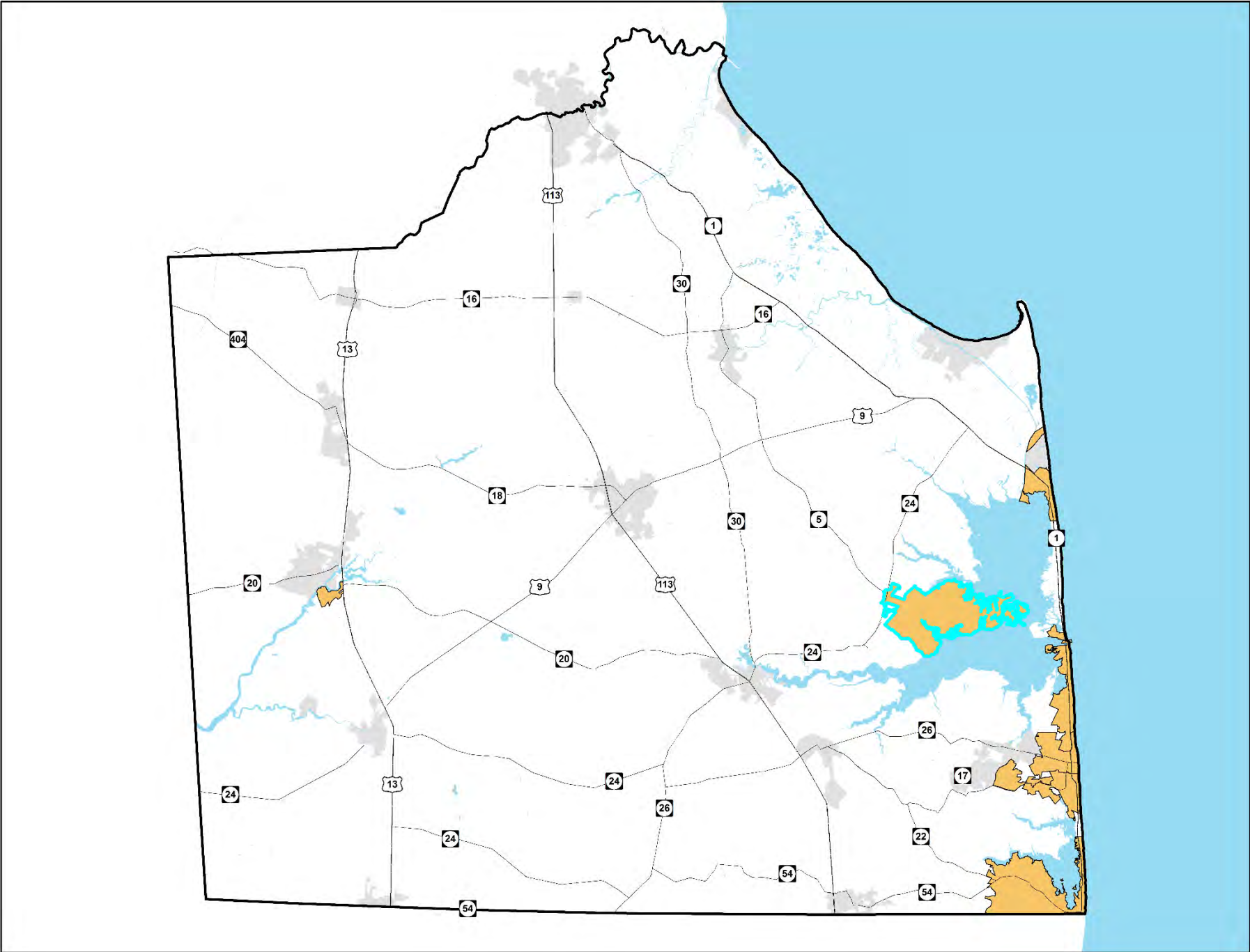
Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany
- Fenwick Island
- Blades
- Henlopen Acres
- North Bethany



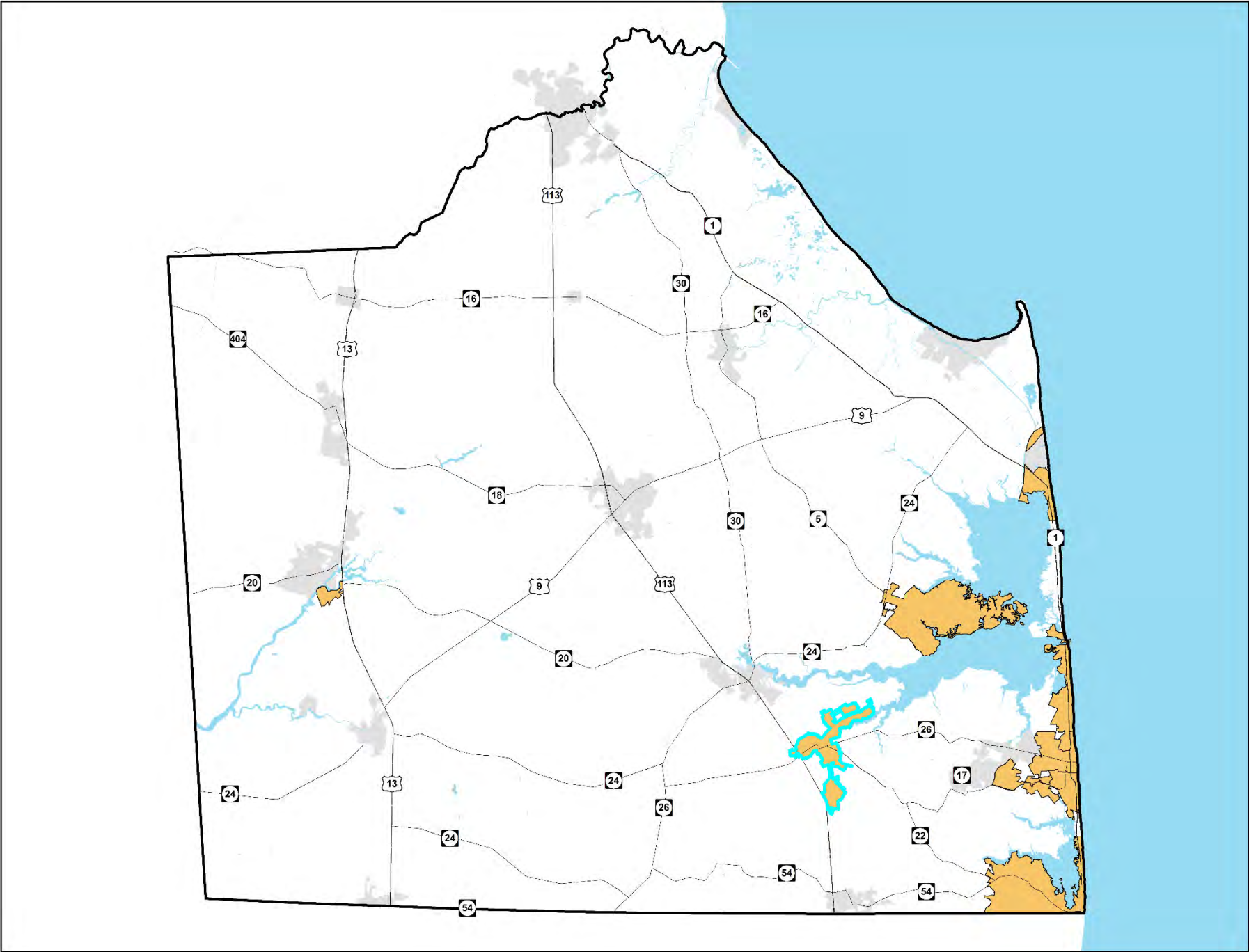
Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany
- Fenwick Island
- Blades
- Henlopen Acres
- North Bethany
- Long Neck



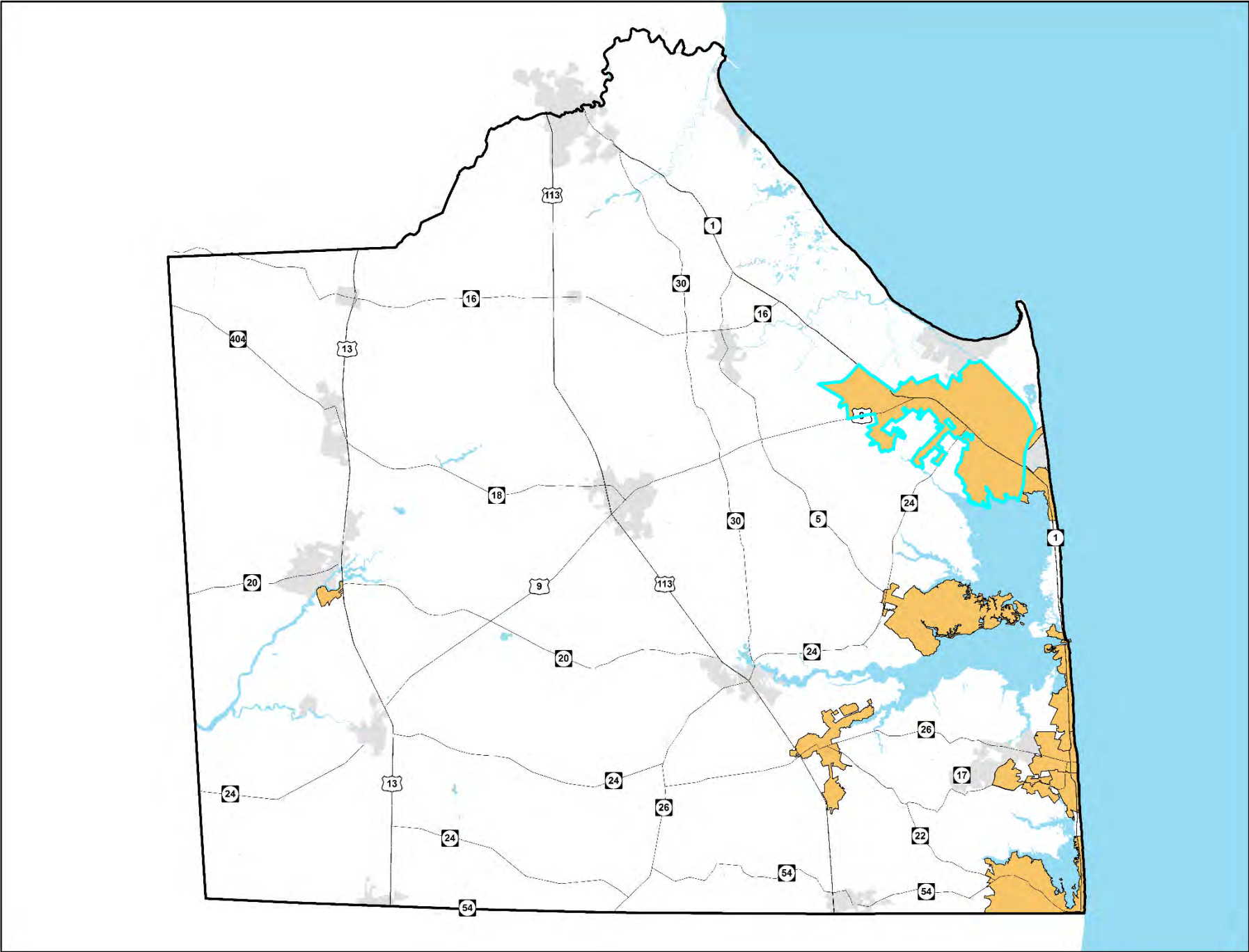
Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany
- Fenwick Island
- Blades
- Henlopen Acres
- North Bethany
- Long Neck
- Dagsboro/
Frankford



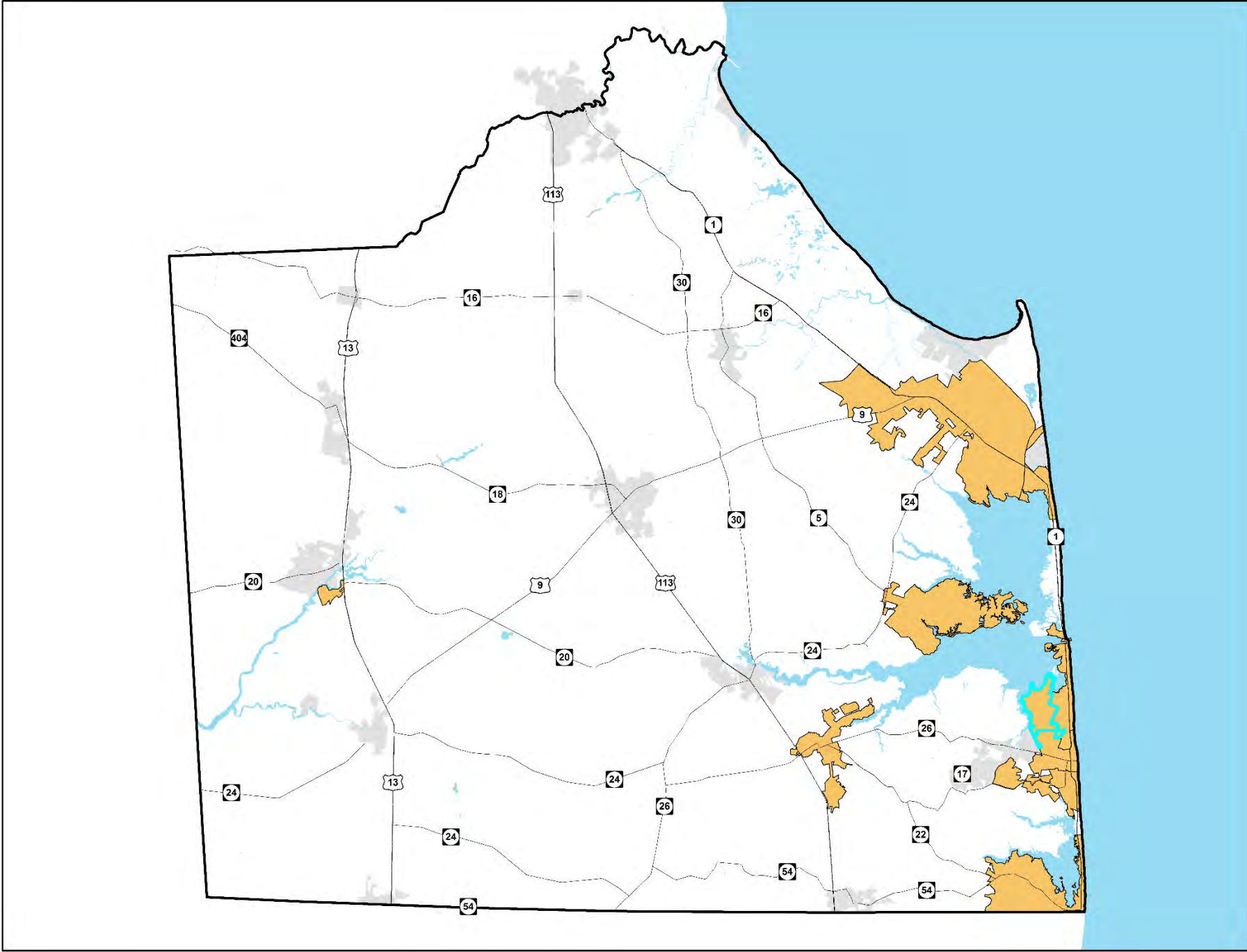
Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany
- Fenwick Island
- Blades
- Henlopen Acres
- North Bethany
- Long Neck
- Dagsboro/
Frankford
- West Rehoboth



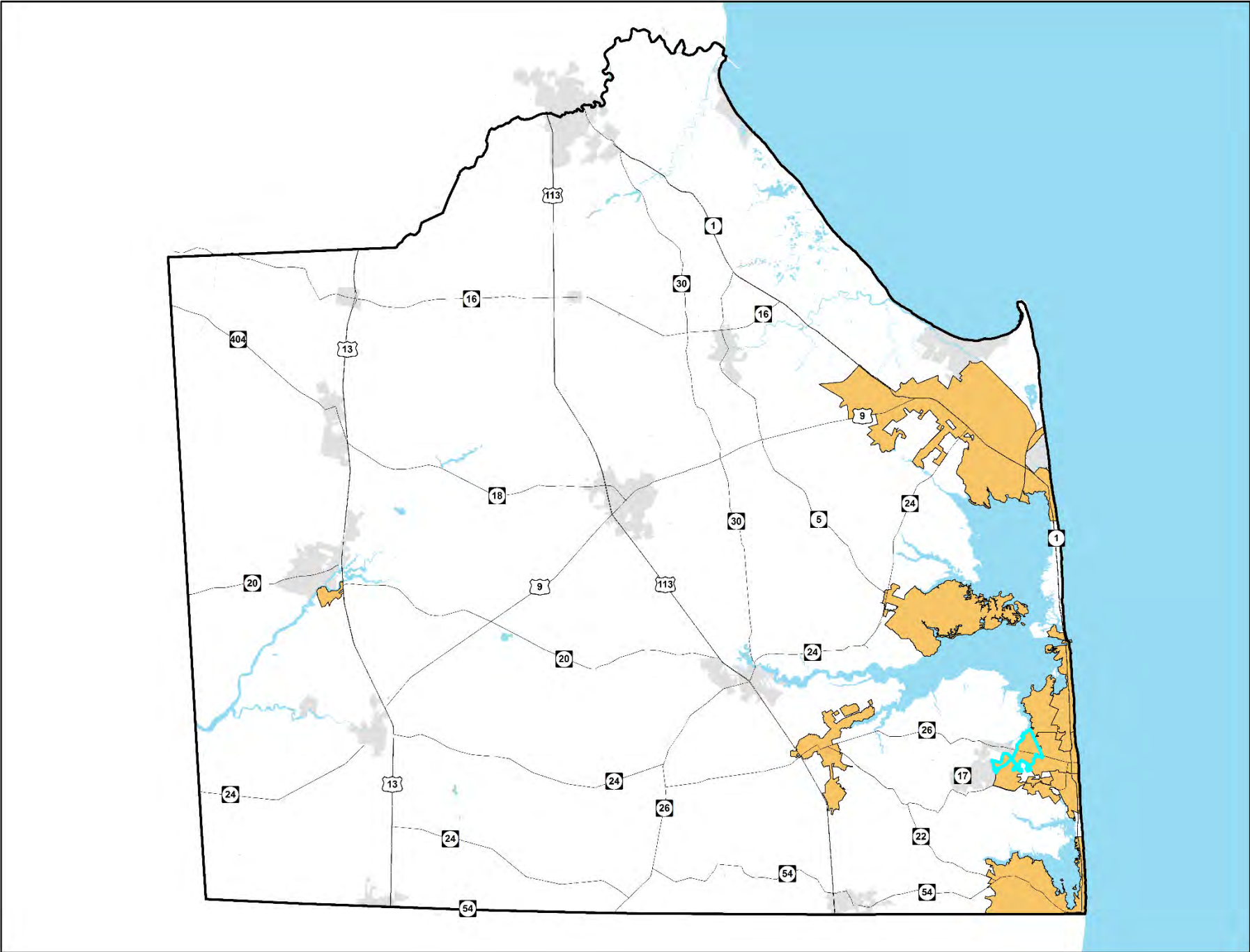
Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany
- Fenwick Island
- Blades
- Henlopen Acres
- North Bethany
- Long Neck
- Dagsboro/
Frankford
- West Rehoboth
- Cedar Neck



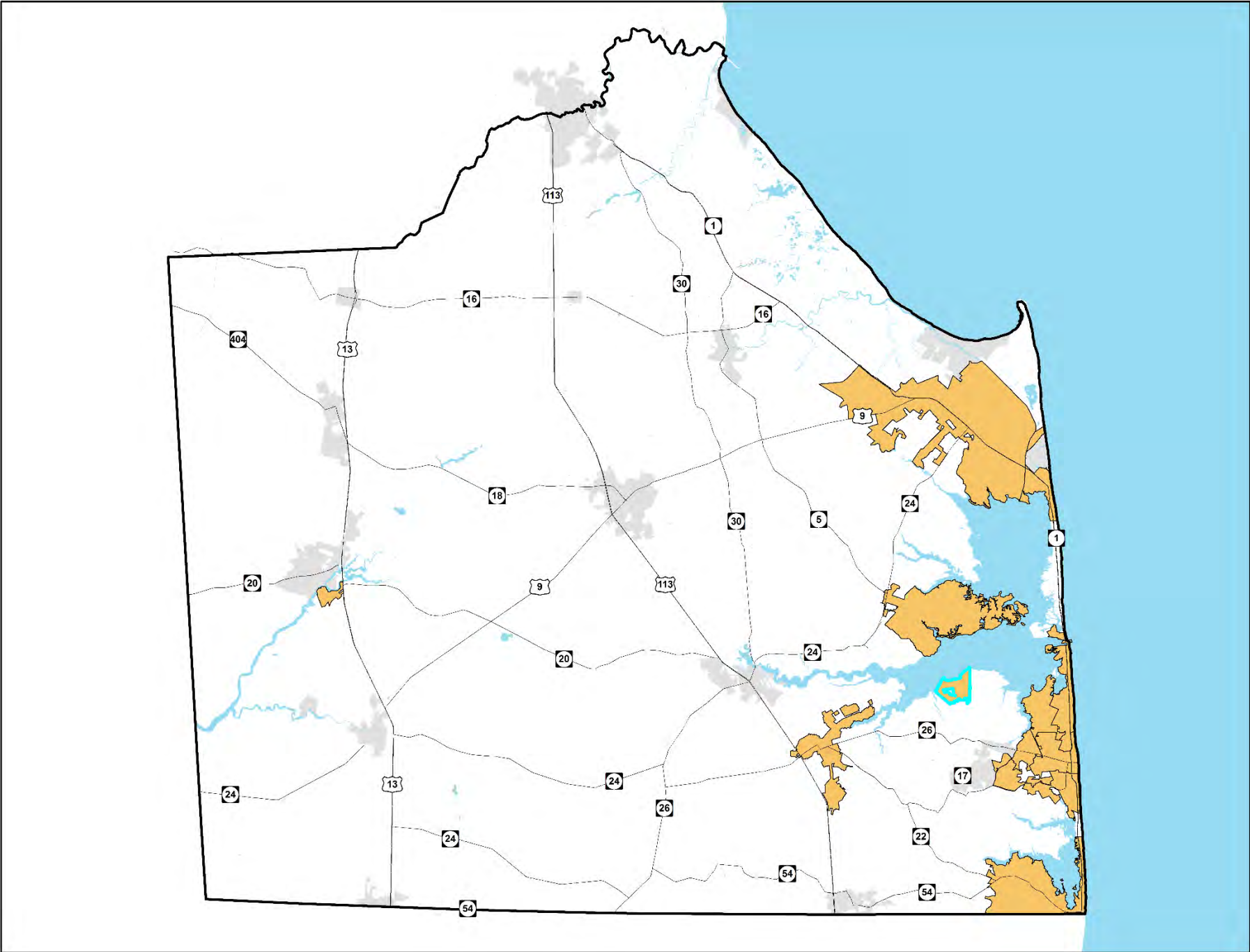
Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany
- Fenwick Island
- Blades
- Henlopen Acres
- North Bethany
- Long Neck
- Dagsboro/
Frankford
- West Rehoboth
- Cedar Neck
- Ocean View



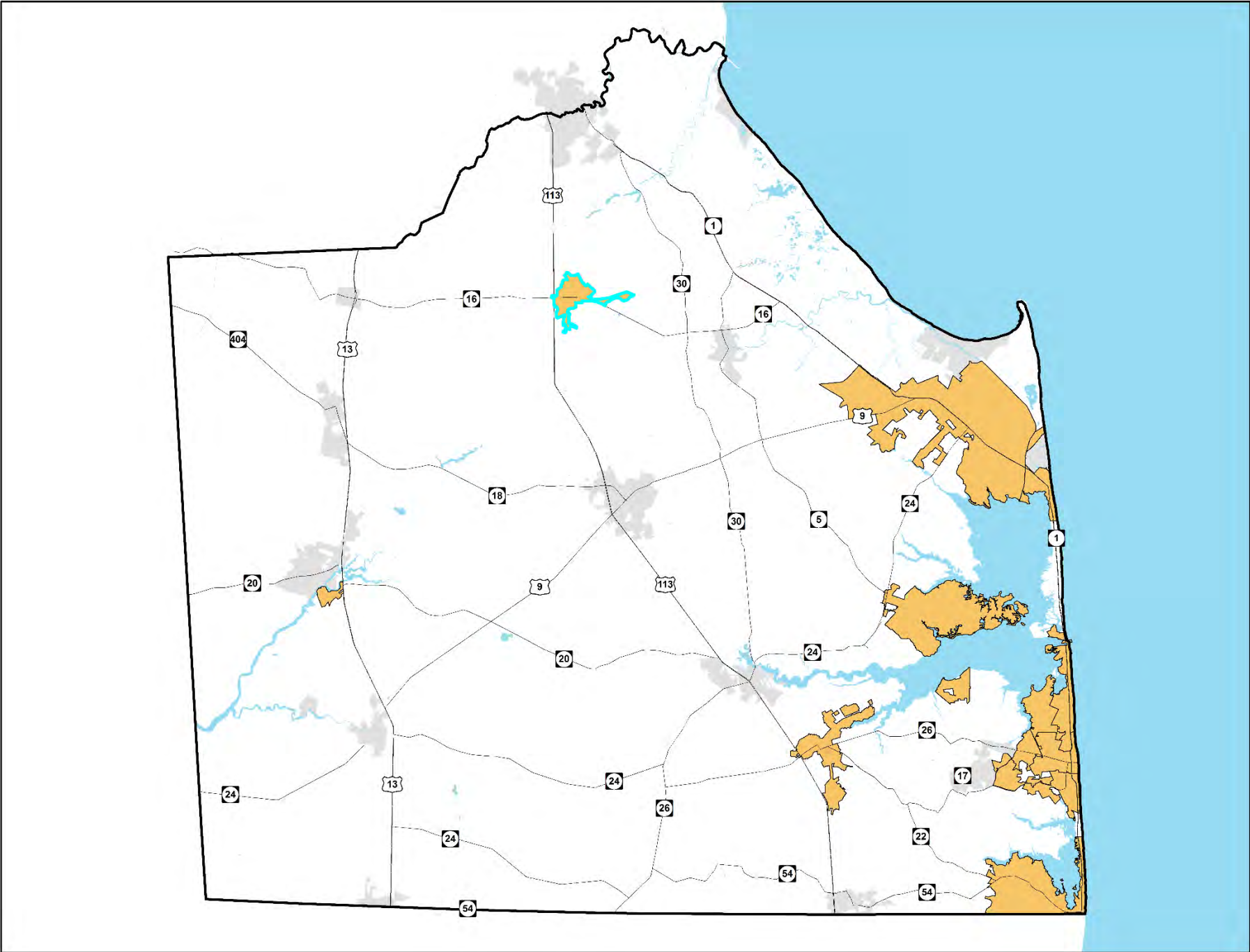
Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany
- Fenwick Island
- Blades
- Henlopen Acres
- North Bethany
- Long Neck
- Dagsboro/
Frankford
- West Rehoboth
- Cedar Neck
- Ocean View
- Holt's Landing



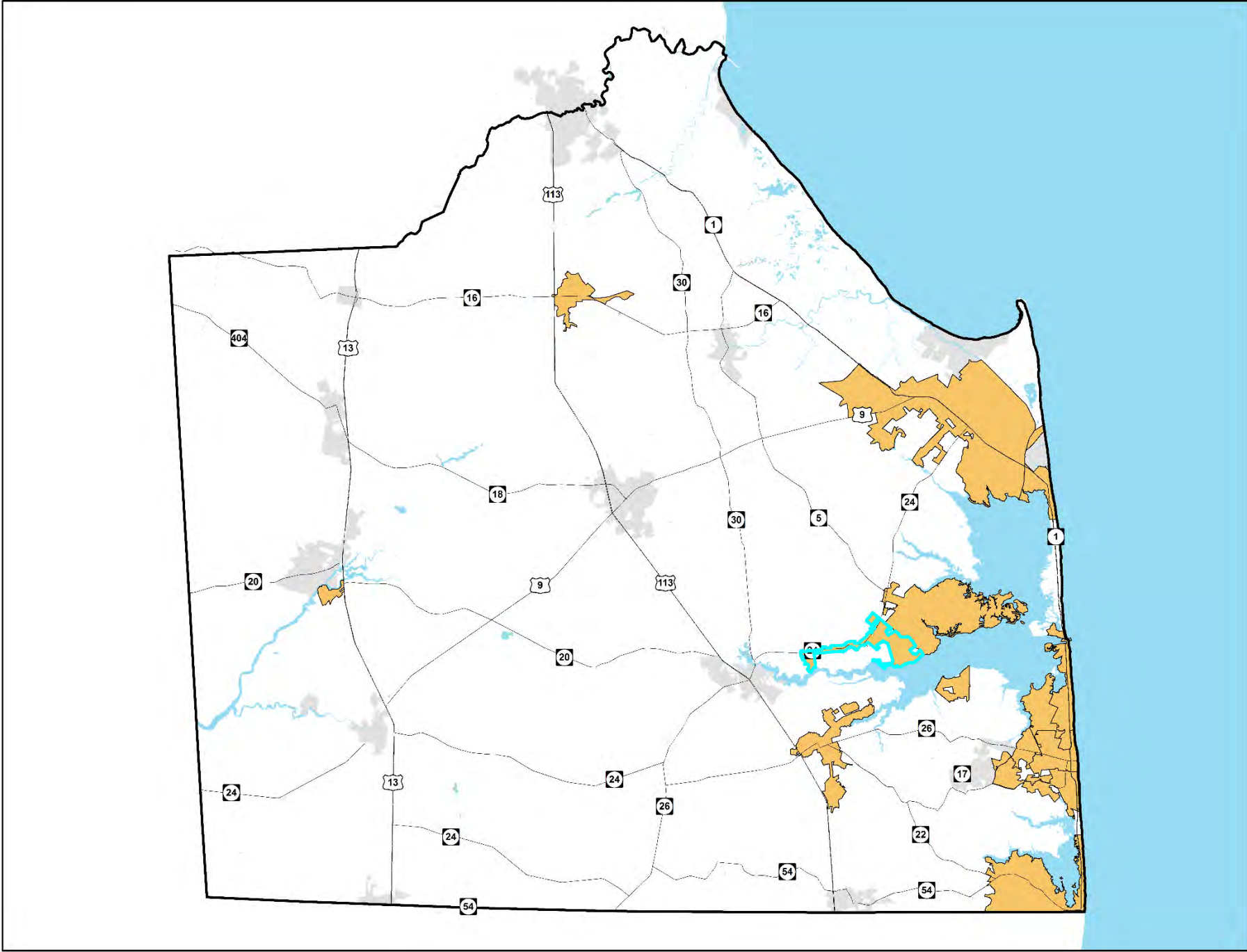
Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany
- Fenwick Island
- Blades
- Henlopen Acres
- North Bethany
- Long Neck
- Dagsboro/
Frankford
- West Rehoboth
- Cedar Neck
- Ocean View
- Holt's Landing
- Ellendale



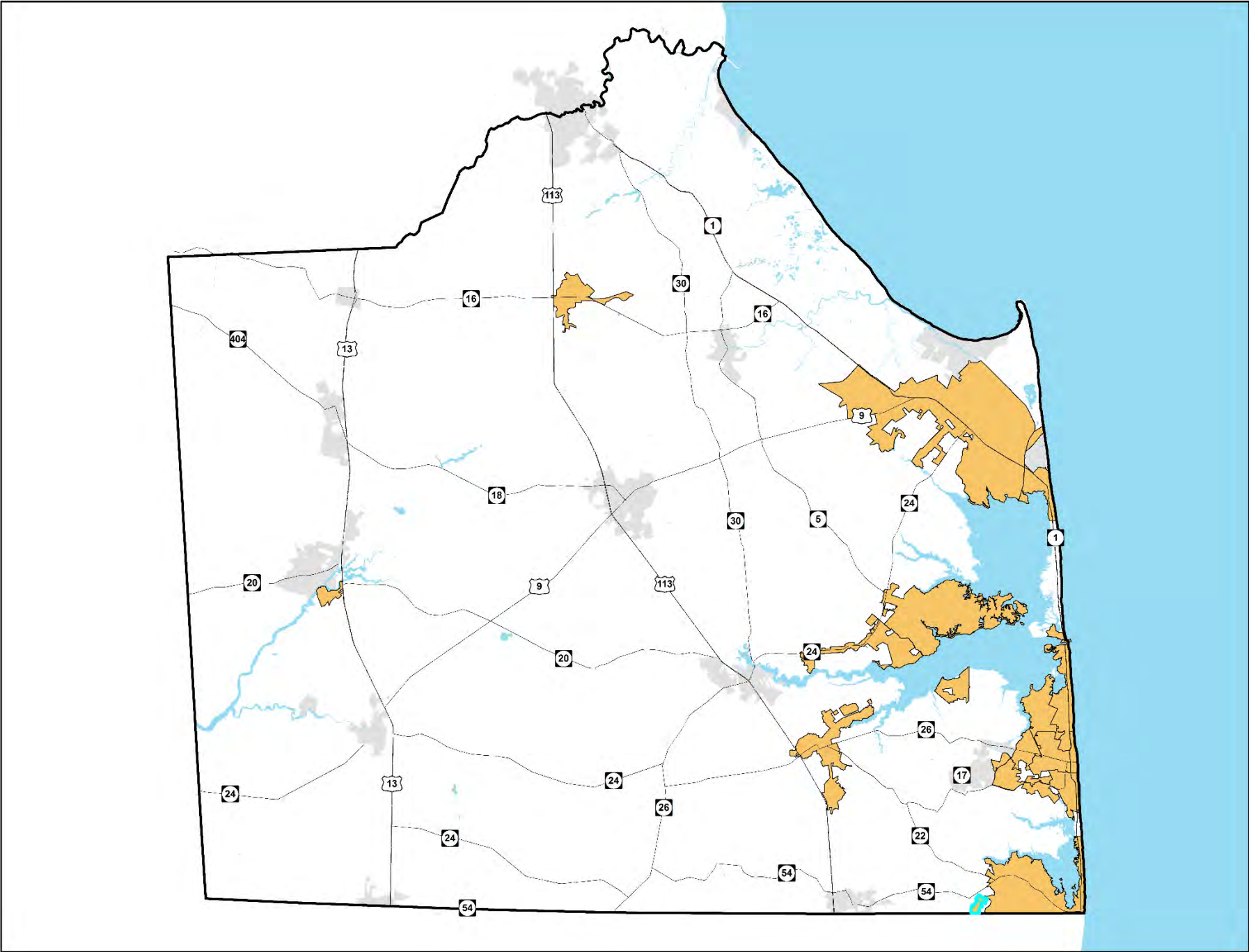
Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany
- Fenwick Island
- Blades
- Henlopen Acres
- North Bethany
- Long Neck
- Dagsboro/
Frankford
- West Rehoboth
- Cedar Neck
- Ocean View
- Holt's Landing
- Ellendale
- Oak Orchard



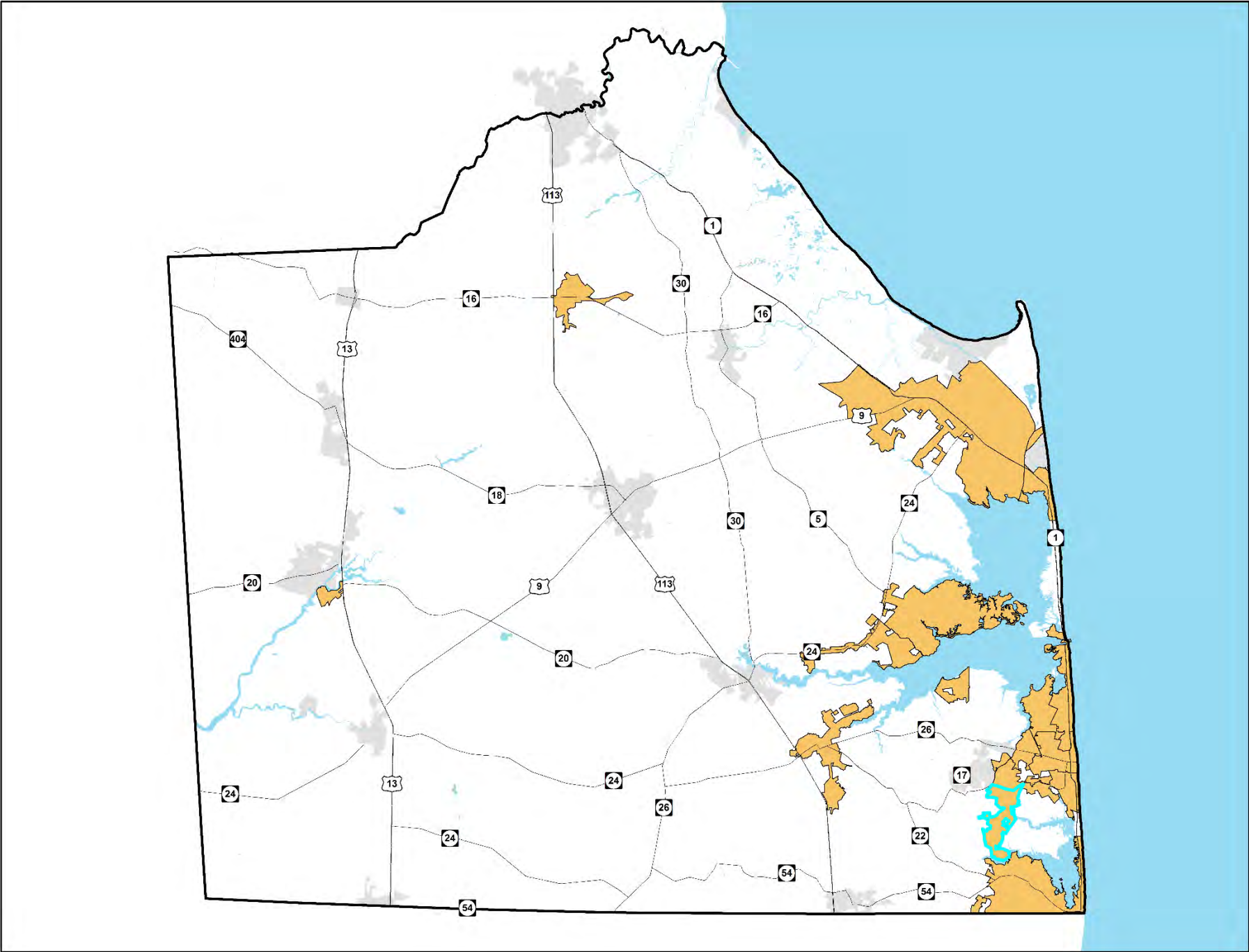
Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany
- Fenwick Island
- Blades
- Henlopen Acres
- North Bethany
- Long Neck
- Dagsboro/
Frankford
- West Rehoboth
- Cedar Neck
- Ocean View
- Holt's Landing
- Ellendale
- Oak Orchard
- Bay View
Estates



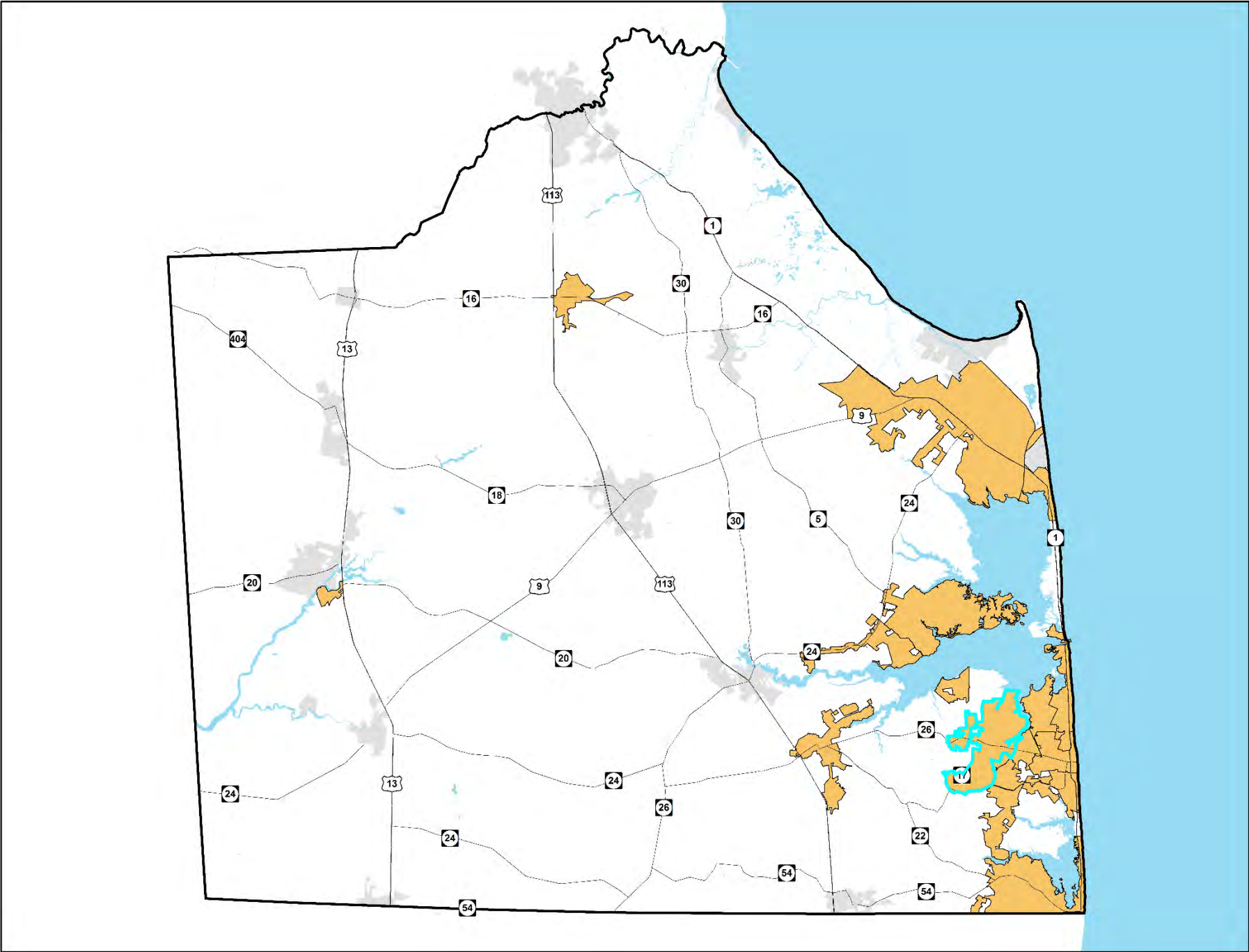
Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany
- Fenwick Island
- Blades
- Henlopen Acres
- North Bethany
- Long Neck
- Dagsboro/
Frankford
- West Rehoboth
- Cedar Neck
- Ocean View
- Holt's Landing
- Ellendale
- Oak Orchard
- Bay View
Estates
- Miller Creek



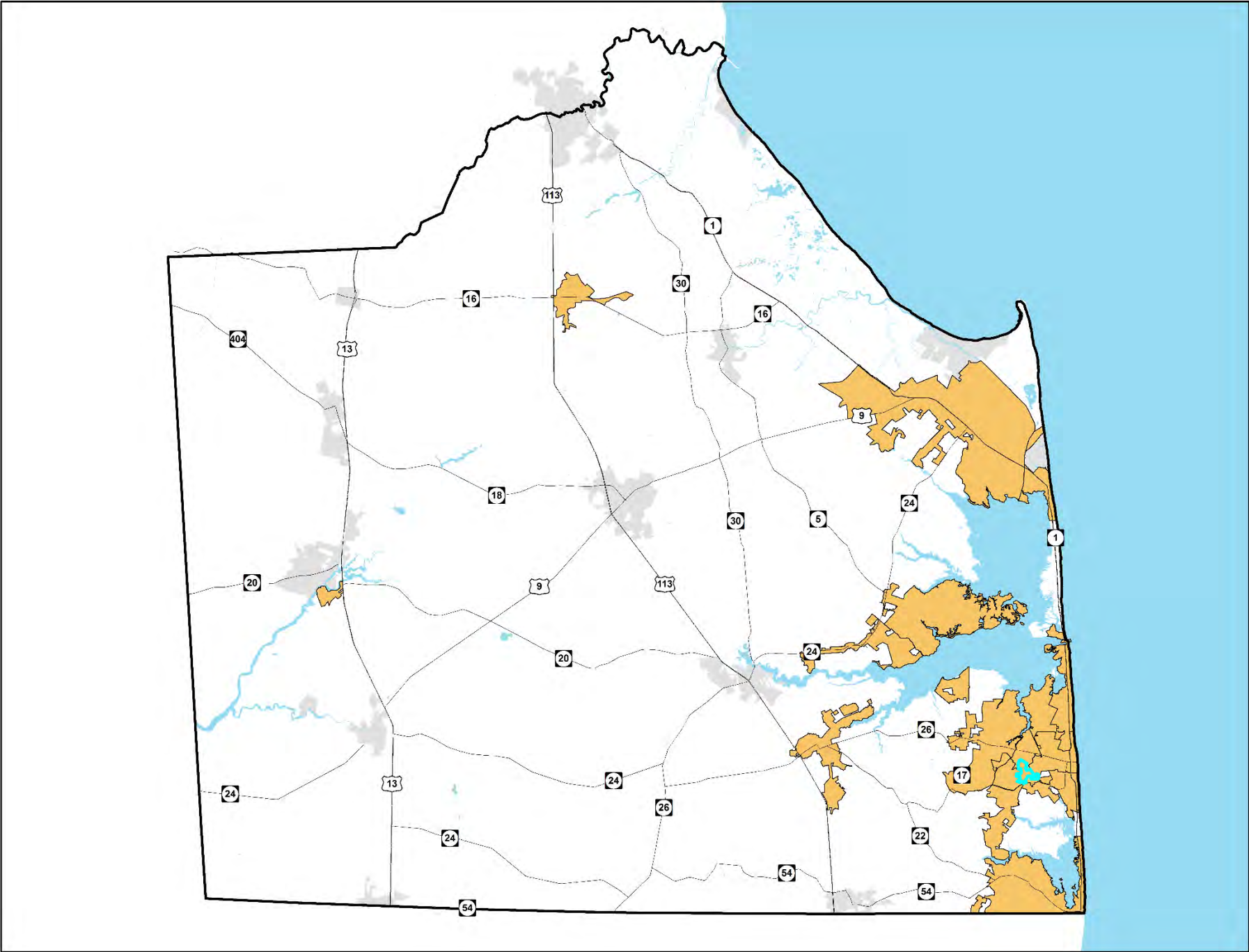
Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany
- Fenwick Island
- Blades
- Henlopen Acres
- North Bethany
- Long Neck
- Dagsboro/
Frankford
- West Rehoboth
- Cedar Neck
- Ocean View
- Holt's Landing
- Ellendale
- Oak Orchard
- Bay View
Estates
- Miller Creek
- Millville



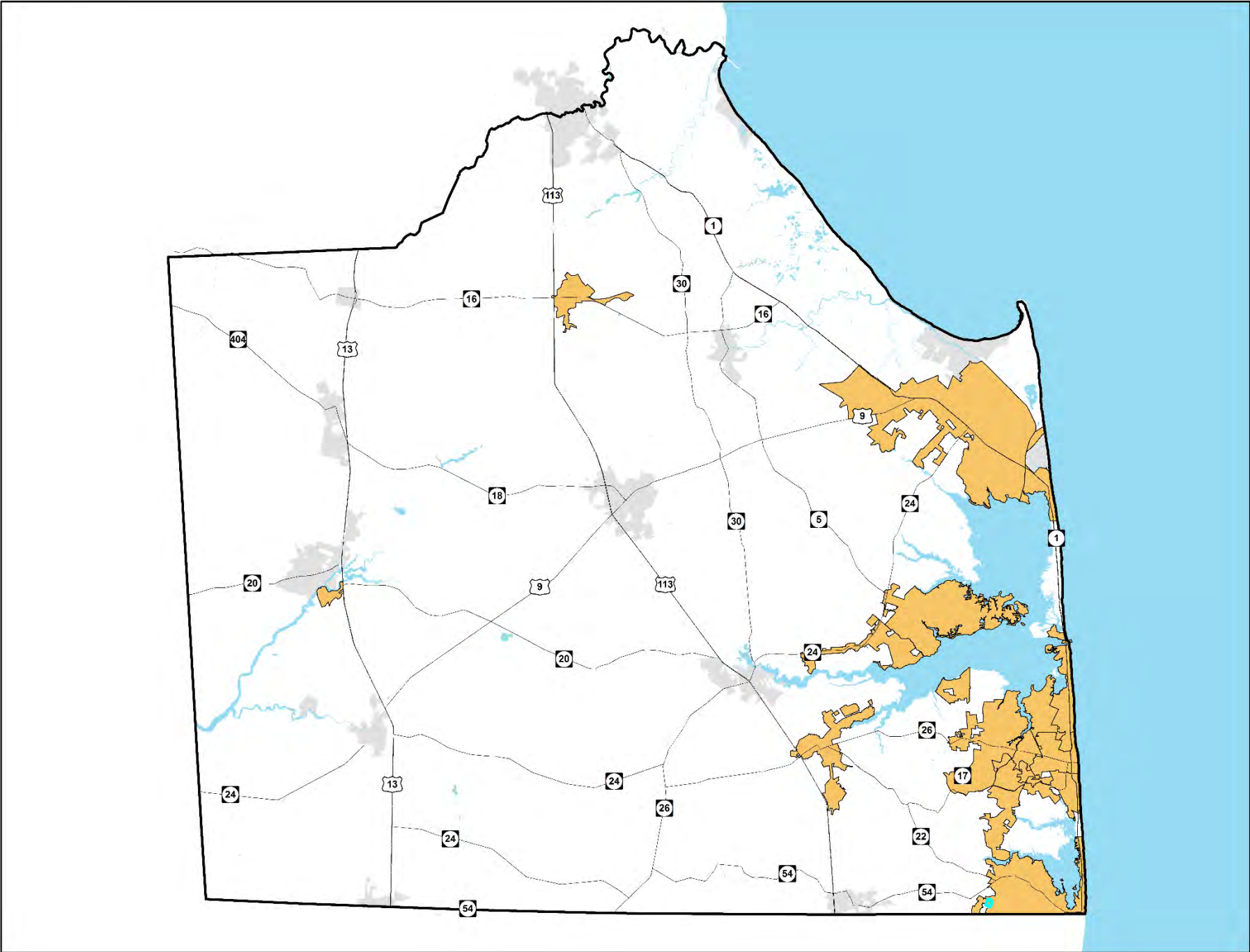
Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany
- Fenwick Island
- Blades
- Henlopen Acres
- North Bethany
- Long Neck
- Dagsboro/
Frankford
- West Rehoboth
- Cedar Neck
- Ocean View
- Holt's Landing
- Ellendale
- Oak Orchard
- Bay View
Estates
- Miller Creek
- Millville
- South Ocean
View



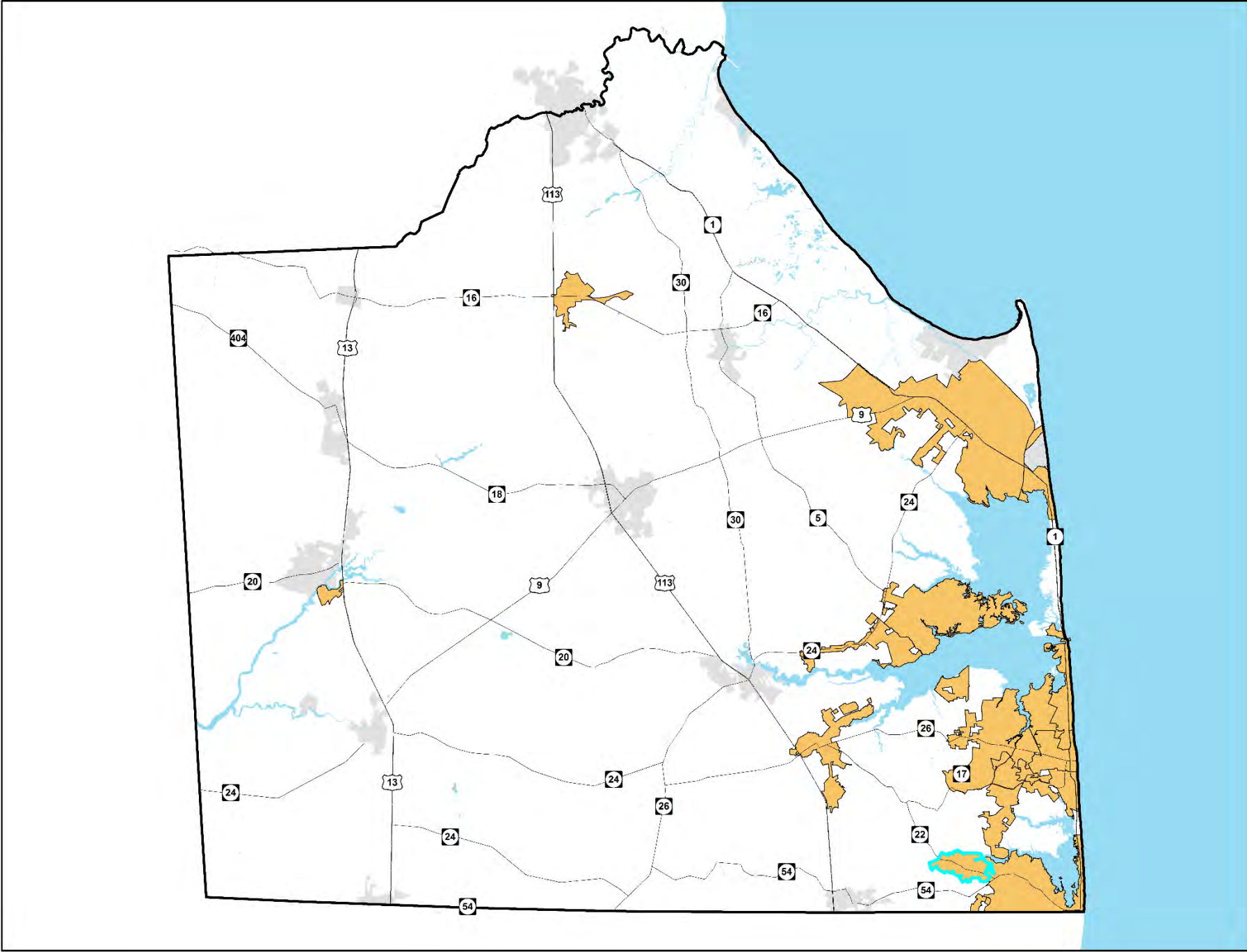
Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany
- Fenwick Island
- Blades
- Henlopen Acres
- North Bethany
- Long Neck
- Dagsboro/
Frankford
- West Rehoboth
- Cedar Neck
- Ocean View
- Holt's Landing
- Ellendale
- Oak Orchard
- Bay View
Estates
- Miller Creek
- Millville
- South Ocean
View
- Sea Country
Estates



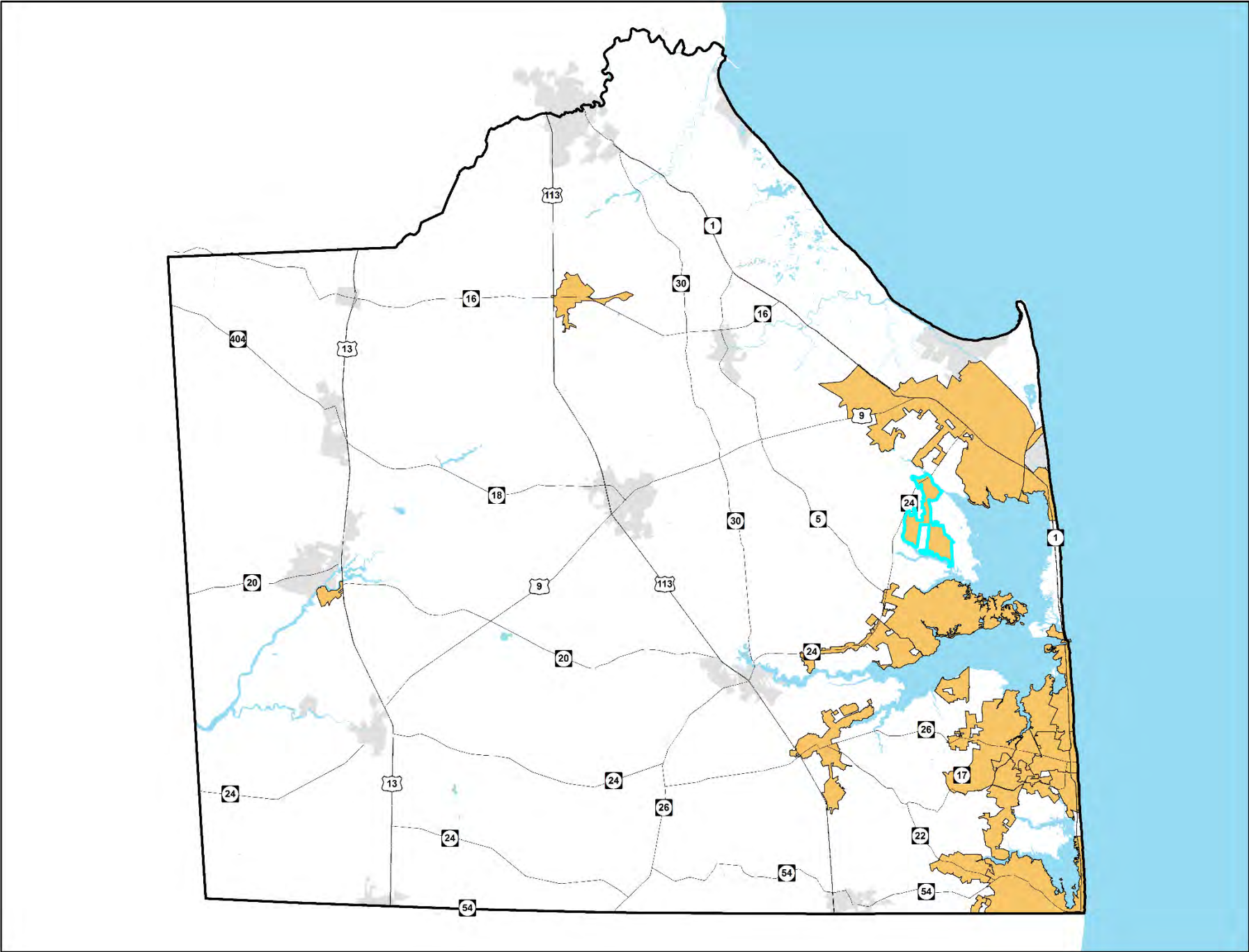
Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany
- Fenwick Island
- Blades
- Henlopen Acres
- North Bethany
- Long Neck
- Dagsboro/
Frankford
- West Rehoboth
- Cedar Neck
- Ocean View
- Holt's Landing
- Ellendale
- Oak Orchard
- Bay View
Estates
- Miller Creek
- Millville
- South Ocean
View
- Sea Country
Estates
- Johnson's
Corner



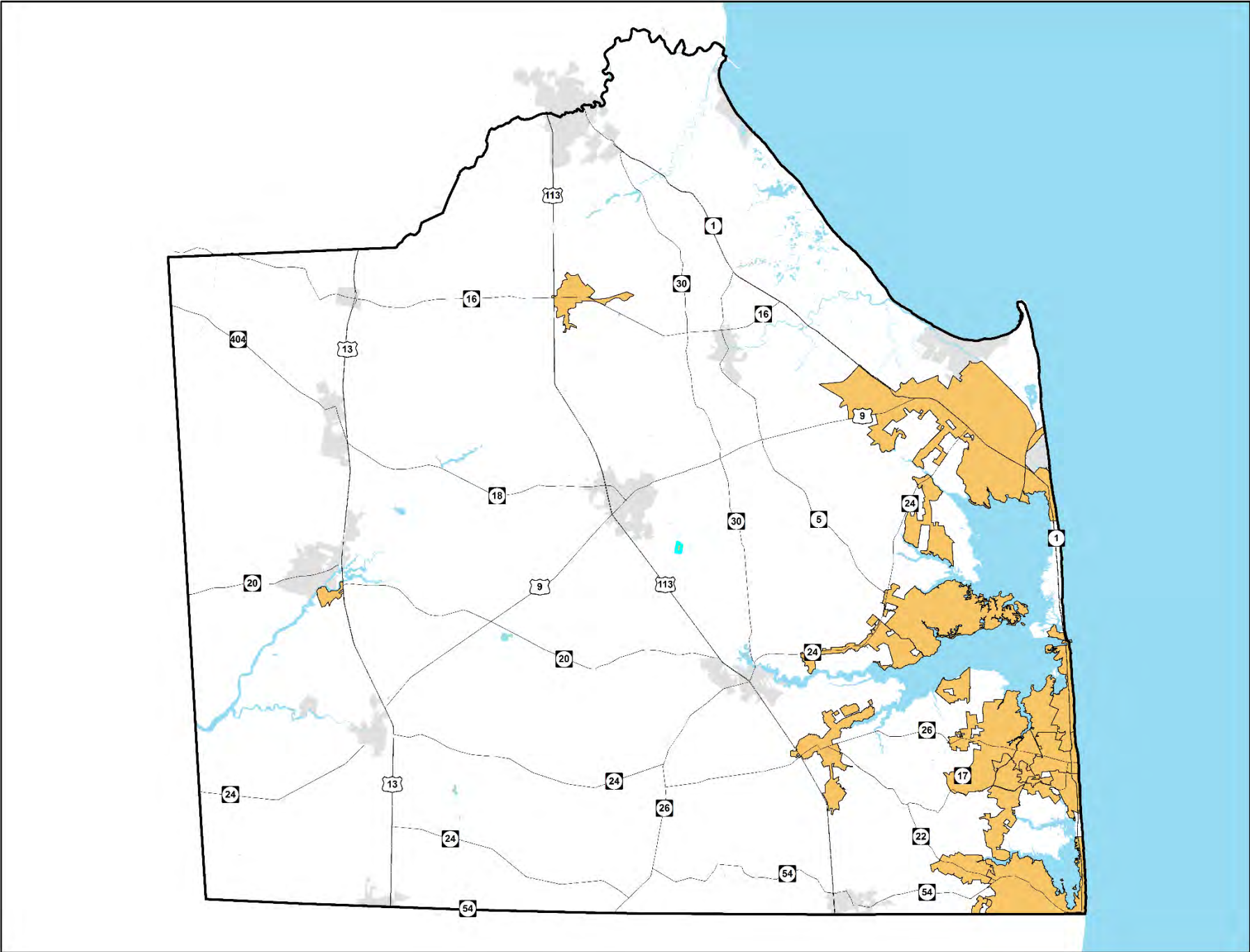
Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany
- Fenwick Island
- Blades
- Henlopen Acres
- North Bethany
- Long Neck
- Dagsboro/
Frankford
- West Rehoboth
- Cedar Neck
- Ocean View
- Holt's Landing
- Ellendale
- Oak Orchard
- Bay View
Estates
- Miller Creek
- Millville
- South Ocean
View
- Sea Country
Estates
- Johnson's
Corner
- Angola



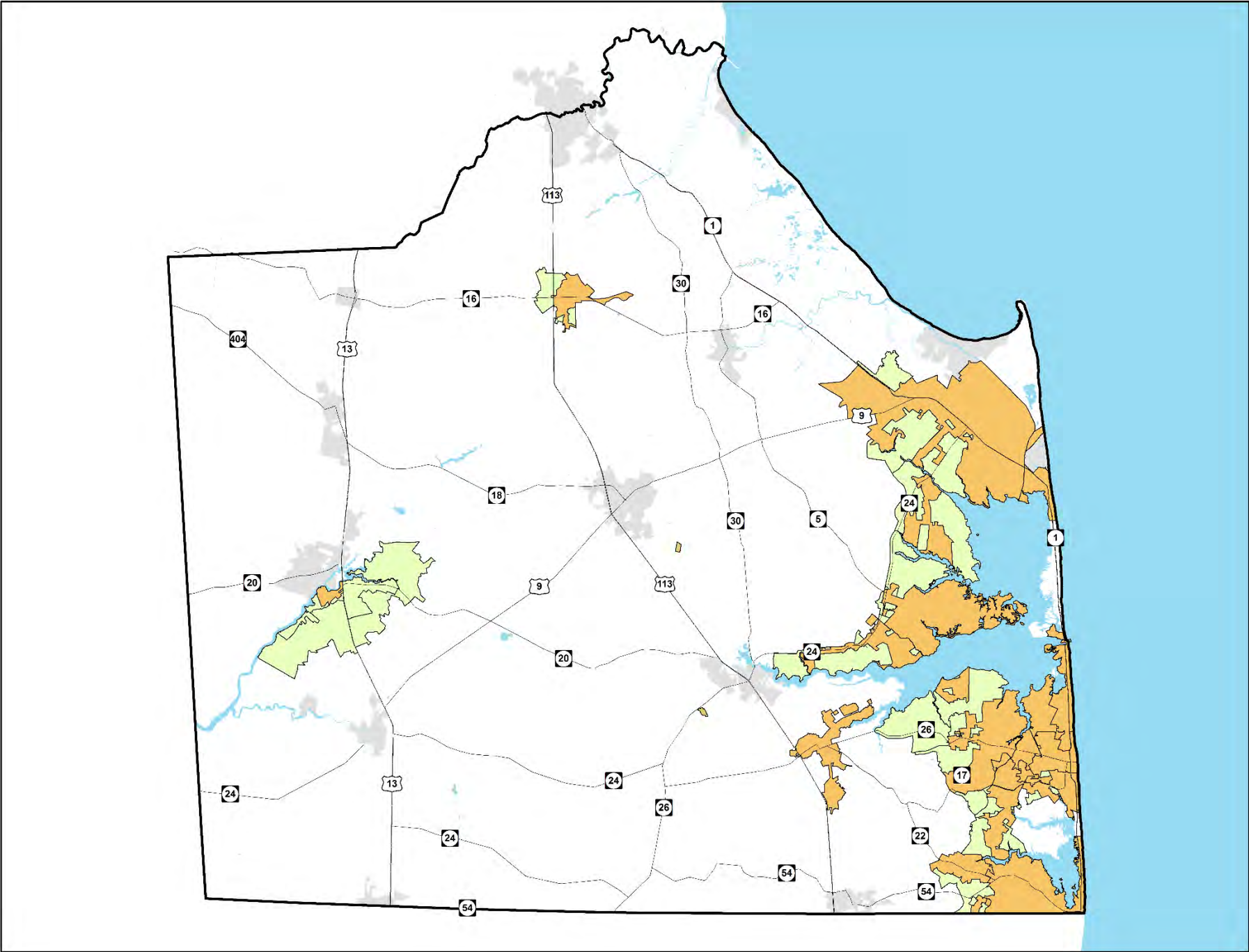
Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany
- Fenwick Island
- Blades
- Henlopen Acres
- North Bethany
- Long Neck
- Dagsboro/
Frankford
- West Rehoboth
- Cedar Neck
- Ocean View
- Holt's Landing
- Ellendale
- Oak Orchard
- Bay View
Estates
- Miller Creek
- Millville
- South Ocean
View
- Sea Country
Estates
- Johnson's
Corner
- Angola
- Golf Village



Sussex County

- Dewey Beach
- Bethany Beach
- South Bethany
- Fenwick Island
- Blades
- Henlopen Acres
- North Bethany
- Long Neck
- Dagsboro/
Frankford
- West Rehoboth
- Cedar Neck
- Ocean View
- Holt's Landing
- Ellendale
- Oak Orchard
- Bay View
Estates
- Miller Creek
- Millville
- South Ocean
View
- Sea Country
Estates
- Johnson's
Corner
- Angola
- Golf Village
- Woodlands



Near-term
Planning
Districts

Comprehensive Plan's Role in the Central Sewer Expansion Process

- Suggest County Code Changes requiring new major subdivision development to make central sewer available to all surrounding parcels created in the minor subdivision process.
- Refine the County primary and secondary sewer planning areas to better reflect the areas which can readily and economically be served by County sewer service.
- Define a tertiary sewer planning area where CPCN coordination will be required.
- Consider recommendation of an on-site parcel size requirement above the State Standard of ½ acre for a low density zoning classification where no sewer service is expected.
- Include section discussing the challenges to on-site septic system remediation process. However, P&Z members who learn of concerns from communities or localized areas with failing systems can encourage petition process as per Del Code.

Comments and Questions?