St. Mary's County, Maryland

Comprehensive Water and Sewerage Plan

2017 Update

[This page blank.]

Maryland
Department of
the Environment

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor

Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

DEC 11 2018

The Honorable James R. Guy
President
Board of County Commissioners
Saint Mary's County Government
P.O. Box 653
23150 Leonardtown Hall Drive
Leonardtown, Maryland 20650

Dear President Guy:

The Maryland Department of the Environment (MDE) has completed its final review of the **Saint Mary's County Comprehensive Water and Sewerage Plan (CWSP) 2017 Update (Amendment)**. The Saint Mary's County Planning Commission approved this Amendment on October 2, 2018. The Amendment updates Tables 3-4 and 4-5 to include the FY2018-2023 Capital Improvement Budget (CIB). The Amendment also updates Table 3-2: Inventory of Existing Community (Water) System Appropriations and revises text in Chapter 3 regarding arsenic in drinking water.

During MDE's review of the Amendment, the Maryland Department of Planning (MDP) advised MDE that the Amendment is consistent with the Saint Mary's County Comprehensive Plan (see enclosed comments). In accordance with §9-507(a) of the Environment Article, Annotated Code of Maryland, the Department hereby modifies (see enclosed modifications) the **Saint Mary's County Comprehensive Water and Sewerage Plan (CWSP) 2017 Update** in order to include current appropriation permit limits.

Specifically, the Department modifies the following portions of the 2017 CWSP Update:

- **Chapter 3 Table 3-2 Inventory of Existing Community System Appropriations**

This action completes MDE's review, as required by §9-507 of the Environment Article, Annotated Code of Maryland. If you need further assistance on these matters, please contact Virginia F. Kearney, Deputy Director, at (410) 537-3512, toll-free at (800) 633-6101, or by e-mail at virginialkearney@maryland.gov.

Sincerely,

Virginia F Kearney/ for

D. Lee Currey, Director
Water and Science Administration

Enclosures

cc: Bill Hunt, Director, Saint Mary's County Dept. of Land Use and Growth Mgmt.
Kathleen Easley, Saint Mary's County Dept. of Land Use and Growth Mgmt.
Daryl Calvano, Environmental Health, St. Mary's County
Charles Boyd, Director, Planning Coordination, MDP
Virginia F. Kearney, Deputy Director, WSA, MDE

MDE Modifications

In accordance with Environment Article 9-507(a)(4), MDE hereby modifies portions of the 2017 St. Mary's Comprehensive Water and Sewer Plan Update. Specifically, MDE modifies: Table 3-2 Inventory of Existing Community System Appropriations.

Table 3-2 Inventory of Existing Community System Appropriations (Continued)

COMMUNITY WELLS	GAP NUMBER	AQUIFER	GAP AVGMGD	GAP MAXMGD
Laurel Ridge	SM1986G016	Aquia	0.056	0.094
Charlotte Hall	SM1966G006	Aquia	0.102	0.255
Persimmon Hills	SM19890010	Aquia	0.0397	0.0662
Ben Oaks/Persimmon Hills	SM19890110	Upper Patapsco	0.060	0.099
Forrest Farm	SM2000G004	Upper Patapsco	0.0705	0.120
Greenbrier	SM19950009	Aquia	0.053	0.100
	SM1989G074	Upper Patapsco	0.053	0.100
Hearts Desire	SM1985G051	Magothy	0.0053	0.0075
Holland Forrest	SM19900065	Aquia	0.003	0.021
Holland Forrest	SM1990GI65	Upper Patapsco	0.012	0.021
Villages of Leonardtown	SM1998G02S	Aquia	· 0.024	0.041
Southgate	SM1991G021	Aquia	0.0136	0.0227
Town or Leonardtown Wells 3 & 4	SMI967G003	Aquia	0.060	0.650
Town of Leonardtown Wells	SM1967GI03	Upper Patapsco	.750	1.10
Leonardtown Farm	SM20040014	Upper Patapsco	0.021	0.0351
Wild Goose Crest	SM2004G002	Upper Patapsco	0.006	0.009
Grandview Haven	SM200SG004	Upper Patapsco	0.035	0.0585
Charlotte Hall	SM2016G004(01)	Upper Patapsco	0.068	0.255
Patuxent Naval Air Station[1]	SM19740118(0S)	Piney Point	0.100	0.210
Patuxent Naval Air Station[2]	SM1974G118(06)	Aquia	0.710	1.070
Patuxent Naval Air Station[3]	SM2001G012(02)	Upper Patapsco	0.120	0.170
St. Mary's College	SM1969GOOI	Aquia	0.130	0.220
Charlotte Hall VA Home	SM1981G018	Aquia	0.070	0.100
Mt. Pleasant Water Co.	SM1972G004	Aquia	0.015	0.022
Cook's Trailer Court (Garrett TP)	SM19690003	Piney Point	0.0065	0.0108
Christmas Tree Farm TP				
Langley TP				
Lexington Mobile Home Co.	SM19660003	Piney Point	0.018	0.025

XXX= Per MOE WMA Comment 7124/17

MARYLAND DEPARTMENT OF PLANNING

Larry Hogan, Governor
Boyd Rutherford, Lt. Governor

Robert S. McCord, Secretary

November 16, 2018

Janice Outen
Water Quality Infrastructure Program
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, MD 21230

Re: St. Mary's County Water and Sewer Plan 2017 Update

Dear Ms. Outen:

The Maryland Department of Planning (Planning) has reviewed the St. Mary's County Comprehensive Water and Sewer Plan (CWSP) 2017 Update pursuant to our mandate to advise the Maryland Department of the Environment on local comprehensive plan consistency and other appropriate matters as required by Environment Article Section 9-507 (b)(2). Planning previously reviewed the draft Water and Sewer Plan 2017 Update and submitted a letter to Maryland Department of the Environment on July 19, 2018. Planning's review of the adopted amendments and comments are not substantively different from those previously submitted.

Update Summary

The Commissioners of St. Mary's County held a public hearing on these amendments on September 18, 2018, and approved them on October 2, 2018.

The resolution amends the CWSP by updating the following:

1. Incorporated the FY2018-2023 Capital Improvement Budget (CIB) into Tables 3-4 and 4-5 of the CWSP.
2. Table 3-2 Inventory of Existing Community Water System Appropriations is updated.
3. Text in Chapter 3 is revised to address arsenic in drinking water.

Consistency with the Comprehensive Plan

These amendments are consistent with the County's Comprehensive Plan. The amendments to incorporate the latest CIB are consistent because they support the comprehensive plan's policy to "provide phased distribution system matched to growth in the County" (p. 7-15). The other amendments are updates to provide accurate information regarding the county's water systems and the required regulatory approach for addressing arsenic in drinking water.

Priority Funding Area Review

Pursuant to State Finance and Procurement Article 5-7B-02, local jurisdictions are eligible to receive State financial assistance under certain programs if the project is located in a Priority Funding Area (PFA).

If you have questions or concerns regarding these comments, please call Karen Mierow at 410.767.3837, or Daniel Rosen at 410.767.4577.

Sincerely,

Charles W. Boyd, AICP
Director, Planning Coordination

Cc: Tony Redman, DNR
Dwight Dotterer, MDA
Jason Dubow, MDP
Sylvia Mosser, MDP
Karen Mierow, MDP
Joseph Griffiths, MDP
Daniel Rosen, MDP

LIBER 0026 FOLIO 332

Requested by: Department of Land Use & Growth Management

Resolution No. 2018 - 29

Subject: Land Use – To Adopt Amendments to the St. Mary's County Comprehensive Water and Sewerage Plan

RESOLUTION

TO ADOPT AMENDMENTS TO THE ST. MARY'S COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN 2017 UPDATE

WHEREAS, pursuant to §9-503 of the *Environment Article* of the *Annotated Code of Maryland,* the Commissioners of St. Mary's County (hereinafter the "Commissioners") are required to review the St. Mary's County Comprehensive Water and Sewerage Plan (hereinafter the "Plan") at least once every three (3) years and to submit to the Maryland Department of the Environment any proposed amendment to the Plan; and

WHEREAS, pursuant to §9-506 of said *Environment Article*, the St. Mary's County Planning Commission conducted a public hearing on July 9, 2018 to consider the following amendments to the Plan:

(1) "Table 3-4: St. Mary's County Metropolitan Commission Capital Improvement Budget FY18-23 (Water)" as shown in Attachment 1 hereto shall be substituted for "Table 3-4: St. Mary's County Metropolitan Commission Capital Improvement Budget FY17-22 (Water)" on page 3-24.

(2) "Table 4-5: St. Mary's County Metropolitan Commission Capital Improvement Budget FY18-23 (Sewer)" as shown in Attachment 2 hereto shall be substituted for "Table 4-5 St. Mary's County Metropolitan Commission Capital Improvements Budget FY17-22 (Sewer)" on page 4-23.

(3) "Table 3-2 Inventory of Existing Community (Water) System Appropriations" as shown in Attachment 3 hereto shall be substituted for "Table 3-2 Inventory of Existing Community (Water) System Appropriations" on pages 3-21 to 3-22; and

WHEREAS, the Planning Commission recommended that the proposed amendments be adopted; and

WHEREAS, in accordance with §9-503(d)(2) of the *Environment Article* of the *Annotated Code of Maryland*, a notice of a public hearing was advertised on August 24, 2018 and August 31, 2018, in *The Enterprise*, a newspaper of general circulation in St. Mary's County, and a public hearing was held on September 18, 2018, to receive public comment and consider adoption of the amendments of the Plan; and

WHEREAS, the Commissioners of St. Mary's County, Maryland, find that it is in the best interest of the health, safety, and welfare of the citizens of St. Mary's County to adopt the amendments of the Plan.

NOW, THEREFORE, BE IT RESOLVED, by the Commissioners of St. Mary's County, that:

SECTION I. The St. Mary's County Comprehensive Water and Sewerage Plan is amended as follows:

(1) "Table 3-4: St. Mary's County Metropolitan Commission Capital Improvement Budget FY18-23 (Water)" as shown in Attachment 1 hereto shall be substituted for "Table 3-4: St. Mary's County Metropolitan Commission Capital Improvement Budget FY17-22 (Water)" on page 3-24.

Requested by: **Department of Land Use & Growth Management**

Resolution No. 2018 - 29

Subject: **Land Use – To Adopt Amendments to the St. Mary's County Comprehensive Water and Sewerage Plan**

(2) "Table 4-5: St. Mary's County Metropolitan Commission Capital Improvement Budget FY18-23 (Sewer)" as shown in Attachment 2 hereto shall be substituted for "Table 4-5 St. Mary's County Metropolitan Commission Capital Improvements Budget FY17-22 (Sewer)" on page 4-23.

(3) "Table 3-2 Inventory of Existing Community (Water) System Appropriations" as shown in Attachment 3 hereto shall be substituted for "Table 3-2 Inventory of Existing Community (Water) System Appropriations" on pages 3-21 to 3-22.

(4) "Proposed Arsenic Text Amendment" as shown in Attachment 4 hereto shall be added as Subsection 3.3.1 on page 3-5.

SECTION II. The amendments to the St. Mary's County Comprehensive Water and Sewerage Plan adopted herein shall be submitted to the Maryland Department of the Environment.

SECTION III. The amendments to the St. Mary's County Comprehensive Water and Sewerage Plan adopted herein shall be effective on the date of approval of the amendments by the Maryland Department of the Environment.

Those voting Aye: 5

Those voting Nay: 0

Those Abstaining: 0

Date of Adoption: 10-2-18

Effective Date: 10-16-18

ATTEST:

Rebecca B. Bridgett
County Administrator

APPROVED AS TO FORM
AND LEGAL SUFFICIENCY:

David A. Weiskopf
County Attorney

COMMISSIONERS OF ST. MARY'S COUNTY

James R. Guy, Commissioner President

Michael L. Hewitt, Commissioner

Tom Jarboe, Commissioner

Todd B. Morgan, Commissioner

John E. O'Connor, Commissioner

LIBER0026 FOLIO334

DOCUMENT VALIDATION

LR - Government Instrument 0.00
Agency Name: SM County Commissioner
Instrument List: Other
Describe Other:
Resolution 29
Ref: MM/Co Commissioner
==========
Total: 0.00
10/10/2018 04:13 CC18-MS
#11111615 CC0704 - St Mary's County/CC07.04.03 - Register 03

Circuit Court for St. Mary's County
PO Box 676
41605 Courthouse Drive
Leonardtown, MD 20650
(301) 475-7844

Contents

4. SEWERAGE

Chapter 1: Goals, Policies and Related Plans
Table of Contents

[This page blank]

1. GOALS, POLICIES AND RELATED PLANS

1.1 Goals and Policies of the Comprehensive Water and Sewerage Plan

The Comprehensive Water and Sewerage Plan is a growth-management tool of the land planning process, and is incorporated by reference into the County's Comprehensive Land Use Plan ("Quality of Life in St. Mary's County – a Strategy for the 21st Century"). State planning legislation has identified various visions for future growth, and charged local governments with the responsibility for managing growth and ensuring that infrastructure will support its anticipated development. Accordingly, the Comprehensive Land Use Plan has been adopted to preserve and enhance the quality of life by recognizing and protecting the unique character of St. Mary's County as a rural Chesapeake Bay peninsula, to foster economic growth and to create an atmosphere of excellence by focusing and managing growth to create vibrant, attractive communities, by protecting the rural character and economy of the countryside, by nurturing the shoreline and adjacent waters and by preserving and capitalizing on the other natural resources and historical quality of the County.

Because the nature of this Water and Sewerage Plan is a continuing planning process, it has been and will continue to be changed, modified, and revised to meet the evolving needs of St. Mary's County. In this regard, the policies that are presented in this plan reflect current realities and anticipations, but, in terms of the County's responsibility in land use planning, the scope of the water and sewerage plan looks beyond the minimum ten year horizon stipulated in the laws which mandate such planning.

Although St. Mary's County remains on the fringe of the Washington and Baltimore metropolitan corridor, it has long been affected by the rapid growth within that corridor. This Comprehensive Water and Sewerage Plan represents an important component of the County's strategy and coordination of efforts of the Board of County Commissioners, the Leonardtown Commissioners, the Planning Commission, the Metropolitan Commission, and the Health Department to meet the needs of an ever growing population.

It is critically important to St. Mary's County to plan for its future water supply in secure, permanent, and protected sources in areas available to serve anticipated long-range growth. The County must continue 1) identifying strategic resources of water supply, 2) implementing strategies to protect the water supply, and 3) monitoring the geological picture of the water supply. Options to consider include monitoring wells, desalinization, the establishment and preservation of impoundment areas and clustering of development.

The goals on which this plan is based are summarized as follows:

1.1.1 Protection of the health, safety, and welfare of the people of St. Mary's County and its neighbors through improving sanitary conditions in every way possible.

1.1.2 Protection and enhancement of environmental qualities, recognizing nature as a primary component of physical and social design.

1.1.3 Protection of areas of significant natural beauty and resources.

1.1.4 Protection of ground water resources and the establishment and preservation of surface water resources.

1.1.5 Adequate implementation of this Comprehensive Water and Sewerage Plan through preparation and adoption of such ordinances, rules and regulations as may be necessary.

1.1.6 Development guided to areas where water and sewerage systems exist or may be installed both economically and in conformance with the Land Use Plan (because both the St. Mary's County Comprehensive Plan and this St. Mary's County Comprehensive Water and Sewerage Plan include the term "comprehensive" in their respective titles, the former is cited herein as the "County Land Use Plan").

1.1.7 Public ownership of all community water and sewerage systems.

1.1.8 Reduction of existing and potential pollution, and achievement of state water quality standards.

1.1.9 A citizenry informed as to pollution problems and solicited for its advice and cooperation.

1.1.10 Careful management of water resources by all cognizant agencies.

1.1.11 Conformance of all County government programs with the goals set forth in this plan.

In order to meet these goals and policies, the County has prepared and adopted a Comprehensive Land Use Plan, a Comprehensive Zoning Ordinance, a Sewer Use Ordinance, and standard specifications for water and sewerage construction in addition to this Comprehensive Water and Sewerage Plan.

1.2 Related Plans, Policies and Ordinances

1.2.1 Comprehensive Land Use Plan:

The Board of County Commissioners has adopted a plan for locating land use (types, amounts, and relationships), community facilities (parks, libraries, schools, fire stations, health and emergency medical services), roads and utilities over a twenty to thirty year period. The plan also addresses the protection of wildlife and natural resources, particularly the Chesapeake Bay and its tributaries. The plan's fundamental concept is focusing development and the expenditure of public dollars on community facilities and transportation in areas where these things already exist or can be economically provided, and preserving the rural character of the remainder of the County. Identified as development districts or primary growth areas are Lexington Park and Leonardtown. Identified as Town Centers or secondary growth areas are Charlotte Hall, New Market, Mechanicsville, Hollywood and Piney Point. The Village Centers within the County are Callaway, Chaptico, Clements, Loveville, Valley Lee, St. Inigoes and Ridge. The remainder of the County is identified as a rural preservation area where development densities are to be kept lower than in the growth areas, and the expenditure of public dollars for water and sewerage is to be devoted to maintenance of existing facilities and not new facilities, unless justified by health issues.

The Land Use Plan provides specific policies for water supply and sewerage facilities, which are reflected below. In addition to the zoning ordinance, this water and sewerage plan is an important means of implementing the Land Use Plan.

The St. Mary’s County Comprehensive Plan, entitled “Quality of Life in St. Mary’s County – A Strategy for the 21st Century”, provides the following goals, policies and guidelines governing the provision water and sewerage facilities:

3.1.2.A.i Provide planned SEWERAGE SERVICE

a. Extend new sewerage service only to planned growth areas.

b. Direct sewerage service to village centers and neighborhood conservation districts as needed to remedy the failure of existing septic systems or to serve expanding populations. Small local land treatment systems are the preferred means of providing sewerage service to such areas. Avoid discharge of treated wastewater into local waters.

c. Require all sewage collection systems to be designed and constructed to St. Mary's County Standard Specification for Water and Sewerage Construction.

d. Ensure that all interceptors are sized to meet the needs of the planned growth of the drainage area or sanitary district in which the projects are located.

e. Discharge treated effluent only through outfalls in the Chesapeake Bay or Potomac River or disposed on land. Long-term discharges into other water bodies are prohibited.

f. Do not extend new sewerage service to rural areas unless it corrects an existing health hazard or environmental threat.

g. Provide central sewage collection systems in the development districts. As collection systems are extended into service areas, require connection of all structures with plumbing on property within the service area, which are located 200 feet or less from any collection line.

3.1.2.A.ii Limit impacts of SEPTIC SYSTEMS.

a. Encourage regular maintenance, including pump out, of septic systems.

b. Promote use of approved alternative septic system technologies to:

i) Retrofit existing systems to reduce risk of failure;

ii) Correct system failures where connection to central collection systems is not feasible;

iii) Allow expansion of existing structures where use of a conventional septic system is not feasible; and

iv) Minimize environmental impacts wherever conventional systems are currently feasible.

c. Developments in minor subdivisions in the rural preservation district (RPD) where shared septic easement use is proposed, require clustering when such clustering may improve system performance, reduce impacts from clearing and land disturbing activities and allow more efficient use of the land.

3.1.2.A.iii Provide planned WATER SERVICE

a. Protect and manage groundwater resources to maintain a safe and adequate water supply

i) Monitor groundwater withdrawal rates and aquifer depth to assure adequate levels of service for both public and private systems and wells.

ii) Support statewide policies which protect groundwater recharge areas from contamination and from increases in imperviousness that might limit replenishment of the supply.

iii) Establish thresholds of development warranting community water systems to avoid negative

impacts of concentrating individual wells in rural areas, expressed as number of dwelling units or businesses located within a certain distance of each other.

iv) Encourage and promote educating the public on water conservation.

b. Protect surface water supply areas.

i) Establish and enforce land use policies to protect these areas from adverse impacts of development on water quality and on the ability to construct the impoundment area.

ii) Protect existing surface waters from, and support cleanup of, contamination by toxic chemicals, heavy metals, pesticides, and from human and animal waste.

c. Provide phased distribution systems matched to growth in the County.

i) Provide central water supply systems in the Development Districts and Town Centers. As supply systems are extended in these growth areas, require connection of all structures with plumbing on property within the service area, which are located 200 feet or less from any distribution line.

ii) Upgrade community water systems as needed to meet appropriate standards (including fire protection) and to keep pace with increasing capacity needs.

iii) Provide central water systems to serve expanding populations in existing Village Centers, Neighborhood Conservation Districts, and areas meeting development thresholds.

iv) Provide central water systems to supply areas with failing wells in Village Centers, Neighborhood Conservation Districts, and areas meeting development thresholds.

v) Require shared wells as defined in the Comprehensive Water and Sewerage Plan (CWSP) to be supervised or operated by the St. Mary's County Metropolitan Commission (MetCom). Require dedication of all new central water systems to the MetCom for ownership, operation, and maintenance in accordance with MetCom standards and specifications.

1.2.2 Comprehensive Zoning Ordinance

The purpose of a zoning ordinance is to promote the health, safety, order, convenience, and general welfare of the citizens of the County. The ordinance divides the County's territory into residential, commercial, marine, industrial, and rural preservation planning districts. It also includes requirements for the provision of facilities that are adequate to the sewerage, fire protection and water supply needs of new development.

The intent of the adequate facilities requirements of the ordinance is to control phasing and timing of development approval by conditioning such approval upon a finding that sufficient infrastructure and public facilities are present or will be provided to serve proposed development. Provision of adequate facilities is a joint responsibility of County government and the developer. As such, it is accomplished only in conjunction with additional planning tools including the Land Use Plan and the Capital Improvements Program (CIP).

Benefits to the County and developers which accrue from these provisions include 1) a mechanism for coordinating the timing and location of development; 2) a mechanism for the orderly expansion of public capital facilities; 3) consistency among new development, capital

improvements, and the Land Use Plan; 4) a reduced likelihood of environmental damage from overburdened facilities; and 5) a mechanism for stabilizing necessary capital expenditures and associated financing mechanisms. Adequate facilities are required to maintain and improve the quality of life within the County.

1.2.3 St. Mary's County Standard Specifications for Water and Sewerage Construction:

This ordinance was adopted in accordance with Chapter 113 of the Public Laws of St. Mary's County for the purpose of ensuring quality control. All public and private community water and sewerage systems must comply with these specifications. They are available for purchase from the St. Mary's County Metropolitan Commission.

1.2.4 Private Water and Sewerage Systems:

A. Water: A private individual water system or well means a source of water that serves no more than one user. A ground water appropriation permit must be obtained from the Maryland Department of the Environment prior to well construction. Individual water supply systems are regulated by the Health Department under COMAR 26.04.02 through .04. These systems are permitted in NPS (no planned service) or W-6/S-6 areas, or they may be used elsewhere as interim systems.

B. Sewer: A private individual sewerage disposal system means an on-site system that serves no more than one (1) dwelling unit of equivalent dwelling units (EDU). Individual sewerage systems are regulated by the Health Department under COMAR 26.04.02 through .04. A percolation test must be performed on the subject property prior to the issuance of a permit to construct an on-site septic system. An application must be submitted to the Saint Mary's County Department of Environmental Health. A sanitarian will schedule a percolation test based on whether the system will require a "wet" or "dry" test. "Wet" tests are done in the wet-season as determined by the state. The wet season is usually between the months of January and April when significant rainfalls occur and water consumption by plants is at a minimum. However the wet season is subject to change. The on-site sewerage systems must be located within the Health Department's specifications in order to minimize the potential negative effects to ground water supplies and the natural environment.

1.2.5 Shared Facilities:

Maryland Department of the Environment regulations governing shared facilities (COMAR 26.04.05) define a "shared facility" as a water or sewerage system which serves more than one lot of land or more than one user on a single lot of land with water or sewerage systems located on the individual lots or on parcels owned in common by the users or the controlling authority. The controlling authority for shared facilities in St. Mary's County is the St. Mary's County Metropolitan Commission. The approving authority for shared facilities in St. Mary's County is the St. Mary's County Health Department, with the concurrence of the Maryland Department of the Environment. The Metropolitan Commission may purchase, hold, lease, build, construct, own, operate, repair, maintain and improve a shared facility or enter into contractual agreements with the federal government, the State, a municipality, person or individual to provide such services. All shared facilities should be designed, constructed and operated in accordance with

COMAR 26.04.05 and should comply with all other applicable State and local laws and regulations. Shared wastewater treatment facilities include Forrest Farms and Airedele Road.

Shared facilities may be amended into this Comprehensive Water and Sewerage Plan pursuant to section 1.5. The following standards apply to shared systems:

A. Only subsurface sewage disposal systems (including septic system drain fields, mound systems, or infiltration systems) may be used to provide treatment as shared facilities.

B. Shared sewage treatment and disposal facilities may be utilized in Rural Preservation Districts only for

   (1) On-site (i.e., served dwelling units and the facility must be located within the same parent parcel or a contiguous parcel), clustered new development as defined by the St. Mary's County zoning ordinance; or
   (2) Off-site correction of failed septic systems.

C. Each dwelling unit served by a shared facility shall be served by its own sewer service line installed in accordance with the St. Mary's County Standard Specifications for Water and Sewerage Construction.

D. Plans and specifications for these shared facilities shall be submitted to the MDE and the Metropolitan Commission for approval and shall be constructed in conformance with the St. Mary's County or the St. Mary's County Standard Specifications for Water and Sewerage Construction.

E. A public works agreement shall be entered into and recorded to run with and bind upon the land served by the shared facility. This agreement between the Metropolitan Commission and the landowner(s) shall define the respective role and responsibilities of the successors and assigns in title to the property in the administration of these shared systems.

1.2.6 Community Systems:

A. Water: A community water system means a source of water and a distribution system, including treatment and storage facilities, whether publicly or privately owned, serving two (2) or more EDUs. Per the St. Mary's County Comprehensive Zoning Ordinance, Chapter 70, section 9, amended July, 26, 2005, all residential subdivisions of 25 lots or more in any zoning district must connect to a public water system. All development in Development Districts, Town Centers and Village Centers, that is designated for service under this Comprehensive Water and Sewerage Plan (i.e., within a W-1, W-3D or W-6D service area) must be served by a public water system of sufficient capacity. Also under Chapter 70, the Director may waive or defer this requirement with concurrence from the Metropolitan Commission and from the Office of Environmental Health if the applicant demonstrates that connecting to or constructing a new water system would not be feasible in consideration of the property's linear distance from existing facilities, topography, environmental constraints, hydraulics, or denied off-site easements. The applicant has the burden of proving that the waiver or deferral is justified based on the facts. A denial of a waiver by the Director may be appealed to the Board of Appeals.

B. Sewerage: A community sewerage system means any system, whether publicly or privately owned, established for the collection, transportation, and disposal of sewage or industrial wastes of a liquid nature, including various devices for the treatment of such sewage and industrial wastes serving two or more EDUs within an appropriate area designated by the Land Use Plan. Public community sewerage systems include the wastewater treatment plants at Lexington Park (the Marlay-Taylor Water Reclamation Facility on Pine Hill Run), Leonardtown, St. Clements Shores and Wicomico Shores. Community sewerage systems may not serve the rural preservation district except to alleviate health hazards. All new development requiring subdivision or site plan approval within the Lexington Park Development District shall be required to connect to the public community sewerage system unless placed within a "no planned service (NPS) category through this Comprehensive Water and Sewerage Plan. Per the St. Mary's County Comprehensive Zoning Ordinance, Chapter 70, amended July, 26, 2005, the Director may waive or defer this requirement with concurrence from the Metropolitan Commission and from the Office of Environmental Health upon demonstration by the applicant that a connection would not be feasible considering the property's linear distance from existing facilities, topography, environmental constraints, hydraulics, or denied off-site easements. The applicant has the burden of proving that the waiver or deferral is justified based on the facts. A denial of a waiver by the Director may be appealed to the Board of Appeals.

1.3 Water and Sewerage Service Areas:

To implement the County and Town Land Use Plans, this Water and Sewerage Plan provides the service priorities listed below. The numeral in the service classification does not guarantee the timeframe for which service may be realized. For example an S-6 or W-6 category does not guarantee that service will be available on site within 6-10 years.

The Land Use Plan allows community sewerage systems outside of Development Districts, Town Centers or Village Centers to alleviate health hazards or to serve neighborhood conservation districts. Community sewerage systems, including wastewater treatment plants, may not be considered as shared systems. Specifically, wastewater treatment plants at Marlay-Taylor, Leonardtown, St. Clements Shores and Wicomico Shores are not shared systems per this definition. Areas outside of designated districts and centers that are served by these wastewater treatment plants are categorized RS-E (rural service – environmental hazard). Properties within NPS areas or within such RS-E service areas which are not certified by the health department as experiencing septic system failure shall be denied access to the sewerage facilities passing through such RS-E or NPS categorized areas.

1.3.1 Service within Growth Areas

A. W-1, S-1 - Existing and Under Construction Service Area: A water or sewer line is assumed to be existing if it is in operation or under construction (notice to proceed and a contract has been let) and will be placed in operation immediately after construction is completed. Parcels or lots assigned this service area must be in a Development District, a Town Center, a Village Center or a Neighborhood Conservation District as defined by the Land Use Plan and must abut a road, easement, right of way, or alley in which an existing water main or sewer is located. W-1 and S-1 indicate that service is available to structures located on the property or

means that undeveloped property is entitled to a maximum of one EDU, unless additional EDUs are duly allocated.

B. W-3 D, S-3 D: Areas to be Served Within Three to Five Years: A parcel assigned to this service area must be located in a Development District, a Town Center, a Village Center or a Neighborhood Conservation District as defined by the Land Use Plan, and the proposed development thereof must in all other respects comply with that plan. Properties located within this category are expected to be served within five years. An initial submission of a plan of subdivision or a site development plan must have been reviewed and approved by the Planning Commission for a property to be eligible for inclusion in this category. A final record plat may not be approved unless the subdivision or site development has been appropriately amended into this water and sewerage plan if required. The suffix "D" may be used in conjunction with this category to indicate that the proposed construction of the developer's share of new facilities is to be financed by the developer of the property. Amending a development project into a W-3D or S-3D service area does not ensure allocation of capacity from its affected community water or sewerage system.

C. W-6 D, S-6 D - Potential Area for Future Service: A parcel assigned to this service area must be located in a Development District, a Town Center, a Village Center or a Neighborhood Conservation District as defined by the Land Use Plan, and the proposed development thereof must in all other respects comply with that plan. These are areas where there is a potential for future service. Classification in this area represents anticipated development and does not indicate concept approval for the development of specific properties.

Areas shown as W-6 D or S-6 D will not necessarily be entirely developed because of the resource protection requirements of the Land Use Plan (i.e., restrictions exist on open space and resource protection). Nor will all properties shown as W-6 D or S-6 D necessarily be provided with public water or sewerage service within the next 10 years, but rather this service area category is provided to facilitate the planning and staging of capital improvements to meet the needs of projected population increases.

1.3.2 Rural Service Areas

A. RW-1, RS-1 (existing service), RW-D, RS-D (approved for service, developer financed); RS-E (rural sanitary service – environmental hazard): Properties within Rural Preservation Districts as designated in the Land Use Plan may be assigned these service categories. The associated population densities and land uses in a rural area are typically accommodated by private individual systems, but the RPD zoning district does allow for clustered low density residential development. Rural water systems may be comprised of shared wells. A community water system is necessary to supplement fire prevention and preventing possible ground water contamination by limiting the number of penetrations into the aquifer's confining beds. Shared septic systems help facilitate clustering and preservation of open space. Per direction by the Maryland Department of Environment, the designation of rural shared septic service also applies to onsite septic systems that treat more than 5,000 gallons per day (GPD). To implement the Comprehensive Plan (see section IV.3.1.2.A.i.f) new sewerage service shall not be extended to rural areas unless it corrects an existing health

hazard or environmental threat. This applies to service originating in a growth area and being extended to a rural area. To accommodate clustered low density residential development in rural areas, shared systems may be designed and installed exclusively for that development. The creation of such a system requires an amendment to the Comprehensive Water and Sewerage Plan.

Shared water systems for six or less EDUs may locate within a public water service area or in an RW category if it is determined by the County that connection to a public water system is not feasible at the present time. If a proposed development project includes a shared water system, it may be located in an RPD zoning district. All new residential subdivisions of twenty-five (25) lots or more shall connect to, or construct, a public water system.

1.3.3 No Planned Service (NPS): These are all other areas of the County for which no community water or sewerage service is planned within ten years.

1.4 Organization of Agencies and Commissions

1.4.1 St. Mary's County

A. The St. Mary's County Board of County Commissioners acts as the local approving authority for the Comprehensive Water and Sewerage Plan. The Board of County Commissioners enacts and amends resolutions that direct water and sewerage policies within the County and approve amendments to the CWSP which involve the expansion of public water and sewerage systems into the RPD zoning district. The Maryland Department of the Environment has final approval authority.

B. The St. Mary's County Planning Commission prepares and recommends land use policies and controls, reviews development plans and makes recommendations on amendments to this water and sewerage plan to the Board of County Commissioners, reviews capital improvement programs (including those of the Metropolitan Commission), approves subdivisions, site plans, and procedural processes. The Planning Commission is also responsible under Title 9, Subtitle 5, Section 506, Paragraph (a)(3) of the Annotated Code of Maryland to hold hearings, make certain findings, and completely review this Comprehensive Water and Sewerage Plan for proposed new water or sewerage systems or expansions of existing systems. See section 1.5.2 A regarding definition of "expansion."

C. The Board of Appeals is the conditional use approving authority for public utilities and public service uses and structures. Permits issued may vary in requirements so as to protect surrounding properties or the health, safety, and welfare of the residents in the County.

D. The Metropolitan Commission designs, constructs and operates public water and sewerage systems, reviews plans for community water and sewerage systems, and advises regarding proposed amendments to this Comprehensive Water and Sewerage Plan.

E. The St. Mary's County Health Department, Office of Environmental Health enforces health standards, issues permits for on-site septic systems and individual wells, recommends areas for water supply and sewerage systems and advises regarding proposed amendments to this Comprehensive Water and Sewerage Plan.

F. The Department of Land Use and Growth Management coordinates the process of amending this Comprehensive Water and Sewerage Plan at the local level and monitors state agency review of locally approved reviews and amendments, approves subdivision plats, and proposes and implements development policies of the Land Use Plan. The Planning Commission allocates capacity of all wastewater facilities operated by the Metropolitan Commission. This responsibility may be delegated to Planning Department staff.

1.4.2 Town of Leonardtown:

The Commissioners of Leonardtown, the only incorporated municipality in St. Mary's County, operates its own water and sewerage facilities. Water service is allocated pursuant to current Town policies which prohibit extension of water service outside of Town limits. Sewer service is allocated from the Leonardtown treatment plant in accordance with an inter-jurisdictional agreement executed in 1980. The Town submits amendments to this Comprehensive Water and Sewerage Plan to the St. Mary's County Board of County Commissioners.

1.4.3 State of Maryland

A. The Maryland Department of the Environment (MDE), Water Management Administration regulates the construction of water and sewerage facilities. A person may not install, materially alter or materially extend a water supply system or a sewerage system within the State of Maryland except in accordance with a water and sewerage construction permit issued by MDE.

B. The Maryland Department of Planning (MDP), reviews the proposed amendments to determine congruity with the County's Comprehensive Plan and the State of Maryland's growth policies.

C. The Maryland Department of Agriculture (MDA), reviews the proposed amendments for impacts on natural resources and agricultural lands.

1.5 **Plan** Amendments

Comprehensive Water and Sewerage Plan Triennial Review and Report Title 9, Subtitle 5, Section 503 of the Environment Article of the Annotated Code of Maryland requires St. Mary's County to review the Comprehensive Water and Sewerage Plan at least every three years. Responsibility for implementation of Title 9 has been assigned to the State of Maryland's Department of the Environment which has adopted Regulation Number 26.03.01 - Regulations for Planning Water Supply and Sewerage Systems. Pursuant thereto, this plan should be reviewed at least every three years, and a report of the review should be duly prepared and adopted.

A review and report may be initiated as needed to facilitate amendments to the plan for expansions of existing systems or for new systems as defined in the previous section. A full amendment process involving both the Planning Commission and the Board of County Commissioners is required for new wastewater treatment plants or for extending the service area of an existing wastewater treatment plant beyond the limits of a Development District, Town Center or Village Center to accommodate the correction of a certified health hazard. Such full process is necessary to ensure that access to the expanded facility will be denied to properties outside of designated growth areas for which a health

hazard has not been certified. An administrative amendment process is available for qualifying systems as described below.

1.5.1 Periodic Amendments:

Paragraph (a)(3) to Section 506 of Title 9 of the Environment Article of the Annotated Code of Maryland (amended per House Bill 394 of 2007), pertains specifically to St. Mary's County and reads as follows:

(a)(3)(I) This paragraph applies only in St. Mary's County

(II) A new public sewerage system or an expansion of an existing public sewerage system, or a new water supply system or an expansion of an existing water supply system, may not be allowed in St. Mary's County unless the adoption, revision, or amendment to the County plan containing the public sewerage system or water supply system:

Is reviewed by the St. Mary's County Planning Commission in conformity with the provisions of this paragraph; and

Is approved by the Board of County Commissioners, or subject to subparagraph (v) of this paragraph, the Commissioners' designee.

(III) The County Commissioners or the Commissioners' designee may not approve the adoption, revision, or amendment of the County plan that contains a new public sewerage system or an expansion of an existing public sewerage system or a new water supply system or an expansion of an existing water supply system, until the Planning Commission:

1. Conducts a complete review of the County plan; and

2. Holds or arranges to be held at least one public hearing on the County plan. The Planning Commission may delegate the responsibility of holding a public hearing under this subparagraph to county staff as directed by the County Commissioners.

(IV) In its review and recommendation to the County Commissioners or the Commissioners' designee, the St. Mary's County Planning Commission should consider and make specific findings of fact with respect to the following objectives and policies of the County plan that contains a new public sewerage system or an expansion of an existing public sewerage system, or a new water supply system or an expansion of an existing water supply system:

1. Compatibility with the Comprehensive Land Use Plan;

2. Planning and zoning issues;

3. Population estimates;

4. Engineering;

5. Economics;

6. State, regional, and municipal plans; and

7. Comments received from other agencies in the County.

(V) The County Commissioners may only appoint a designee under this subsection for purposes of considering amendments to the County Plan containing a public sewerage system or water supply system in growth areas shown on an adopted Comprehensive Land Use Plan.

A. The following definitions clarify the scope of Paragraph 9-506(a)(3):

(1) "New public sewerage system" means any such system:

a) that has not been incorporated into the Comprehensive Water and Sewerage Plan as of the date of its adoption, or

b) for which the amendment process has not begun by such date of adoption.

(2) "Expansion of an existing sewerage system" means initiating a CWSP amendment for:

a) increasing the service area of such a system or

b) increasing the capacity of such a system.

(3) "Expansion" does not mean connecting a dwelling unit or equivalent dwelling unit to such a system where the unit is located within a legal lot of record and does not require increasing the service area of such a system.

B. Amendments to this plan to accommodate new subdivisions, planned unit developments or nonresidential developments should be processed as follows.

1.5.2 Amendment Process

A. Preconditions: a control file must be created at the Department of Land Use and Growth Management if one does not already exist.

B. Application submission requirements (to be prepared by the applicant):

(1) Six (6) completed application forms
(2) Exhibits

a) Concept plan, and/or
b) Preliminary plan as submitted for approval or as approved by the Planning Commission, and/or
c) Preliminary construction drawings

(3) Narrative

a) Description of the property in question and of the dwelling units or equivalent dwelling units which require the amendment. Indicate growth area status.
b) Description of proposed water and sewerage facilities
c) Maximum dwelling units or equivalent dwelling units to be served
d) Projected initial, 5-year and 10-year water demand and/or wastewater flow
e) Facilities within the development to accommodate those projections
f) Facilities outside the development to accommodate those projections. I.e., discuss discharge points, connections to public water or sewerage systems, and the current and subsequent capacities of those systems.

(4) §9-506(a)(3) Analysis

a) Compatibility with the Comprehensive Land Use Plan
b) Planning and zoning issues
c) Population estimates (calculate EDUs required for the new population at build out)
d) Engineering
e) Economics
f) State, regional and municipal plans, and
g) Comments received from other agencies in the County

C. TEC Review (Coordinated by the Department of Land Use and Growth Management).

(1) Full submission package provided in timely fashion to all TEC participants by the Department of Land Use and Growth Management
(2) Principal comments from Environmental Health and the Metropolitan Commission; the comments will:

a) identify sources and capacities of affected water and sewerage facilities;
b) calculate the reduction in capacity from those facilities required for the proposed amendment;
c) briefly describe and certify the adequacy of the proposed new facilities; and

(3) Draft replacement service area maps prepared by the Department of Land Use and Growth Management

D. Planning Commission Review:

(1) Public hearing scheduled and advertised. Notice of public hearing shall conform to the requirements set forth by Section 21.3 in the St. Mary's County Comprehensive Zoning Ordinance.
(2) Pursuant to COMAR 26.03.01.02, the Department of Land Use and Growth Management, on behalf of the Planning Commission and the Board of County Commissioners, will:

a) Consult every official planning agency having any immediate jurisdiction in the County, including those with multi-county or regional jurisdiction, and
b) Provide to the Maryland Department of the Environment (MDE) a statement that the above agencies have been consulted.
c) Provide MDE with prior written notice of the hearing and a draft of the amendment prior to adoption.

(3) Staff report, including §9-506(a)(3) analysis, will be provided to the members of the Planning Commission.
(4) Recommendation for consideration by the Board of County Commissioners should be issued within 30 days of the public hearing. If the recommendation is for approval it shall include certification of compliance with the Comprehensive Plan that is in effect.

E. Board of County Commissioners Review:

(1) Planning Commission recommendation and findings of fact are transmitted to the Board of County Commissioners.
(2) Public hearing scheduled and advertised in accordance with Section 21.3 of the St. Mary's County Comprehensive Zoning Ordinance, Maryland Annotated Code Article 25 §3(r), COMAR 26.03.01.02.E and Maryland Annotated Code Environment Article §9-503(d).
(3) The Board of County Commissioners should approve or disapprove the proposed amendment within a reasonable period of time. Approval should be in the form of a resolution.

F. Follow up:

(1) Upon approval by the Board of County Commissioners, County staff shall submit the following to MDE:

a) Resolution of adoption amending the St. Mary's County Comprehensive Water and Sewerage Plan
b) Certification of compliance with the Land Use Plan signed by the Planning Commission
c) Replacement map for the amended St. Mary's County Comprehensive Water and Sewerage Plan
d) Detailed staff report, including §9-506(a)(3) analysis

(2) Maryland Department of Environment

a) Powers of the Maryland Department of Environment (MDE)—When a county governing body submits its proposed county plan or a proposed amendment of its county plan to MDE, MDE may:

i. Approve the proposal;
ii. Disapprove the proposal;
iii. If the part approved includes all of the required elements of a county plan, approve the proposal in part and disapprove it in part; or
iv. modify or take other appropriate action on the proposal

b) Required consultation by MDE - Before MDE approves or disapproves, in whole or in part, a proposed County plan or a proposed revision or amendment of a County plan, MDE shall submit the proposal:

i. To the Maryland Department of Natural Resources for advice on natural resource matters;
ii. To the Maryland Department of Planning for advice on consistency of the proposal with the local master plan and other appropriate matters; and
iii. To the Maryland Department of Agriculture for advice on the impact of water and sewerage service and solid waste facilities on productive or potentially productive agricultural land.

c) Review period.

i. Except as otherwise provided in this subsection, MDE shall approve or partially disapprove each proposed County plan or proposed revision or amendment to a County plan within 90 days after the proposal is submitted to the department.
ii. For good cause and after notice to the County involved, MDE may extend the 90-day review period of paragraph (i) of this subsection for an additional 90 days.

d) Failure of MDE to act within review period. If MDE does not disapprove, in whole or in part, a proposed County plan or proposed revision or amendment of a County plan within the review period provided in subsection (c) of this section, the proposal is approved.

(3) Planning Commission or designee may formally grant an allocation of capacity when a project requires service from facilities which are subject to allocation policies or consent agreements.

a) Applicant shall:

i. Enter into a public works agreement with the Metropolitan Commission
ii. Apply for an MDE construction permit
iii. Transfer ownership of newly constructed facilities to the Metropolitan Commission

1.5.3 Administrative Delegation: Pursuant to Section 9-506(a)(3) of the Environmental article, the Planning Commission may delegate the responsibility of holding a public hearing to County staff as directed by the County Commissioners.

1.5.4 Subdivision Plan Review Process and Site Plan Submission Standards: Plans for water and sewerage facilities must be included with submissions for subdivisions and final site plans per County subdivision and zoning ordinances.

1.6 Allocation of Sewer Capacity

Recorded tracts or parcels of land abutting a public sewer and upon which a benefit assessment charge is being levied may be entitled to one (1) sewer connection for each such tract or parcel as applied for, provided that all applicable regulations and requirements which are prerequisite for building permit issuance have been met. A list of such properties shall be maintained by the Department of Land Use and Growth Management (DLUGM). Subdivisions and developments which are located within the service area of a public sewerage facility as defined by the Comprehensive Water and Sewerage Plan may obtain sewerage capacity and building permits on a first come, first served basis pursuant to a realistic build-out schedule stipulated by the Planning Commission. The potential number of EDUs for a development shall be determined at the time of submission of an adequate public facilities report for major subdivisions and site plans as required by Chapter 70 (Adequate Public Facilities) of the Comprehensive Zoning Ordinance. For all other developments, potential EDU determination should be made at TEC. Allocation shall occur at the time of subdivision record plat or final site plan approval in conjunction with the determination of adequacy of public facilities described in Chapter 70 of the Comprehensive Zoning Ordinance. If there is no capacity available in a water or sewerage system or a component thereof, the

applicant requesting EDUs shall be placed on a waiting list maintained by the DLUGM. The applicant positioned at the top of the list may receive allocations as a result of relinquishment of EDUs from an existing account, or if additional capacity is generated through system design or recalculation of EDU values. Parcels with failing on-site sewerage disposal systems having been designated as a health hazard by the St. Mary's County Health Department shall be allocated sewer capacity ahead of new development.

1.6.1 In Growth Areas: (Development Districts, Town Centers, Village Centers and Neighborhood Conservation areas defined by the Comprehensive Land Use Plan)

Treatment capacity for wastewater treatment plants at Marlay-Taylor (serving the Lexington Park Development District, the Hollywood and Piney Point Town Centers, and the Valley Lee and Callaway Village Centers), and Leonardtown (serving the Leonardtown Development District beyond Town corporate limits) may be allocated as follows:

A. One EDU per zoning lot abutting public sewer.

B. Additional EDUs may be allocated where:

(1) Plant capacity is available (first come first served).
(2) A final subdivision plat or site plan has been approved.
(3) The service area category is S-1or S-3D.

1.6.2 Outside of Growth Areas: Treatment capacity for wastewater treatment plants at Marlay-Taylor Water Reclamation Facility (by way of the Bay Interceptor, Piney Pt. Pump-over or Holly Gaf (proposed), Airedele Road, Leonardtown (by way of Banneker or the Villages at Leonardtown) or St. Clements Shores (as serving properties outside of the RNC zone), may be allocated as follows:

A. Properties with certified septic system failure or other environmental hazard

(1) One EDU per dwelling for which the health department has certified septic system failure or ordered connection as a means of correcting such failure; or for which the septic system has been determined to contribute nitrogen and phosphorus contamination of the Chesapeake Bay.
(2) Such properties shall automatically constitute an RS-E service area without further amendment to this Comprehensive Water and Sewerage Plan.

B. Parcels adjacent to the Bay Interceptor:

The Bay Interceptor was designed to receive St. Mary's College sewage, to permit abandonment of a small sewage treatment plant at Evergreen Park, and to accommodate new development along the sewer's drainage area in accordance with the densities permitted by the Comprehensive Plan and Zoning Ordinance in effect in the 1970's. Pursuant to a December 28, 1977 agreement between the Metropolitan Commission and the State of Maryland, 0.3 mgd of effluent was to be conveyed from the college by way of the interceptor and treated at the Pine Hill Run (now Marlay Taylor) plant. The design capacity of the interceptor varies between St Mary's City and the point at which it connects with the water reclamation facility, but overall the average capacity is 2.4 mgd. The 1988 Comprehensive

Plan designated the interceptor's drainage area for rural preservation. The remaining interceptor capacity may be utilized by parcels of land that abut the interceptor as they were of record as of August 1, 1990 (i.e., no improvement of a lot or parcel subdivided or created after August 1, 1990 may be granted access to the interceptor).

C. Schools adjacent to or accessible through Development Districts per Board of County Commissioners Resolution W/S 05-83.

1.6.3 Within Leonardtown corporate limits

EDUs may be allocated where:

A. Plant capacity is available.

B. A final subdivision plat or site plan has been approved.

C. The service area category is S-1 or S-3D.

1.6.4 Leonardtown Interjurisdictional Agreement: In 1980 the Metropolitan Commission and the Town of Leonardtown entered into an agreement pertaining to the use of and the method of sharing the cost of 680,000 gallons per day wastewater treatment plant constructed within the Town of Leonardtown to meet the sewage disposal needs of Leonardtown Sanitary District No. 3, see section 4.5.3.

1.6.5 Airedele Road, Tall Timbers, St. George Island: By resolution W/S 92-01, dated March 10, 1992, the Board of County Commissioners 1) established the Airedele Road sewerage service area and set a limit of 75 EDUs to be served by the planned facility; 2) established the St. George's Island service area; and 3) established the Tall Timbers service area and set a limit of 162 EDUs to be served within that area (case no. 91-0121). An attachment to said resolution W/S 92-01 entitled "Service to St. George Island" stipulated a process by which the agreement could be modified to accommodate additional EDUs, and the resolution has been subsequently amended pursuant to such process.

1.6.6 Piney Point Pump-over Consent Agreement: This agreement between the Board of County Commissioners, the Metropolitan Commission and the Maryland Department of the Environment is dated November 19, 1986. It limits sewer service to the 20-year service area defined in figure 10 of the Piney Point Sanitary District Facility Plan dated August 1980, to the Piney Point Landings subdivision, and to properties outside the service area experiencing uncorrectable septic system failures.

1.6.7 Wicomico Shores – Reference County Commissioners Ordinance 88-35.

1.6.8 St. Clements Shores – By Resolution 84-22, dated August 14, 1984, the Board of County Commissioners established the St. Clements Shores wastewater treatment plant allocation policy, which limits allocations to its present capacity.

1.7 Allocation of Capacity for Water Service

A determination of adequacy for the affected community water system shall be made at the time of subdivision recorded plat or final site plan approval in accordance with Chapter 70 of the St. Mary's County Comprehensive Zoning Ordinance. For projects exempt from the adequate public facilities

ordinance, determination of adequacy will be made upon application.

1.8 General County-wide Policies

1.8.1 Sewer

A. The Metropolitan Commission shall own all wastewater treatment systems of fixed location outside of the corporate limits of Leonardtown.

B. The discharge of wastewater plant effluent shall be prohibited in potential water reservoir basins.

C. Discharge of effluent into County waters shall be prohibited unless discharge on the land is not technically or financially feasible.

D. State and Federal support should be sought to develop new technical and fiscal means to minimize pollution of County waters from sources such as failing septic systems, agriculture, and marine oriented wastes.

1.8.2 Marine and Waterfront Preservation: All marinas should be equipped with sewage collection systems for the servicing of pleasure craft as required by state law.

1.9 Recommendations of the Water Policy Task Force

In 2000 the Board of County Commissioners (BCC) appointed a task force, subordinate to the Commission on the Environment (COE), to investigate such problems as declining ground water levels, inadequate well construction, development of community water systems, surface water supplies, conservation, and the County's role in water supply resources planning and development. In the seven years of its operation the WPTF has 1) developed and obtained Board of County Commissioners support (January 2006) for a potential Countywide water policy that will manage potable water withdrawals from the aquifers that supply virtually all water consumed in the County; and 2) established a zoning requirement that all housing developments of 25 or more dwelling units be connected to a public water system operated by the Metropolitan Commission (MetCom) and draw from the Patapsco aquifer, the deepest of the three aquifers in use by the County. (This proposed policy: will reduce stress on both the Aquia and Piney Point/Nanjemoy aquifers that are used by individuals and smaller subdivisions; will enable sprinkler systems to be installed in these developments thus increasing fire safety; will reduce both the number of holes drilled into our aquifers and the possibility of contamination. Requests for waivers to this policy are permitted; however, unanimous approval from the Directors of the Health Department, MetCom and Land Use and Growth Management are required before this can occur.) The WPTF recommends the following:

(1) Have St. Mary's County, with MetCom's technical assistance, take an active role in the MDE permit process through routine coordination plus active participation in the well drilling permits approval process for large commercial/industrial potable water users. These large users would, unless engineering considerations dictate otherwise, be directed to use the Patapsco aquifer, but only after all other feasible alternative water sources were examined and found unacceptable from an engineering standpoint. If aquifer water had to be used, every attempt should be made to minimize withdrawals through recycling or reuse.

(2) Require MDE to specify exactly what happens when water levels in a particular aquifer approach

or reach the Management Level (defined as 80% of the distance from pre-pumping levels to the top of the aquifer in question). Also, require MDE to clarify the extent of the geographical area affected by such an event.

(3) Expand the well monitoring and water use metering programs, under MetCom, to provide continual data on ground water usage and condition. No hard data is available concerning water use from private wells throughout the County. These wells contribute from between 40-60 percent of all water used from our aquifers. Specifically and in conjunction with the Maryland Geological Survey (MGS), establish a system of metering private wells around the county to obtain valuable data concerning both water use and water levels.

(4) Develop a County water conservation program, to include education, water saving devices and practices and conservation rewards.

(5) Investigate the suitability and adequacy of the Patuxent Aquifer, the deepest in the County.

(6) Conduct an evaluation of surface water impoundment sites. These sites have been identified for over 20 years and never investigated. The Corps of Engineers is capable of such investigations. Matching monetary funding may be available for such an effort.

(7) Conduct an evaluation of potential substitutes for ground water such as rain water, gray water, desalinated water and, for certain purposes, sewage treatment plant effluent (recycled wastewater). Obtain necessary state and legislative changes needed to make gray water systems and recycled wastewater both legal and encouraged in Maryland.

(8) Consider restricting non-potable water users to unconfined aquifers or other non-potable sources. For large commercial/industrial potable water application permits, require in-depth study to insure that every feasible alternative is explored before potable water for non-potable usage is allowed.

[This page blank.]

Chapter 2: General Background Data
Table of Contents

Tables

Maps

[This page blank]

2. GENERAL BACKGROUND DATA

2.1 Purpose

The purpose of this chapter is to present the physical, social, economic, land use, and planning information relevant to water and sewerage planning. The planning of future basic services in St. Mary's County should be integrated with the concerns and issues that are apparent now and which are discernable in the foreseeable future.

2.2 General Information

St. Mary's County is 367 square miles in extent and the 16th largest county in Maryland. It is bounded by water on all sides except for the border with Charles County to the north. The present St. Mary's County was the location of initial European settlement in Maryland, and St. Mary's City was the first state capital during the sixty years preceding 1694. Leonardtown has been the county seat since 1710 and is the only incorporated town within the County. Settlement is centered at Lexington Park and the Patuxent River Naval Air Station and Leonardtown. St. Mary's County still maintains its essentially rural character despite the increasing growth of residential subdivisions and commercial, industrial, and institutional activities. Map 2-1 illustrates the land use areas within the County designated as Village Centers, Rural Service Centers, Town Centers, Leonardtown corporate limits, naval facilities, neighborhood conservation areas and Development Districts. Map 2-2 shows the relationship of election districts and sanitary districts.

In the early eighties the U.S. Environmental Protection Agency together with the states surrounding the Chesapeake Bay, determined that the health of the Chesapeake Bay was in jeopardy and that it was necessary to initiate a collaborative effort to restore this largest estuary of the country. It was further determined that while toxic pollutants were in fact causing detrimental impacts in certain localized areas of the Bay, the principal systemic problem facing the estuary was dangerously low dissolved oxygen due to nutrient over enrichment. An overabundance of nutrients, or nitrogen and phosphorus, can adversely impact underwater living resources by causing algae blooms which decrease light penetration, and upon their decomposition, consume ambient quantities of essential dissolved oxygen.

The 1983 Chesapeake Bay Agreement established a cooperative effort among Virginia, Maryland, Pennsylvania, the District of Columbia, the Chesapeake Bay Commission and the federal government to improve the condition of the Chesapeake Bay. In 1987, the agreement was expanded to include a goal of reducing the flow of nutrients into the Bay 40 percent. In 1992, the Bay Agreement was amended to include development of nutrient reduction strategies for each of the main rivers feeding the Chesapeake Bay. In June of 2000, a comprehensive assessment of the Bay's restoration needs culminated in a landmark multi-jurisdictional agreement which delineates new restoration commitments, and was entitled Chesapeake 2000, or generally referred to as "C2K".

The Bay Restoration Fund was signed into law on May 26, 2004. The Chesapeake Bay has experienced a decline in water quality due to over enrichment of nutrients (mainly phosphorus and nitrogen). Effluent from wastewater treatment plants is one of the top three major contributors of nutrients entering the Bay (urban and agricultural runoffs are the other two). The purpose of the bill is to create a dedicated fund, financed by wastewater treatment plant users, to upgrade Maryland's wastewater treatment plants with enhanced nutrient removal (ENR) technology so they are capable of achieving wastewater effluent quality of 3 mg/l total nitrogen and 0.3 mg/l total phosphorus. In addition, a similar fee paid by septic system users will be utilized to upgrade onsite systems and implement cover crops to reduce nitrogen loading to the Bay. The signing of this bill initiated Maryland's efforts to further reduce nitrogen and phosphorus loading in the Bay by over 7.5 million pounds of nitrogen per year and over 260 thousand pounds of phosphorus per year, which represent over one-third of Maryland's commitment under the Chesapeake Bay 2000 Agreement.

2.3 Growth Considerations

Planning water and sewerage facilities and improving present service systems are guided by the Land Use Plan. Present and future location of population and employment as identified by the Land Use Plan are important in the planning of water and sewerage systems. The location of people and jobs are major determinants of where water and sewerage facilities should be provided, and influence the priority for constructing facilities. St. Mary's County may expect a moderate but sustained growth rate in the next 20 years, and implications of this growth on water and sewerage are substantial.

2.4 Physical Features

A dominant characteristic of St. Mary's County is its abundance of natural resources and unique physical features. The purpose of this section is to analyze the physical features which affect development and the planning of water and sewerage facilities.

2.4.1 Topography and Slope

Lying within the Atlantic Coastal Plain, St. Mary's County is characterized by a low-lying series of terraces. Topographically, the County consists of the remnants of a once smooth plain, which, through erosion, has been dissected by a great number of small valleys. The modification of the plain through erosion increases as the boundaries of the County, Patuxent River and Chesapeake Bay and the Potomac River are approached.

Taken as a whole, the divide of the County is lowest in its southern portion between the Chesapeake Bay and the St. Mary's River, where it has an elevation of about 60 feet, and rises gradually until its greatest altitude is reached on the north side of Golden Beach Road east of Maryland Route 5 in the Charlotte Hall Town Center, where it has a height of about 187 feet. The area east of Route 235 is characterized by slopes in excess of 15% with, the more rugged portion occurring in the northern portion of the area.

The original smooth plain has been thoroughly dissected into belts of hills in the vicinity of the major bodies of water. The eastern and western border belts of the County are hilly, and the central belt is smooth to rolling. Many individual watersheds, therefore, result from the peninsular character of the County and the dissected topography. This is a major constraint for all water and sewerage planning.

Because the County is in an exposed location, the ASA Standard Building Code requires that minimum design loads in buildings and other structures should be designed for 30 x 1.5 = 45 pounds per square foot wind pressure, corresponding to a 123 mile per hour wind. Elevated tanks and standpipes should be designed for at least these loads, allowing for winds from any direction.

Natural Drainage Areas: Watersheds in Maryland are identified by hydrologic unit codes which identify drainage basins at various scales. There are seven 8-digit watersheds identified in the County. Sizes of the 8-digit watersheds vary in the County but have an average size of 45 square miles. The 8-digit watershed size is the scale at which a majority of state monitoring and reporting for water quality and biological integrity is conducted and the scale at which watershed plans, total maximum daily loads (TMDLs) and watershed restoration action strategies (WRAS) are developed.

The 8-digit watersheds are listed below.

1. Wicomico River
2. St. Clements Bay
3. Breton Bay

4. St. Mary's River

5. Lower Tidal Potomac (direct drainage)

6. Lower Patuxent (direct drainage)

7. Lower Western Shore Chesapeake Bay (direct drainage)

The first four watersheds are listed in order from north to south and drain to the southwest through streams and wetlands that feed into large tidal bays that feed into the tidal Potomac River. The fifth drains directly via many small streams and wetlands to the tidal Potomac River. The Lower Patuxent watershed drains directly via many small steep stream valleys that run eastward to the tidal Patuxent River. The Lower Western Shore Chesapeake Bay drains via small shallow stream systems and extensive smaller tidal creek and wetland systems eastward into the Chesapeake Bay. The many smaller stream and wetland systems are defined in fifty nine 12-digit subwatersheds with sizes ranging from 2 acres to 16 square miles. The County and local watershed groups typically work at the 12-digit scale to perform more intensive monitoring and develop detailed subwatershed plans for implementation in the County.

Normal precipitation is 44 inches (3.67 feet) per year. Approximate equivalents are shown below: Annual Precipitation			
	Cubic Feet	Gallons	Gallons Per Day
Per Acre (43,560 sq. ft.)	160,000	1,200,000	3,280
Per square mile (640)	102,000,000	765,000,000	2,100,00
St. Mary's County (367 sq. miles)	37,400,000,000	270,000,000,000	770,000,000

2.4.2 Soils and Drainage

The Soil Conservation Service publishes a study entitled "Natural Soil Groups of Maryland". This study analyzes the suitability of soils for certain land uses. The following pages describe each of the natural soil groups found in St. Mary's County and indicate their approximate location and analyze their suitability for urban uses. These interpretations are general and do not preclude the need for detailed soils analysis.

Soil Descriptions -

A. Coastal Beach Soils (Natural Soils Group A2)

(1) General Location - First Election District between Point Lookout and Point Lookout Creek on the Potomac River.

(2) Description - This group consists of land types that have very little if any true soil development. These are non-coherent, loose sands that have been worked and reworked by waves, tides, and wind and are still subject to such action. Excavations are especially hazardous, and likely to encounter the water table. There is a high potential for corrosion of uncoated steel and concrete, due to saline conditions and fluctuating water tables. Septic tank absorption fields function very well above the water table, but are likely to cause pollution of ground water or nearby open water, Deep "dry wells" are almost certain to encounter the water table.

B. Keyport Fine Sandy Loam and Keyport Silt (Natural Soils Group E2a)

(1) General Location - Generally located throughout the central part of the County within the boundaries formed by Routes 235, 234, 5, Ridge, and the Charles County line.

(2) Description - Moderately well drained, but high susceptibility to erosion on slopes. The perched water table and dense subsoils severely limit these soils for septic tank absorption fields. The subsoils are too dense to absorb the effluent and if the tile field is placed above the dense layers, the effluent builds up and seeps to the surface, either over the tile field or down the slope. Percolation tests are to be conducted during the period February 1 to April 30 to more accurately evaluate the soils for use of septic tanks. These areas have potential for deep "dry wells" if there is no apparent hazard of contaminating underground water. Geological maps should be consulted for feasibility determinations.

C. Elkton Loam and Elkton Silt Loam Soils (Natural Soils Group - F3)

(1) General Location - Located adjacent to the major bodies of water throughout the County.

(2) Description - This group consists of poorly, somewhat poorly, and very poorly drained gently sloping to depressional soils. These soils have a number of undesirable characteristics and features that make them difficult to manage for most uses. Many of them are clayey, sticky, and plastic when wet and hard and intractable when dry. Poor natural drainage and soil material of generally poor engineering properties impose severe limitations on these soils for practically all aspects of urbanization. Foundations should be carefully designed and engineered to withstand the shrink-swell phenomena.

D. Meadow Soils (Natural Soils Group F3)

(1) General Location - Located along flood plains, inland creeks, streams, and other tributaries throughout the County.

(2) Description - These soils are made up of sediments washed from silty to sandy uplands. They are highly compressive, unstable and subject to subsidence if drained. All soils in this group are subject to stream flooding or ponding and seasonally high water tables that are not at, or near, the surface in winter and spring. These soils are moderately or severely limited for farming, and limited for most all non-farm uses. Severe wetness and flooding make these soils unsuitable for urbanization. Along the waterfront, these soils may cause a non-point source of pollution.

E. Tidal Marsh (Natural Soils Group G3)

(1) General Location - Major locations are the area of Point Lookout Creek and Lake Conoy; headwaters of Breton Bay, St. Clements Bay, and Chaptico Bay.

(2) Description - Tidal marshes and swamps are prevalent on these soils. These soils are not suitable for urbanization because of extreme wetness from a high water table and almost constant flooding.

F. Sassafras Soils (Natural Soils Group Bla)

(1) General Location - Scattered throughout the County with concentrations along Route 235; Patuxent Naval Air Station; New Market; and Golden Beach.

(2) Description - This is the largest extensively, most adaptable group of soils in the County. These are deep, well drained and permeable. Generally, they have a silty or loamy surface soil and sufficient clay in the subsoil to have either a high or moderately available moisture capacity. These soils are highly desirable for either farm or non-farm uses because they are well drained, easily tilled, and water moves through them at moderate or moderately rapid rates. They also provide the best (most problem free) sites for urban development. With very few exceptions, these soils have no more than slight or moderate limitations for shallow, subsurface septic tank

absorption fields. Most of the soils generally will pass percolation tests, and have good potential for properly installed, shallow, subsurface septic tank absorption fields, without a serious risk of contaminating nearby surface groundwater sources.

G. Sassafras Silt Loam and Fine Silt Loam Rolling Phase (Natural Soils Group Blb)

(1) General Location - Generally concentrated in the central and south central portion of the County.

(2) Description - Same as Bla with additional characteristics as follows: Slopes of 8 - 15 percent moderately limit the soils of this group for most phases of urban development. Installation of roads and sewers are commonly more problematic and expensive. Although more expensive to develop, these soils may be a better choice for residential development since in many places they have greater aesthetic value than the nearly level areas, since the lower areas are the subject of increased pressure for preservation as prime farm land (Bla).

H. Sassafras Gravelly Sand (Natural Soils Group Blc)

(1) General Location - Concentrations are found in the Mechanicsville area and along New Market – Turner Road (MD 6) and Golden Beach Road in the northern portion of the County.

(2) Description - Same as Bla with additional characteristics as follows: Slopes greater than fifteen percent along which these soils occur are generally too steep for most phases of urban development. However, some wooded areas with other aesthetic attraction are in demand as sites for rather expensive residences. Others, especially wooded areas, are being utilized as essential components of Planned Unit Development. Others have value as park and picnic areas because of good surface and internal drainage, but they are too steep for intensive uses.

I. Sassafras Gravelly Loam (Natural Soils Group B2c)

(1) General Location - Concentrated in north central portion of the County between Routes 5, 234, 235, and the Charles County line.

(2) Description - This group is rather unique in that the soils are well drained in spite of rather slowly permeable layers below a depth of two to three feet. Internal drainage is thorough and the water table is quite deep. Some of the soils in this group have a rather high content of gravel or rock fragments in the surface layers. Slopes of greater than 15 percent severely limit these soils for urbanization. Extensive and intensive cutting and filling would be required for intense development. However, special design and engineering techniques are enabling some areas to be developed for individual home sites.

J. Norfolk Sand Soils (Natural Soils Group Ala)

(1) General Location - Small concentrations scattered through the County.

(2) Description - Deep, very sandy, and somewhat excessively drained soils. They are extremely susceptible to erosion by wind when dry and without vegetative cover. These soils have good potential for urban development. They provide nearly level, dry sites for foundations of buildings and, in most places, for basements. These soils are a natural source of sand and some gravel for construction of buildings and roads. Because these soils have a rapid percolation rate, septic tank absorption fields function well in them; but for the same reason, there is a potential for ground water contamination resulting from effluent not being adequately filtered by the sandy substrata. This problem is even more hazardous with "dry wells" for sewage disposal.

2.4.3 Ground Cover

Approximately 51% of the County is covered by forests. Oak, scrub loblolly pine, locust, ash, elm, sweet gum, dogwood, hickory, birch, maple, persimmon, poplar, and other tree types seem

to be well suited to the soils and climate of St. Mary's County. The forest cover is scattered evenly throughout the County. Approximately 30% of the County land surface is in active agricultural or open space use (the latter including wetlands).

2.4.4 Areas Suitable for Land Treatment of Sewage Effluent

There are over sixty areas in St. Mary's County which show varying degrees of potential as sites for land treatment facilities. The establishment of such facilities could benefit the County, both environmentally and economically. Environmentally speaking, the use of several hundred acres of land to augment or even replace discharges into local rivers and streams is desirable. Such facilities have been operated to serve the St. Clements Shore and the Compton area since 1980. That facility is augmented with shallow, highly permeable basins, called Rapid Infiltration Basins (RIB) that are used seasonally during the winter wet seasons. The Wicomico Shores WWTP has discharged into RIB's since 1993. After percolating through at least 10' of dry soil, the highly treated effluent is further filtered prior to recharging the surficial aquifers.

These methods of sewage have good potential in other parts of this County provided percable soils and deep water tables are available. Further study should be made into possible uses of spray irrigation and rapid infiltration basins in other parts of St. Mary's County.

2.4.5 Water Quality

All receiving waters of the County are officially designated by the state as Class I Waters. In addition, all estuarine portions of the Potomac and Patuxent Rivers, together with their tributaries and the abutting portion of the Chesapeake Bay, carry the more stringent designation of Class II Waters in order to protect shellfish harvesting.

2.4.6 Groundwater Resources

The primary aquifers of St. Mary's County are the permeable water bearing parts of the Piney Point-Nanjemoy formations, the Aquia formation and the Patapsco formation. The Piney Point-Nanjemoy formations are referred to jointly as Piney Point since they act as a single hydraulic unit. Maps of these aquifers may be found in a 1997 study performed by Grufron Achmad and Harry Hansen entitled "Hydrogeology, Model Simulation, and Water-Supply Potential of the Aquia and Piney Point- Nanjemoy Aquifers in Calvert and St. Mary's Counties, Maryland." The Metropolitan Commission has enacted a policy that mandates that all new municipal wells will utilize the Patapsco aquifer. All domestic wells will continue to utilize the Aquia and Piney-Point aquifers. There are some concerns about the quantity of the water supplied by these aquifers. As a result County, State and Federal funds were appropriated to drill test wells into the Patapsco formation throughout southern Maryland. A computer model was developed by the Maryland Geological Survey to simulate the current and future capacity of that aquifer, as well as its impact on the Aquia and Piney Point Nanjemoy formations. An administrative report titled "Water-Supply Potential of the Coastal Plain Aquifers in Calvert, Charles, and St. Mary's Counties, Maryland, with Emphasis on the Upper Patapsco and Lower Patapsco Aquifers", dated June 2005, by David Drummond with the Maryland Geological Survey (MGS) was prepared that describes the result of that study. Concurrently an additional report was prepared by David Andreansen of MGS which projects the impact of future pumpage in St. Mary's, Calvert and Anne Arundel counties on the Aquia aquifer.

2.5 Population Projections

The population of St. Mary's County increased by approximately 13% from 1990 - 2000, from 75,974 to 86,211 persons. As of July 1, 2006 the population is estimated to be 98,854. The population is estimated to continue to increase at the rate of approximately 25% from 2000 – 2010, from 86,211 to 107,700 persons with the acknowledgement that the largest population concentration has been and will

continue to be in the Lexington Park area (8th Election District). The growth rate within the County is high within the northern election districts, as population growth from the Washington, D.C. metropolitan area spreads into St. Mary's County. The Eighth Election District is expected to continue to grow because of projected increases in jobs at the Patuxent River Naval Air Station, and because the availability of public facilities such as water and sewerage and the higher density zoning in the area make the cost of a new home less expensive for the prospective buyer. Table 2-1 illustrates the population projections for the twenty-year planning period.

This CWSP relies on the population projections of the Maryland Department of Planning. Should a revised count be issued by the U.S. Bureau of the Census, the County would expect the Maryland Department of the Environment to likewise revise its calculation of limits to be imposed on the discharge of nutrients into the waters of Maryland from wastewater treatment facilities and on the operations of such within this County.

2.6 Land Use

2.6.1 The Built Environment

The more important land use concentrations are residential, commercial, industrial, public and quasi-public. In 2002 there were 48,009 developed acres in the County. Tables 2-4 and 2-5 at the end of this chapter were prepared with data from the Maryland Department of Planning which summarizes land use patterns and trends.

2.6.2 Forests

Forest land as defined in the State Land Use Inventory and as shown in this survey is land that is at least 10% stocked by trees capable of producing timber and other wood products that exert an influence on the climate or water regimes". In addition, "Lands from which trees have been removed to less than 10% stocking but which have not been developed for other use are also included. For example, lands on which there is forest rotation, involving clear-cutting and block planting, are part of Forest Land".

2.6.3 Agriculture

Agricultural land uses are defined as land areas primarily used for production of farm commodities. In Southern Maryland, agriculture refers to crop and livestock production.

2.7 Educational Facilities

Existing and proposed educational complexes are important considerations in water and sewerage planning since they contain both concentrations of students and school employees. The St. Mary's County public school system in 2006-2007 consisted of 16 standard elementary, 4 middle schools, 3 high schools, 1 special education school, and a vocational-technical center. The total enrollment was 16,168 students, including the special education students. In addition to public schools, there were approximately 3,362 pupils enrolled in private schools for the 2006-2007 school year. Several higher education institutions offer programs within the County. St. Mary's College of Maryland, located at St. Mary's City, is a state-supported coeducational, four-year -liberal arts college with an enrollment of approximately 1,900 students in 2006/07 with 1,550 living on campus and in the fall of 2007, new residential suites are planned to open which will house an additional 88 students. In addition, the College of Southern Maryland’s Leonardtown campus offers Associate of Arts degrees and professional certificates to part-time students. There were 1,976 students enrolled at the facility during the fall of 2006. There are currently eighty-seven academic programs offered by twelve university partners at the Southern Maryland Higher Education Center campus located in California, within the Wildwood Professional and Technology Park. Approximately 2,000 students are enrolled in the programs, which culminate in professional certifications, bachelor's, master's, and doctorate degrees.

2.8 Major Public Institutions

Major public institutions represent a significant consideration in public water and sewerage planning. The water and sewerage demands generated by both the employees and the residents or patients of the institutions may require connection to a community water and sewerage system. In cases where connecting to such system is not feasible, an adequate on-site system should be designed. Table 2-3 of this chapter locates the major public institutions which are currently operated in the County.

Table 2-1 Population Estimates By Election Districts

St. Mary's County, Maryland

Population Estimates and Projections by Election Districts - 1990-2030

Election District	1990 Census	2000 Census	2005 population estimate	2010	2015	2020	2025	2030
1	5,382	5,691	6,576	7,370	8,174	8,947	9,682	10,380
2	4,782	6,603	6,705	7,514	8,334	9,122	9,872	10,584
3	9,065	10,900	11,808	13,234	14,677	16,066	17,387	18,640
4	7,237	9,583	9,918	11,115	12,328	13,494	14,604	15,656
5	9,474	9,966	11,546	12,940	14,352	15,710	17,001	18,227
6	10,419	13,114	13,899	15,576	17,276	18,910	20,465	21,940
7	3,172	3,083	3,724	4,174	4,629	5,067	5,484	5,879
8	26,172	27,003	31,603	35,417	39,282	42,998	46,533	49,887
9	271	268	321	359	399	436	472	506
Total	75,974	86,211	96,100	107,700	119,450	130,750	141,500	151,700

Source: Totals from Maryland State Data Center, updated through November 2006; election district breakdown from county staff based on 1990 and 2000 census counts.

LUGM:3/07

Table 2-2 Population Estimates by Sanitary Districts

Sanitary District	1990 Census	2000 Census	2005 population estimate	2010	2015	2020	2025	2030
1	7,684	8,719	9,720	10,893	12,081	13,224	14,311	15,343
2	5,528	6,273	6,992	7,836	8,691	9,514	10,296	11,038
3	9,471	10,747	11,980	13,426	14,891	16,299	17,640	18,911
4	1,863	2,114	2,357	2,641	2,929	3,206	3,470	3,720
5	3,617	4,104	4,575	5,127	5,687	6,225	6,737	7,222
6	1,076	1,221	1,361	1,525	1,692	1,852	2,004	2,148
7	3,229	3,664	4,084	4,577	5,077	5,557	6,014	6,447
8	32,801	37,221	41,490	46,498	51,571	56,450	61,091	65,495
9	3,599	4,084	4,552	5,102	5,659	6,194	6,703	7,186
10	7,106	8,063	8,988	10,073	11,172	12,229	13,235	14,189
Total	75,974	86,211	96,100	107,700	119,450	130,750	141,500	151,700

Table 2-3 Major Public Institutions

Institutions	Election District	Sanitary District	Population	2006 EDU's	District EDU Total
Camp Riverview	St. Inigoes (1)	VII	**	##	
St. Mary's College	St. Inigoes (1)	VII	1,900	355	355 +
Lundeberg School	Valley Lee (2)	V	280	110	110
Governemntal Center	Leonardtown (3)	III	240	46	
College of Southern MD	Leonardtown (3)	III	1,976	4	
Cedar Lane	Leonardtown (3)	III	236*	90	
St. Mary's Nursing Home	Leonardtown (3)	III	212*	78	
County Jail	Leonardtown (3)	III	230*	90	
Hospital	Leonardtown (3)	III	105*	70	378
Veteran's Home	Mechanicsville (5)	X	454 (2013)	#	
Higher Ed Center	Bay (8)	VIII	2,000	23	
Bayside Nursing Home	Bay (8)	VIII	125	43	
Pax River NAS	Bay (8)	VIII	**	3000	3043
TOTAL:			***7758***		**3,531**

* Number of Beds

\# Charlotte Hall Veteran's Home: Connected to the community water system only for emergency service, there have been no allocations; Independent onsite sewer system.

Independent onsite system

** not reported

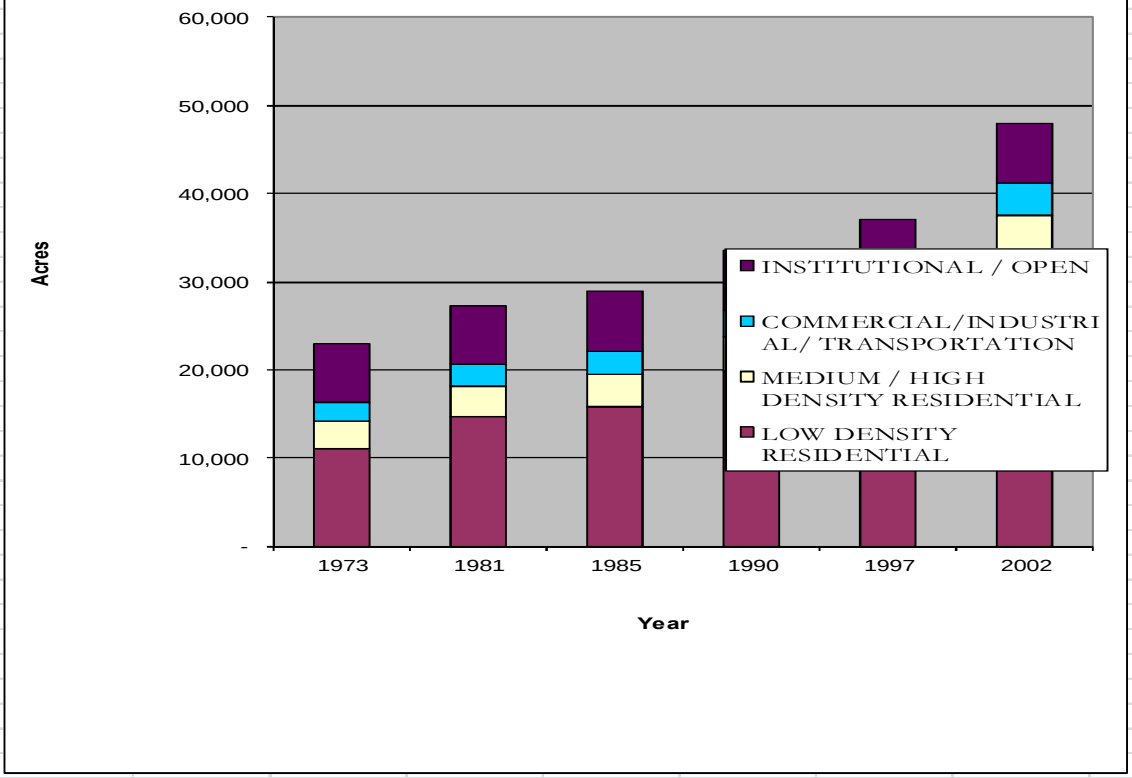
Table 2-4 Land Use in Acres

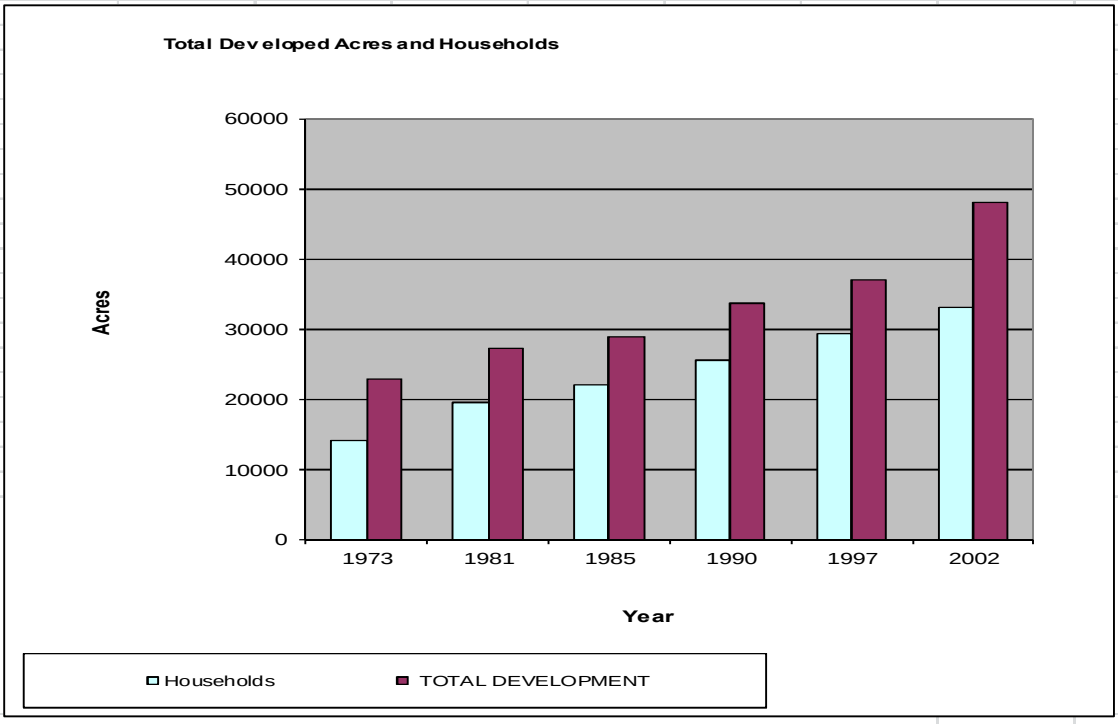
Saint Mary's County	1973	1981	1985	1990	1997	2002
LOW DENSITY RESIDENTIAL	11,081	14,740	15,866	19,858	22,699	31,774
MEDIUM / HIGH DENSITY RESIDENTIAL	3,106	3,465	3,682	3,894	4,495	5,814
COMMERCIAL/INDUSTRIAL/ TRANSPORTATION	2,194	2,376	2,580	3,081	3,077	3,598
INSTITUTIONAL / OPEN	6,548	6,708	6,733	6,771	6,718	6,823
TOTAL DEVELOPMENT	22,930	27,289	28,861	33,604	36,989	48,009
AGRICULTURE	67,916	66,773	66,192	65,596	64,703	60,308
FOREST	136,002	132,860	131,747	128,076	125,706	118,504
EXTRACTIVE / BARREN / BARE	420	576	872	875	839	1,095
WETLAND	2,380	2,635	2,645	2,640	2,552	2,887
TOTAL RESOURCES	206,717	202,844	201,456	197,186	193,800	182,794
TOTAL LAND	229,647	230,133	230,317	230,790	230,789	230,803
WATER	309,736	309,250	309,066	308,592	308,592	308,590
TOTAL AREA	539,382	539,382	539,382	539,382	539,382	539,393

Source: Maryland Department of Planning

TABLE 2-4 (contiuned)				
LANDUSE TYPE	Change from 1973-2002	PERCENTAGE	Change from 1997-2002	PERCENTAGE
LOW DENSITY RESIDENTIAL	20,693	187%	9,075	40%
MEDIUM / HIGH DENSITY RESIDENTIAL	2,708	87%	1,319	29%
COMMERCIAL/INDUSTRIAL/ TRANSPORTATION	1,404	64%	521	17%
INSTITUTIONAL / OPEN	275	4%	105	2%
TOTAL DEVELOPMENT	25,079	109%	11,020	30%
AGRICULTURE	-7,608	-11%	-4,395	-7%
FOREST	-17,498	-13%	-7,202	-6%
EXTRACTIVE / BARREN / BARE	675	161%	256	30%
WETLAND	507	21%	335	13%
TOTAL RESOURCES	-23,923	-12%	-11,006	-6%
Source: Maryland Deparment of Planning				

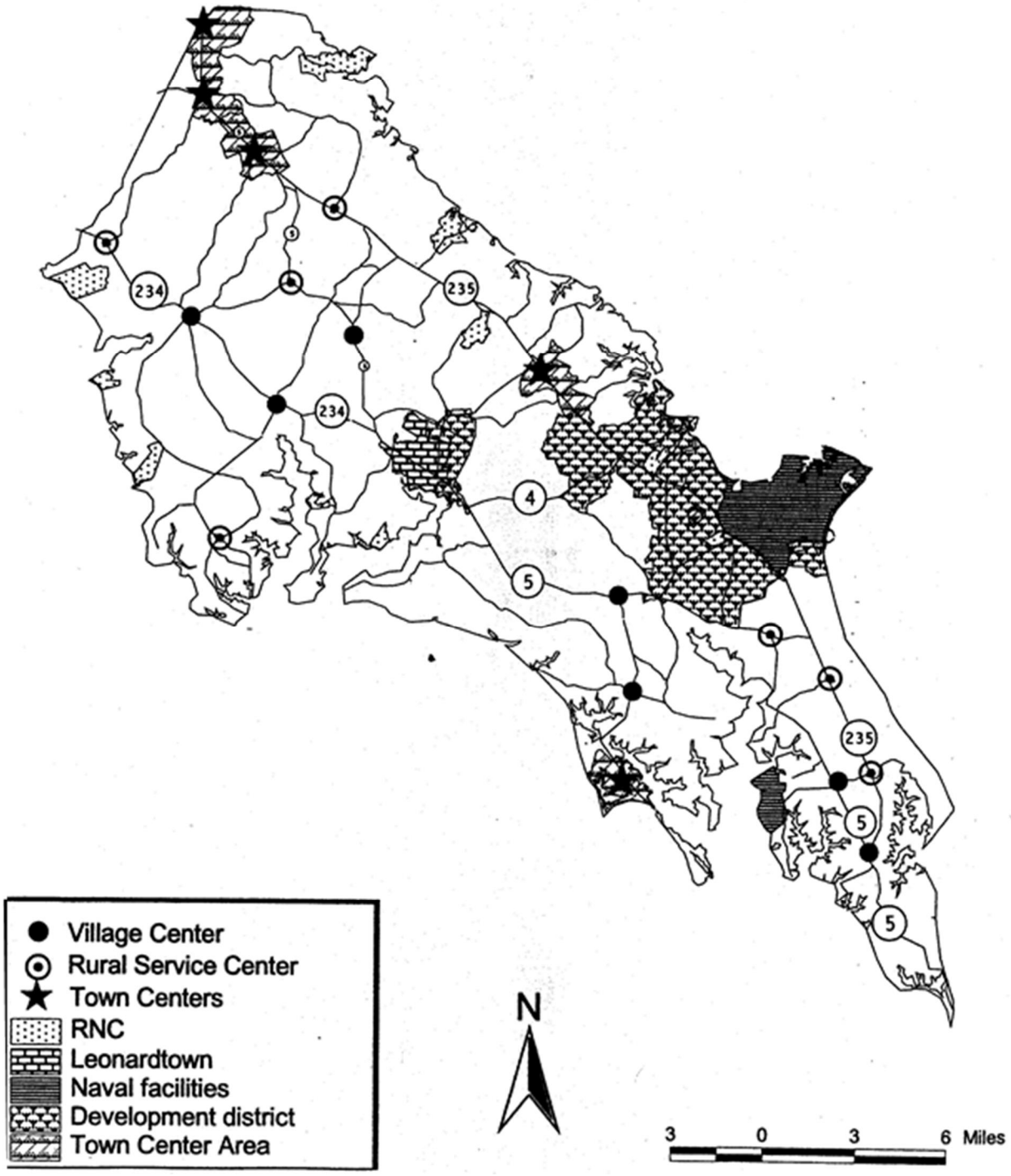
Table 2-5 Development Acres



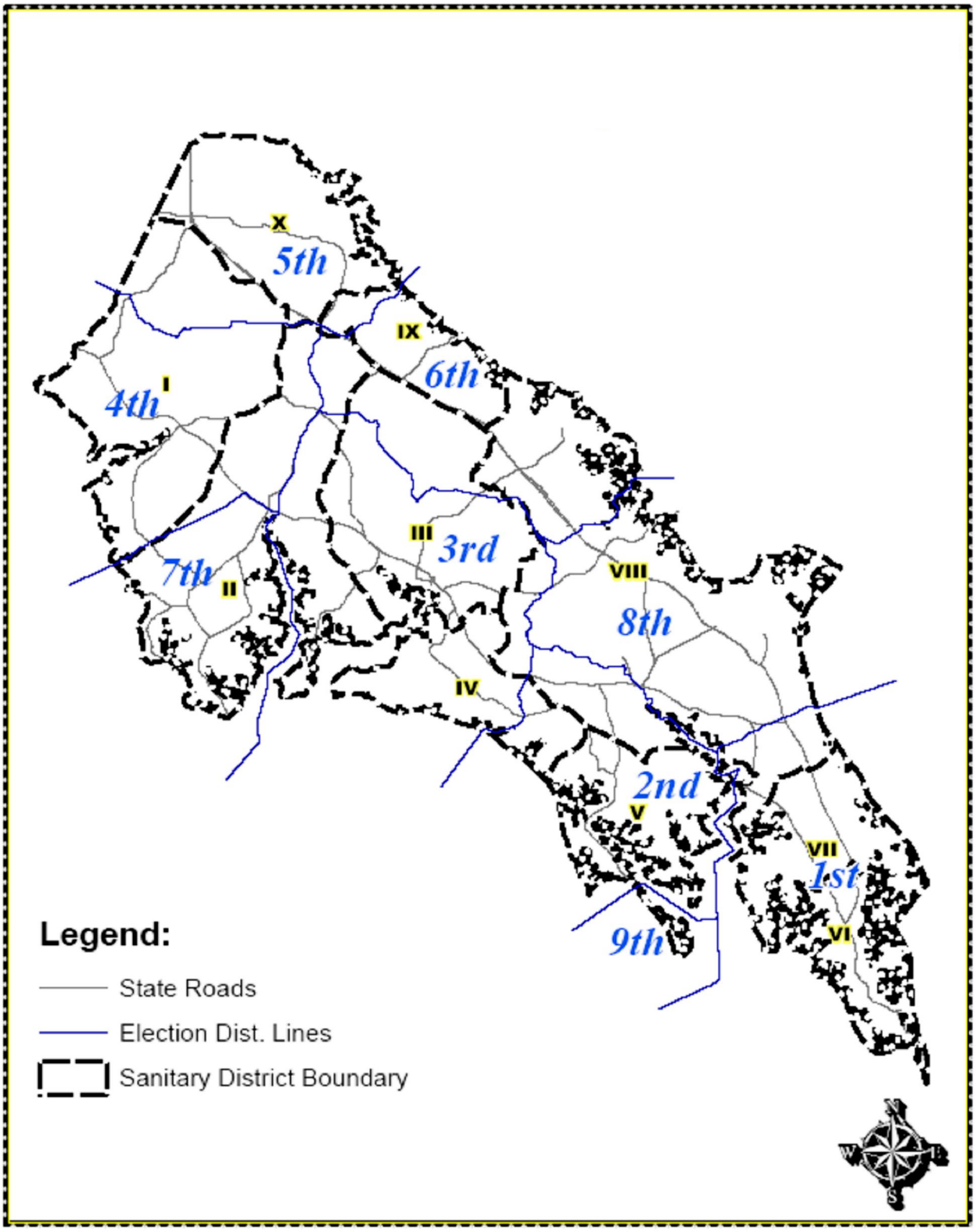


Source: Maryland Deparment of Planning and St. Mary's County Department of Land Use and Growth Management

Map 2 - 1: Land Use Concept



Map 2 - 2: Relationship of Election Districts and Sanitary Districts



[This page blank.]

Chapter 3: Water
Table of Contents

List of Tables

Water Service Area Maps

3. WATER

This chapter will deal with water supply and distribution throughout the County. Discussion of those elements which relate to the County as a whole will be followed by detailed descriptions of each water service area with related recommendations. This discussion will help ensure the safety and adequacy of water service for current and future populations of the County, including Leonardtown.

3.1 Water Resources

St. Mary's County is fortunate to have aquifers that are readily available for consumption. However, the County should also look for other sources of potable water to supplement water supplies provided by the aquifers.

3.1.1 Aquifers

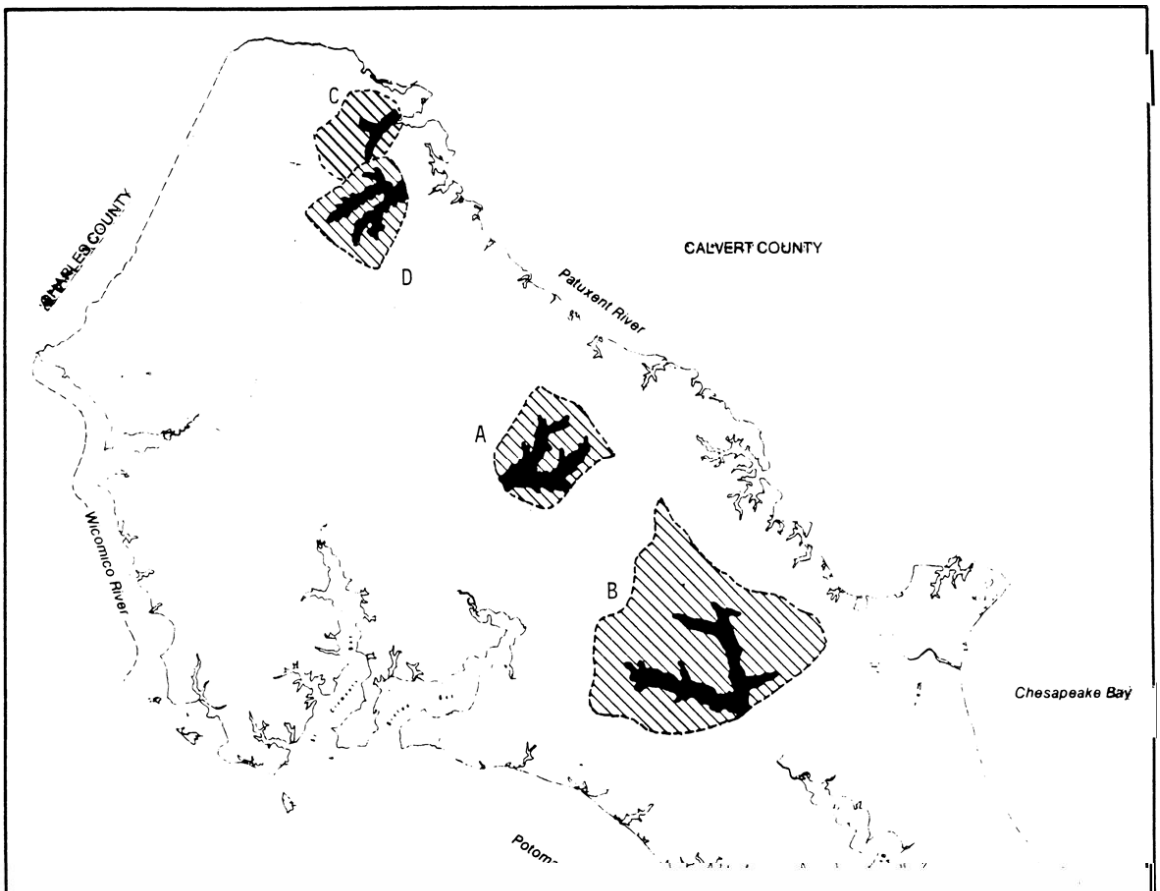
Historically the County has withdrawn a majority of its groundwater from the Aquia and Piney Point-Nanjemoy aquifers. Recently the Metropolitan Commission has begun utilizing the Upper Patapsco aquifer for public wells. Additionally, a fourth and deeper aquifer, the Patuxent, lies beneath the previously mentioned three and has not yet been explored from either quality or quantity standpoints. In a January 10, 2006 letter to Senator Roy Dyson, the County Commissioners requested that the State give priority to investigating the potential of this aquifer. The letter also requested that further priority study be given to how our aquifers are recharged. Specifically, the outcrop areas to the north and west of the County where water enters the aquifers need to be investigated to insure that land use decisions made there do not damage, interrupt or pollute the water flowing to the County.

3.1.2 Surface Water

The major surface water resources surrounding St. Mary's County are brackish and could only be used for municipal supplies by desalinization. There is a potential to use water from the larger freshwater streams such as St. Mary's River or McIntosh Run if sufficient water can be stored in reservoirs. At least one potential water supply reservoir site is in public ownership, St. Mary's Lake, but has not been put into service because ground water supplies are abundant, more uniform and more easily treated. In view of falling potentiometric levels and failing wells, this water and sewerage plan identifies potential reservoir sites on McIntosh Run in the Leonardtown service area, St. Mary's River in the Pine Hill Run Service area, Killpeck Creek in the Indian Creek service area, and Persimmon Creek in the Manor Run service area. Pollution potential of surface water supplies is much greater than for ground waters, the degree depending on land uses permitted in catchment areas. The majority of the McIntosh watershed is made up of agricultural areas and could be subject to contamination by insecticides, fertilizers, and animal waste, unless otherwise controlled. The Killpeck and Persimmon reservoirs are within water front protection zones which, while providing more stringent control of land use, does not preclude contamination from the sources mentioned above. Upper reaches of the St. Mary's River are in a Development District, but the proposed reservoir is immediately surrounded primarily by open space / recreation area. However, there are signs of encroaching development, especially along the southwestern boundary. Contaminants of agricultural origin should not be a problem in this reservoir, and proper management of the recreation area will prevent damage from human sources.

In order to retain the possibility of utilizing these reservoirs for ultimate water supply, the land areas covered (not only by water impoundments but the much larger catchment areas) will require protection from development. Future sewerage and water planning should be consistent with this objective and should help to effectively preserve the County's approved water catchment and dam site strategy.

Surface water withdrawals in the County are limited to a few commercial and agricultural operations. The use of this resource should be encouraged, where practical, to reduce the demand on groundwater for non-potable uses.



KEY ID	Water Source Name	Avg. Flow (MGD)	Catchment Area (Sq. Mi.)	Range of Crest Elev. (MSL) Min. Max.	Reservoir Area (Acres) Min. Max.	Storage Vol. (M Gal.) From To
A	McIntosh Run	7.6	11.8	40 - 80	59 - 988	96 - 5787
B	St. Mary's River	*	19.0	61	-	-
C	Killpeck Creek	3.5	5.5	20 - 60	68 - 411	166 - 3033
D	Persimmon Creek	3.5	5.4	20 - 80	73 - 726	213 - 7101

Source: 1982 CWSP

3.1.3 Desalinization

In light of falling potentiometric levels, this plan recommends that the County explore the possibility of desalinization. St. Mary's County is surrounded by brackish water that could be utilized as an auxiliary source of potable water with desalinization. This would appear most suitable in the Lexington Park and Leonardtown areas, which now suffer from highly stressed aquifers and are identified as designated growth areas. In the County's letter of January 10, 2006 to Senator Roy Dyson, the Commissioners have asked the State to place priority on studying the potential of using desalinization as a potential water supply source. With the

advent of membrane treatment systems desalinization has become more economically viable and efficient. There are a variety of methods of removing salts from brackish water. Membrane processes include electrodialysis and reverse osmosis. The reverse osmosis process is the mostly widely used desalinization process in the United States. Thermal processes include multi-stage flash distillation, multi-effect distillation, and vapor compression.

3.2 Water Usage

The use of water resources in Maryland is controlled by the Maryland Department of the Environment (MDE) through the issuance of water appropriation permits. This system has been developed to oversee the right of individual landowners to make reasonable use of the water associated with their property without causing an unreasonable impact on other water users or the resource. This right of law extends beyond jurisdictional boundaries which is why the broad regulatory authority has remained the responsibility of the state.

The state has established regulations that limit the use of a confined aquifer in any region to 80 percent of the difference between the historic, pre-pumping water level and the top of the aquifer. This limit is known as the "Management Level", and is used in all studies and analyses conducted by the Maryland Geological Survey (MGS). These essential studies have provided the data by which the County may formulate an aquifer/water management policy. The regulations give MDE the authority to deny a proposed appropriation that would unreasonably harm the aquifer or other users of the aquifer. MDE may advise the applicant to file a new application for an appropriation from another aquifer. In making this determination, MDE must consider a number of factors, including the aggregate changes and cumulative impact to water resources in the area and the practicality of avoiding harm by adjusting the use of the applicant or another permitee. If an applicant intends to appropriate ground water in unprecedented quantities for a unique purpose that is not common to the area affected, and if the appropriation would cause harm to other users when no other options are available, MDE may require an applicant to pay for the cost of improving neighboring facilities or mitigate the impact on nearby users.

The water appropriation permit system includes a regular review and renewal cycle and the requirement for large water users to report withdrawals semi-annually. In letters dated January 10, 2006 and August 7, 2007, the County Commissioners requested that the State clarify its definition of the Management Level.

3.2.1 Ground Water Usage

In the southern half of the County, the Aquia and Patapsco aquifers supply water to large municipal, industrial and institutional systems. The Metropolitan Commission has enacted a policy that requires new public wells to utilize the Patapsco Aquifer. The shallower Piney Point - Nanjemoy aquifer supplies water to smaller commercial and individual domestic users. The Piney Point aquifer is not available for uses in an area north of Morganza. Since the Piney Point aquifer is unavailable, the Aquia aquifer is used extensively by all categories of water appropriators. The increase in population is leading to a greater demand for water appropriations from the Aquia. A decline in the potentiometric surface has created a local concern for the future reliability of the Aquia aquifer. The County Commissioners' August 7, 2007 letter to the state specifically outlined the concerns in this area and requested confirmation of planned continued full use of the Aquia aquifer in conjunction with the Patapsco. A number of well failures throughout the County are believed to be a result of recent drought conditions, falling potentiometric levels and the use of telescopic well casings. Report of Investigations No.64, prepared by the Maryland Geological Survey (MGS) in 2001, indicates that computer simulations of projected draw-downs of the Aquia aquifer, particularly in the Country Lakes area could approach the 80% management limit by 2020. As a result, a study of the Patapsco Aquifer was launched in 2002 to determine if this aquifer could provide sufficient water to relieve stress on the Aquia.

In 2003 MGS completed the drilling of seven test wells to explore the potential of the Patapsco aquifer. An administrative report titled "Water-Supply Potential of the Coastal Plain Aquifers in Calvert, Charles, and St. Mary's Counties, Maryland, with Emphasis on the Upper Patapsco and Lower Patapsco Aquifers", dated June 2005, by David Drummond of MGS, indicated that the upper Patapsco aquifer is of excellent quality and should provide adequate supply through 2030 based on the current county population projections. This study, the culmination of 6 years of varied studies and analyses, formed the core of the County's emerging plan to manage potable water sources.

In the above referenced letters to the State the County Commissioners wrote:

We believe that St. Mary's County will reach Management Levels in the Aquia and Piney Point aquifers not long after the 2030 time frame in the Lexington Park, Leonardtown and Charlotte Hall areas unless the Patapsco aquifer is more extensively used. Heavier reliance on the Patapsco by all municipal and all other major users can provide private well users with more available water from the Aquia and Piney Point aquifers, and will halt and may perhaps reverse the water level declines in both that have occurred over the past 60 years. In the Lexington Park area in 2000, the Metropolitan Commission started to use the Patapsco to relieve stress on the Aquia and to conform to the new federal arsenic drinking water standards. The leveling of the decline in potentiometric surfaces in our test wells and improved water quality indicates the change is having the desired effect. We have informal indications from MDE that heavier use of the Patapsco is acceptable. Therefore, the Board of County Commissioners proposes to require that new or replacement wells be drilled into the Patapsco wherever it is feasible from an engineering standpoint to do so. This requirement would apply to all wells installed by our water and sewer authority, the Metropolitan Commission; to all major users; and to new rural subdivisions with 25 units or more that are served by a public water system. We are aware that some requests for water appropriation permits can come directly to the Maryland Department of the Environment (MDE) without passing through the County's governmental planning process. We further recognize that directing an applicant to use a specific aquifer is a State prerogative; but we feel that heavier use of the Patapsco is a sound, proactive approach to managing our County's water supplies. We ask the State Water Resources Management Advisory Committee to confirm support for this proposed requirement, and, where major user appropriations permits come directly to MDE that we are afforded an opportunity to comment on the aquifer to be used before the permit is issued.

Not specifically stated in the letters, but contained in all the analyses performed by MGS, is the commitment by the Metropolitan Commission to hold water withdrawal rates from the Aquia aquifer to 2002 pumping rates with additional requirements being satisfied through use of the Patapsco. New wells needed by MetCom to replace failing ones in the Aquia or Piney Point aquifers could be drilled into these aquifers as long as capacity of a replacement well is limited to the maximum capacity of the State appropriation permit that was in effect in 2002. MetCom could, however, depending on circumstances, decide to use the Patapsco for the new well, with remaining nearby Aquia and Piney Point wells being allowed to increase their flow to 2002 levels.

Even though the Aquia aquifer supply should be adequate for the next two decades or so, it was essential to examine the potential for deeper aquifers, particularly in the northern half of St. Mary's County in order to identify future alternative supplies and to begin using these supplies prior to 2025 to slow demand on the aquifer and, thereby, reduce the impact on the water levels in existing wells. These include the deep aquifers of the Patapsco formation. Before these aquifers could be considered reliable future water supplies, a further investigation was conducted to determine the potential supply and water qualify characteristics. In 2003 MGS completed the drilling of seven test wells to explore the potential of the Patapsco aquifer. In 2005, an

administrative report titled "Water-Supply Potential of the Coastal Plain Aquifers in Calvert, Charles, and St. Mary's Counties, Maryland, with Emphasis on the Upper Patapsco and Lower Patapsco Aquifers", dated June 2005, by David Drummond with MGS, which indicates that the upper Patapsco aquifer is of excellent quality and should provide adequate supply through the year 2025 based on the current county projections.

New and replacement community water system wells shall insofar as possible use the deeper Patapsco aquifer. This is particularly important in the northern half of the County where there is a need to separate larger community wells from individual domestic wells. It is the policy of this Plan that all private domestic wells utilize the shallowest water bearing confined aquifer. All community system wells must use a deeper confined aquifer in areas where such aquifers exist.

3.3 Well Construction

The productivity of a well depends on a number of factors. Two of the most important are the properties of the aquifer and the care a well driller takes in constructing and developing the well. The basic construction of the well dictates the quantity of water that may be produced by the well and the type of pump that may be used. The type of pump limits the depth from which water may be withdrawn.

Well construction regulations changed in 1973. Prior to that date, 2 inch casings with jet pumps were permitted for domestic and commercial wells. Since 1973, a minimum four-inch well casing has been required, as has use of submersible pumps. State regulations require the four inch casing only to a depth of 20 feet below the existing static water level. Two-inch casings can be extended below that point into the aquifer. There is no standard requiring the pump to be installed at a greater depth below the static water level. In many cases, the increasing demand for ground water has resulted in a decline in the static water level far greater than the 20-foot buffer. This has caused many wells to be replaced, because the 4"casing is not deep enough to allow the submersible pump to be dropped down to the current static levels. As a result, many people have faced a financial burden to replace their wells. Since 1993, the required minimum depth for 4" casings is 200' below the static water level but not below the top of the aquifer. Pumps must be 50' below the static water level, but not below the top of the aquifer. By conditioning well permits in this manner, future well failures may be averted.

3.3.1 Arsenic in Drinking Water

Arsenic is a naturally occurring element present in food, soil, rocks, air and water. In 2001, the Environmental Protection Agency lowered the Maximum Contaminate Level (MCL) for Arsenic from 50 ppb to 10 ppb.

St. Mary's County was identified by the Maryland Geological Survey as exhibiting arsenic levels in certain confined aquafers approaching and sometimes exceeding the MCL.

The St. Mary's County Health Department samples for arsenic in all new and replacement privately owned drinking water wells to determine compliance with the MCL. If exceedances are reported, the water must be treated to reduce the arsenic to compliant levels. Follow up water samples are taken to ensure the treatment device is functional prior to certifying the well as potable.

3.4 Water Conservation

This Plan fully supports water conservation measures as a means to save water, energy, and the expense of additional water handling facilities. Water conservation is already required in some aspects of the existing Plumbing Code. Conservation causes a number of beneficial side effects. Obviously our water resources are saved. Sewer flows into treatment plants are lessened, thereby increasing capacity without any capital outlay. Lower water usage usually translates into a lower water bill.

The use of water meters and associated pricing plans is an effective water conservation measure. It is the

intent of the Metropolitan Commission to meter all water services by the end of FY 2011. The Commissioners of Leonardtown have also budgeted and are planning to install residential water meters in FY 2008. This Plan supports and encourages the Commission's efforts as well as Leonardtown's.

3.4.1 Treated Wastewater Re-use/Sustainable Development

It is estimated that 5% of potable water is used for human consumption. It is, therefore, theoretically possible to reduce water consumption by as much as 95% by re-using highly treated wastewater. As of 2002, the Metropolitan Commission had constructed a water reclamation project for the irrigation of the Breton Bay Golf Course, and has obtained MDE approval to irrigate the Wicomico Shores Municipal Golf Course in a similar manner. This Plan encourages and supports the Commission's efforts to pursue the technologies as an alternative to using confined aquifer supplies.

The Metropolitan Commission has also explored the re-use of treated wastewater effluent from the Marlay-Taylor, the Patuxent River Naval Air Station and from the greater Lexington Park area. This Plan encourages the Metropolitan Commission to actively pursue the use of treated wastewater effluent, rain water, and gray water as viable alternatives to potable water consumption as well as a method of reducing wastewater effluent nutrient discharges into the Chesapeake Bay.

3.5 Monitoring

The MGS ground water monitoring network and the MDE water appropriation permitting system provide water level and pumpage data on the Piney Point – Nanjemoy and Aquia aquifers. This information should be routinely provided to the Metropolitan Commission and the St. Mary's County Health Department. Cooperation between MGS, MDE and the County will create a better-defined picture of the status of water resources.

By appropriate study, monitoring and resultant planning, potential problems can be averted. St. Mary's County along with other agencies in the region financed a project to identify additional ground water supplies within the Patapsco Aquifer located in Southern Maryland.

3.6 Planning for Growth and Development

St. Mary's County has the responsibility to adequately prepare for growth. Management of growth is directed by the open, comprehensive public planning process which has resulted in the 2002 Comprehensive (Land Use) Plan. That Plan requires that all subdivisions of 25 lots or more be served by public water systems. The Comprehensive Water and Sewerage Plan is a tool designed to ensure that adequate water supply systems are developed that utilize all available water resources in support of that planning process.

This Plan recommends the usage of community water systems as the primary method of achieving that objective. Central water systems, therefore, should be the primary source of future water supply. Cluster development, in particular, lends itself to community systems. Further, this Plan supports the current policy that all community water system customers be metered. Private well construction should be discouraged except for individual lots and minor subdivisions in the Rural Preservation District (RPD). To discourage development in the RPD as recommended by the Comprehensive Plan, State growth management objectives, Forest Conservation Program, Critical Areas Program, etc., growth in rural areas should be contained in Village Centers and Town Centers served by community water systems.

3.7 Water Supply System

The water supply system for St. Mary's County consists of the following:

3.7.1 Well Complexes

The system is based on a concept of well complexes, in which every public well site would consist of approximately one-half acre of land. The first installation usually would be a well and pump with a capacity of approximately 100 gallons per minute, draining upon the best local aquifer and operating through a hydro-pneumatic tank. The next would be a ground storage tank providing 350 gallons of storage per equivalent dwelling unit, with a high-pressure pumping station to deliver water to the distribution system, plus the required fire flow storage as required by the National Fire Protection Association (NFPA). As additional water would be required, a second well would be drilled, perhaps to a different aquifer. Well complexes should be spaced approximately 2 to 3 miles apart where possible, preferably not closer than 1-1/2 miles. Complexes eventually may have wells in both the Patapsco and Aquia Formations. In the southern portion of the County the Piney Point/Nanjemoy Aquifer should be reserved for private domestic wells. It is appropriate to prohibit new commercial or municipal wells from utilizing the Piney Point – Nanjemoy Aquifer. In the future, attendant costs no doubt will increase beyond the present level. Concentrating the facilities into well complexes will make possible automation, telemetering and central control, standardization, and the consequential reduction in costs.

3.7.2 Distribution System

The distribution system design is based upon analyses of typical areas (Piney Point, Mechanicsville, Pine Hill Run Sanitary District, and others elsewhere). The basis is an initial network of mains (12" or larger) connecting elevated tanks with an input of well water near the midpoints. Such a network will provide an ample domestic supply, approved fire protection, and a supply for light industry and commerce, provided subsidiary mains create a grid of alternate 8” and 12” mains. Larger mains should be installed along presently non existent roads, as the advent of industry or high density development changes the present picture. Such a system is quite flexible. As much or as little of it may be built as circumstances dictate. If the pressure zones and tank locations shown on the county wide map and the well location principles are followed, the increasements will fit together eventually as a workable whole.

3.7.3 Storage Capacity

Storage capacity must be sufficient to provide a volume equivalent to one day’s average daily flow plus a minimum fire flow volume based on current ISO or NFPA standards.

3.7.4 Pressure Zones

Pressure zones have been established throughout the County based on topographic features. These zones relate to elevation and therefore extend across service area limits as topography dictates. They have been selected to provide sufficient but not excessive pressure to their respective areas. These zones will take on greater importance as community systems expand and are interconnected across zone boundaries.

3.7.5 Well-Head Protection Areas

Areas surrounding public well complexes should be protected from contamination from objectionable uses. The Environmental Protection Agency has programs that may financially assist the County in the establishment of such a program.

3.8 Water Service Areas

Water is distributed by pressure, therefore it is not as restricted to natural drainage as are sewers, but for ease of administration, the water service areas coincide with the sanitary districts.

Community water systems in each district are discussed below. New service areas may be amended into the plan for developments which comply with the land use plan and the goals and policies stated in chapter 1 of this water and sewerage plan.

3.8.1 Luckland Run Sanitary District No. 1

This district, at the northwestern extremity of the County, contains 32,768 acres. All four water pressure zones are represented in this service area, beginning with zone one (1) along the shores of the Wicomico and rising to zone four (4) along Three Notch Road (MD 235) as shown on the water map

A. Wicomico Shores

Located adjacent to Budd's Creek and bordering on the Wicomico River is the Wicomico Shores subdivision. The Metropolitan Commission owns and operates the water and sewerage systems for Wicomico Shores. In 1988, the Board of County Commissioners passed the Wicomico Shores Special Taxing District Ordinance (Ordinance No. 88-35) to allow for the provision of community water and sewerage service for 700 dwelling units or equivalent dwelling units. The ordinance stipulates " two-hundred forty-four (244) lots to be subdivided from parcels 9 and 22, tax map 16, and other lands of Wicomico, Inc. ..." in addition to four hundred twenty (420) existing parcels and sixty (60) additional equivalent dwelling units attributable to the golf course. Community water is provided by an elevated storage tank designed to provide 0.3 mgd, and is distributed through a system of 8-inch diameter water mains. As of January 2007, there are currently four hundred sixty (460) EDUs served by this system.

B. Birch Manor

Birch Manor is located adjacent to Point Lookout Road (MD 5) and south of Three Notch Road (MD 235). Operated by the Metropolitan Commission, the water system for this subdivision consists of two wells, a pumping station (124 gpm) and two (2) storage tanks (25,000 gallons combined storage capacity) which serve 100 dwelling units. This subdivision is built out, and no expansions are planned. There are currently 100 EDUs served on this system.

C. Country Lakes

The Country Lakes subdivision, which will ultimately encompass 823 lots, is located on the west side of Mechanicsville Road, approximately midway between Mechanicsville and Chaptico. Water service is provided by three wells (577 gpm), a hydro-pneumatic tank, and two elevated storage tanks of 100,000 and 150,000 gallons. The Metropolitan Commission also serves Hayden's Run subdivision (65 units), Lacey's Run Estates (48 units), Meadow Woods (53 units), Shannon Run (75 units) and Bruce Knolls (30 units). As of January 2007, one thousand ninety one (1091) units are being served.

D. Remainder of the district: No other community water service is planned.

3.8.2 Dukehart's Creek Sanitary District No. 2

This area, covering 36,934 acres, runs from its narrowest portion at Three Notch Road (MD 235) southerly to the Potomac River, flanking both sides of St. Clement's Bay. Three pressure zones are represented in the area: pressure zone three (3) in the upper reaches of the area near Three Notch Road (MD 235); pressure zone two (2) in the middle portion of the area; and pressure zone one (1) along the shoreline of the Potomac and St. Clement's Bay. The district is located primarily within a rural preservation district as identified by the land use plan, and no major developments are anticipated.

A. St. Clement's Shores

St. Clement's Shores is a neighborhood conservation district with a community water system which is operated by the Metropolitan Commission. Water is provided by one well (115gpm) which is chlorinated and stored in a 44,000-gallon ground storage tank. While the system supplies adequate flow for domestic use, it does not have mains of sufficient size to guarantee adequate fire protection. The largest main is 4" and there are no hydrants on the system. However, the ground storage tank has a connection for filling fire apparatus. This water system will ultimately serve 240 units. 219 dwelling units are currently being served.

B. Mt. Pleasant

This subdivision is located at the intersection of Maryland Rt. 470 and 242, south of Dynard. Its water system is owned and operated by Thomas Downs. Two 4 – inch diameter wells provide 8,000 gpd to serve 33 dwelling units located within sections 1 through 4, and lot 6 of section 5. Water is chlorinated. No expansion is planned.

C. Remainder of district

No other community water service is planned.

3.8.3 Leonardtown Sanitary District No. 3

This service area is central to the County, covering 26,435 acres, most of which lies north of Leonardtown. It extends from the headwaters of Breton Bay on the south, to Three Notch Road (MD 235) on the north. The area is mostly within pressure zone two (2), with pressure zone one (1) represented on the west edge of Leonardtown, and pressure zone three (3) in the northeastern portion of the area.

A. Leonardtown

The Town of Leonardtown owns and operates a municipal water system consisting of four wells, three elevated storage tanks and a system of distribution lines ranging from 2 inches to 12 inches. Leonardtown has the second largest water system in the County. .

A 100,000 gallon elevated water tank is located in the town center area. This tank is approximately eighty-three years of age and will need to be rehabilitated or eliminated in the next three to five years. A second 300,000 gallon elevated water tank is in the north part of the Town on Greenbrier Road. This tank is approximately thirty-eight years of age. The third elevated water tank is west of the town center area. This tank, built in 1991, has a capacity of 500,000 gallons bringing the total available capacity to 900,000 gallons. While the third tank gives the Town added capacity for future growth for at least five to ten years, the Town continues to be active in the planning and acquisition of additional tank and well sites.

The Town currently has four wells in operation. The largest until now was the Courthouse Drive well which was constructed in 1989 and rehabilitated in 1993. This well has a pumping capacity of .53 million gallons per day (mgd). The second largest well was located at 23330 Greenbrier Road adjacent to the existing water tower. It was rehabilitated in 1999 and has a capacity of .34 mgd. The Town's third well is located at 23230 Greenbrier Road. It was constructed in 1966, but was rehabilitated in 1991, including new pumps, controls, and chlorination equipment. The capacity of this well is .22 mgd. In 2006 the Town constructed a 1.1 mgd well at 23320 Greenbrier Road. The current permit will be to pump .75 mgd. Well #2 will be abandoned eventually and well #3 and #4 will be used as emergency backup wells. The new well withdraws water from the Patapsco aquifer, instead of the Aquia as with all the other wells previously. This new well is being used to meet the new federal arsenic regulations. The Leonardtown water treatment procedure is a single step process involving chlorination and pH

testing. All wells and treatment processes comply with federal and state regulations.

The largest distribution lines are the 12-inch main on Moakley Street and the 12-inch Point Lookout Road main which runs west to Shops at Breton Bay. Most of the distribution lines are ductile iron and remain in good condition. At the end of some distribution lines, galvanized steel was used and may need replacing in the future.

As of December 31, 2006, the Town served 1,655 EDUs with its water system. Notwithstanding the fact that 105 of those EDUs are outside Town limits, the Town's current policy limits new connections to residents and commercial establishments that are located within the corporate limits.

B. Holland Forest Landing

The system serves 51 units and has two 100 gpm wells, a 100,000 gallon ground storage tank and is chlorinated. A new well will be drilled into the Upper Patapsco aquifer in 2008 to meet current drinking water standards for arsenic.

C. King and Kennedy Estates

This subdivision is located on Loveville Road (MD 247), south of Three Notch Road (MD 235), and is served by a community water system that is operated by the Metropolitan Commission. Water is supplied by two wells (70 gpm), a storage tank (15,000 gallons), and fire hydrants. Water is chlorinated. The system will ultimately serve 70 units. As of January 2007, 51 units were served.

D. Mulberry South

26 dwelling units will be served by this system which is operated by the Metropolitan Commission and which consists of 2 wells (80 gpm total) a hydro-pneumatic storage tank (5,000 gallons), and chlorination. An additional well, installed in the Upper Patapsco formation to address the new arsenic rule, was placed in service in January 2007; this well is rated at 60 gpm. As of January 2007, 22 units have been connected to the system.

E. Villages of Leonardtown

This new subdivision is located at the Northern most end of Leonardtown at the intersection of Point Lookout Road (MD 5) and Budd's Creek Road (MD 234). It is operated by the Metropolitan Commission and consists of 1 well (120 gpm), a ground storage tank (83,000 gallons) and a standby generator. The community chlorinated water system currently serves 88 units.

F. Forrest Farm

This chlorinated water system with two wells (550 gpm), a ground storage tank (94,000 gallons) and a generator will serve 209 units, a community swimming pool and a recreation center, plus a contingency to accommodate failed septic systems for a total of 230 EDUs. The system is operated by the Metropolitan Commission and currently serves 113 units.

G. Remainder of the district

No other community water service is planned.

3.8.4 Flood Creek Sanitary District No. 4

This service area includes 13,216 acres along the Potomac River and is bounded on the north by Breton Bay. Portions shoreward of Medley's Neck Road (MD. 244), north of Poplar Hill Creek, are relatively flat. The Blake Creek watershed and the area northeast of Medley's Neck Road

(MD 244) rise sharply to 100 MSL (meters above sea level). The northeasterly portion of the district is in the pressure zone two (2) and the balance is in pressure zone one (1).

A. Wilderness Run and Kingston

191 dwelling units will ultimately be served by this system which is operated by the Metropolitan Commission and which is comprised of two wells and one storage tank (100,000 gallons). This system will also serve Kingston subdivision (101 units). As of January 2007, this system serves 185 units and the water is chlorinated.

B. La Grande Estates

Privately owned system.

C. Leonardtown Farms

Construction of dwellings began in 2007, and there will be 71 units at build-out. The chlorinated water system is operated by the Metropolitan Commission and consists of a 100 gpm well drilled to the Upper Patapsco aquifer and an 85,000 gallon elevated storage tank.

3.8.5 Piney Point Sanitary District No. 5

This service area covers 13,478 acres in the southern part of the County as a peninsula between the Potomac and St. Mary's Rivers, including St. George Island which is connected to the County by a bridge. With the exception of a small pressure zone two (2) area around St. Mary's Church in the northern sector, the entire service area is in pressure zone one (1). The highest concentration of development is currently in the Piney Point – Tall Timbers area, between St. George Creek and the Potomac River. Steuart's Petroleum maintains a bulk oil receiving terminal in this area, and the Harry Lundeberg School of Seamanship is located on St. George Creek. The Land Use Plan designates Piney Point as a Town Center.

A. Piney Point

This system is operated by the Metropolitan Commission and consists of one well (200 gpm), a reserve well, and a 30,000-gallon ground storage tank. Water is chlorinated. The system also serves Lundeberg School and will serve the Potomac Sands subdivision, a development which will ultimately include 45 dwelling units. This water system uses the existing 30,000 gallon ground storage tank and a tri-plex booster system for fire protection. An additional well is scheduled under the Metropolitan Commission CIB. Currently, 218 EDUs are served.

B. The Landings at Piney Point

This subdivision encompasses 95 lots. As of January 2007, 83 units are served. This system is comprised of two (2) wells and 180,000 gallon storage tank and is operated by the Metropolitan Commission. Water is chlorinated.

C. Remainder of the district

No other community water service is planned.

3.8.6 Lake Conoy Sanitary District No. 6

Southern-most in the County, this service area of 8,954 acres is triangular in shape and almost totally surrounded by water. The area has little topographic relief except in its north central region where elevations of up to 90 MSL (meters above sea level) are reached. District No. 6 lies wholly within pressure zone one (1). Growth in this service area will be minimal, and no community water systems are planned.

A. Point Lookout State Park

Point Lookout State Park is a Department of Natural Resources (DNR) facility. The park is located on the southern tip of St. Mary's County, at the confluence of the Potomac River and the Chesapeake Bay. The park is open year-round, and has 143 improved campsites. Maryland Environmental Services (MES) maintains the water supply and distribution for the entire park. There are two water systems that serve the needs of the park. The north system consists of one chlorinated well and a 25,000 gallon storage tank. System pressure is supplied by pumps. The south system consists of two chlorinated wells and one 7,000 gallon hydro-pneumatic tank. The approximately 4 miles of water distribution piping is composed of either PVC or ductile iron pipe. The combined total water production from both systems ranges from 9900 gpd in the winter to 31,700 gpd in the summer.

B. Remainder of the district

No other community water service is planned.

3.8.7 Carroll Pond Sanitary District No. 7

This area lies to the north of Service Area No. 6 and spans from the Chesapeake Bay to the St. Mary's River, encompassing 18,445 acres. High ground – up to 85 MSL (meters above sea level) – is concentrated between Point Lookout Road (MD 5) and Three Notch Road (MD 235). Shoreward the terrain transforms into large, relatively flat areas. With the exception of a small portion at the northern end, the entire area is within pressure zone one (1).

A. Webster Field

The Webster Field and Coast Guard Station system is operated by the Navy and consists of three wells, (680 gpm) and two storage tanks (425,000 gallon combined capacity). Due to continuous moderate growth at Webster, the Navy is planning for a new fire suppression tank in the next 5-7 years.

B. Remainder of the district

No other community water service is planned.

3.8.8 Pine Hill Run Sanitary District No. 8

This service area, the largest in the County, includes 51,570 acres, and is the population center of the County. Most of its population is clustered around the Naval Air Station, and within the Lexington Park – Great Mills – California Triangle, and includes the Lexington Park Development District stipulated by the land use plan. To the south, St. Mary's City and St. Mary's College constitute a second area of population concentration. This service area lies within pressure zone two (2) with the exception of the shore areas of the Patuxent River and a portion of the area west of St. Mary's City that are in pressure zone one (1). The Naval Air Station and St. Mary's College maintain proprietary systems.

There are several private water systems functioning within this district, all of which are listed on Table 3-2. These systems, while supplying acceptable domestic service, fall short of providing desirable fire protection. Many private systems also lack mains sized for adequate fire flow, and some have not provided fire hydrants within their network. This may be a problem warranting further investigation.

A. Lexington Park system

The majority of the population is serviced by a public system under the jurisdiction of the Metropolitan Commission. As of January 2007, the system is comprised of 22 wells and three

(3) elevated storage tanks (at Great Mills Road, Wildewood and Hickory Hills). A 1,000,000 gallon ground storage tank has been completed at First Colony. Some emergency support is currently available from one interconnection with the Naval Air Station system. All water is chlorinated. As of January 2007, the system currently serves 11,443 EDUs. Continuity of service and improved fire protection is the first priority in this water service area. In providing these services, it is planned that ultimately the urban development area as designated on the land use plan will be looped by 12-inch mains, and systematically reinforced with elevated and ground storage. The Lord Calvert and California Trailer Park wells may be turned over to the Metropolitan Commission and become a part of the Lexington Park system in the next 5 to 15 years. The following community water systems have been incorporated into the Lexington Park system:

(1) Wildewood

The Wildewood PUD consists of 884.8 acres of residentially zoned land (PDR 4.28 units/acre) and 33 acres of commercially zoned land. The June 1991 amendment to the PUD consisted of 347.9 acres (part of the total 884.8 acres) at PDR 4.28. As of June 2002 the majority of the commercial land is developed. One out parcel of approximately two acres remains to be developed. The residential land will support 3,792 dwelling units. Approximately 1,655 units have been built or approved and are being served by community water and sewerage, leaving 2,137 units for future development. New development within Wildewood will include approximately 100 to 150 units per year, with total build-out reached by the year 2020.

The impacts to the water and sewer infrastructure will be managed by improvements to these systems. The main portion of these improvements will be designed and phased in with development as warranted. Following are the existing and proposed future system components which will comprise the Wildewood PUD system at build-out.

In 1991 the Wildewood water system was tied into the Lexington Park System, thereby benefiting both systems by providing backup capacity in low pressure situations.

As of 2002 the system consists of three wells (two 100 gpm wells and a 200 gpm well) and three storage tanks (a 200,000 gallon elevated storage tank and two 7,500 gallon hydro-pneumatic tanks).

Future capacity will be provided by on site production wells. The projected capacity of these future wells (in addition to the three mentioned above) needed to accommodate the PUD to build-out is approximately 600 gpm based on maximum daily flow. This production is to come from a well with a capacity of 600 gpm. The new well is estimated to go on-line within 2008. Fire flow is provided by the existing 200,000 gallon elevated storage tank located within Wildewood. Design is underway for a new 750,000 gallon elevated water storage tank to support the full PUD build-out. The expanded distribution system will be sized in accordance with accepted engineering standards to carry the projected flows.

(2) Greenview Knolls

The Greenview Knolls water system is operated by the Metropolitan Commission. The system is comprised of one well at 115 gpm, one hydro-pneumatic storage tank at 80 gpm. Water is chlorinated. The system is designed to serve 393 dwelling units (340 are currently served). Greenview Knolls is connected to the Lexington Park water system, thereby benefiting both systems. No other improvements are planned. This system also serves the Greenview Knolls West community.

(3) Woods at Myrtle Point

The Woods at Myrtle Point is planned for connection to the Lexington Park system. Water supply and storage at First Colony was sized to take into account the needs of the Woods at Myrtle Point. It consists of an initial 130 units with a projected total of 490.

B. Southgate

The Southgate water system consists of one well (25 gpm), one ground storage tank (40,000 gallons) and one hydro-pneumatic tank (10,000 gallons). Water is chlorinated. The Metropolitan Commission operates the system. It is designed to serve 79 EDUs, as January 2007, 64 units are served.

C. Hollywood

The Hollywood water system consists of two wells 80 gpm & 100 gpm) and one storage tank (6,500 gallons). Water is chlorinated. The system is operated by the Metropolitan Commission. It is designed to serve 20 EDUs, and as of January 2007, 34 units are served. This system serves the former Hollywood Elementary School, which is currently an adult care center. The new Hollywood Elementary School is served by its own well. To meet current drinking water standards for arsenic, this system will be served by a new well drilled to the Upper Patapsco aquifer.

D. Fenwick Manor

The Fenwick Manor subdivision has a water system that is comprised of two wells (40 and 50 gpm), a 10,000-gallon hydro-pneumatic tank and a 10,000-gallon ground storage tank. Water is chlorinated. The system is operated by the Metropolitan Commission. It is designed to serve 101 EDUs, and as of January 2007, this system serves 83 EDUs. To meet the new arsenic rule, this system will either be tied into the Lexington Park Water System or a new well will be installed in the Upper Patapsco formation.

E. Fox Meadows

The Fox Meadows subdivision has a water system which is comprised of two wells (84 gpm) and a storage tank (5,000 gallons). Water is chlorinated. The system is operated by the Metropolitan Commission. It is designed to serve 34 EDUs, as of January 2007, 47 EDUs are served. Park Hall Elementary School is also served by this water system.

F. Callaway

Public water in Callaway is provided by two wells (250 gpm), a hydro pneumatic storage tank (15,000 gallons) and a 220,000 gallon ground storage tank located within the Hunting Quarter PUD. The water is chlorinated. The water system is designed to serve 180 EDUs and currently serves 120 as of October 2002. The system is operated by the Metropolitan Commission.

G. Cedar Cove

The Cedar Cove PUD has a water system which is comprised of 3 wells (total of 600 gpm) and storage tanks (100,000 gallons and 268,000 gallons). Water is chlorinated. The system is operated by the Metropolitan Commission. It is designed to serve 831 EDUs, as of January 2007, 940 EDUs are served.

H. Greenbrier

The water system consists of two wells (300 gpm) and a 15,000-gallon hydro-pneumatic tank. It is designed to serve 486 EDUs, as of January 2007, 268 EDUs are being served. The water is chlorinated and the system is operated by the Metropolitan Commission. A test well has been drilled.

I. Trailer parks:

(1) William E. Smith Trailer Park - 12 lots are served by a private water system that consists of a single 4" well (40 gpm) and four hydro-pneumatic tanks (40 gallons each). Water is not treated. No groundwater appropriation permit has been issued. In 2008 this site was being reviewed for redevelopment; reference Case No. 07-132-027. The redeveloped site will be served by the Greenbrier water system.
(2) Lexington Estates - Located on Three Notch Road (MD 235) south of Lexington Park. 76 lots (14,000-gpd average daily demand) are served two wells (25 gpm) and a 5,000-gallon hydro-pneumatic tank. The water is not treated. The system is operated by Williams Management Company. The hydro-pneumatic tank is due to be replaced because of water pressure problems. GAP: SM1966G003.
(3) Garrett Mobile Home Park - 32 lots (trailers, post office, gas station) are served by a private water system which consists of one well and two hydro-pneumatic tanks (500 gallons each) and two bladder tanks (50 gallons each). Water is not treated. System operator is the Cook Management Company. GAP: SM1969G003.
(4) Langley Trailer Park - 37 lots (average demand 9,000 gpd) are served by a private water system which consists of two wells and 3 bladder tanks (150 gallons each). Water is chlorinated. System operator is Charles Langley.
(5) Lord Calvert Trailer Park - 280 lots are served by a private water system that consists of one well (120 gpm), one hydro-pneumatic tank (10,000 gallons), and a storage tank (30,000 gallons). Water is chlorinated. System operator is Waring Associates. GAP: SM1952G002.
(6) California Trailer Park - 26 lots are served by a private water system which consists of two wells and two hydro-pneumatic tanks (3,000 gallons each). Water is not treated. The system is managed by Burke Management. GAP: SM1973G007. In 2008 this site was being reviewed for redevelopment; reference Case No. 05-132-019. The redeveloped site will be served by the Lexington Park water system.

J. St. Mary's College

Daily water production averages 93,000 gpd and increases to 260,000 gpd with the start of school in September. The water treatment facility serving the college consists of three wells, a 400,000-gallon water tower, and chlorine disinfection equipment. The three wells have a yield capacity ranging from 150-250 gallons per minute. The wells allow a total daily production yield of approximately 594,000 gallons per day based on an 18 hour per day pumping cycle. Water is distributed by a 12 inch trunk line made of cast iron.

The raw water for Wells #1, 5, and 6 require only chlorination to comply with the Safe Drinking Water Act limitations. Well no. 2 is no longer in service, but is used to monitor the ground water table. Wells # 3 and # 4 have both been abandoned. Total capacity of the three wells is slightly over 396,000 gpd, based on a 12-hour maximum pumping time for each well. For planning purposes the actual capacity should be assumed to be half of the maximum capacity, or 198,000 gpd. Current water demand for the college averages 93,000 gpd, with peak days exceeding 250,000 gpd.

K. Patuxent River Naval Air Station

This water system consists of four separate distribution systems fed by 16 active wells. There are 6 additional outlying well servicing individual areas. The combined storage capacity is 3.55 million gallons for fire suppression and 175,000 gallons for potable uses. The potable water is chlorinated and fluoridated. The base population averages 22,000 personnel. This includes military, civil service and contractor workforce.

3.8.9 Manor Run Sanitary District No. 9

This area includes 10,016 acres along a 7 mile frontage of the Patuxent River. From the shore of the river, it rises through relatively rugged terrain to Three Notch Road (MD 235). Shoreline areas are in pressure zone one (1) and the higher areas are in zones (2) and (3).

There are no community water systems in this area and the population projections indicate a minimal demand for such systems through the year 2012. No service is planned for this district.

3.8.10 Indian Creek Sanitary District No. 10

This water service area is in the northern most portion of the County, bounded on the east by the Patuxent River and on the west generally by Three Notch Road (MD 5). The area contains 20,954 acres, most of which is fairly rugged terrain.

A. Rolling Acres

The Rolling Acres water system which is operated by the Metropolitan Commission and consists of two wells (85 and 75 gpm), two 15,000 gallon ground storage tanks, a 10,000 gallon hydro-pneumatic storage tank, and a 100,000 gallon elevated storage tank. The elevated storage tank is located at Summit Hill. Water is chlorinated. The average use is 50,000 gpd. It is planned to serve 415 units, as of January 2007, 256 units are served. Rolling Acres, Summit Hill, Indian River Estates and Carroll Manor are connected to this water system.

B. Laurel Ridge

The Laurel Ridge subdivision has a water system which is comprised of two wells (112 and 100 gpm), a 15,000 gallon hydro-pneumatic storage tank, and a 100,000 gallon stand pipe. Water is chlorinated. The system is operated by the Metropolitan Commission. It is designed to serve 525 EDUs. As of January 2007, 205 EDUs are served. The remaining units will be built within the next 5 years.

C. Charlotte Hall Veterans Home

The Charlotte Hall Veterans Home is a facility for Maryland veterans located west of Three Notch Road (MD 5) near the junction with New Market Road (MD 6). It was opened in January 1985, and is operated by the Maryland Veterans Home Commission. The main building has two wings, one which provides domiciliary and residential care, and the other comprehensive nursing care. The home has facilities for 454 residents. There are approximately 200 staff working on three shifts. The water system is operated by Maryland Environmental Services.

The facility is served by a private water system that was constructed in 1984 when the home was built. Most of the system is in very good condition and was recently rehabilitated. The current rate of water consumption is 47,000 gpd. The water system consists of two water wells with chlorination systems, and an elevated 250,000 gallon storage tank. Well #1 is a 10-inch diameter submersible well with a yield of about 485 gallons per minute. It is located on the veteran's home campus adjacent to the water tower and treatment system. Well #12 is also a 10-inch diameter submersible well with a yield of about 380 gpm.

D. Charlotte Hall Community System

The Charlotte Hall water system consists of three wells and three water pumping stations. The system begins on the northbound side of Three Notch Road (MD 5), just below the New Market Road (MD 6) intersection. The system extends along the northbound side of Three Notch Road to the McKay's Plaza Shopping Center. As of January 2007, 117 units are being served. Full fire protection is provided to the Charlotte Hall service area. The water system is interconnected

to the Charlotte Hall Veteran's Home. This is a state-owned facility served by two wells and a 250,000 gallon elevated storage tank. A regulating valve was installed between the two water systems. If low pressure occurs, as during a fire, the valve automatically opens. Metropolitan Commission personnel regularly exercise the valve. On at least two occasions, the valve has worked efficiently when major fires occurred in the Charlotte Hall area.

(1) Charlotte Hall #1: Water station #1 is located at the farmers market and consists of one well with a capacity of 106 gpm, a 10,000 gallon hydropneumatic tank, and a 30,000 gallon ground storage tank.
(2) Charlotte Hall #2: Water station #2 is located at the Charlotte Hall Business Park and consists of one 121 gpm well.
(3) McKay's Plaza: McKay's Plaza is the location of the Charlotte Hall water system's third water station. It consists of one 45 gpm well, a 10,000 gallon hydropneumatic tank, and a 30,000 gallon ground storage tank.

E. Persimmon Hills

This system has one well at 112 gpm. The chlorinated water system is operated by the Metropolitan Commission and consists of a 200 gpm well drilled to the Patapsco aquifer and a 75,000 gallon elevated storage tank. 122 units are planned to be built, and approximately 20 units per year will be built. The Ben Oaks subdivision adjacent to Persimmon Hills will contain 197 residences at build-out, and will be served by the Persimmon Hills System. As of January 2007, 84 units are served by this system.

F. Wild Goose Crest

This 25 unit subdivision is served by a chlorinated water system that is operated by the Metropolitan Commission. It is comprised of a 32 gpm well drilled to the Patapsco aquifer, a 44,500 gallon elevated storage tank, a triplex pumping system and a generator.

G. Hearts Desire

Community water system with one well at 128 gpm. As of January 2007, 24 units are being served.

H. Remainder of the district

No further service is planned.

3.9 Water Problem Areas

Water problem areas consist of the inadequate portions of community systems and areas where individual systems are experiencing difficulties in providing a potable supply of sufficient quantity and quality; or areas where such systems are not capable of providing a fire flow that is adequate to protect structures that are considered to be of sufficient occupancy hazard to warrant a fire flow, and are also located in sufficient proximity to other structures to present a risk of conflagration; or areas which adversely affect the fire insurance premium ratings of a community water system that does have an adequate fire flow. The National Fire Code requires that the fire flow address only the single largest potential fire event.

3.10 Financing

The Metropolitan Commission is responsible for providing public water service throughout the County's jurisdiction. Several methods are available to pay for public water facilities. The annual income from all sources should equal the debt service on borrowed funds, capital construction costs, administrative, operation and maintenance costs.

3.10.1 Charges to Aid in Construction

Design and construction costs for new water systems or extensions of existing systems that are intended to serve only new developments are paid entirely by the developer under a public works agreement with the Metropolitan Commission. When the new systems are completed and approved by the Commission, they are required by local law to be dedicated to the Commission for the sum of one dollar. If the Commission finds it necessary to increase the capacity of the new water system in order to serve other existing or projected public needs, it has the authority to construct the facilities and require the developer to pay a proportionate share of the cost.

3.10.2 System Improvement Charge

With the passing of Maryland House Bill 969 in April 2007, a rate restructuring was approved that eliminated the collection of Benefit Assessment Charges. This established a new per EDU assessment, called the System Improvement Charge, which will be used to finance the cost of upgrading and replacing existing facilities, as well as include the cost of redistributing the outstanding debt service on bonds that have been previously issued by the Commission. The creation of the System Improvement Charge will average the cost of upgrades and replacements over all of the Commission's customers, instead of just the few who are served by the specific improvements.

3.10.3 Capital Contribution Charge

Paid by new customers at the time of connection, Maryland House Bill 969 established a per EDU capital contribution charge to cover the construction costs of new water infrastructure. This charge will be based on the cost of building new water infrastructure as well as extending existing infrastructure to existing neighborhoods using a multi-year, multiple project basis consistent with the Metropolitan Commission's Six Year Capital Improvement Plan.

3.10.4 Water Service Charges

The charges are primarily for, but not limited to, payment of administrative, maintenance and operation costs. The amounts of the charges are changed by the Metropolitan Commission from time to time to reflect projected expenditures. The volume of water consumed is metered wherever practical, but the charges are otherwise based upon a flat rate times the standard volume for the number of equivalent dwelling units connected. The amount of these charges shall be fixed by the Metropolitan Commission from time to time.

3.10.5 Developer Financing

Developer financing is a widely accepted method of providing water facilities. The developer constructs the facilities under a Public Works Agreement with the Commission, and recovers his investment as part of lot or home costs. The buyer amortizes the capital cost as part of his mortgage payment, and the facilities are eventually deeded to the Metropolitan Commission as required by Board of County Commissioners Resolutions No. 71 13 and 71 22. Construction of the facilities must be in accordance with the St. Mary's County Standard Specifications for Water and Sewerage Construction.

3.10.6 Bonding

St. Mary's County and the Metropolitan Commission should pursue bond issues to finance privately owned projects in order to expand infrastructure in designated growth areas.

Table 3-1 Projected Water Supply Demands and Planned Capacity

Water System Name	Total Capacity (EDU's)	EDU's Allocated	Not Allocated	Gallons per EDU	Capacity (MGD**)	Average Production June 2013	Projected Demand 2017	Planned Capacity (MGD)
Ben Oaks/ Persimmon Hills	200	181	19	230	0.046	0.053	0.074	0.046
Birch Manor	100	100	0	210	0.021	0.019	0.021	0.021
Breton Bay	443	371	72	275	0.122	0.092	0.127	0.130
Cedar Cove	831	1003	-172	210	0.175	0.166	0.175	0.175
Charlotte Hall	1,300	202	1098	1,015	1.320	0.072	0.074	1.320
Charlotte Hall Veterans Home								
Christmas Tree Farm Trailer Park								
Country Lakes	1,200	1108	92	250	0.300	0.272	0.343	0.340
Fenwick Manor	101	85	16	215	0.022	0.017	0.220	0.022
Forrest Farm	230	212	18	250	0.058	0.090	0.035	0.058
Fox Meadow	34	47	-13	250	0.009	0.009	0.009	0.009
Garrett Park Mobile Home Park					.0065			
Greenbrier	486	422	64	220	0.107	0.076	0.074	0.107
Grandview Haven		37			0.035			
Hearts Desire	24	24	0	125	0.003	0.0025	0.074	0.003
Holland Forrest Landing	49	51	-2	180	0.009	0.009	0.009	0.009
Hunting Quarter	500	260	240	205	0.103	0.055	0.065	0.103
King & Kennedy	70	62	8	340	0.024	0.015	0.024	0.024
Langley Trailer Park								
Laurel Ridge	209	206	3	235	0.049	0.055	0.150	0.049
Leonardtown	3,000	1,655	1345	250	0.750	0.420	0.760	0.750
Lexington Mobile Home Co., LLC					0.018			
Lexington Park*	15,393	14,982*	411	260	4.002	2.750	3.739	4.002
Leonardtown Farm	71	71	0	300		0.021		
Lord Calvert Trailer Park					0.115			
Mount Pleasant Water Co., Inc.					0.015			

Water System Name	Total Capacity (EDU's)	EDU's Allocated	Not Allocated	Gallons per EDU	Capacity (MGD**)	Average Production June 2013	Projected Demand 2017	Planned Capacity (MGD)
Mulberry South	26	23	3	200	0.005	0.004	0.005	0.005
Patuxent Naval Air Station (NAWCAD)					0.120			
Piney Point	300	245	55	280	0.084	0.046	0.084	0.084
Piney Point Landings	95	86	9	260	0.025	0.018	0.025	0.025
Rolling Acres	250	257	-7	220	0.055	0.055	0.074	0.055
Southgate	90	69	21	100	0.009	0.009	0.008	0.009
St. Clement's Shores	240	226	14	215	0.052	0.034	0.060	0.060
St. Mary's College								
Villages at Leonardtown	88	88	0	250	0.022	0.028	0.020	0.022
Wicomico Shores	1,191	463	728	170	0.202	0.097	0.098	0.202
Wild Goose Crest	25	22	3	250		0.006		
Wilderness Run / Kingston	190	186	4	190	0.036	0.047	0.043	0.043

* Includes First Colony, Town Creek, Great Mills, Wildewood, St. Mary's Industrial Park, Abberly Farms

** Allocated Average

Source: Metropolitan Commission, Leonardtown Government, St. Mary's County Department of Land Use and Growth Management, MDE

Table 3-2 Inventory of Existing Community System Appropriations

COMMUNITY WELLS	GAP NUMBER	AQUIFER	GAP AVG MGD	GAP MAX MGD
Wicomico Shores	SM1972G001	Upper Patapsco	0.150	0.200
Birch Manor	SM1974G035	Aquia	0.025	0.0375
Country Lakes	SM1976G003	Aquia	0.1608	0.410
Country Lakes	SM1976G103	Upper Patapsco	0.1072	0.410
St. Clement's Shores	SM1965G002	Aquia	0.022	0.0308
St. Clement's Shores	SM1965G102	Upper Patapsco	0.033	0.0462
Breton Bay	SM1969G017	Aquia	0.010	0.150
	SM1969G117	Upper Patapsco	0.142	0.228
King & Kennedy	SM1971G004	Aquia	0.026	0.039
Mulberry South	SM1984G033	Aquia	0.001	0.0096
	SM1984G233	Upper Patapsco	0.0057	0.0096
Wilderness Run/Kingston	SM1986G060	Aquia	0.048	0.077
Piney Point	SM1970G010	Aquia	0.036	0.048
Piney Point	SM1970G210	Upper Patapsco	0.086	0.110
Landings @ Piney Point	SM1988G002	Aquia	0.030	0.060
Lexington Park* (22)	SM1998G021	Upper Patapsco	0.473	0.700
* Includes Hickory Hills	SM1998G021			
	SM1946G001	Aquia	1.6453	2.322
	SM1976G014	Aquia	0.350	0.585
	SM2007G007	Upper Patapsco	0.650	0.975
St. Mary's Industrial Park*	SM2007G006	Upper Patapsco	0.386	0.6562
*Includes Broad Creek	SM2007G006			
Abberly Farms	SM2003G016	Upper Patapsco	0.625	0.9375
Fenwick Manor	SM1974G043	Aquia	0.005	0.040
	SM2008G001	Upper Patapsco	0.027	0.040
Fox Meadow	SM1987G001	Piney Point	0.010	0.018
Hunting Quarter	SM1983G016	Aquia	0.076	0.114
Cedar Cove	SM1973G003	Aquia	0.210	0.293
Rolling Acres	SM1974G025	Aquia	0.0592	0.0988

Table 3.2 Inventory of Existing Community System Appropriations (Continued)

COMMUNITY WELLS	GAP NUMBER	AQUIFER	GAP AVG MGD	GAP MAX MGD
Laurel Ridge	SM1986G016	Aquia	0.056	0.094
Charlotte Hall	SM1966G006	Aquia	0.170	0.255
Persimmon Hills	SM1989G010	Aquia	0.0397	0.0662
Ben Oaks/Persimmon Hills	SM1989G110	Upper Patapsco	0.060	0.099
Forrest Farm	SM2000G004	Upper Patapsco	0.0705	0.120
Greenbrier	SM1995G009	Aquia	0.053	0.100
	SM1989G074	Upper Patapsco	0.053	0.100
Hearts Desire	SM1985G051	Magothy	0.0053	0.0075
Holland Forrest	SM1990G065	Aquia	0.003	0.021
Holland Forrest	SM1990G165	Upper Patapsco	0.012	0.021
Villages of Leonardtown	SM1998G025	Aquia	0.024	0.041
Southgate	SM1991G021	Aquia	0.0136	0.0227
Town of Leonardtown Wells 3 & 4	SM1967G003	Aquia	0.060	0.650
Town of Leonardtown Well 5	SM1967G103	Upper Patapsco	0.750	1.100
Leonardtown Farm	SM2004G014	Upper Patapsco	0.021	0.0351
Wild Goose Crest	SM2004G002	Upper Patapsco	0.006	0.009
Grandview Haven	SM2005G004	Upper Patapsco	0.035	0.0585
Charlotte Hall	SM2016G004(01)	Upper Patapsco	0.068	0.255
Patuxent Naval Air Station[1]	SM1974G118(05)	Piney Point	0.100	0.210
Patuxent Naval Air Station[2]	SM1974G118(06)	Aquia	0.710	1.070
Patuxent Naval Air Station[3]	SM2001G012(02)	Upper Patapsco	0.120	0.170
St. Mary's College	SM1969G001	Aquia	0.130	0.220
Charlotte Hall VA Home	SM1981G018	Aquia	0.070	0.100
Mt. Pleasant Water Co.	SM1972G004	Aquia	0.015	0.022
Cook's Trailer Court (Garrett TP)	SM1969G003	Piney Point	0.0065	0.0108
Christmas Tree Farm TP				
Langley TP				
Lexington Mobile Home Co.	SM1966G003	Piney Point	0.018	0.025

Per MDE WMA Comment 7/24/17 & 12/11/18

Table 3-2A MetCom Rates of Groundwater Withdrawal by Aquifer for 2013

Aquifer	Actual Withdrawal in Million Gallons per Day (MGD)	Allocated Average MGD	Allocated Maximum MGD
Aquia	2.140	2.8936	4.6596
Magothy	0.00	0.0053	0.0075
Piney Point	0.075	0.240	0.378
Upper Patapsco	1.588	2.9424	4.7551

Source: MetCom, MDE

Table 3-3 Water Problem Areas

Sanitary District	Location	Nature of Problem	Options
8th	Fenwick Manor	Arsenic level in excess of 10 parts per billion (ppb)	Deep well or connection to the Lexington Park water system by Dec 2008
8th	Hollywood	Arsenic level in excess of 10 parts per billion (ppb)	Deep well or connection to the Lexington Park water system by Dec 2008
3rd	Holland Forrest	Arsenic level in excess of 10 parts per billion (ppb)	Drill a new well by Dec 2008
Source: St. Mary's County Health Department and MetCom			

Table 3-4 MetCom Capital Improvement Budget FY18-23 (Water)

Project Name	Status	Project ID	Prior Approved	FY 2018	FY 2019	FY 2020	FY2021	FY2022	FY2023	TOTAL
Water Lines										
Patuxent Park Water Main Replacement Phase 3	4	8122WR	$2,384,360							$2,384,360
FDR Blvd WM Ph. 1B (1st Colony/Old Rolling Rd)	4	8151WM	$631,300 [A]							$631,300
Piney Point Water System	3	5111WR	$2,665,000							$2,665,000
Patuxent Park Water Main Replacement Phase 4	2	8161WR	$2,231,500							$2,231,500
FDR Blvd WM Ph. 1 Amber Drive (County Phase 1A)	4	8171WM	$384,750							$384,750
FDR Blvd WM Ph. 1C (Old Rolling Road to Kinnegad Drive)	3	8172WM	$743,850							$743,850
Shangri-La Dr. & S. Essex Dr. Water Main Replacement	2	8171WR	$185,000				$2,153,096 [D,I]			$2,338,096
FDR Blvd WM Ph. 3 (MD237 to Pegg Road)	1	8173WM	$176,400		$1,755,736 [C]	$1,704,080 [C]				$3,636,216
Southampton Water System Rehabilitation	1				$267,000 [I]		$1,629,205 [I]		$1,408,742 [I]	$3,305,947
St. Clements Shores Water System Replacement	3	2101WR	$5,498,000			$3,508,500				$9,006,500
Breton Bay Water System Replacement	1				$300,000 [E,I]			$3,235,650 [F,I]		$3,535,650
Town Creek Water System Phase 1 - 3	2	8081WR	$595,000	$2,749,500			$2,639,500 [H]		$410,075 [D]	$6,394,075
Hollywood Water Systems Connector & PH 2 Replacement	1	8141WM						$141,894 [G]		$141,894
Water Main Connection Crossing MD 5 - Charlotte Hall	1								$575,550 [H]	$575,550
Water Lines Subtotal =			**$15,495,160**	**$2,749,500**	**$2,322,736**	**$5,212,580**	**$6,421,801**	**$3,377,544**	**$2,395,367**	**$37,974,688**
Difference from FY 2017 CIB			**-$1,388,477**	**-$2,630,500**	**-$3,808,814**	**$2,573,080**	**$2,025,634**	**$377,544**	**$2,395,367**	**-$456,166**

Status:
1 Planning Phase
2 Design Phase
3 Contract Phase
4 Construction Phase
5 Close-out Phase

A) Reduced from $1,508,300; actual bid pricing
B) Project(s) moved from FY2020 to FY2021
C) Project phased based on DPW&T's project
D) Project moved from FY2022 to FY2023 Design & Out Years Construction
E) Project added based on multiple breaks/repairs in aging system; estimated design budget
F) Project added based on multiple breaks/repairs in aging system; phasing updated
G) Moved from FY2019 to FY2022
H) Moved from FY2019 to FY2023
I) Amount based on updated cost estimate completed by consultant engineer

Project Name	Status	Project ID	Prior Approved	FY 2018	FY 2019	FY 2020	FY2021	FY2022	FY2023	TOTAL
Wells										
Charlotte Hall Well	4	0091WL	$559,500 [A]							$559,500
Hollywood Well at Broad Creek	4	8092WL	$724,500 [B]							$724,500
Hickory Hills Well	2	8081WL	$997,000							$997,000
Bay Ridge Well Replacement and Upgrade (Replacement for the Great Mills Commercial Center Well)	1	8091WL	$175,160				$1,873,692 [C,H]			$2,048,852
Well Subtotal =			**$2,456,160**	**$0**	**$0**	**$0**	**$1,873,692**	**$0**	**$0**	**$4,329,852**
Difference from FY 2017 CIB			**-$700,000**	**-$2,062,800**	**$0**	**$0**	**$1,873,692**	**$0**	**$0**	**-$889,108**

Water Storage Tanks (WST)										
Charlotte Hall WST	4	0091WT	$3,107,800							$3,107,800
Hollywood/Broad Creek WST	4	8092WT	$3,486,500							$3,486,500
Hickory Hills WST	2	8081WT	$6,297,977							$6,297,977
Bay Ridge WST (Concept Design)	2	8082WT	$126,000							$126,000
Greenbrier WST	1	8161WT	$200,000		$554,233 [D,H]					$754,233
St. Clements Shores WST	1				$225,000 [E,H]		$1,954,000 [F,H]			$2,179,000
Water Tank Inspections, Painting and Replacement	4	WO1717	$774,900	$623,700		$623,700 [G]		$623,700 [G]		$2,646,000
Water Storage Tanks (WST) Subtotal =			**$13,993,177**	**$623,700**	**$779,233**	**$623,700**	**$1,954,000**	**$623,700**	**$0**	**$18,597,510**
Difference from FY 2017 CIB			**$0**	**-$1,510,000**	**-$1,079,467**	**$0**	**$1,954,000**	**$623,700**	**$0**	**-$11,767**

Status:
1 Planning Phase
2 Design Phase
3 Contract Phase
4 Construction Phase
5 Close-out Phase

A) Reduced from $809,500; actual bid pricing
B) Reduced from $1,174,500; actual bid pricing
C) Moved from FY2018 to FY2021
D) Project did not make the MDE Funding list; therefore, moved from FY2018 to FY2019
E) Moved from FY2018 to FY2019
F) Moved from FY2019 to FY2021
G) Phasing updated
H) Amount based on updated cost estimate completed by consultant engineer

Table 3-4 MetCom Capital Improvement Budget FY18-23 (Water) – Continued

Project Name	Status	Project ID	Prior Approved	FY 2018	FY 2019	FY 2020	FY2021	FY2022	FY2023	TOTAL
Miscellaneous										
Radio Read Water Meters Project Phases 1 & 2	5	WO1112	$8,300,000							$8,300,000
Exterior Petty Building Upgrades	2	8131BD	$460,000							$460,000
Oversize Meter Project Phase 2	4	8121MW	$293,000							$293,000
Asset Management Software Upgrade (220,430 capitalized)	4	SW1201	$297,500							$297,500
Miscellaneous Water Line and Saddle Replacement	2	8172WR	$150,000							$150,000
Facilities Condition Assessment	1			$365,700 [A,H]						$365,700
Automatic Meter Reading (AMR) Upgrades	1			$212,500 [B]						$212,500
SCADA Safety and Security Upgrade	1			$125,000 [C]						$125,000
Financial Software Upgrade	1			$160,000 [D]						$160,000
King Kennedy Well & Ground Storage Tank Improvements	2	3-1-W	$757,310		$975,190 [E]					$1,732,500
Piney Point Water Station Upgrades	1		$250,000	$36,433 [F,H]	$394,025 [F,H]					$680,458
Industrial Park Water Station Upgrades	1				$236,250 [G]					$236,250
Miscellaneous Subtotal =			**$10,507,810**	**$899,633**	**$1,605,465**	**$0**	**$0**	**$0**	**$0**	**$13,012,908**
Difference from FY 2017 CIB			**-$1,176,190**	**$774,633**	**$1,605,465**	**$0**	**$0**	**$0**	**$0**	**$1,203,908**

Totals										
Water Lines			$15,495,160	$2,749,500	$2,322,736	$5,212,580	$6,421,801	$3,377,544	$2,395,367	$37,974,688
Wells			$2,456,160	$0	$0	$0	$1,873,692	$0	$0	$4,329,852
Water Storage Tanks (WST)			$13,993,177	$623,700	$779,233	$623,700	$1,954,000	$623,700	$0	$18,597,510
Miscellaneous			$10,507,810	$899,633	$1,605,465	$0	$0	$0	$0	$13,012,908
Subtotal			$42,452,307	$4,272,833	$4,707,434	$5,836,280	$10,249,493	$4,001,244	$2,395,367	$73,914,958
Capital Reserves[I]		7.5%	$3,184,000	$320,000	$353,000	$438,000	$769,000	$300,000	$180,000	$5,544,000
		Total=	**$45,636,307**	**$4,592,833**	**$5,060,434**	**$6,274,280**	**$11,018,493**	**$4,301,244**	**$2,575,367**	**$79,458,958**
Difference from FY 2017 CIB			**-$3,509,667**	**-$5,836,667**	**-$3,528,816**	**$2,766,080**	**$6,292,326**	**$1,076,244**	**$2,575,367**	**-$165,133**

Status:
1 Planning Phase
2 Design Phase
3 Contract Phase
4 Construction Phase
5 Close-out Phase

A) Moved from FY2019 to FY2018
B) Project added to install Automatic Read (AMR) water meters in existing non-metered and non-AMR properties.
C) Project added based on upgrade needs required for SCADA system monitoring equipment and radios along with general overhaul of system electronics
D) Project added to purchase complete financial software package
E) Project construction of WST moved to FY2019
F) Project construction phased between FY2018 and FY2019; budget increased based on relocation of water station on purchased Cobb Property
G) Project moved from FY2018 to FY2019; project added based on upgrade needs required for aging water storage facilities
H) Amount based on updated cost estimate completed by consultant engineer
I) Restricted Reserves requires budget amendment with CSMC to utilize

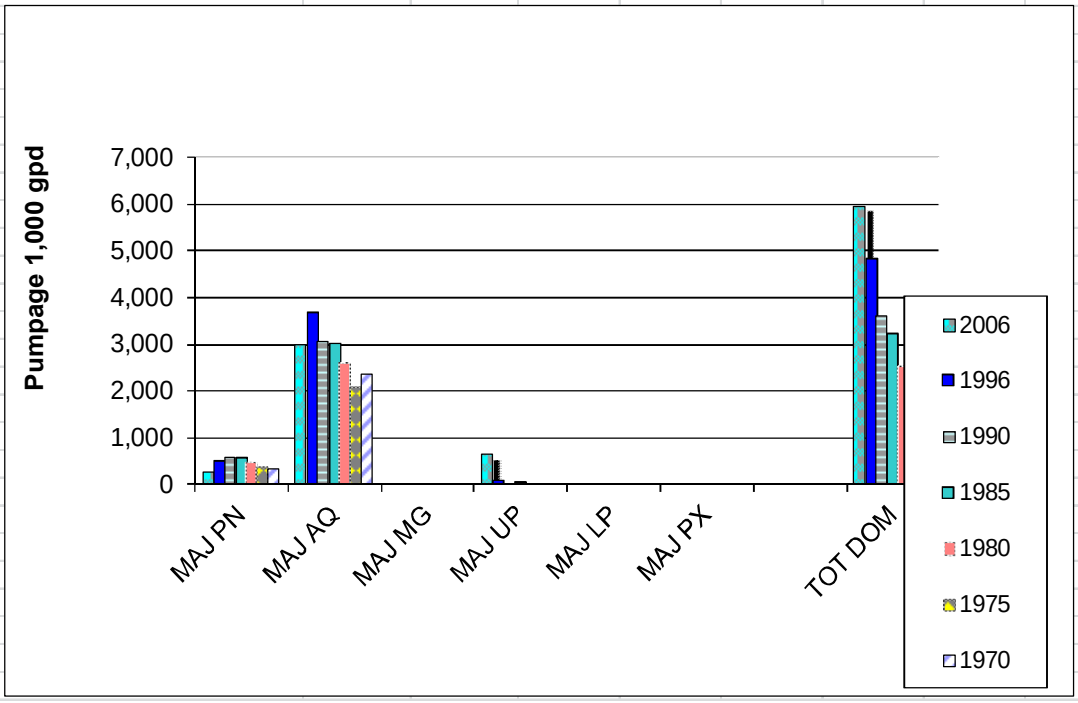
Table 3-5 Ground Water Use in the County 1970 - 2006

Rates of ground-water withdrawals for St. Mary's County for 1970-2006 by major users pumping more than 10,000 gallons per day and aggregated estimates for domestic and minor users, in thousand gallons per day (GPD)

Major Users by Aquifer:		2006	1996	1990	1985	1980	1975	1970
Piney Point- Nanjemoy	MAJ PN	253	509	593	579	463	367	342
Aquia	MAJ AQ	2,988	3,680	3,051	3,007	2,627	2,071	2,379
Magothy	MAJ MG	3	0	0	0	0	0	0
Upper Patapsco	MAJ UP	648	90	28	24	10	15	0
Lower Patapsco	MAJ LP	0	0	0	0	0	0	0
Patuxent	MAJ PX	0	0	0	0	0	0	0
Aggregated domestic and minor users	TOT DOM	5,980	4,830	3,611	3,240	2,540	2,170	1,851
Major users subtotal		3,892	4,279	3,672	3,610	3,100	2,453	2,721
Total		9,872	9,109	7,283	6,850	5,640	4,623	4,572

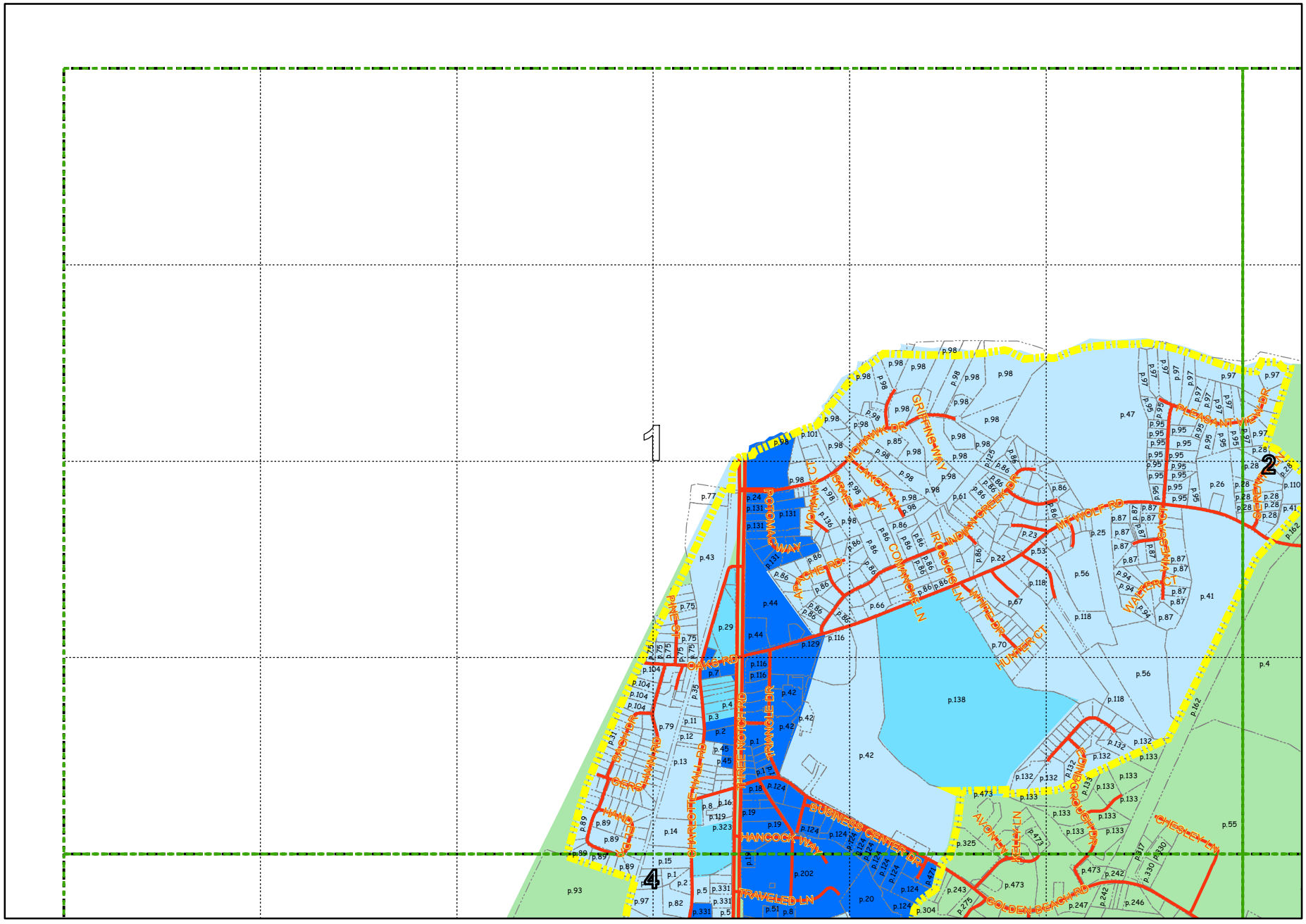
* all Patapsco

source: St. Mary's County Health Department



Water Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid
Growth Areas
Property Lines
Roads

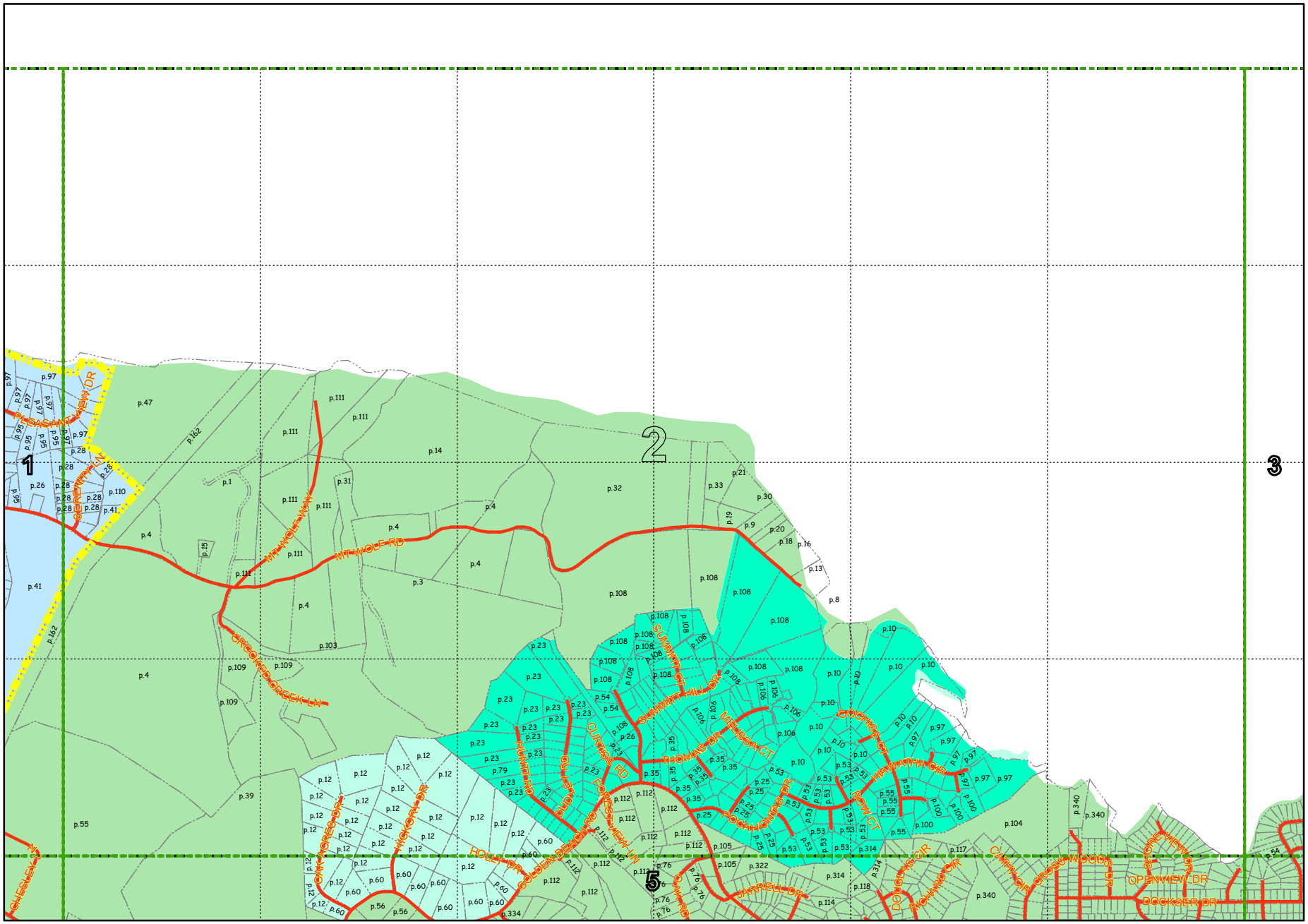
MAP 7

Water Category: W-1 | W-3D | W-6D | RW-1 | RW-D | NPS

2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid Growth Areas Property Lines Roads

MAP 2

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update

Water Service

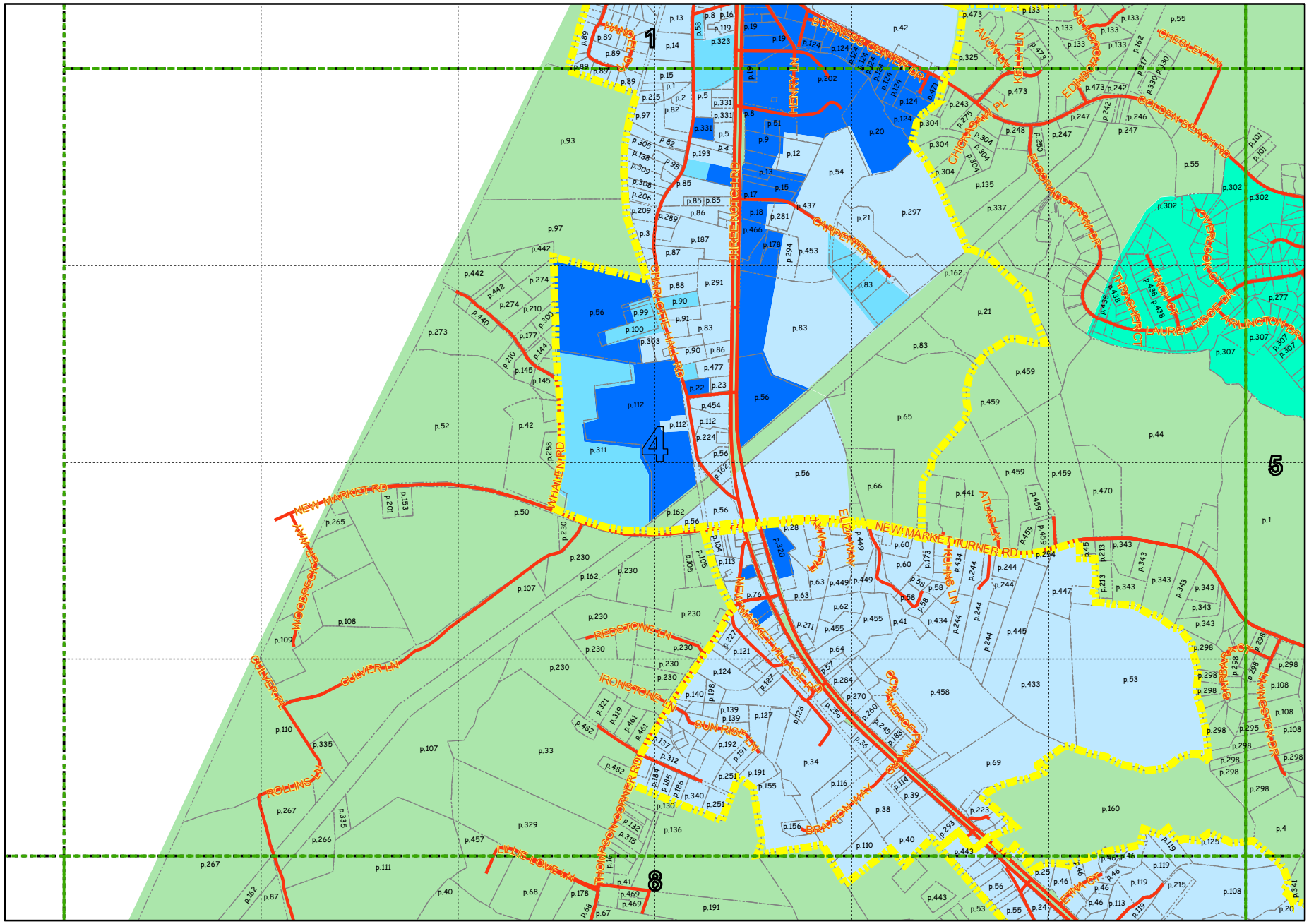
1,000 0 1,000 2,000 3,000 Feet

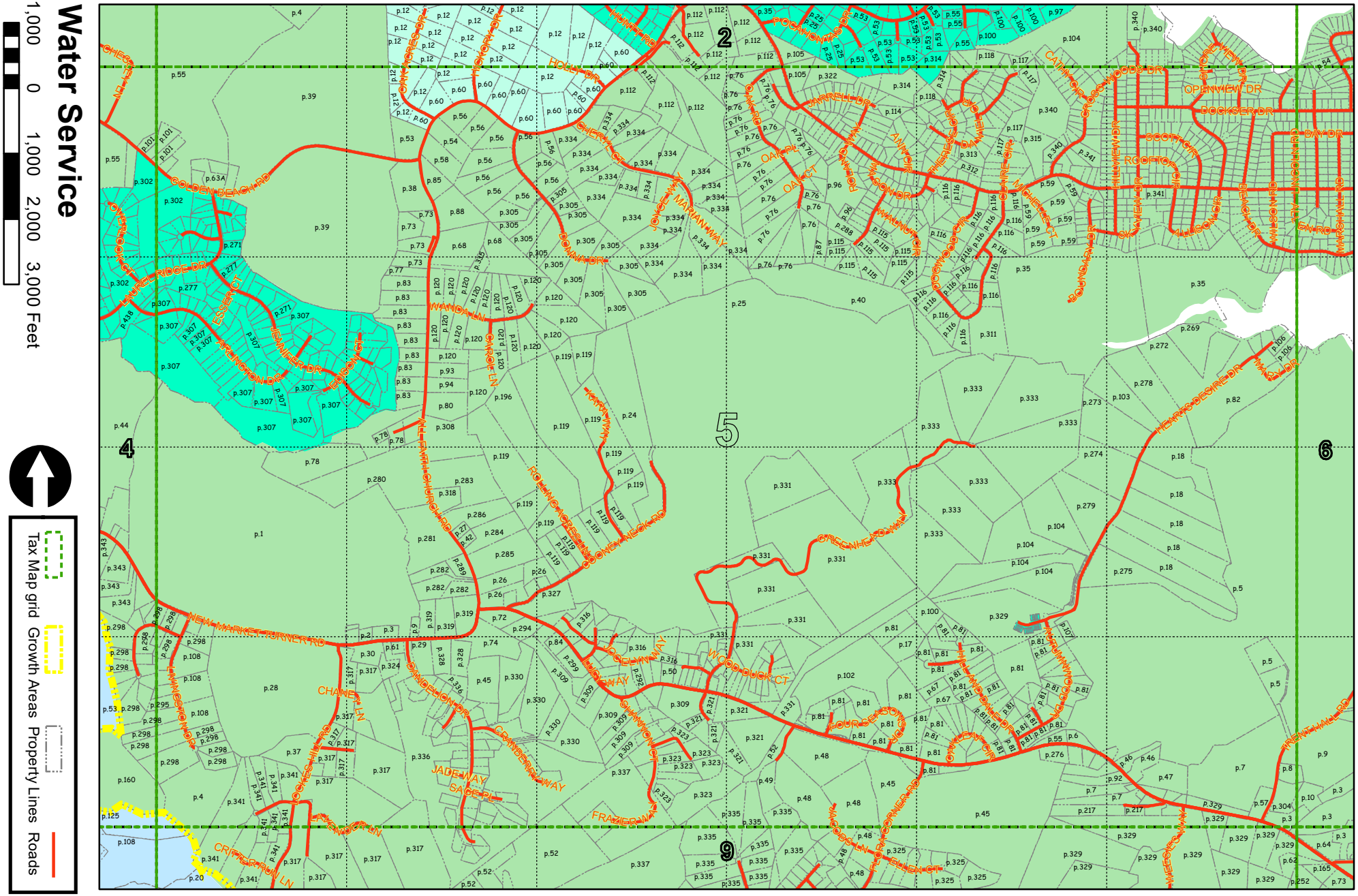
Tax Map grid
Growth Areas
Property Lines
Roads

MAP 3

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

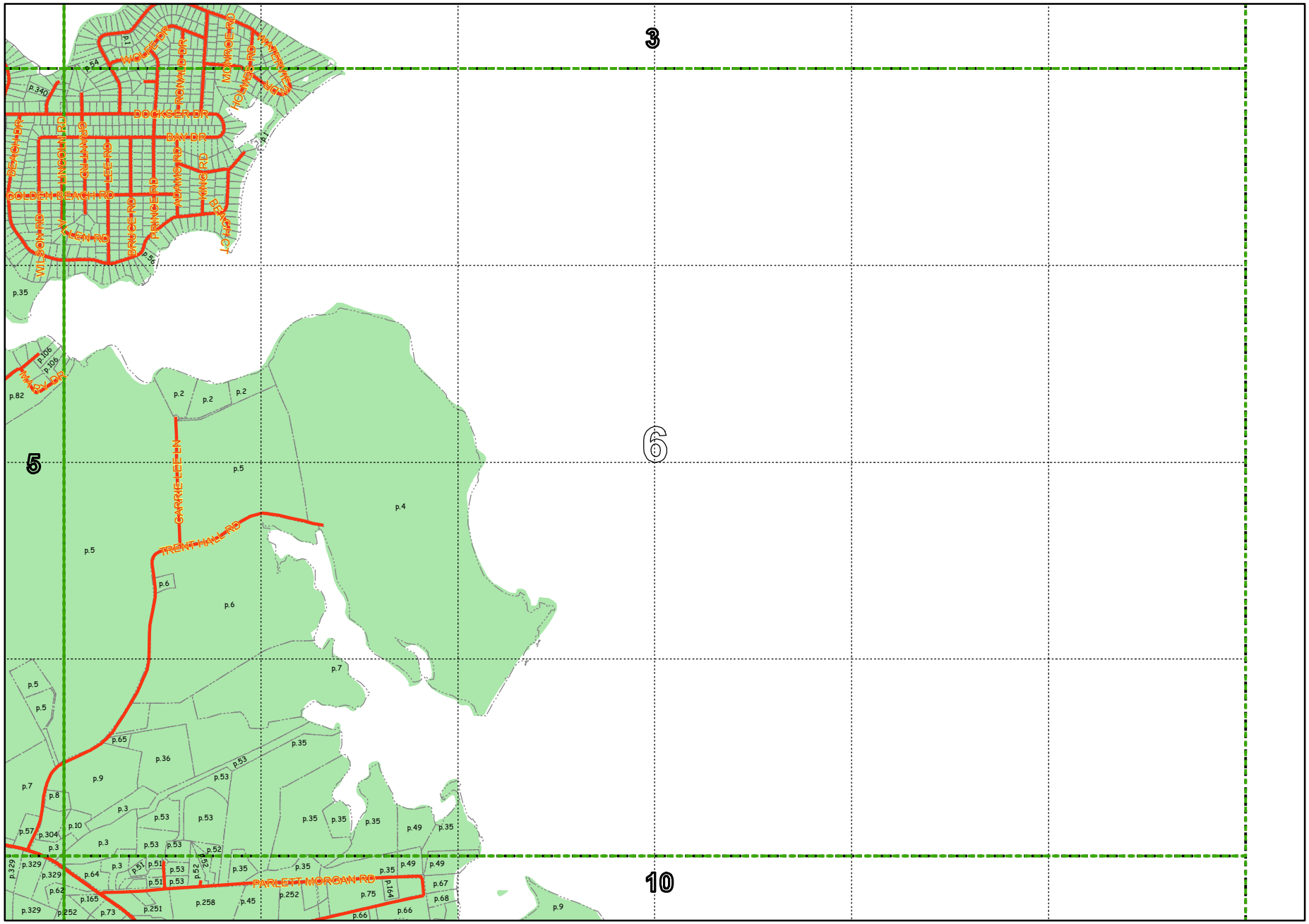
2017 Update


Water Service
1,000 0 1,000 2,000 3,000 Feet
Tax Map grid
Growth Areas
Property Lines
Roads
MAP
Water Category:
W-1
W-3D
W-6D
RW-1
RW-D
NPS
2017 Update


Water Service
1,000 0 1,000 2,000 3,000 Feet
Tax Map grid
Growth Areas
Property Lines
Roads
MAP 5
Water Category:
W-1
W-3D
W-6D
RW-1
RW-D
NPS
2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet

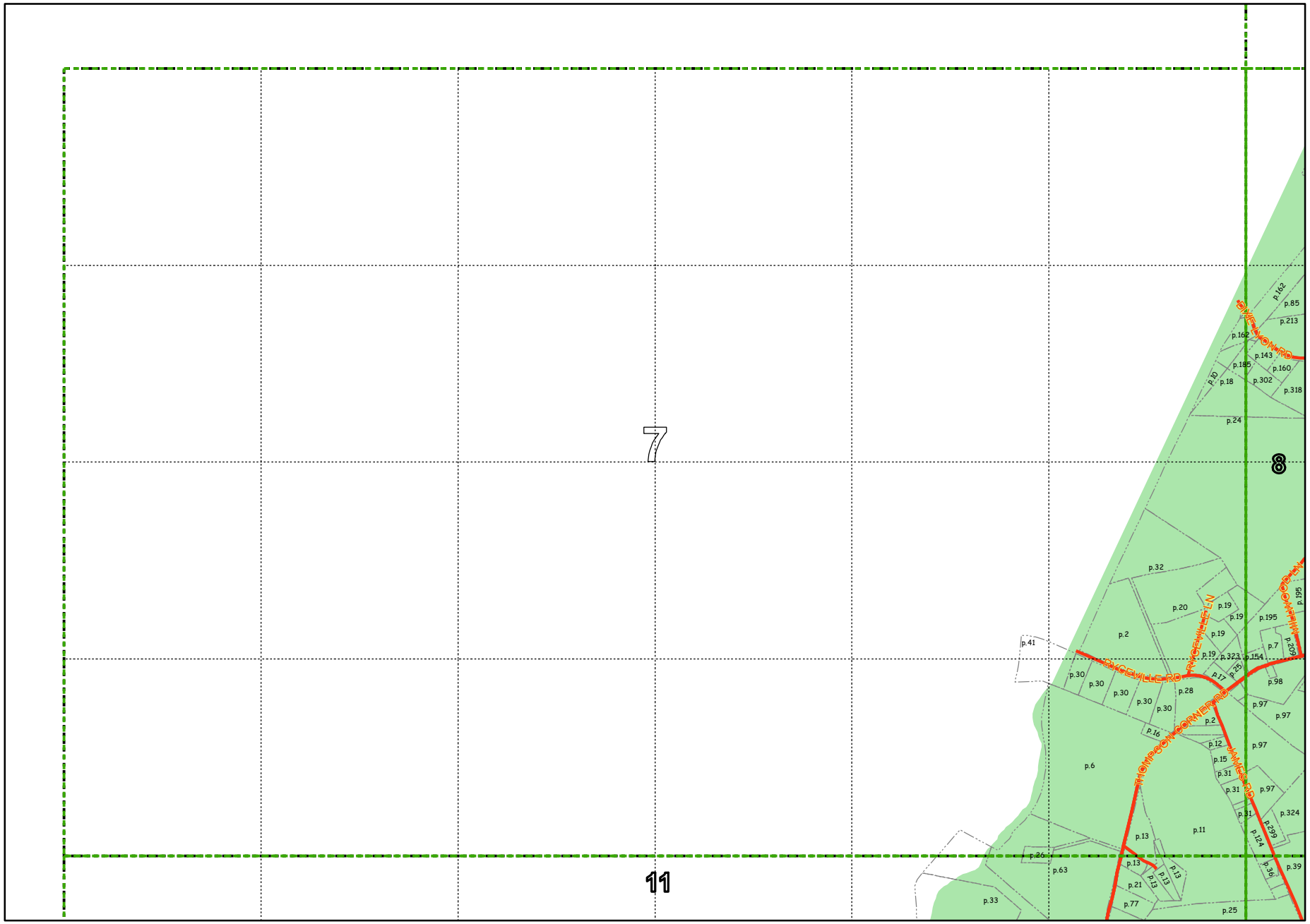


Tax Map grid
Growth Areas
Property Lines
Roads

MAP 6

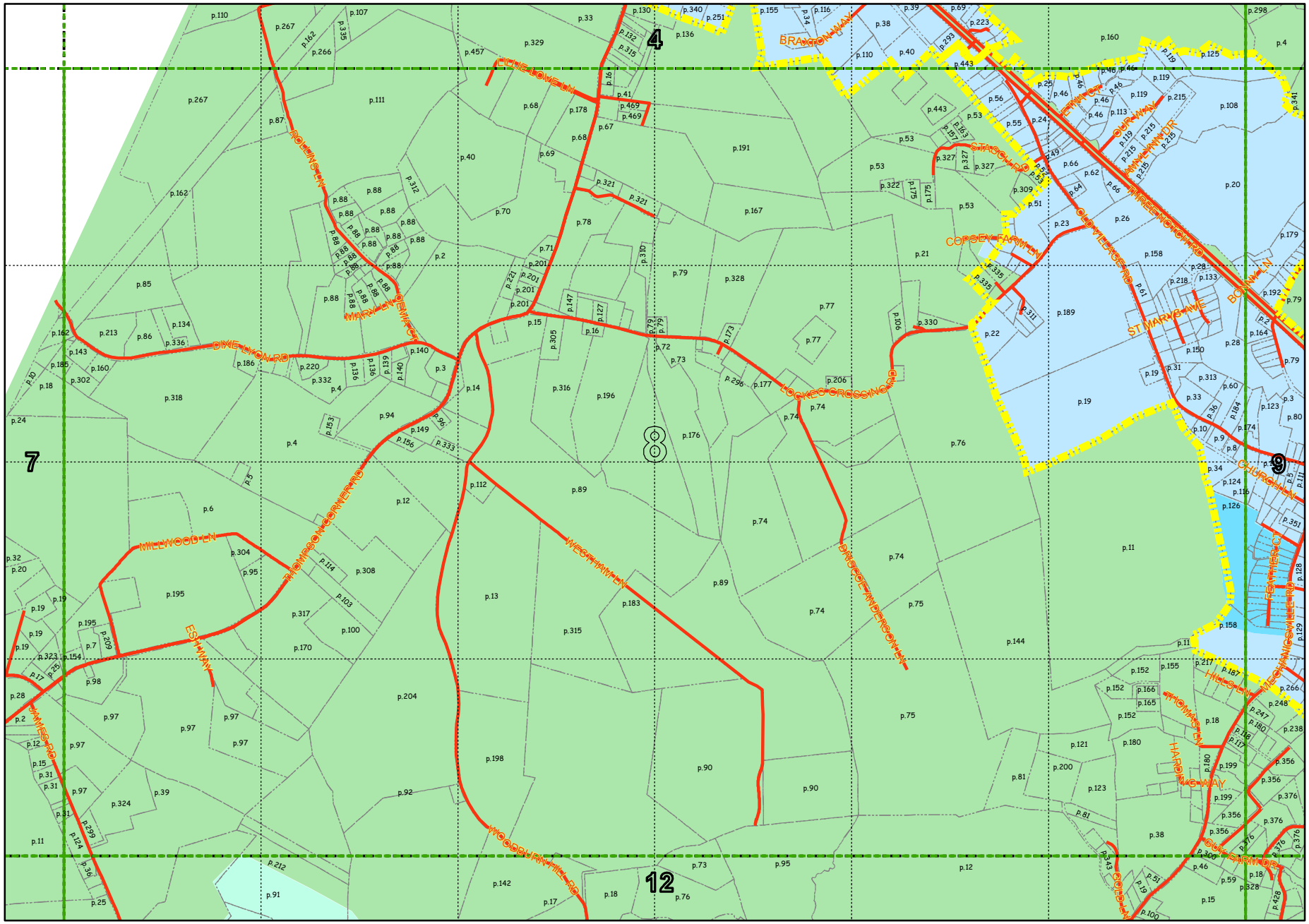
Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update


Water Service
1,000 0 1,000 2,000 3,000 Feet
7
8
11
Tax Map grid
Growth Areas
Property Lines
Roads
MAP 7
Water Category:
W-1
W-3D
W-6D
RW-1
RW-D
NPS
2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid Growth Areas Property Lines Roads

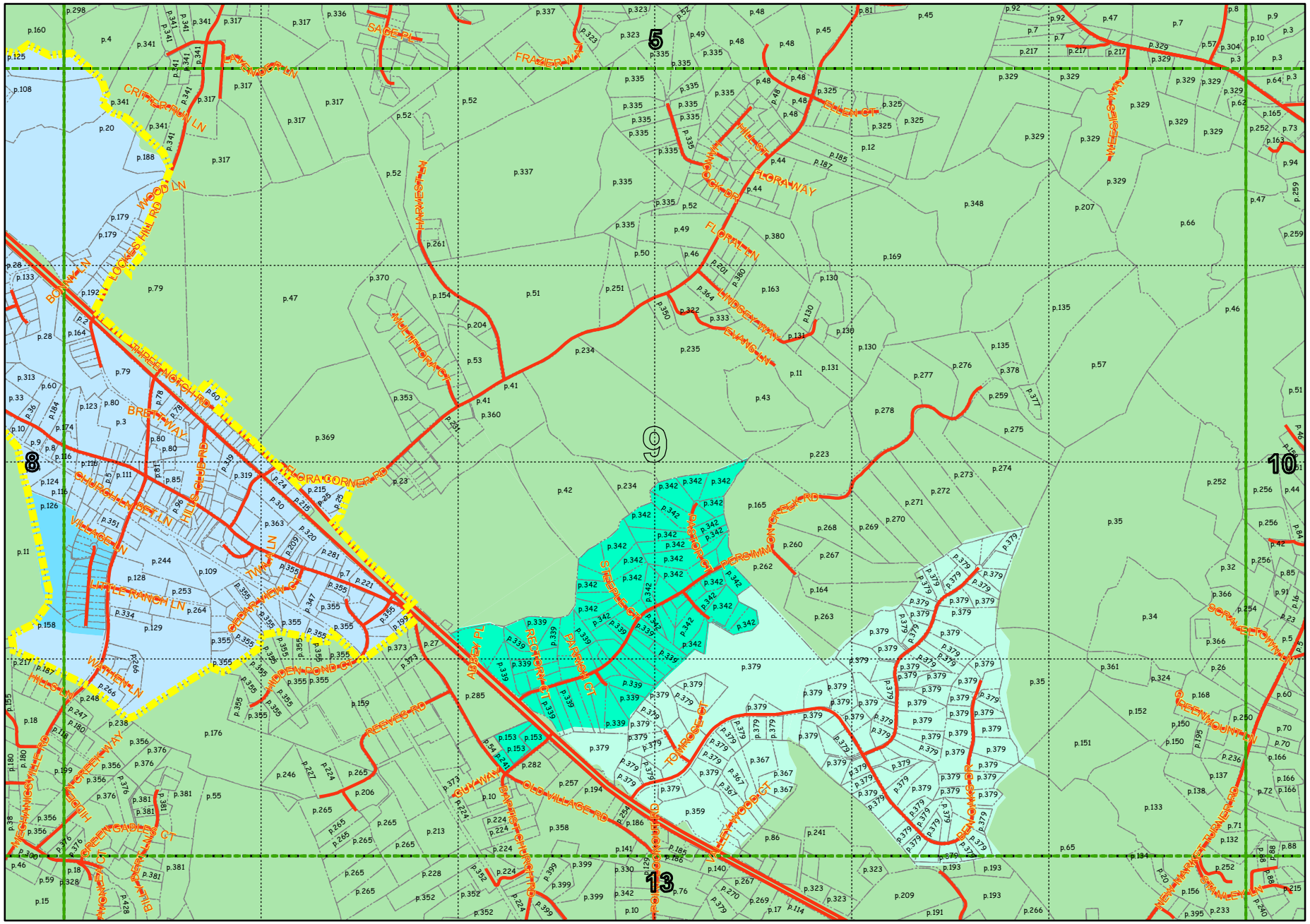
MAP 8

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet

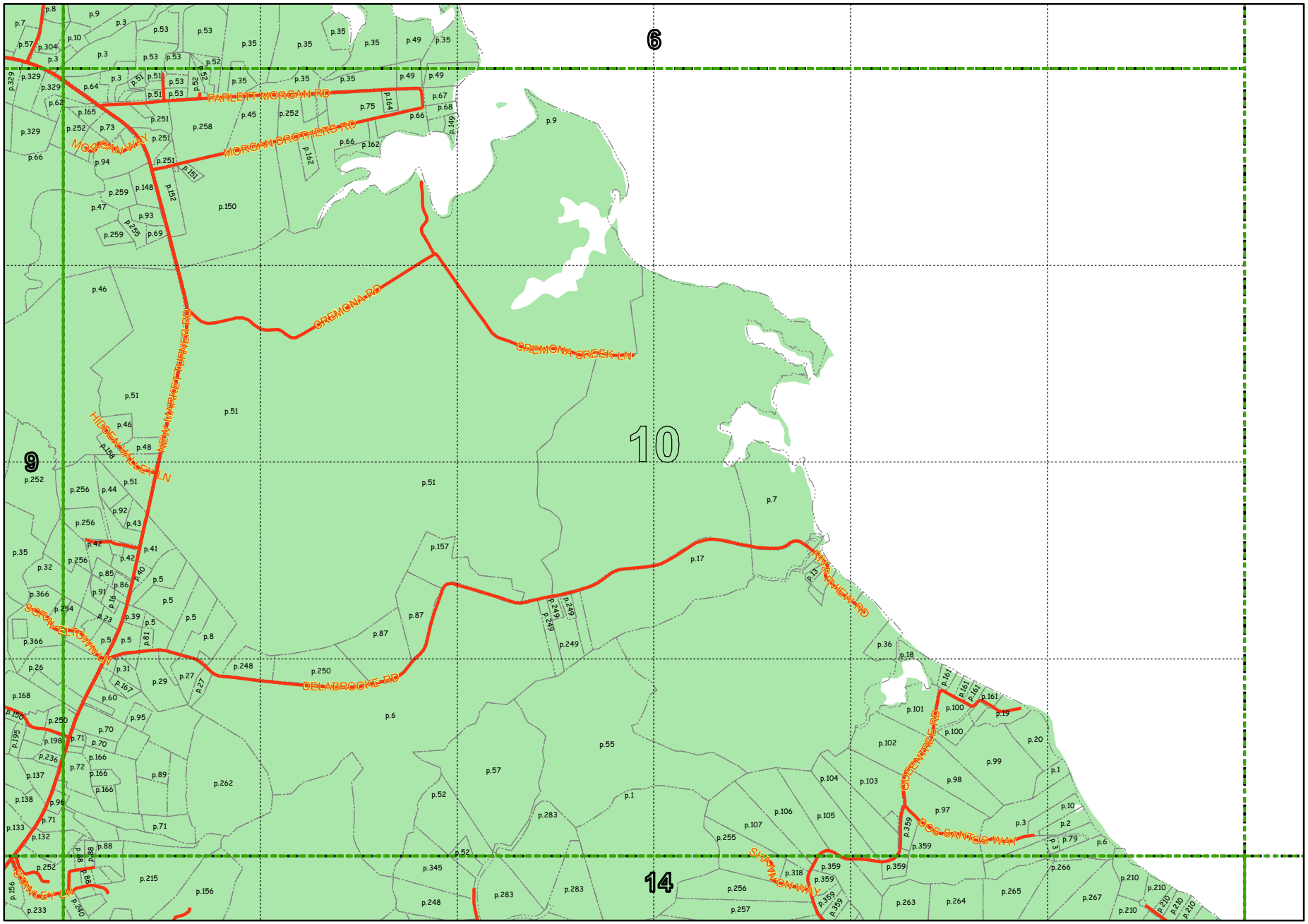


Tax Map grid | Growth Areas | Property Lines | Roads

MAP 9

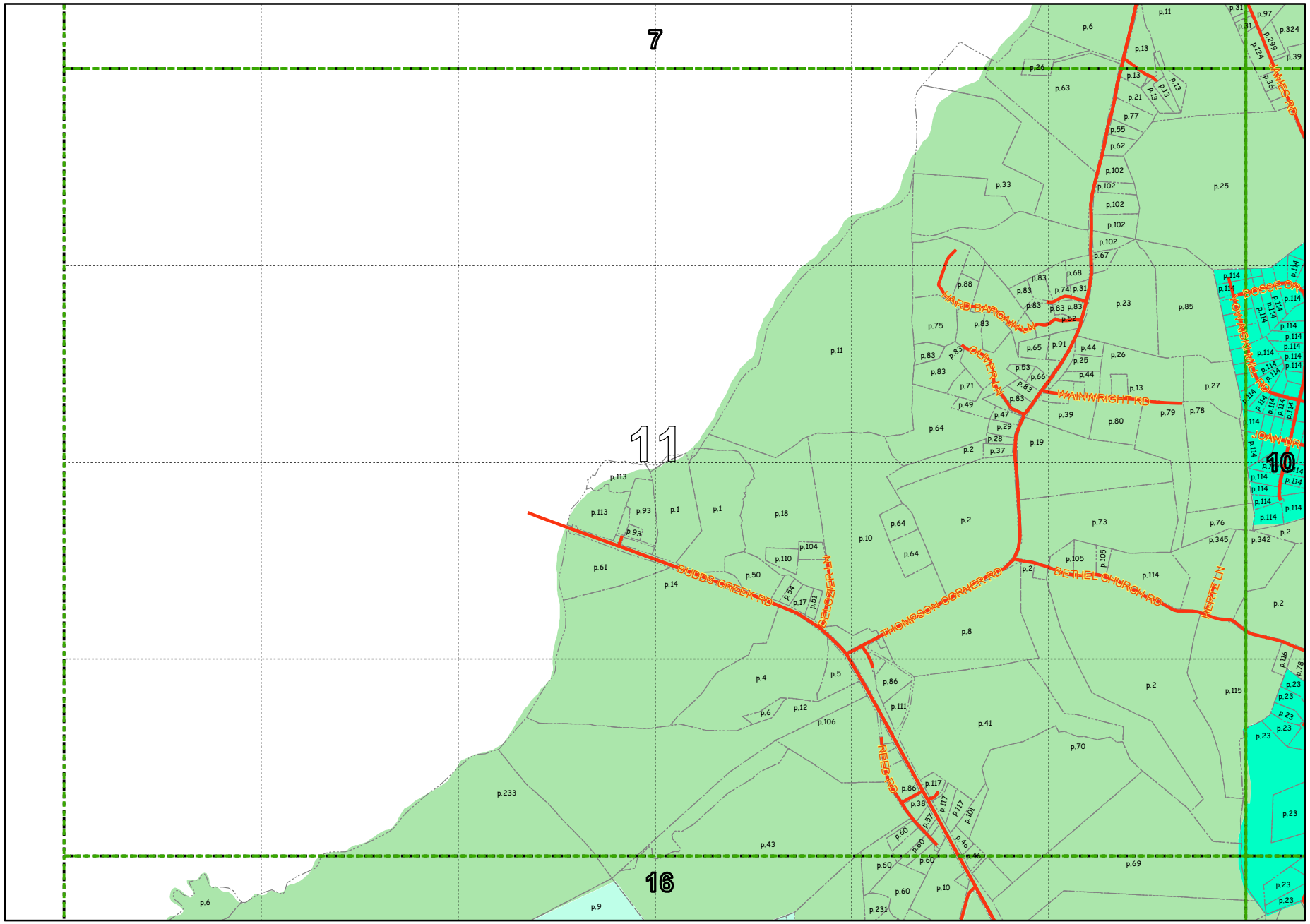
Water Category: W-1 | W-3D | W-6D | RW-1 | RW-D | NPS

2017 Update


Water Service
1,000 0 1,000 2,000 3,000 Feet
Tax Map grid
Growth Areas
Property Lines
Roads
6
9
10
14
PARLETT MORGAN RD
MORGAN WAY
MORGAN BROTHERS RD
CREMONA RD
CREMONA CREEK LN
NEW MARKET TURNER RD
HIDDEN MARSH LN
SCRIVELTOWN WAY
DELABROOKE RD
RIVERMEAD RD
QUEENWARE RD
DOS SANTOS WAY
SHAWMONT WAY
SAMLEY LN
MAP 10
Water Category:
W-1
W-3D
W-6D
RW-1
RW-D
NPS
2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid

Growth Areas

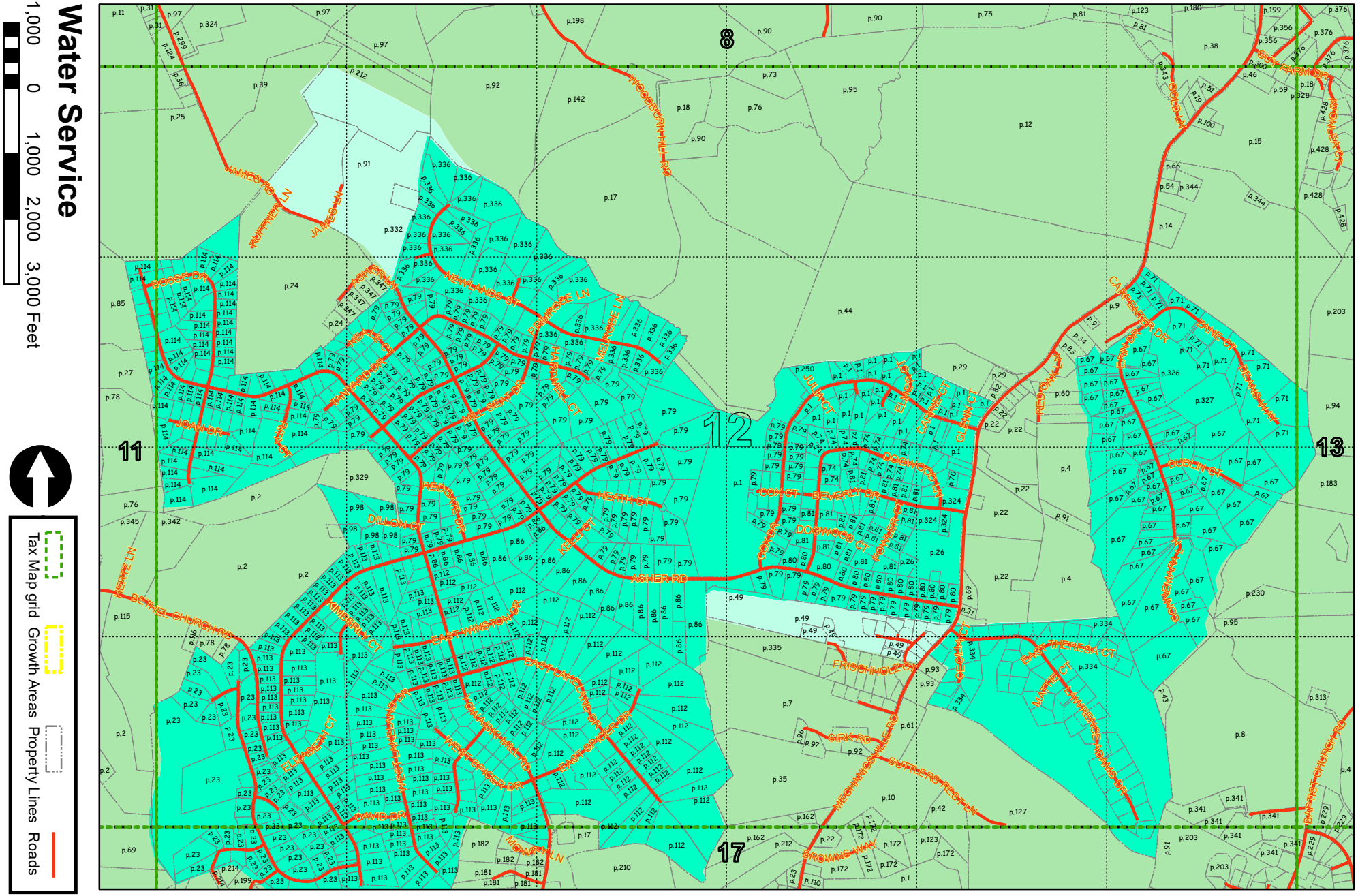
Property Lines

Roads

MAP 11

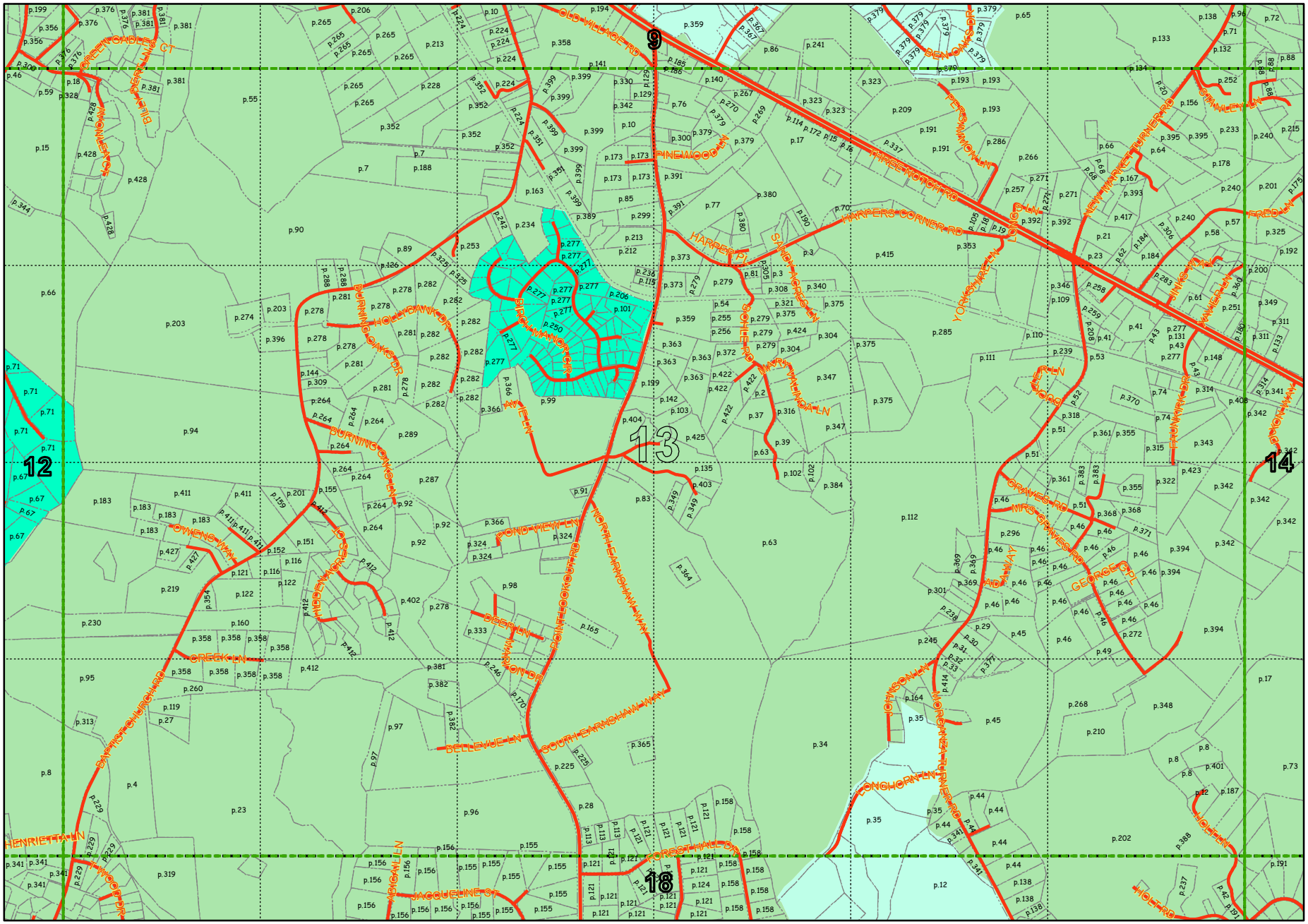
Water Category: W-1 | W-3D | W-6D | RW-1 | RW-D | NPS

2017 Update


Water Service
1,000 0 1,000 2,000 3,000 Feet
Tax Map grid
Growth Areas
Property Lines
Roads
8
11
12
13
17
MAP 12
Water Category:
W-1
W-3D
W-6D
RW-1
RW-D
NPS
2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid Growth Areas Property Lines Roads

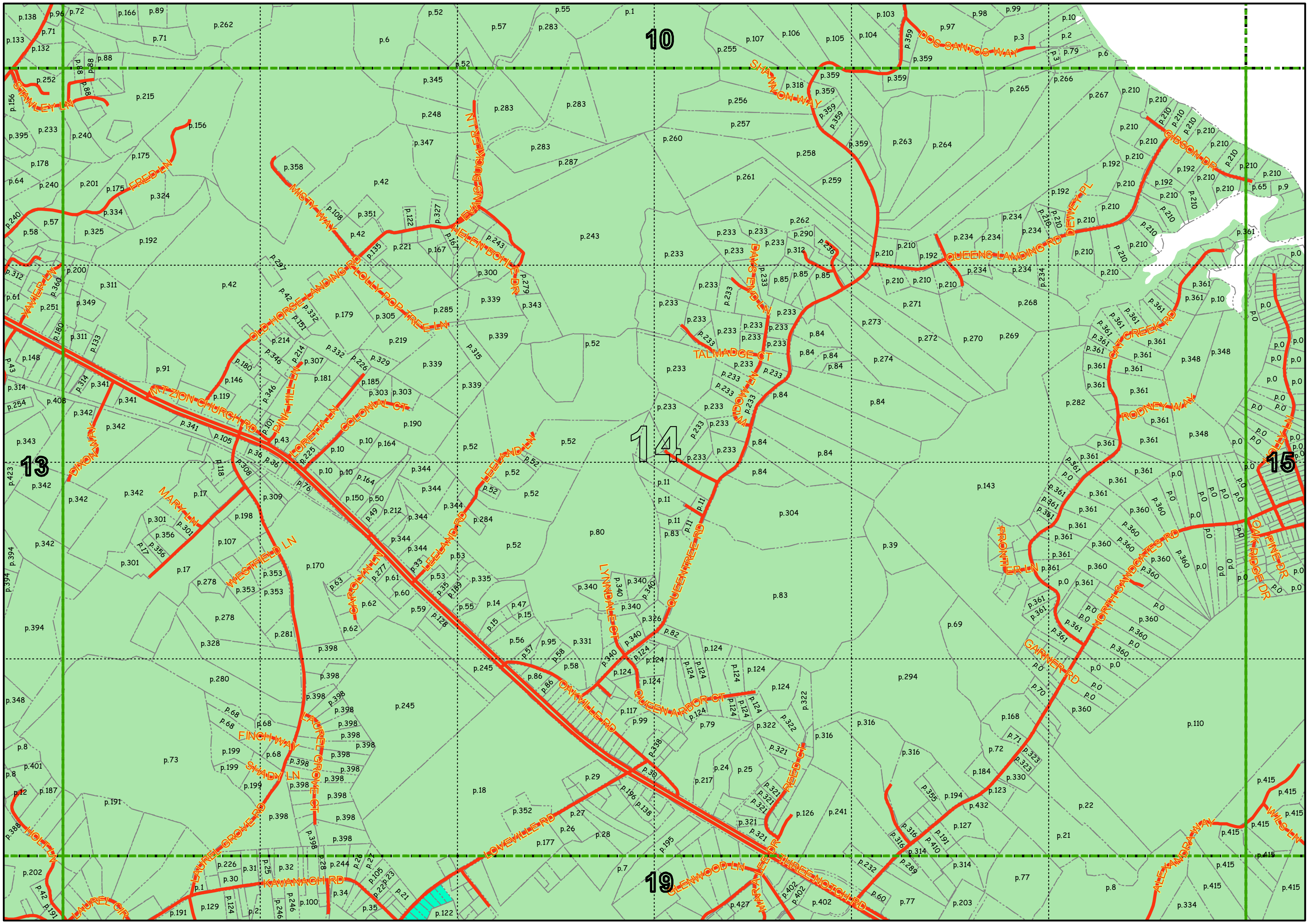
MAP 13

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet



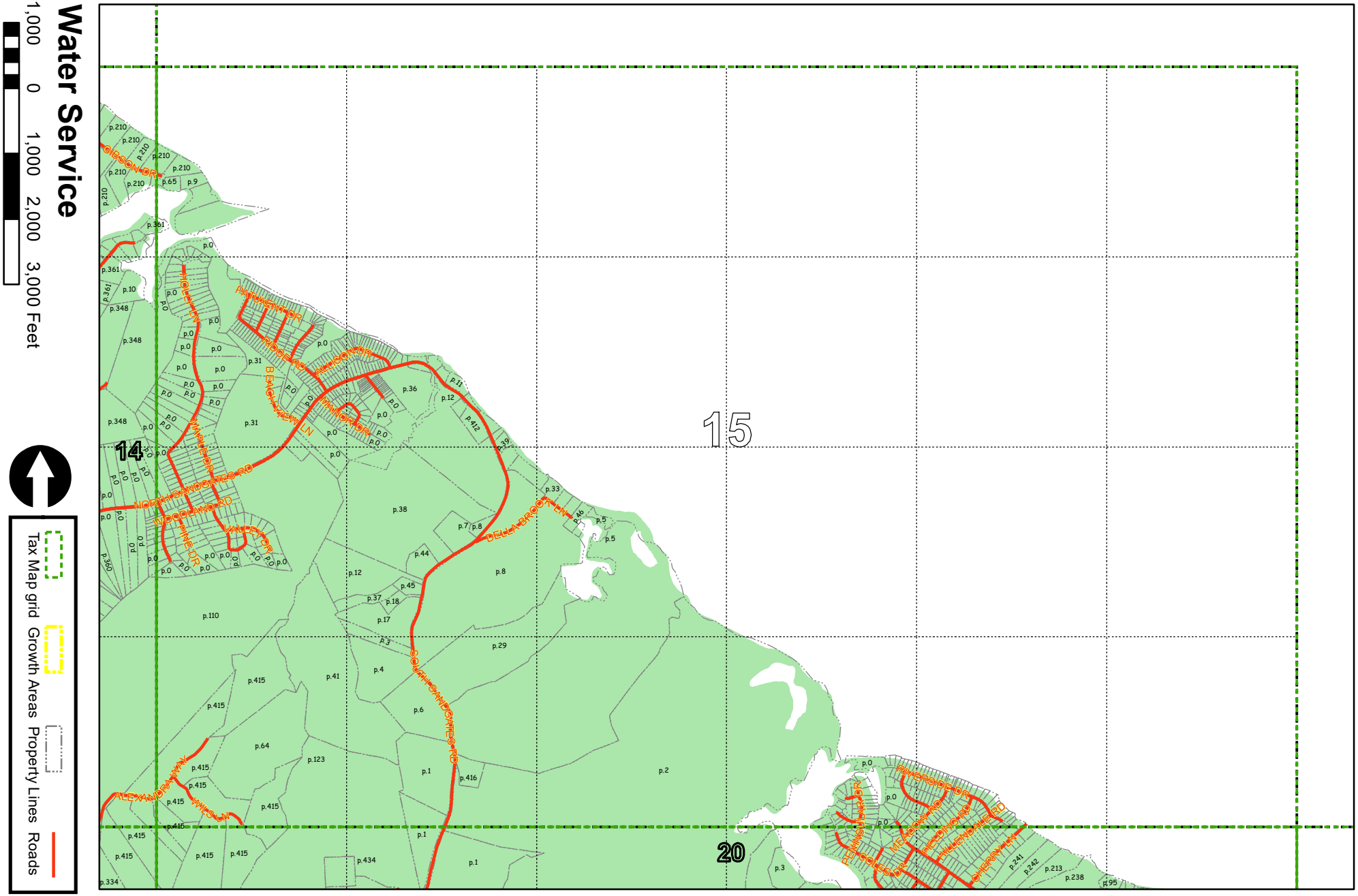
Tax Map grid
Growth Areas
Property Lines
Roads

MAP 14

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update

Water Service



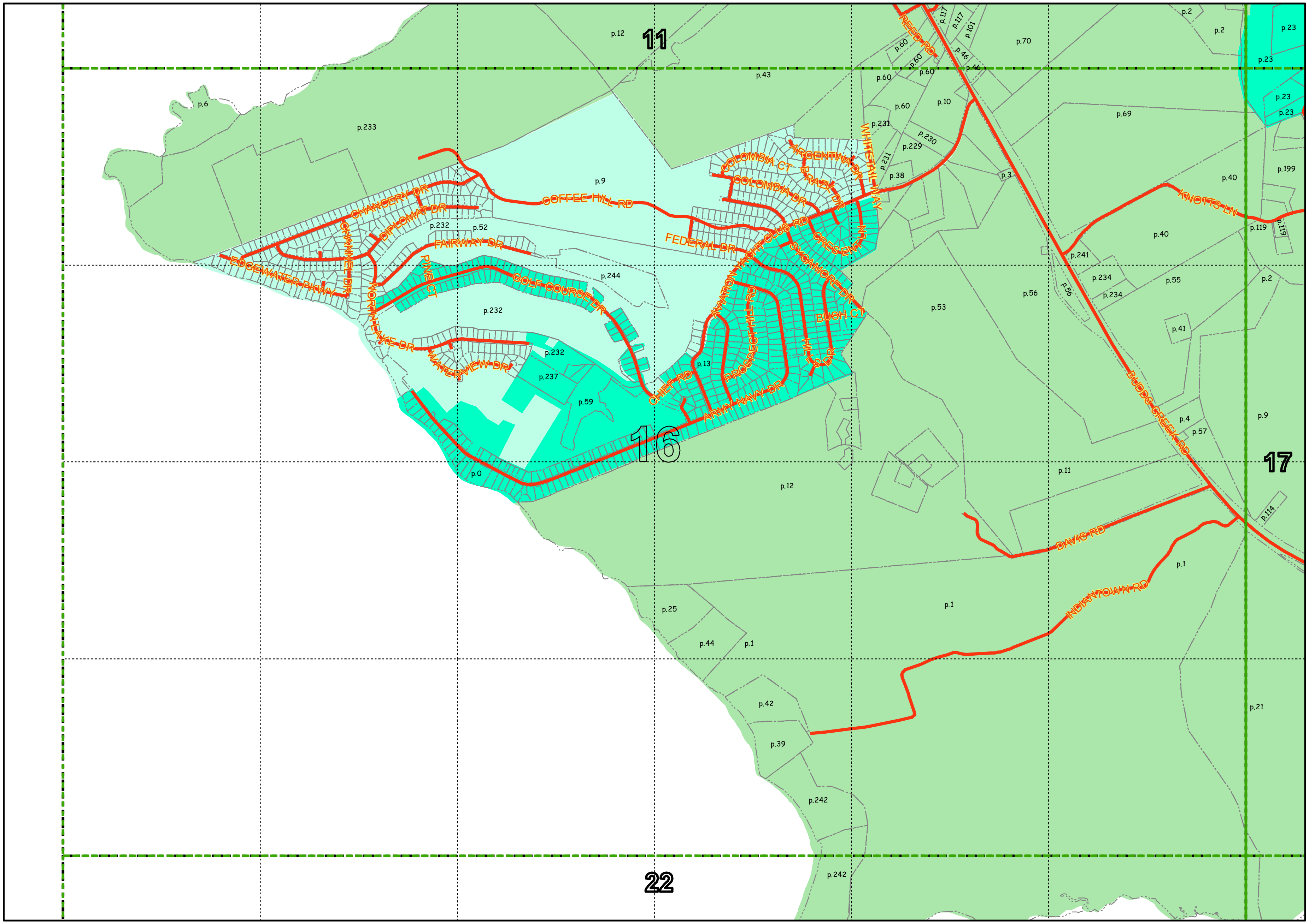
MAP 15

Water Category: W-1 | W-3D | W-6D | RW-1 | RW-D | NPS

2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid
Growth Areas
Property Lines
Roads

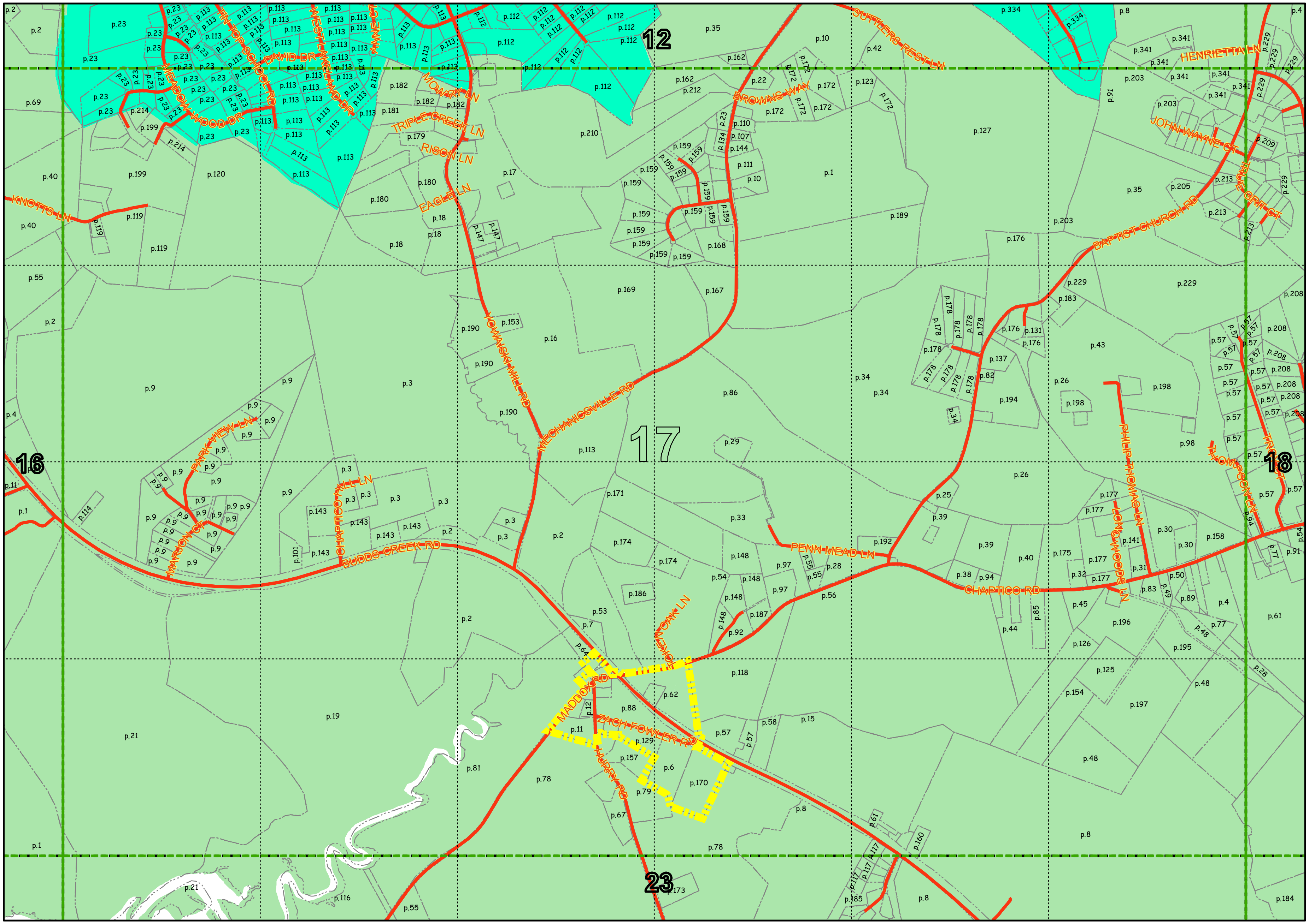
MAP 16

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid

Growth Areas

Property Lines

Roads

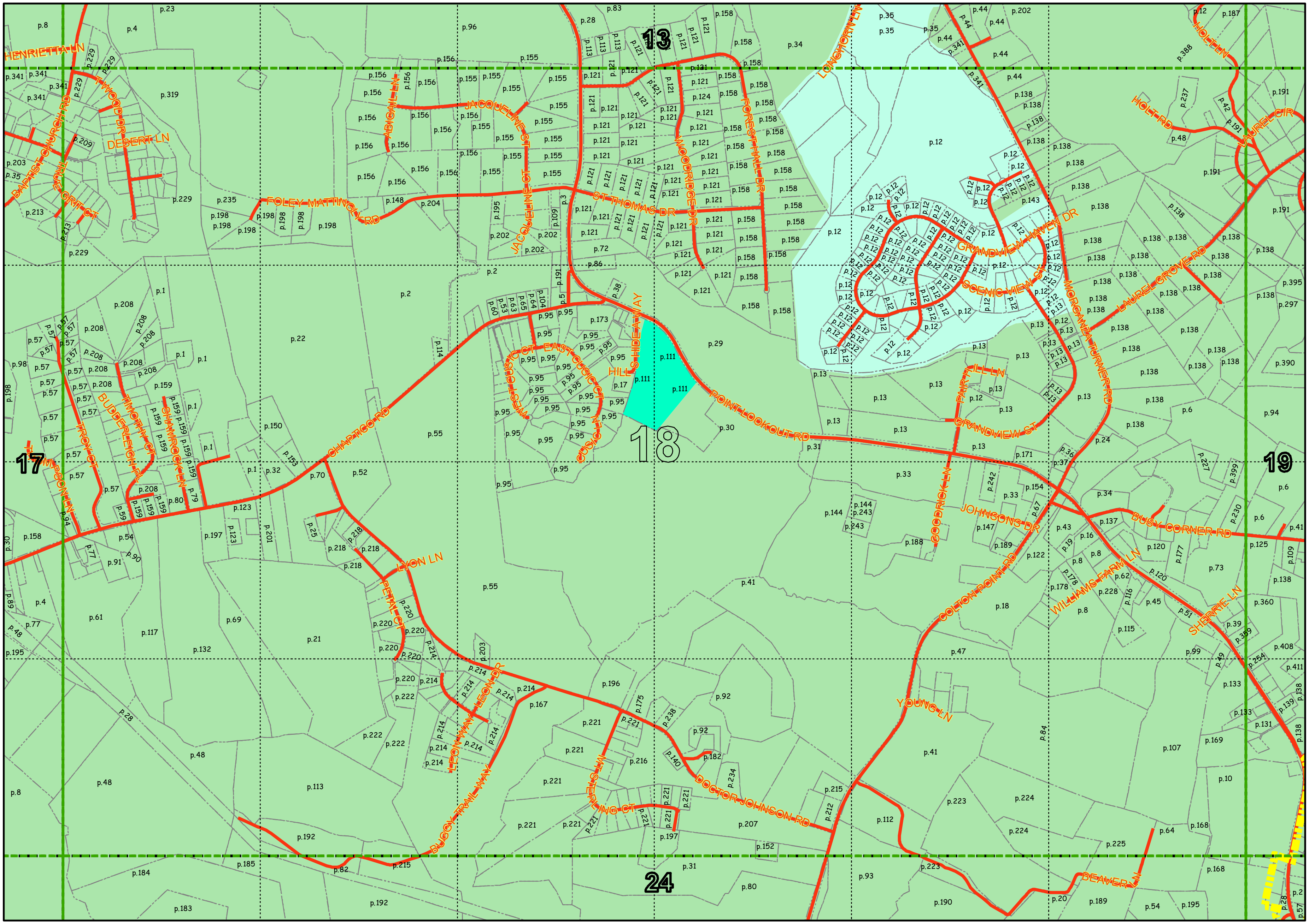
MAP 17

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet



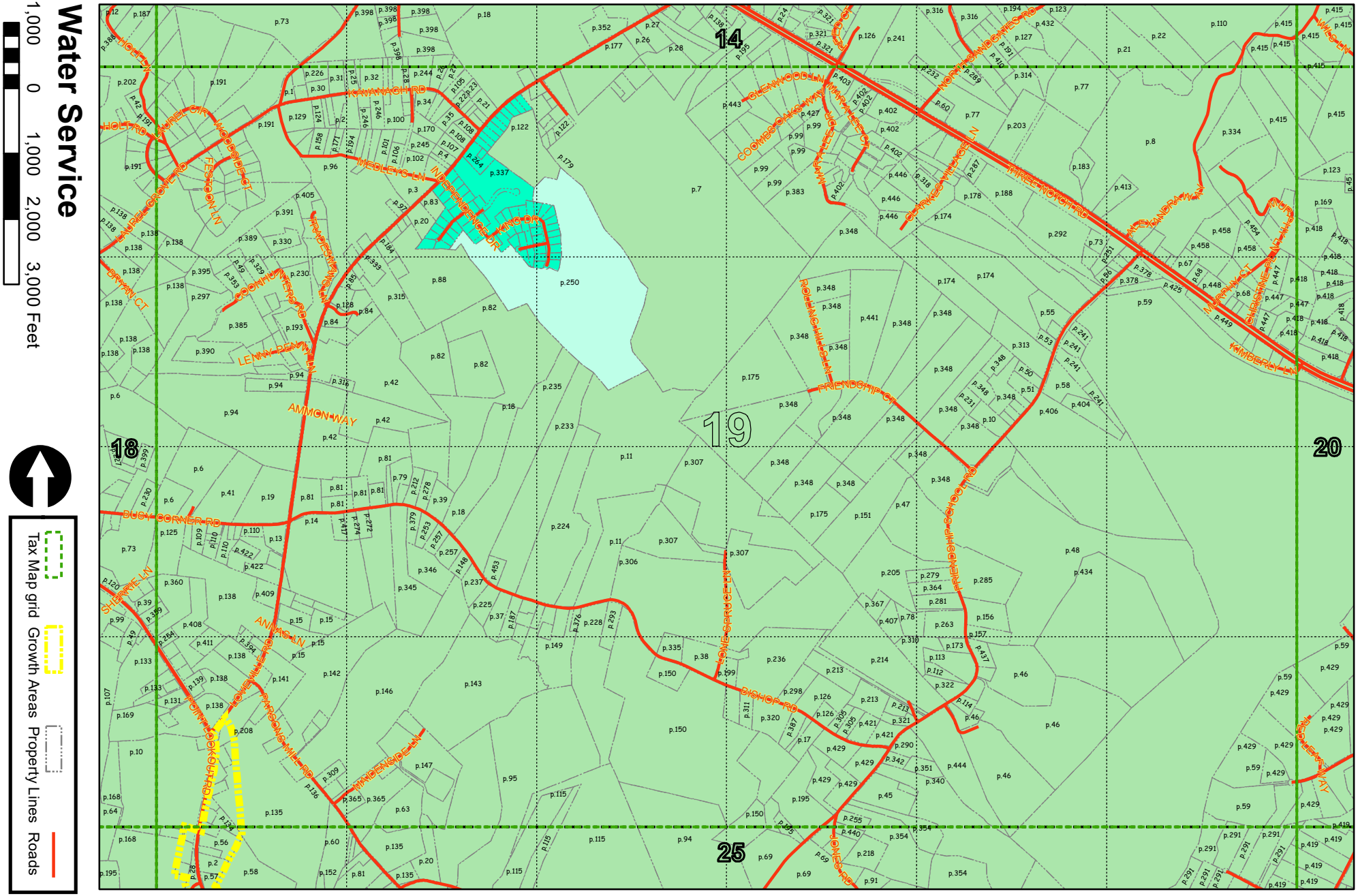
13
17
18
19
24
HENRIETTA LN
DESERT LN
FOLEY MATTINGLY RD
JACQUELINE ST
ST THOMAS DR
FOREST HILL DR
LONGHORN LN
HOLT RD
LAUREL CIR
HOLTEN
GRANDVIEW HAVEN DR
SCENIC VIEW
LAUREL GROVE RD
MORGAN TURNER RD
POINT LOOKOUT RD
CHAPTICO RD
LYON LN
LEON DR
BUCK TRAIL WAY
DOCTOR JOHNSON RD
JOHNSONS DR
BUSY CORNER RD
WILLIAMS FARM LN
COLTON POINT RD
GOODRICK LN
YOUNG LN
BEAVER LN
SHERRIE LN
GRANDVIEW ST

Tax Map grid
Growth Areas
Property Lines
Roads

MAP 18

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

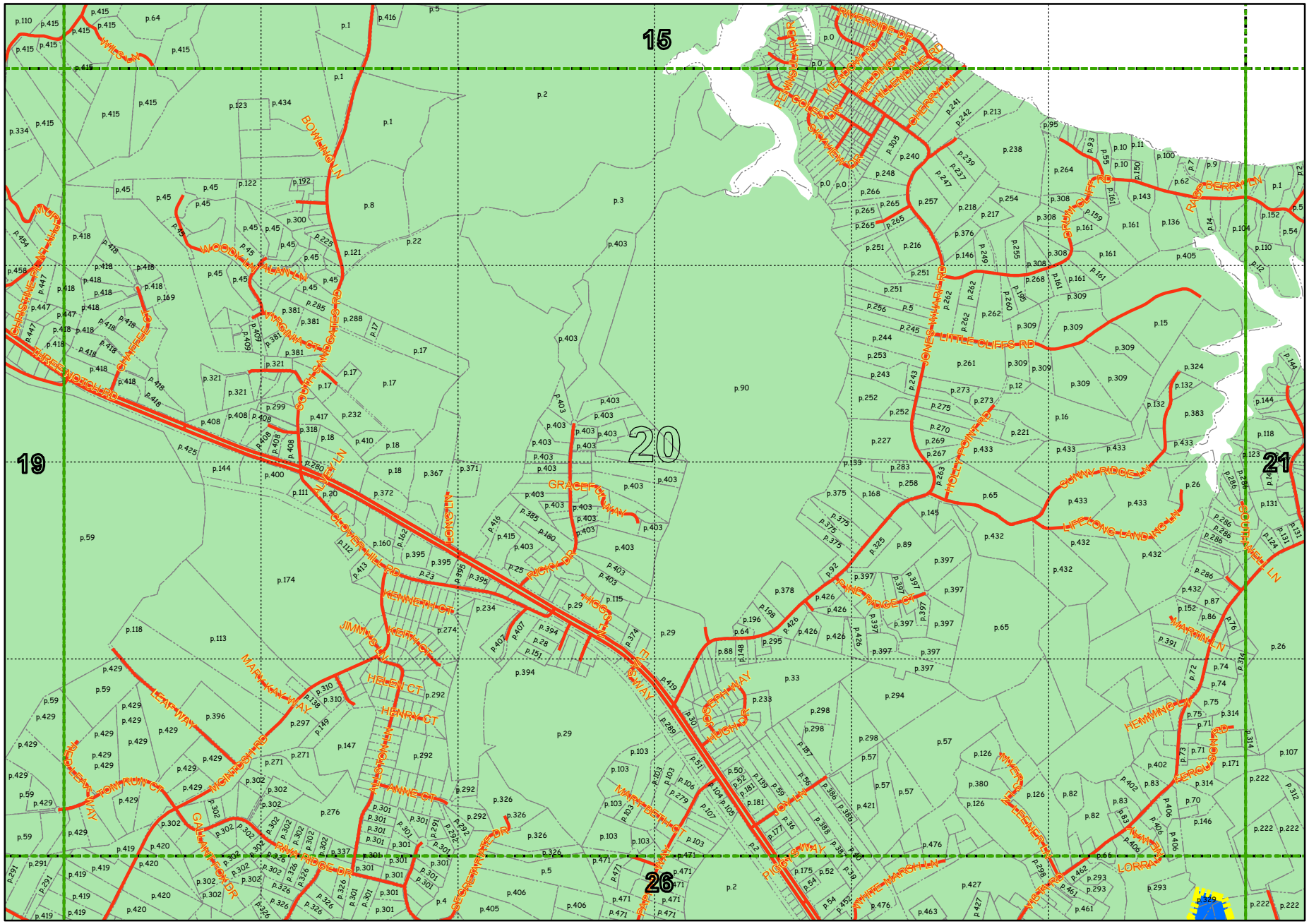
2017 Update



MAP 19

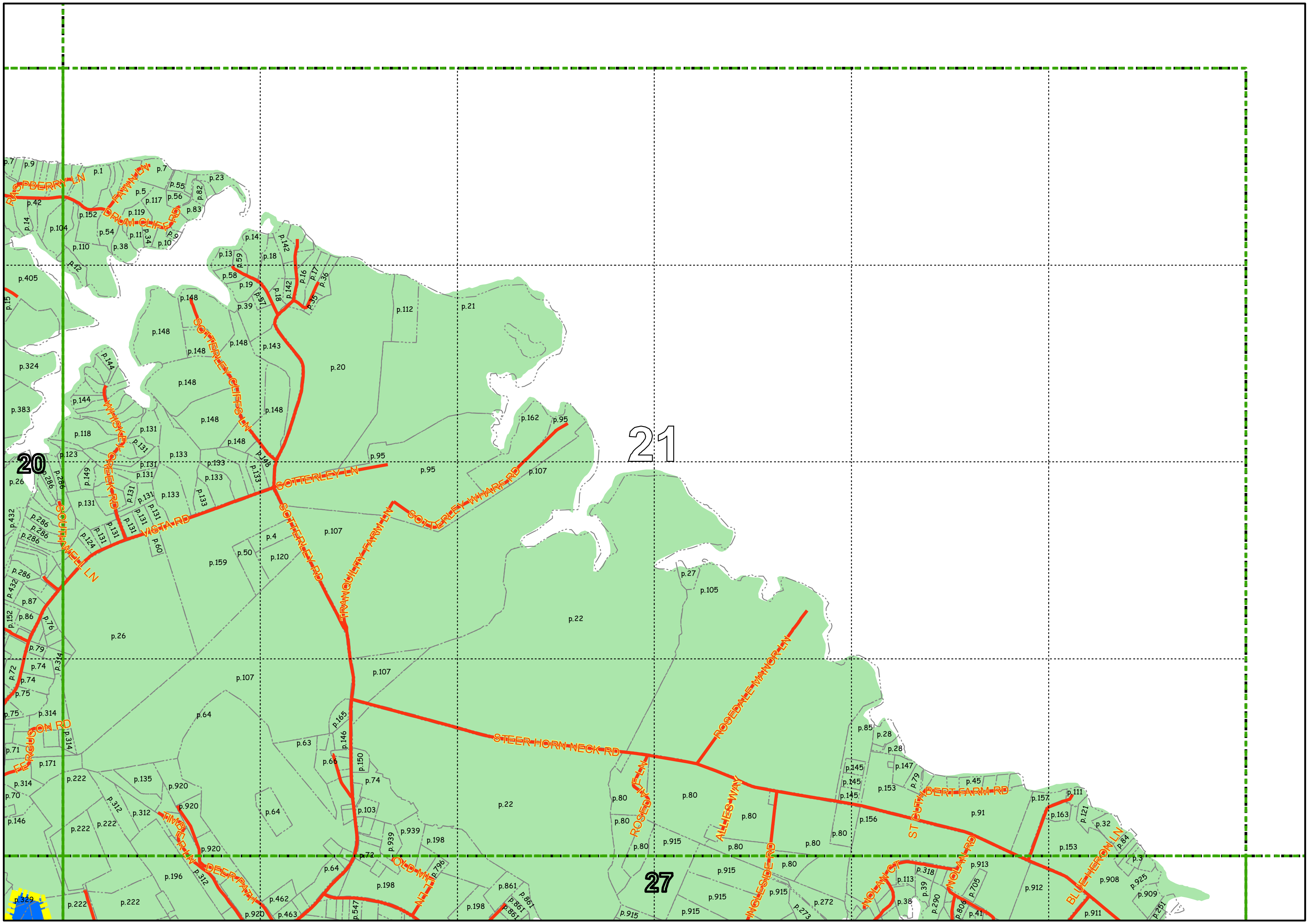
Water Category: W-1 | W-3D | W-6D | RW-1 | RW-D | NPS

2017 Update


15
20
19
21
26
Water Service
1,000 0 1,000 2,000 3,000 Feet
Tax Map grid
Growth Areas
Property Lines
Roads
MAP 20
Water Category:
W-1
W-3D
W-6D
RW-1
RW-D
NPS
2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid

Growth Areas

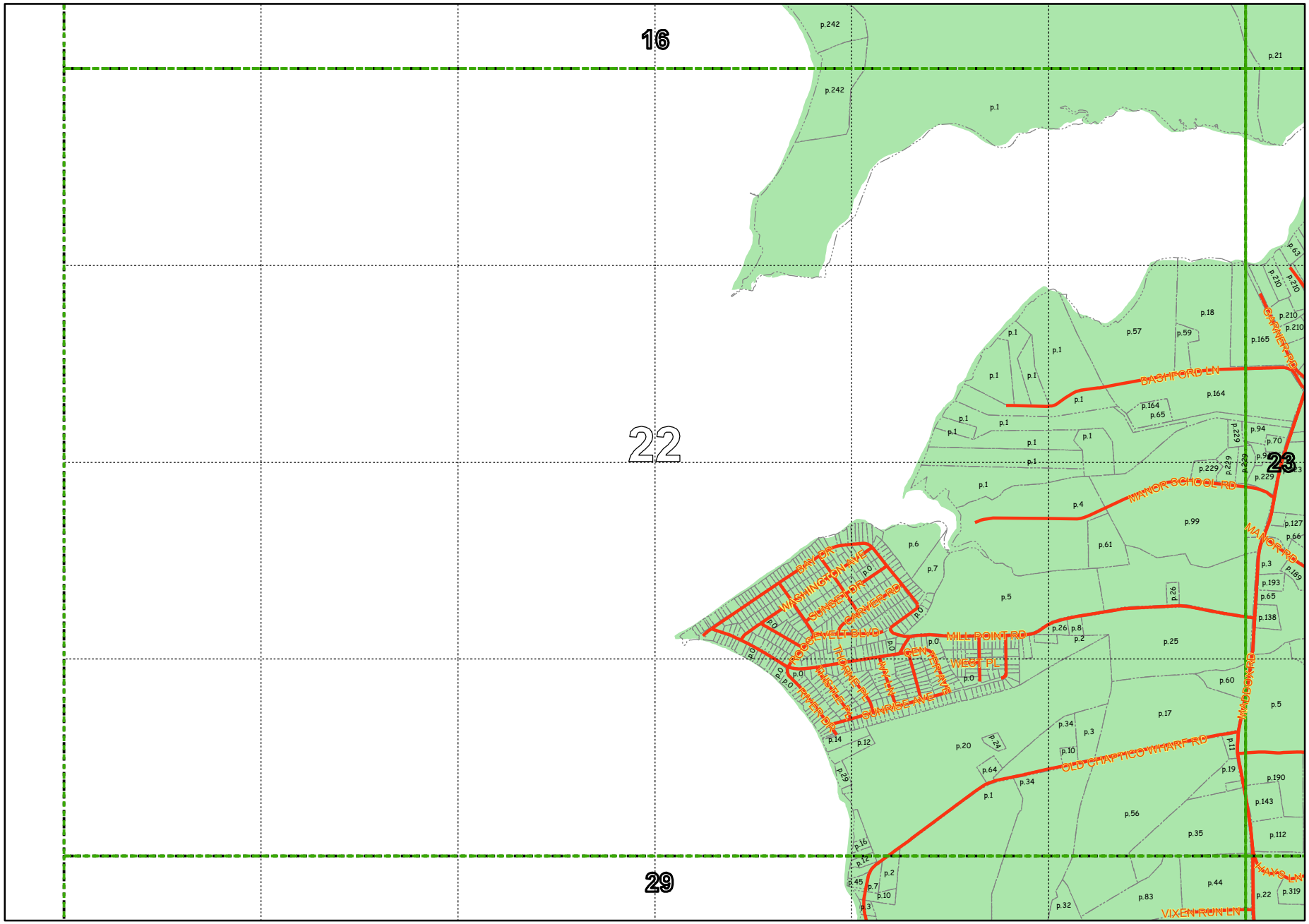
Property Lines

Roads

MAP 21

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update



Water Service

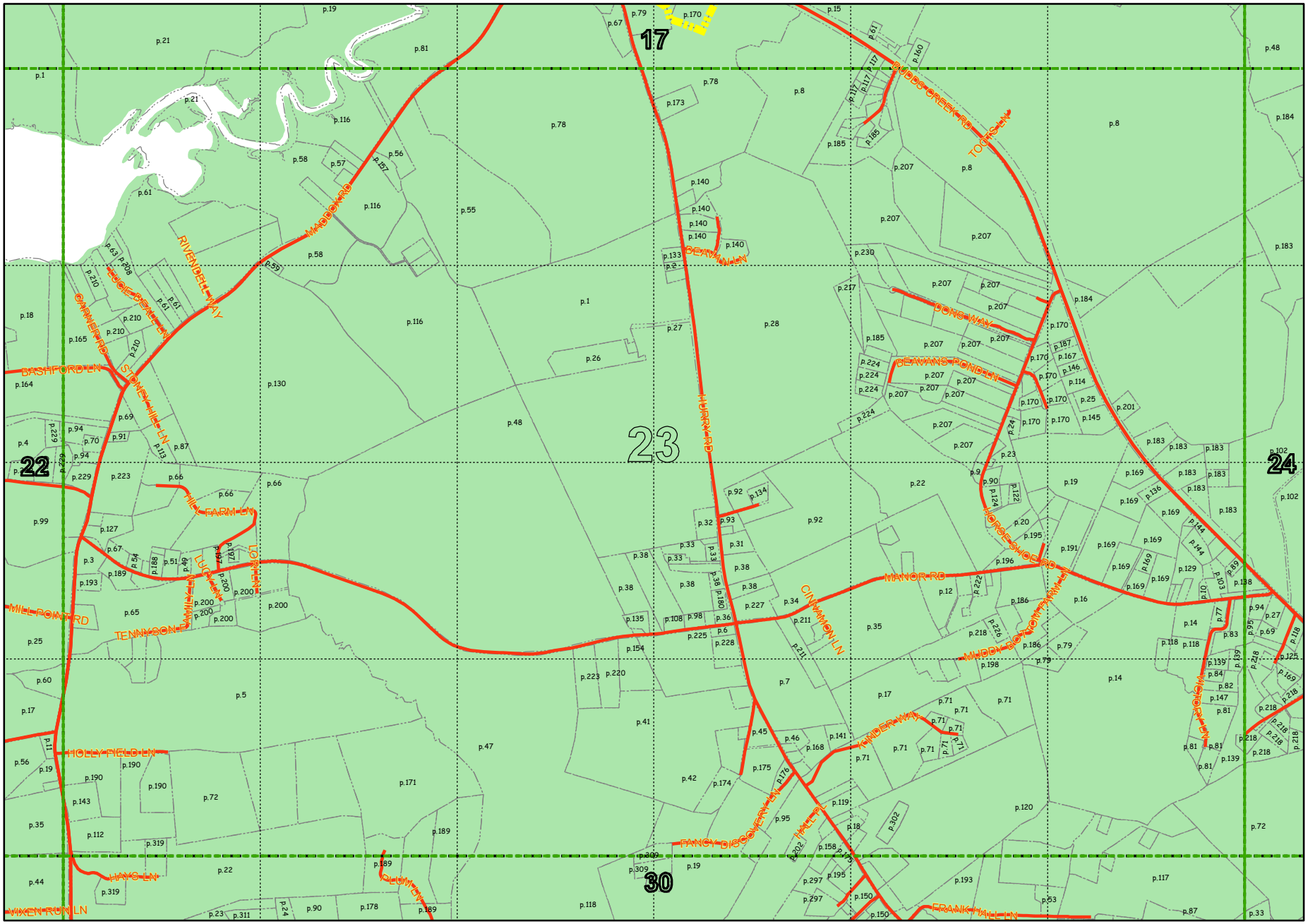
1,000 0 1,000 2,000 3,000 Feet

Tax Map grid
Growth Areas
Property Lines
Roads

MAP 22

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update



Water Service

1,000 0 1,000 2,000 3,000 Feet

Tax Map grid Growth Areas Property Lines Roads

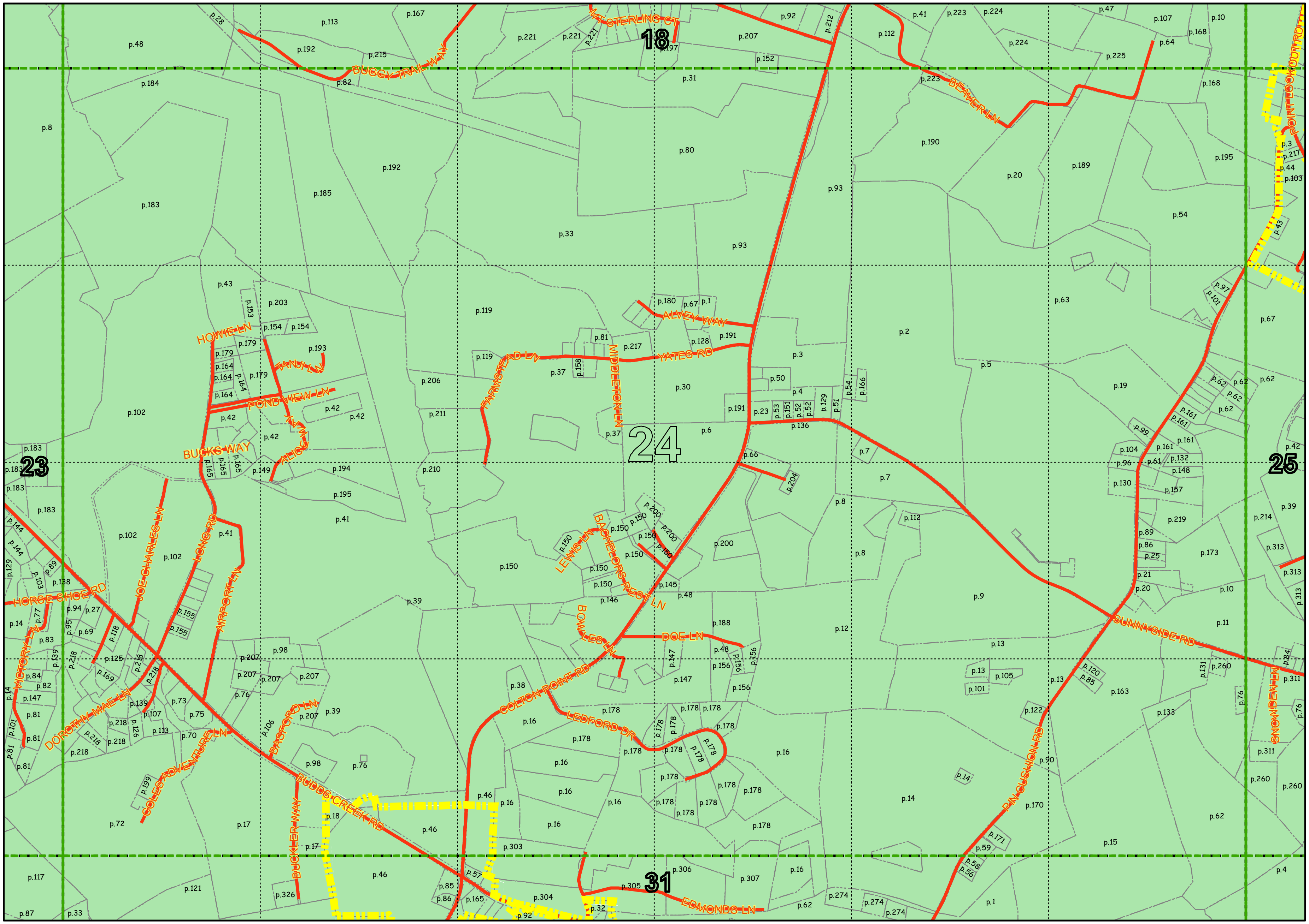
MAP 23

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet



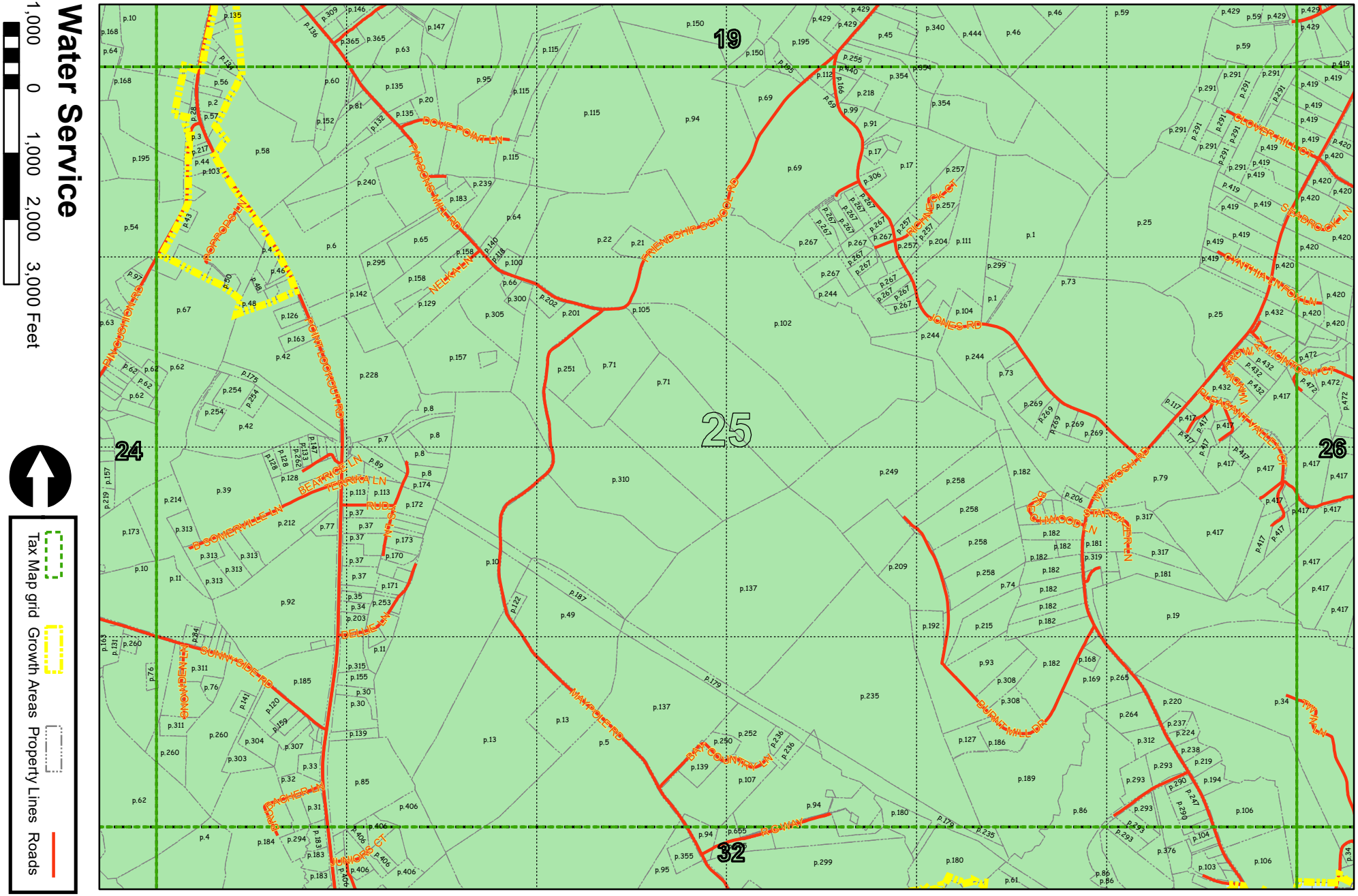
18
23
24
25
31
BUGGY TRAIL WAY
MT STERLING CT
BEWER LN
POINT LOOKOUT RD
HOWIE LN
VANDY LN
POND VIEW LN
BUCKS WAY
ALVEY WAY
YATES RD
FARMSTEAD LN
MIDDLETON LN
LEWIS LN
BACHELORS REST LN
DOE LN
BOWLES LN
COLTON POINT RD
LEDFORD DR
HORSE SHOE RD
JOE CHARLES LN
LONG RD
AIRPORT LN
VICTORY LN
DOROTHY MAE LN
COLES ADVENTURE LN
BASFORD LN
BUDDS CREEK RD
BUCKLER WAY
SUNNYSIDE RD
PIN CUSHION RD
EDMONDS LN

Tax Map grid
Growth Areas
Property Lines
Roads

MAP 24

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

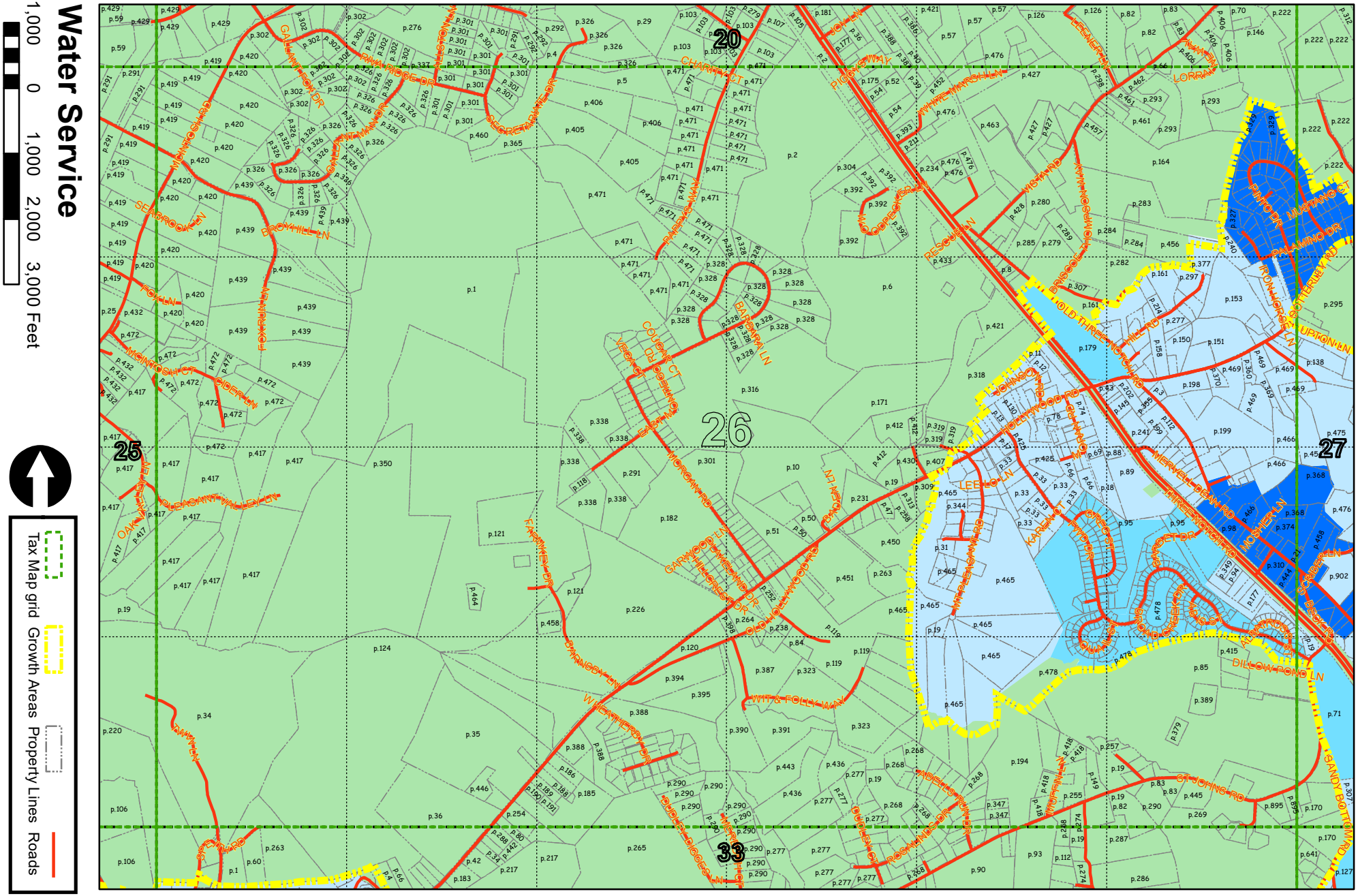
2017 Update

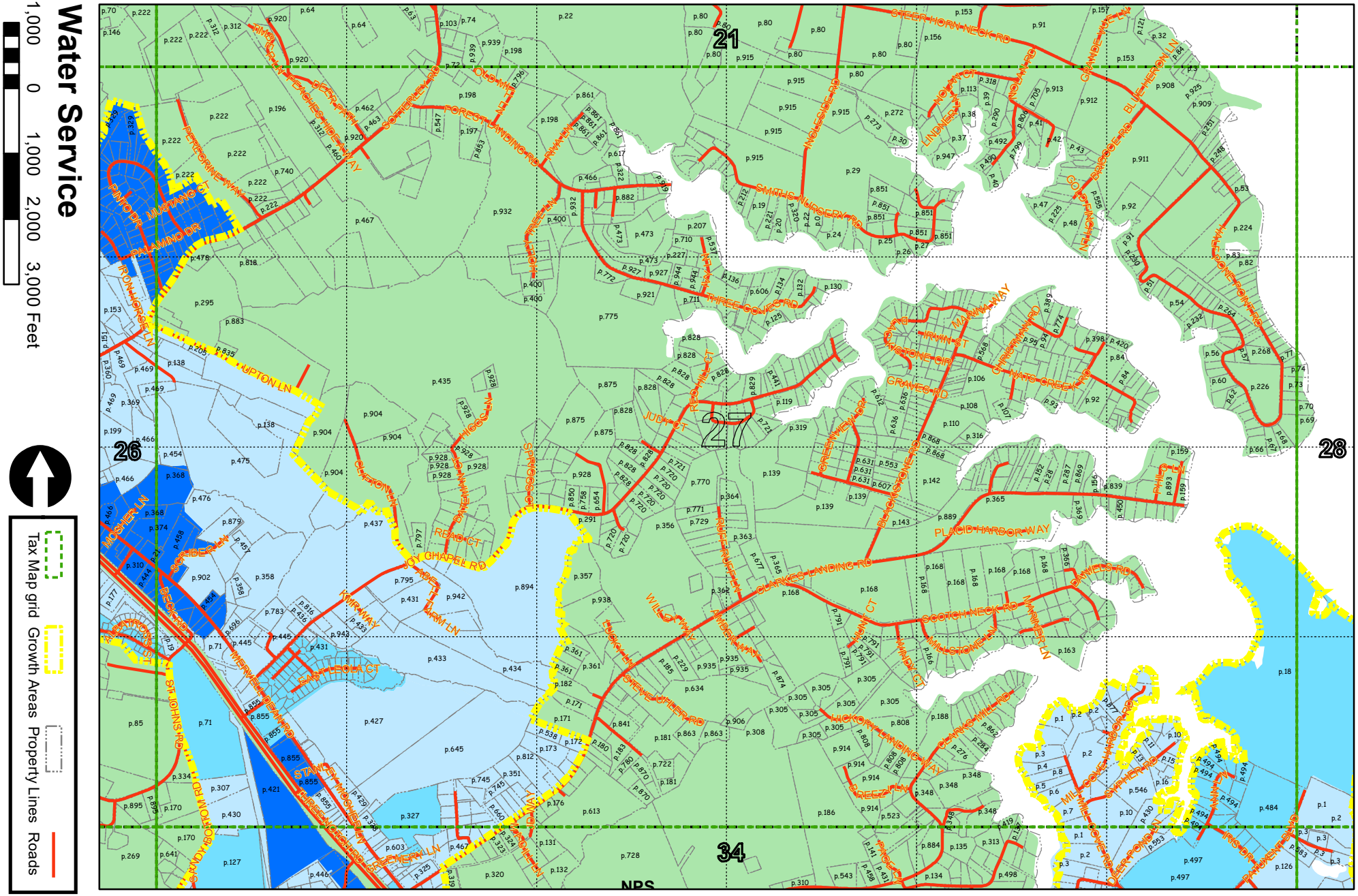


MAP 25

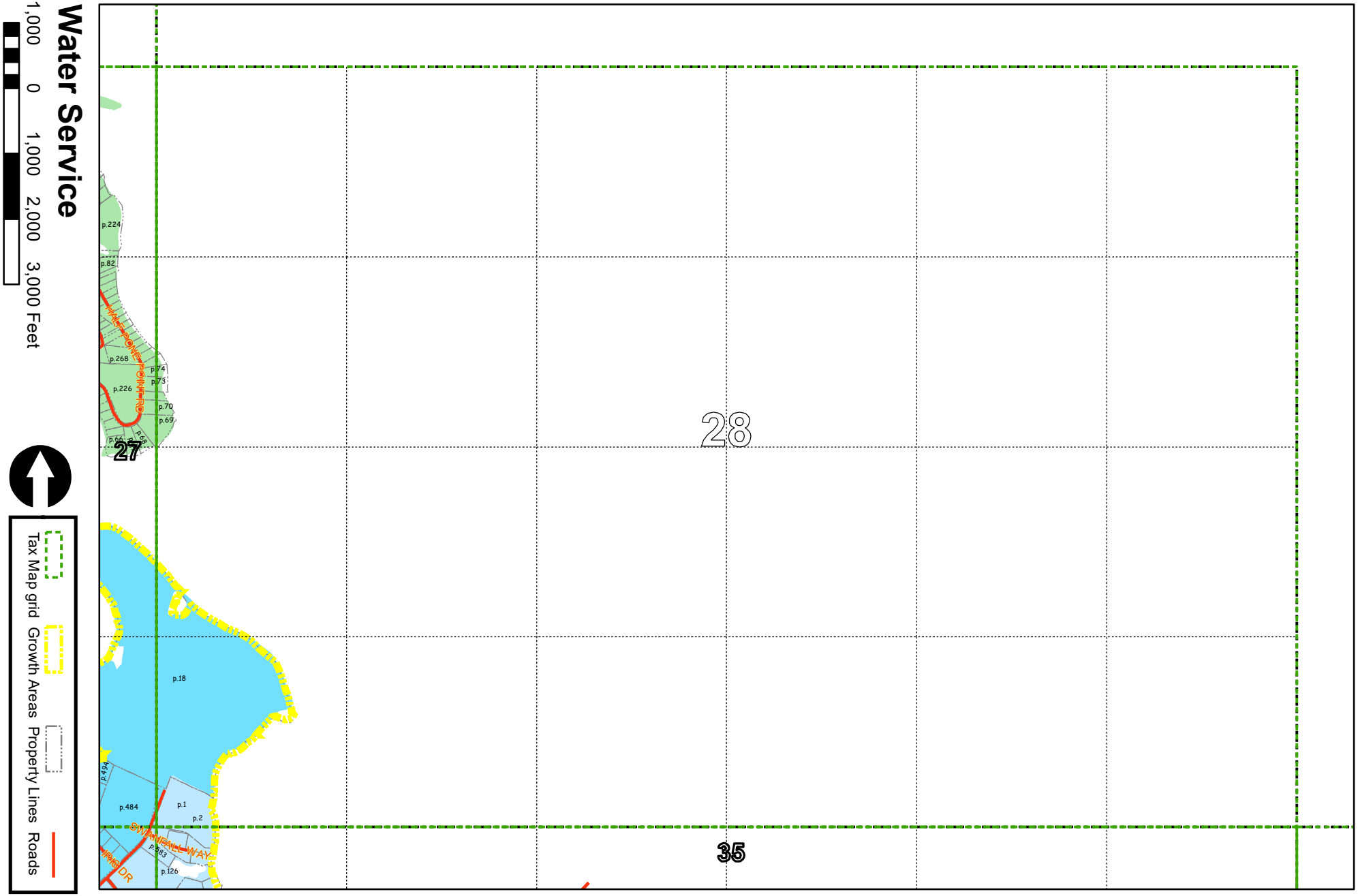
Water Category: W-1 | W-3D | W-6D | RW-1 | RW-D | NPS

2017 Update


Water Service
1,000 0 1,000 2,000 3,000 Feet
Tax Map grid
Growth Areas
Property Lines
Roads
MAP 26
Water Category:
W-1
W-3D
W-6D
RW-1
RW-D
NPS
2017 Update


Water Service
1,000 0 1,000 2,000 3,000 Feet
Tax Map grid
Growth Areas
Property Lines
Roads
MAP 21
Water Category:
W-1
W-3D
W-6D
RW-1
RW-D
NPS
2017 Update
21
26
27
28
34
NPS

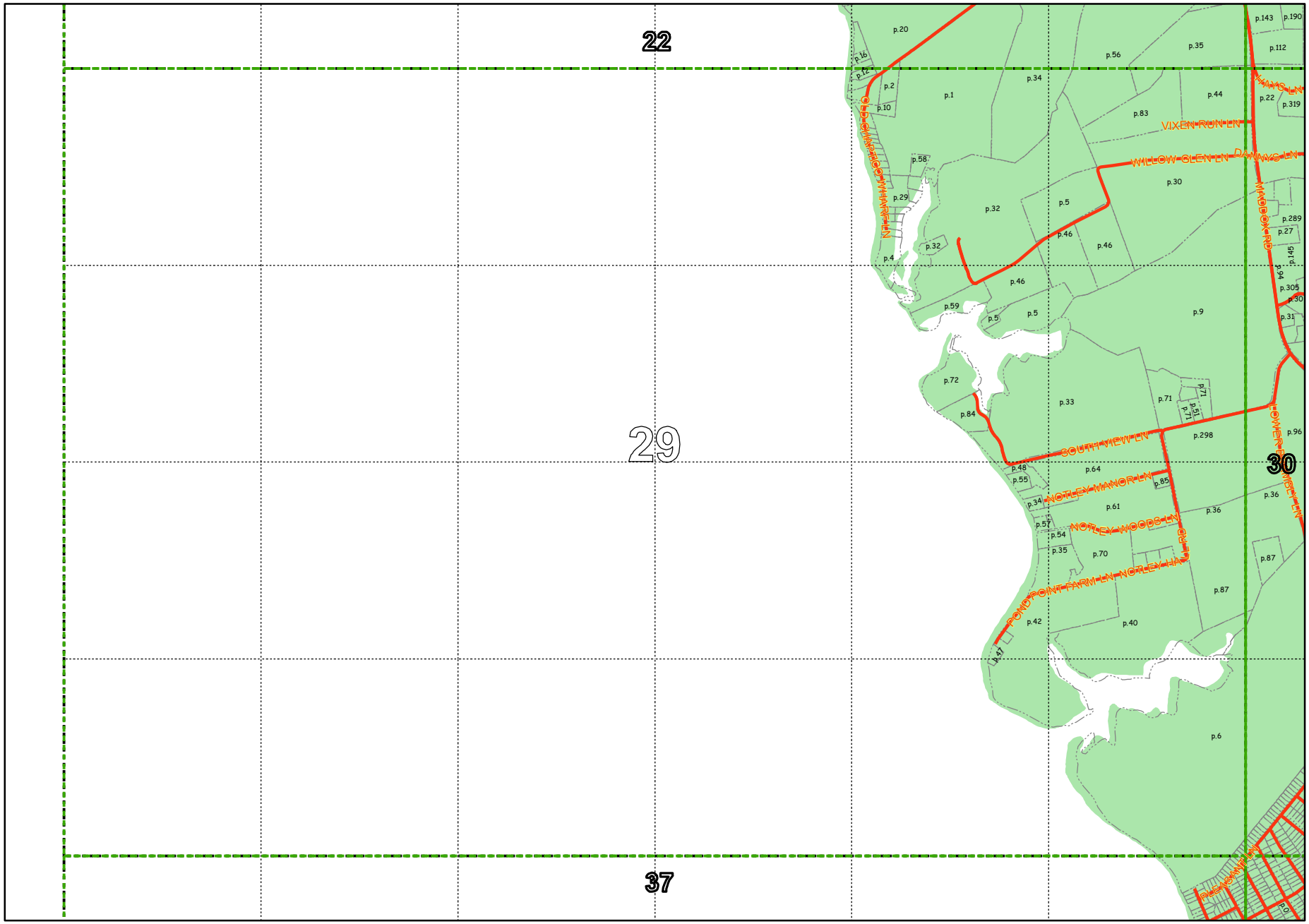
Water Service



MAP 28

Water Category: W-1 | W-3D | W-6D | RW-1 | RW-D | NPS

2017 Update



Water Service

1,000 0 1,000 2,000 3,000 Feet

Tax Map grid
Growth Areas
Property Lines
Roads

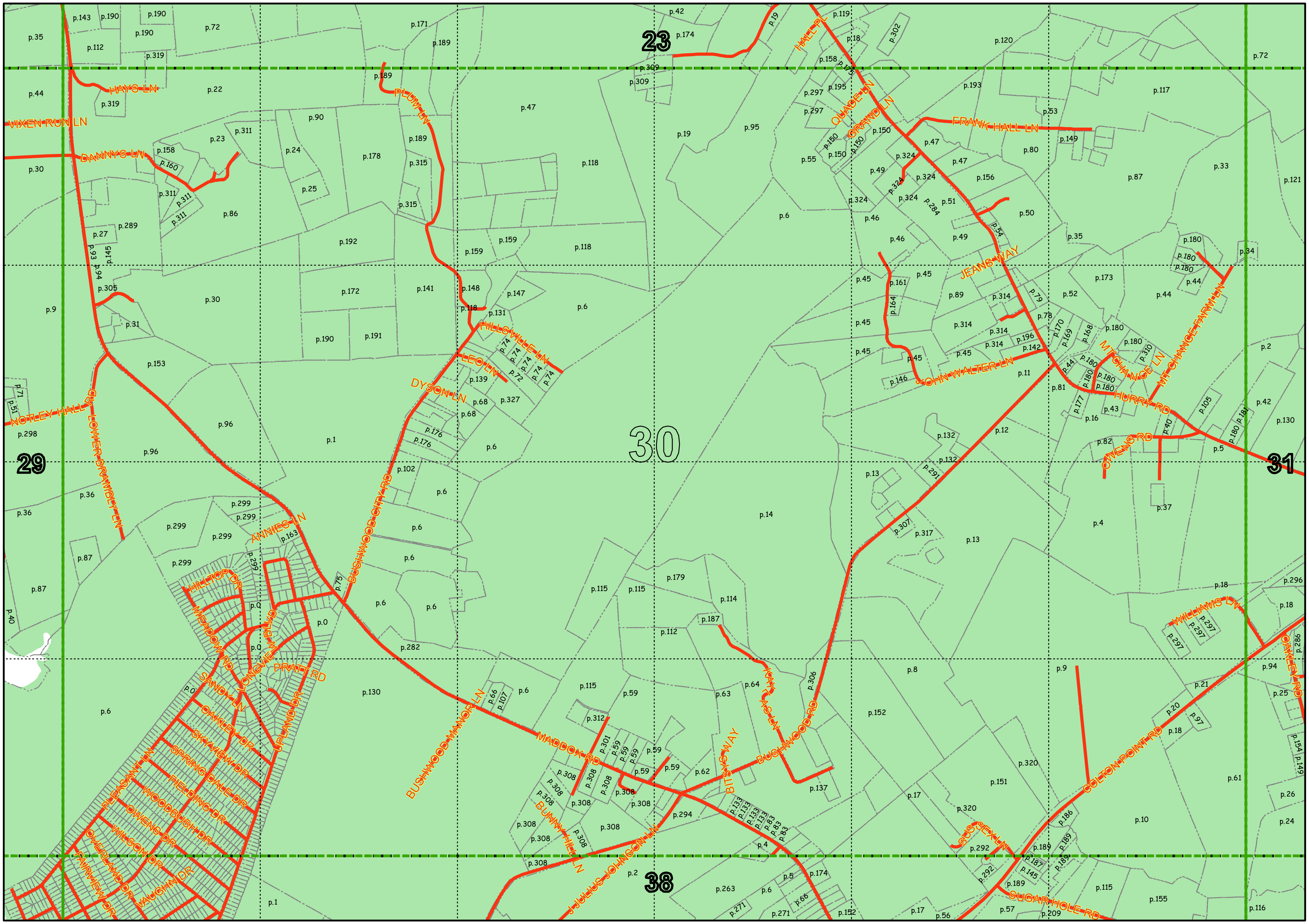
MAP 29

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet



23
29
30
31
38
HAYS LN
VIXEN RUN LN
DANNYS LN
PLUM LN
HALL PL
QUADE LN
GRAND LN
FRANK HALL LN
JEANS WAY
HILLSVILLE LN
LEO LN
DYSON LN
NOTLEY HALL CT
LOWER GRAMBLEY LN
ANNIES LN
BUSHWOOD CITY RD
HILLTOP DR
MEADOW RD
SANDY LN
LONGVIEW
PRATT RD
OAKLEY DR
SKYVIEW DR
UPLAND DR
SPRING DALE DR
FIELDING DR
PLEASANT LN
WOODBUSH DR
OWENS DR
WILSON DR
OVERLAND DR
FAIRVIEW DR
VAUGHN DR
BUSHWOOD MANOR LN
MADDOX RD
BUNNY HILL LN
JULIUS JOHNSON LN
BITS WAY
KAYLAS LN
BUSHWOOD RD
JOHN WALTER LN
MT CHANCE LN
MT CHANCE FARM LN
HURRY RD
OWENS RD
WILLIAMS LN
COLTON POINT RD
SUSSEX LN
SUGAR HOLE RD

Tax Map grid

Growth Areas

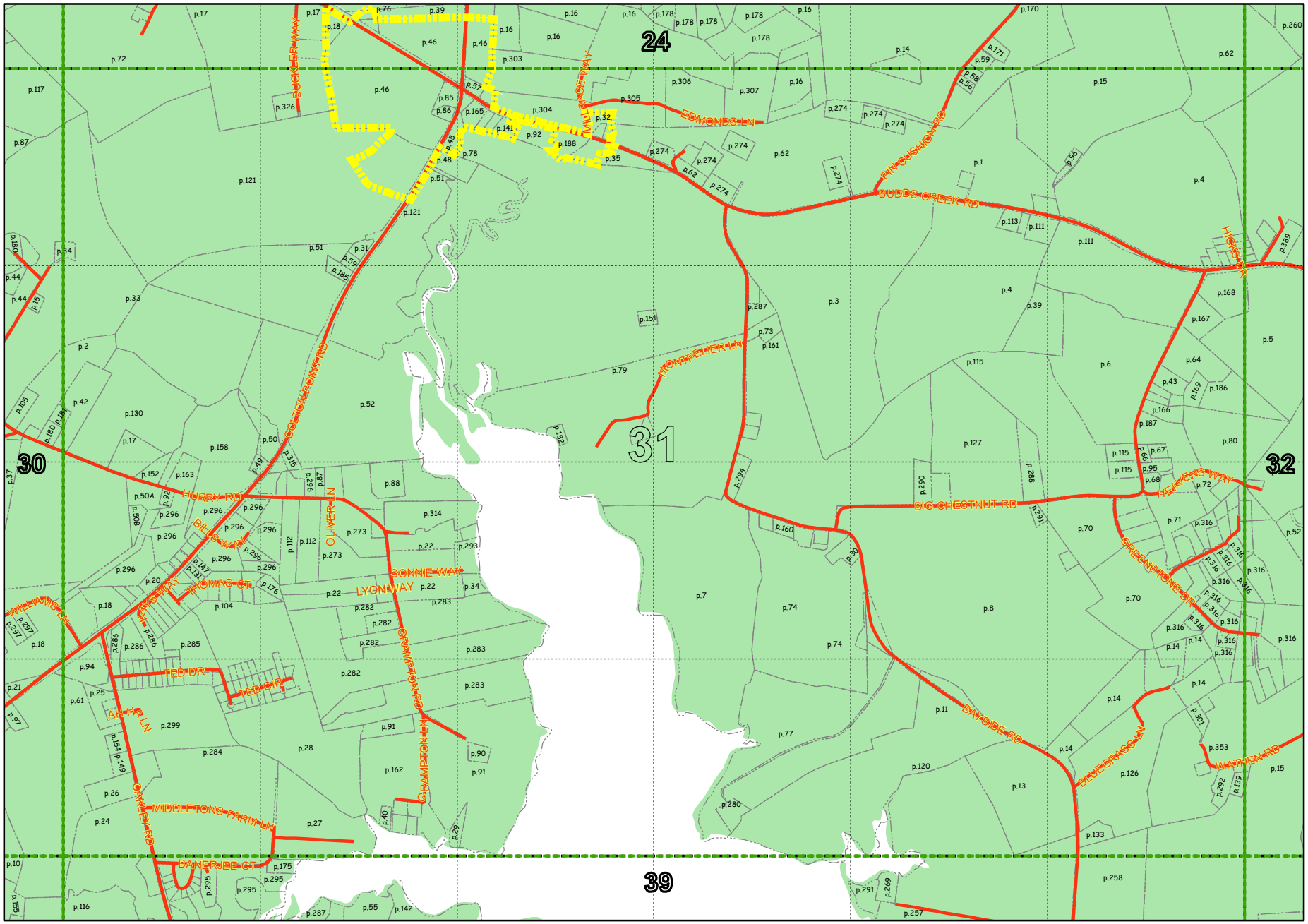
Property Lines

Roads

MAP 30

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update



Water Service

1,000 0 1,000 2,000 3,000 Feet

Tax Map grid
Growth Areas
Property Lines
Roads

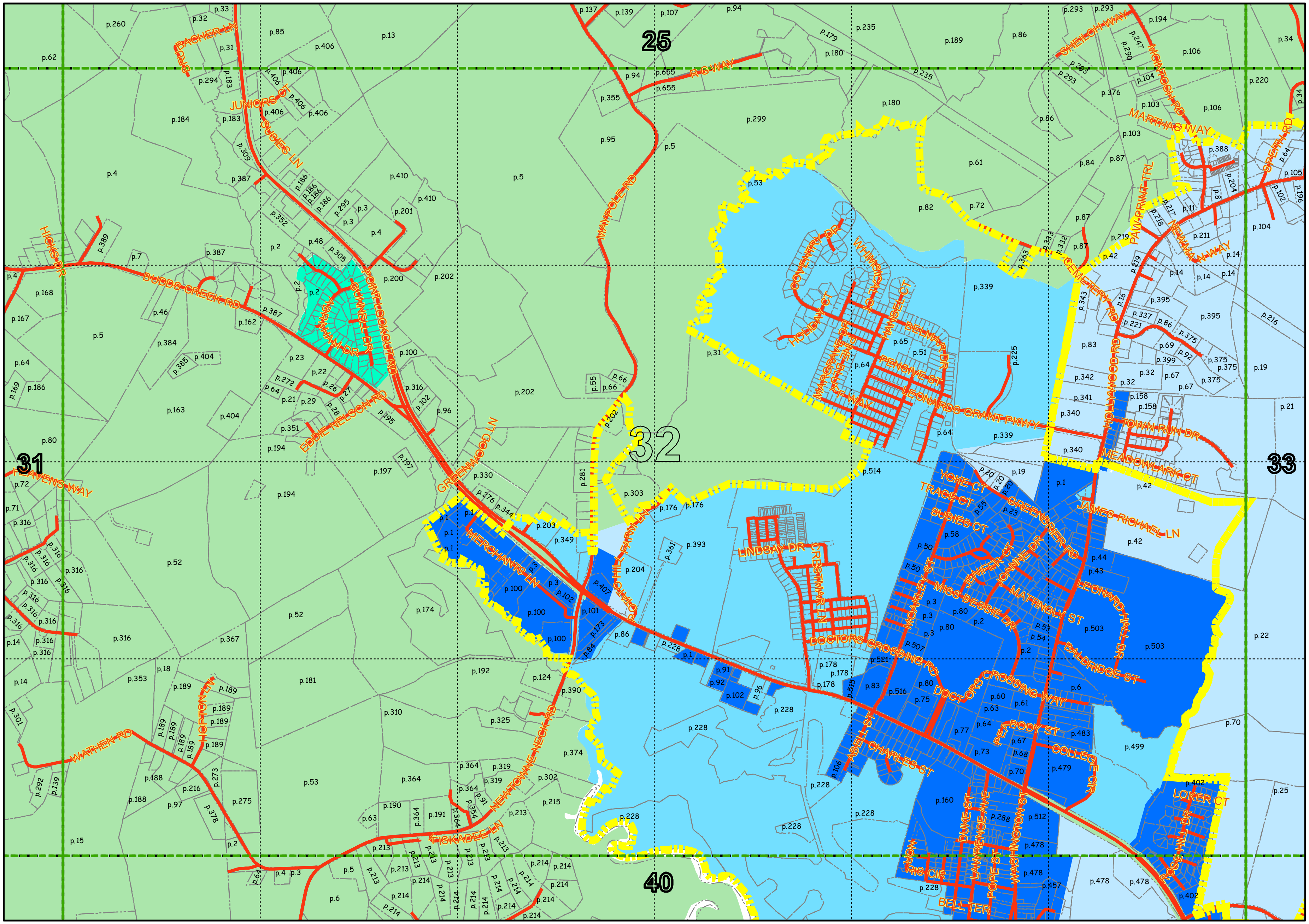
MAP 31

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet


25
31
32
33
40
BUDDS CREEK RD
HICKS DR
HAVENS WAY
MERCHANTS LN
GREENWOOD LN
WALPOLE RD
NEWTOWNE NECK RD
KICKADEE LN
WATHEN RD
EDDIE NELSON RD
COVENTRY DR
LEONARDTOWN GRANT PKWY
LEONARD HALL DR
GREENBRIER RD
MATTINGLY ST
BALDRIDGE ST
DOCTORS CROSSING RD
DOCTORS CROSSING WAY
CHARLES ST
WASHINGTON ST
COLLEGE CIR
PEABODY ST
DUKE ST
LAWRENCE AVE
POPE ST
BELL TER
NORRIS CIR
CRESTMARK LN
LINDSAY DR
MISS BESSIE DR
JAMES RICHARD LN
MEADOWLARK CT
TOWN RUN DR
HOLLYWOOD RD
CEMETERY RD
MARTHAS WAY
SHELOH WAY
PAW PRINT TRL
LOKER CT
HILLTOP LN
JUNIORS CT
SUSIES LN
BACHER LN
YOKE CT
TRACE CT
SUSIES CT
JENIFER CT
ABELL ST
MOAKLEY ST
FENWICK ST

Tax Map grid

Growth Areas

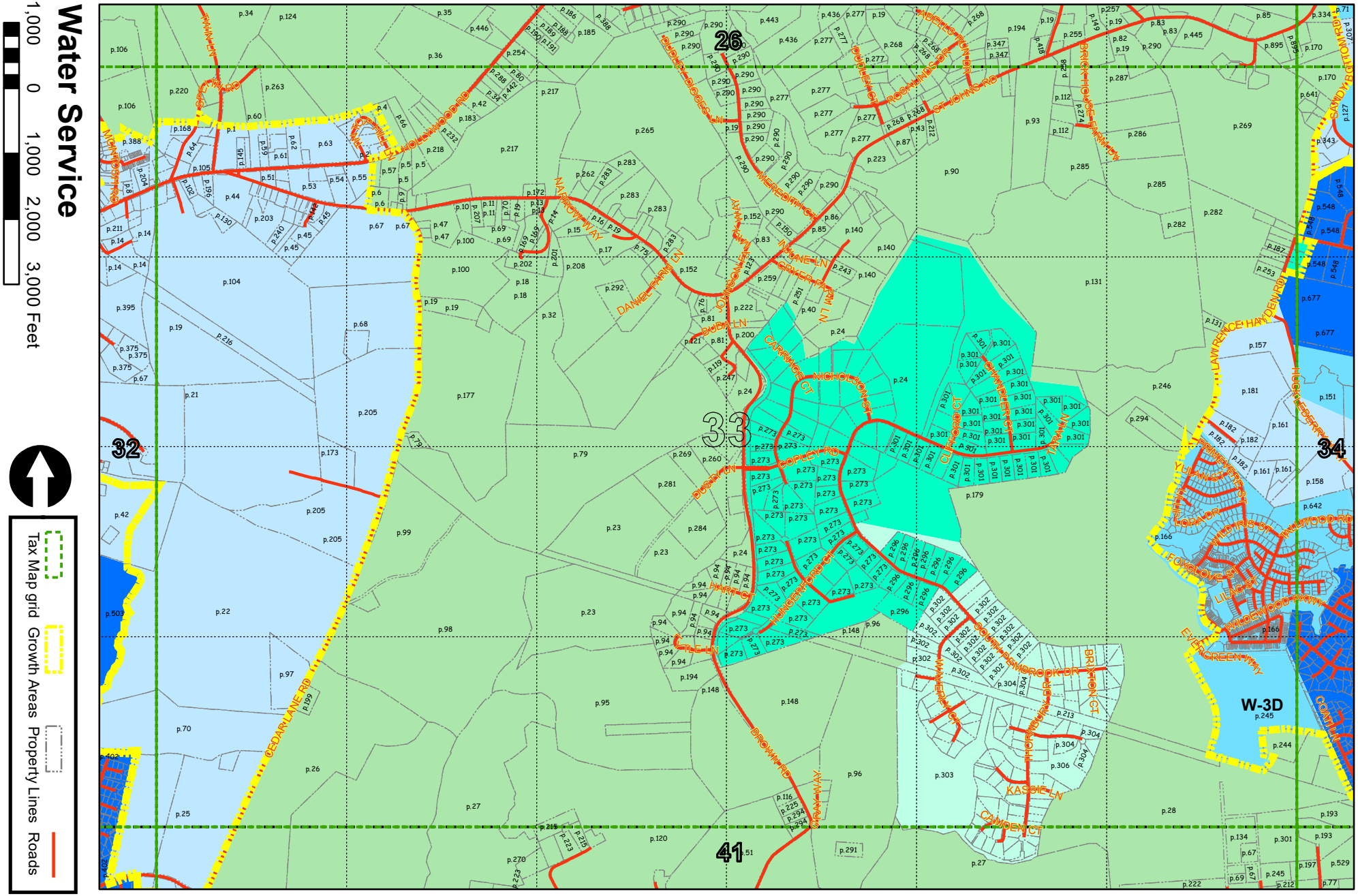
Property Lines

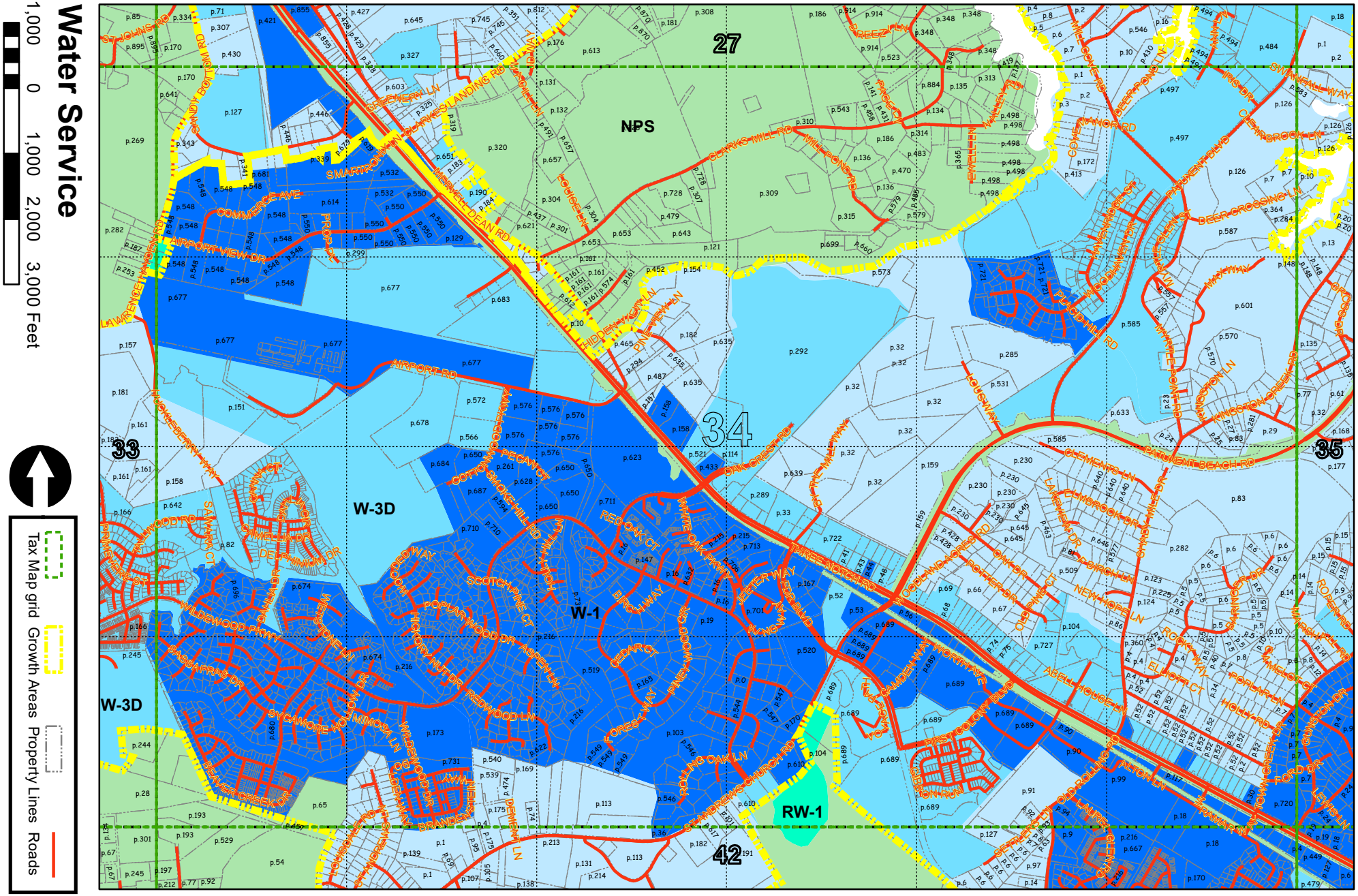
Roads

MAP 32

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

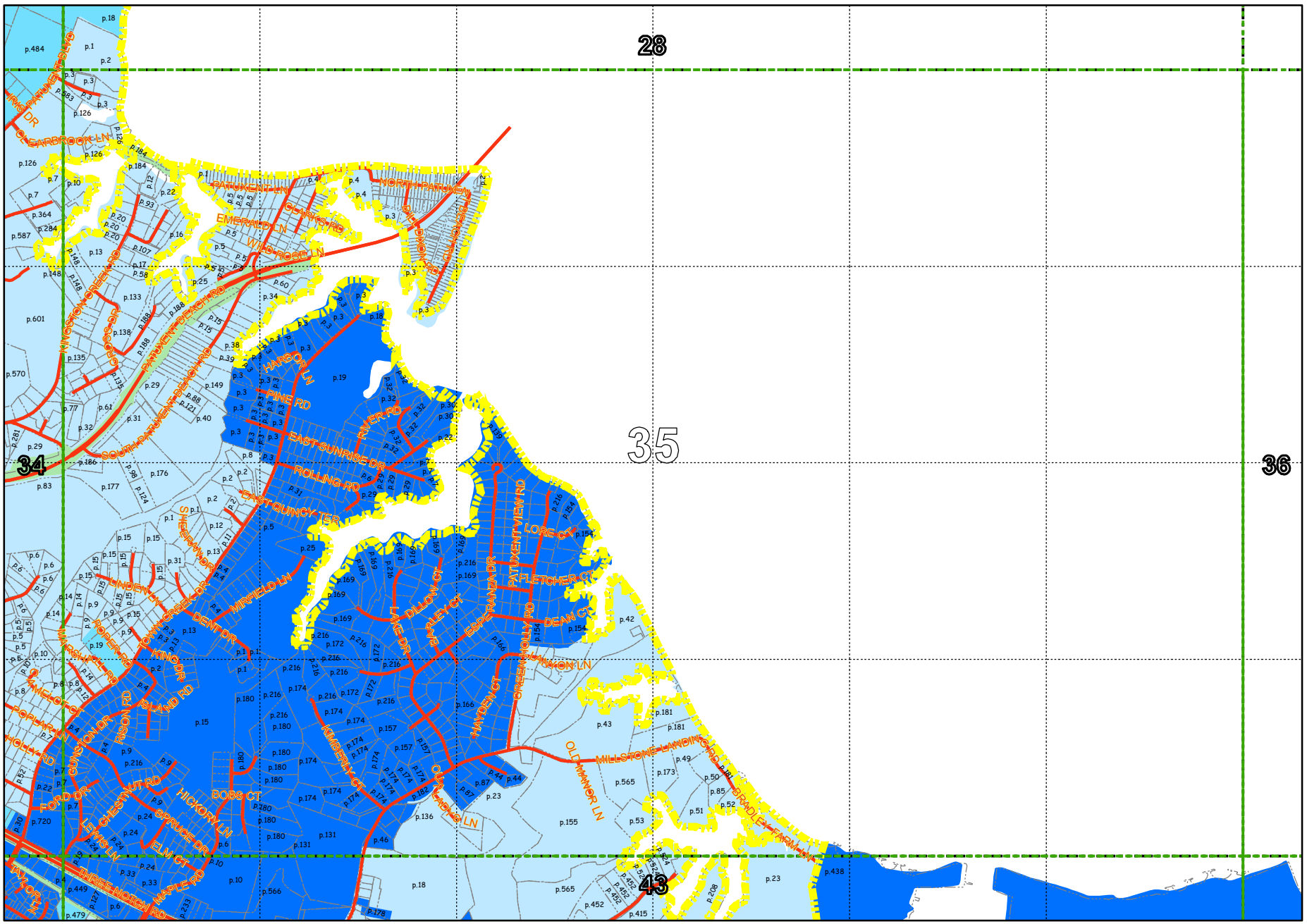
2017 Update


Water Service
1,000 0 1,000 2,000 3,000 Feet
Tax Map grid
Growth Areas
Property Lines
Roads
MAP 33
Water Category:
W-1
W-3D
W-6D
RW-1
RW-D
NPS
2017 Update
26
32
33
34
41
W-3D


Water Service
1,000 0 1,000 2,000 3,000 Feet
Tax Map grid
Growth Areas
Property Lines
Roads
MAP 34
27
NPS
34
33
35
42
W-3D
W-1
RW-1
Water Category:
W-1
W-3D
W-6D
RW-1
RW-D
NPS
2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet



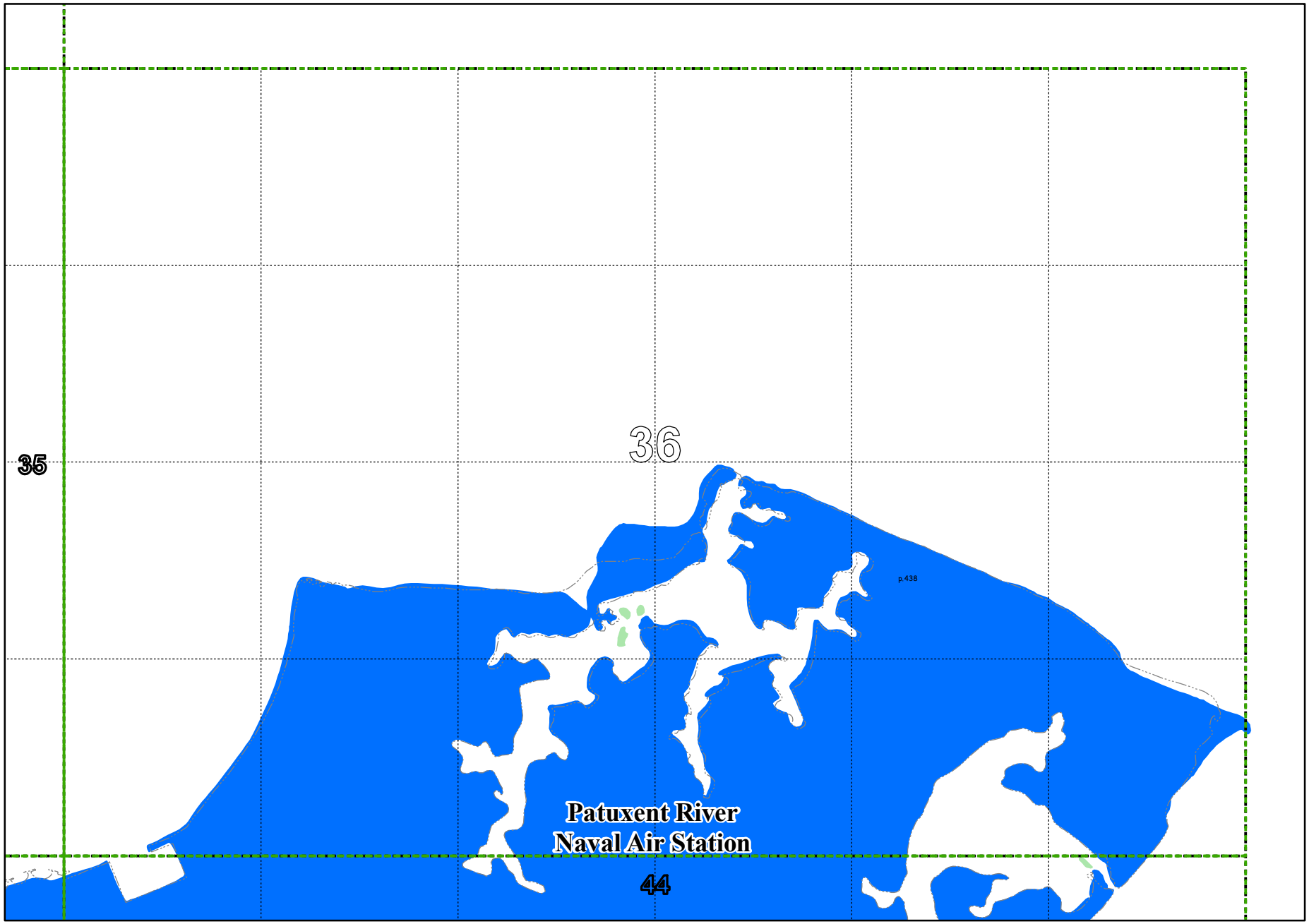
MAP 35

Water Category: W-1 | W-3D | W-6D | RW-1 | RW-D | NPS

2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet

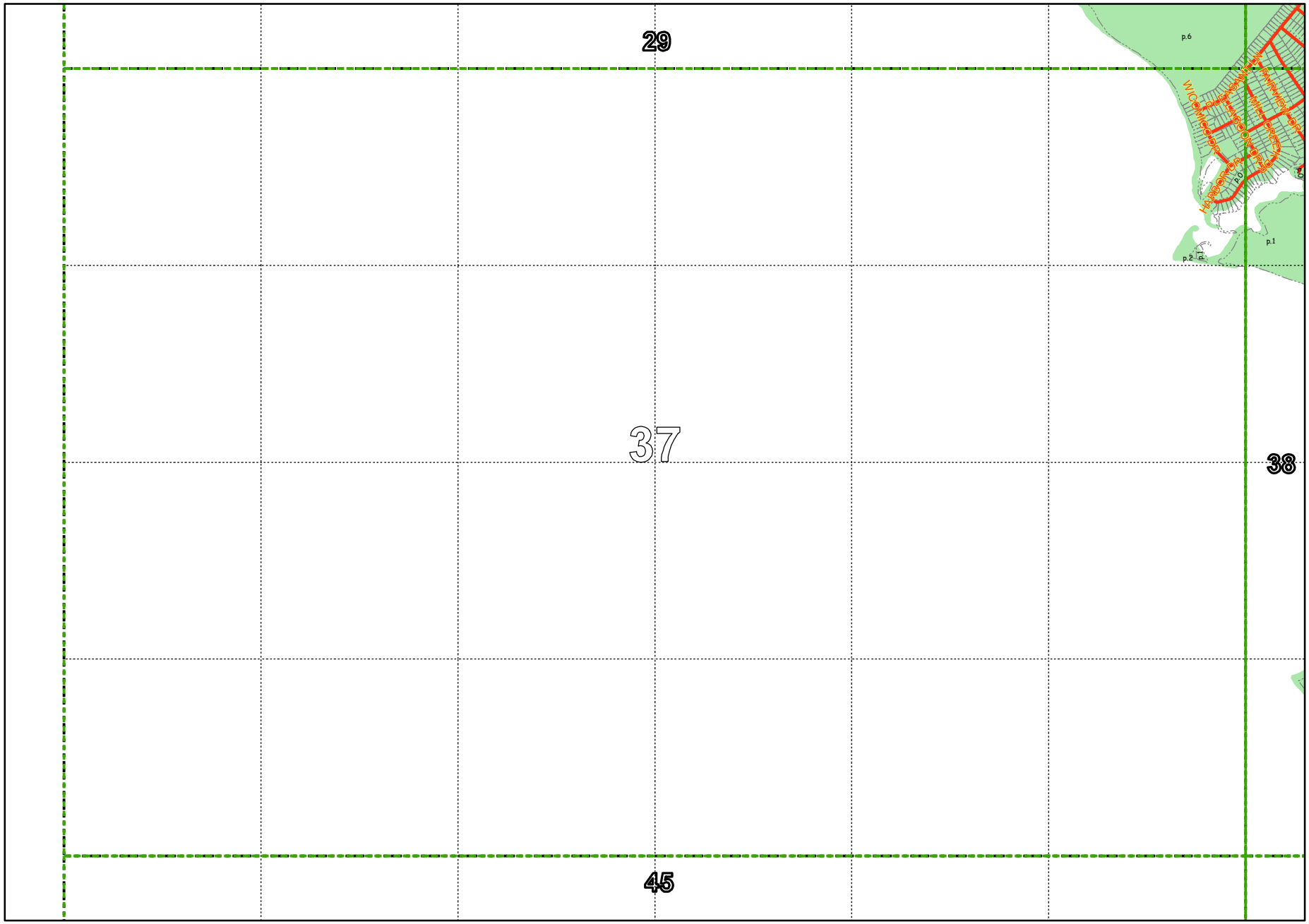


Tax Map grid
Growth Areas
Property Lines
Roads

MAP 36

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update



Water Service

1,000 0 1,000 2,000 3,000 Feet

Tax Map grid

Growth Areas

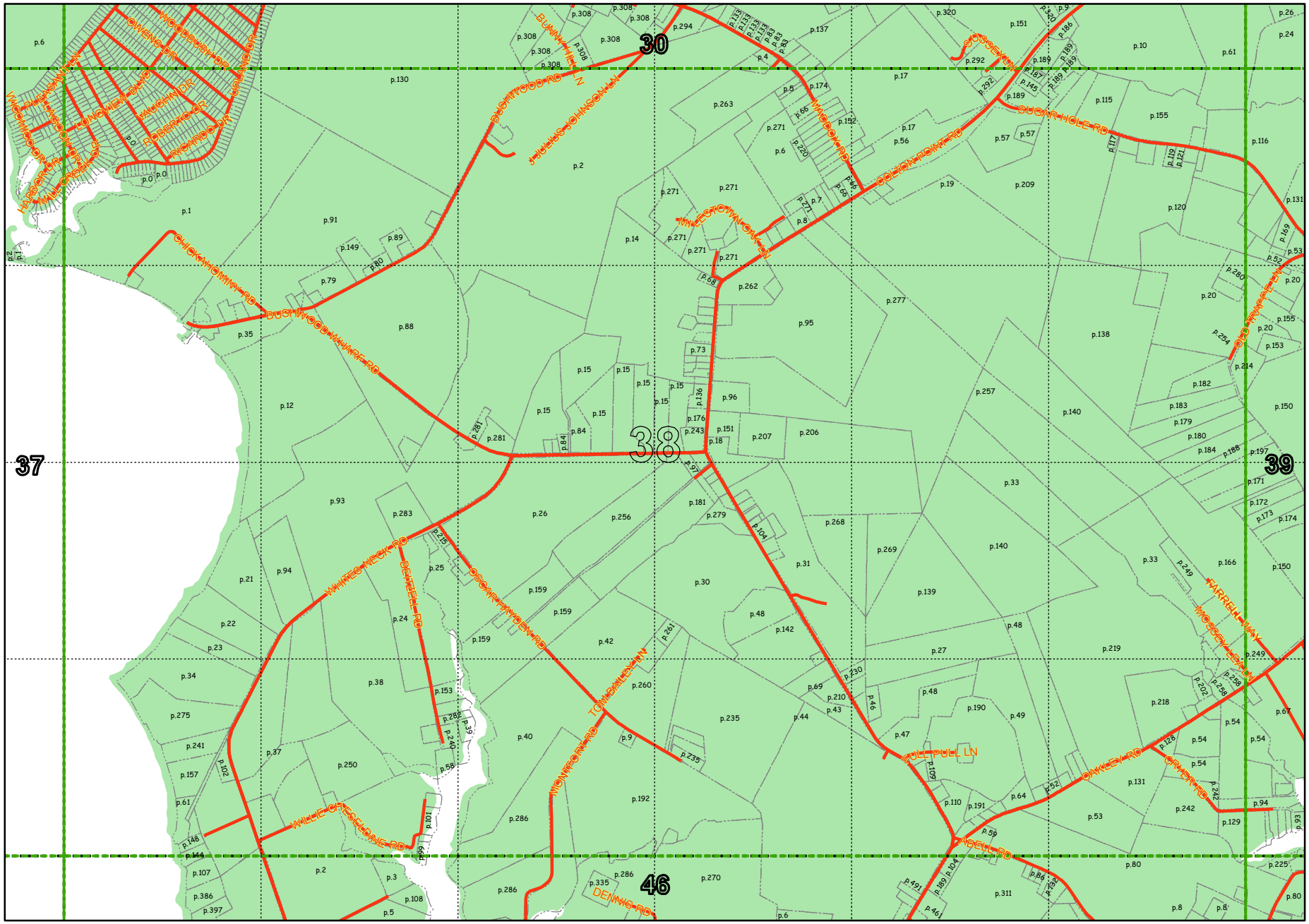
Property Lines

Roads

MAP 31

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update



Water Service

1,000 0 1,000 2,000 3,000 Feet

Tax Map grid Growth Areas Property Lines Roads

MAP 38

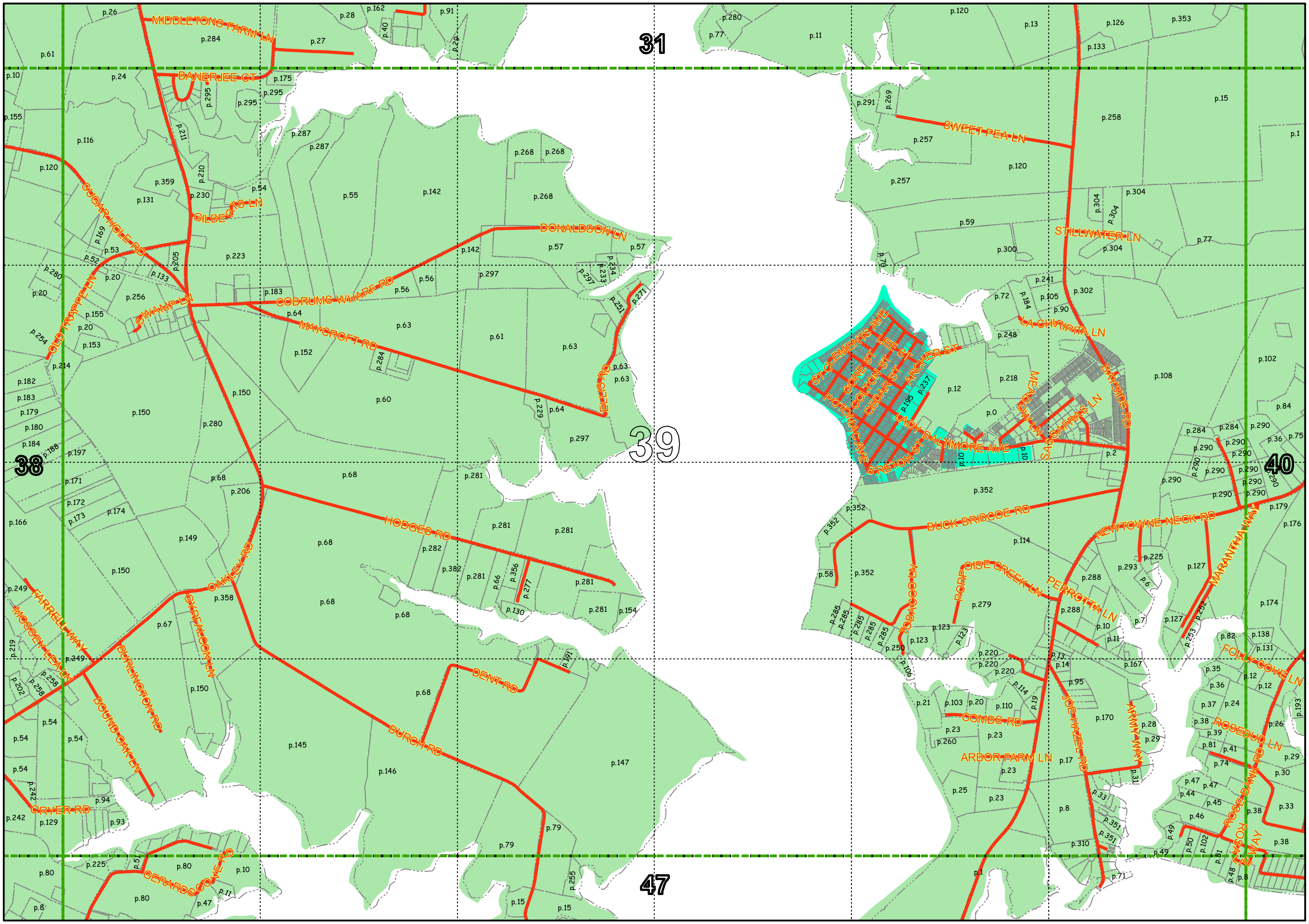
Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet

Tax Map grid
Growth Areas
Property Lines
Roads

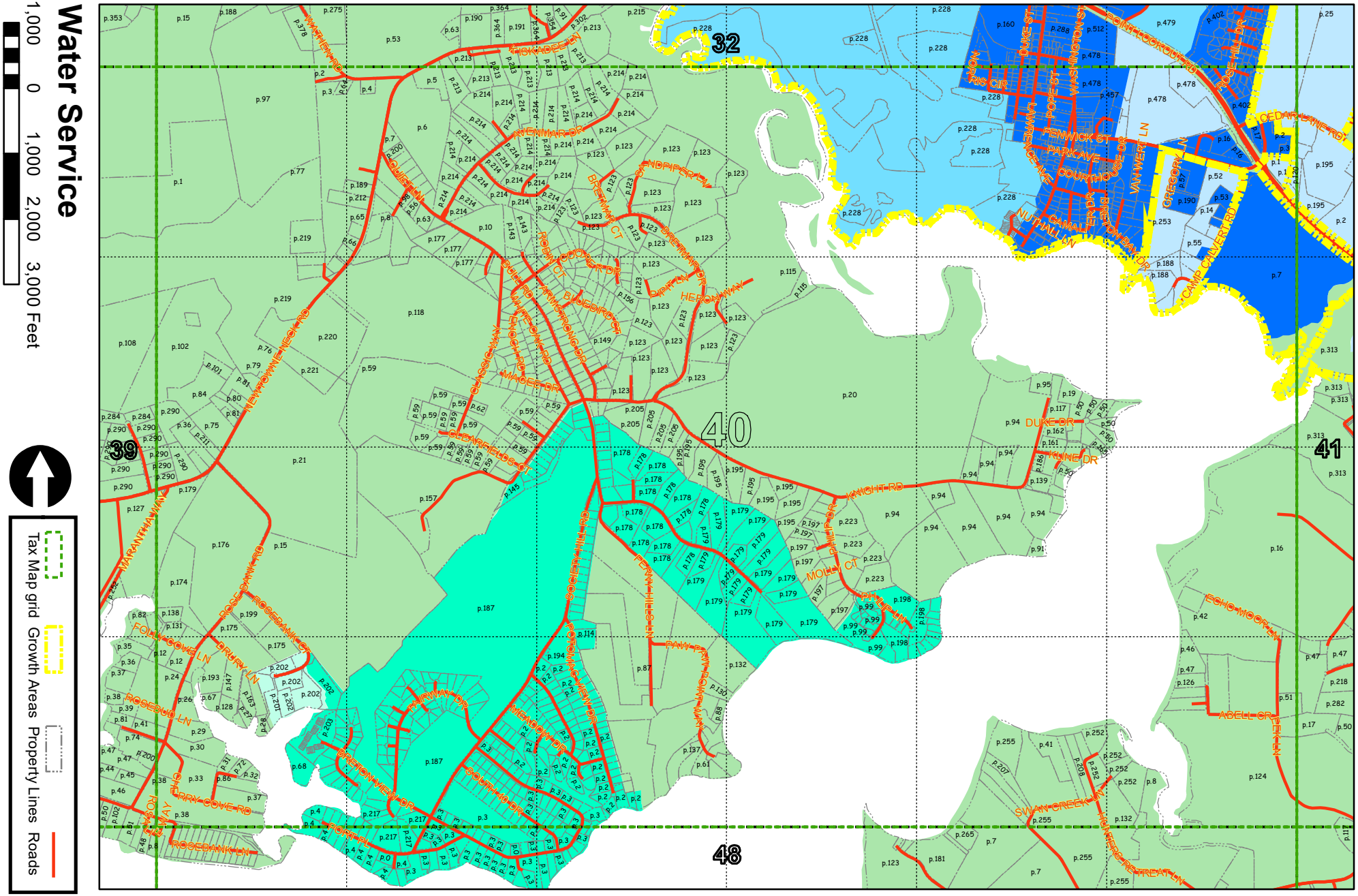


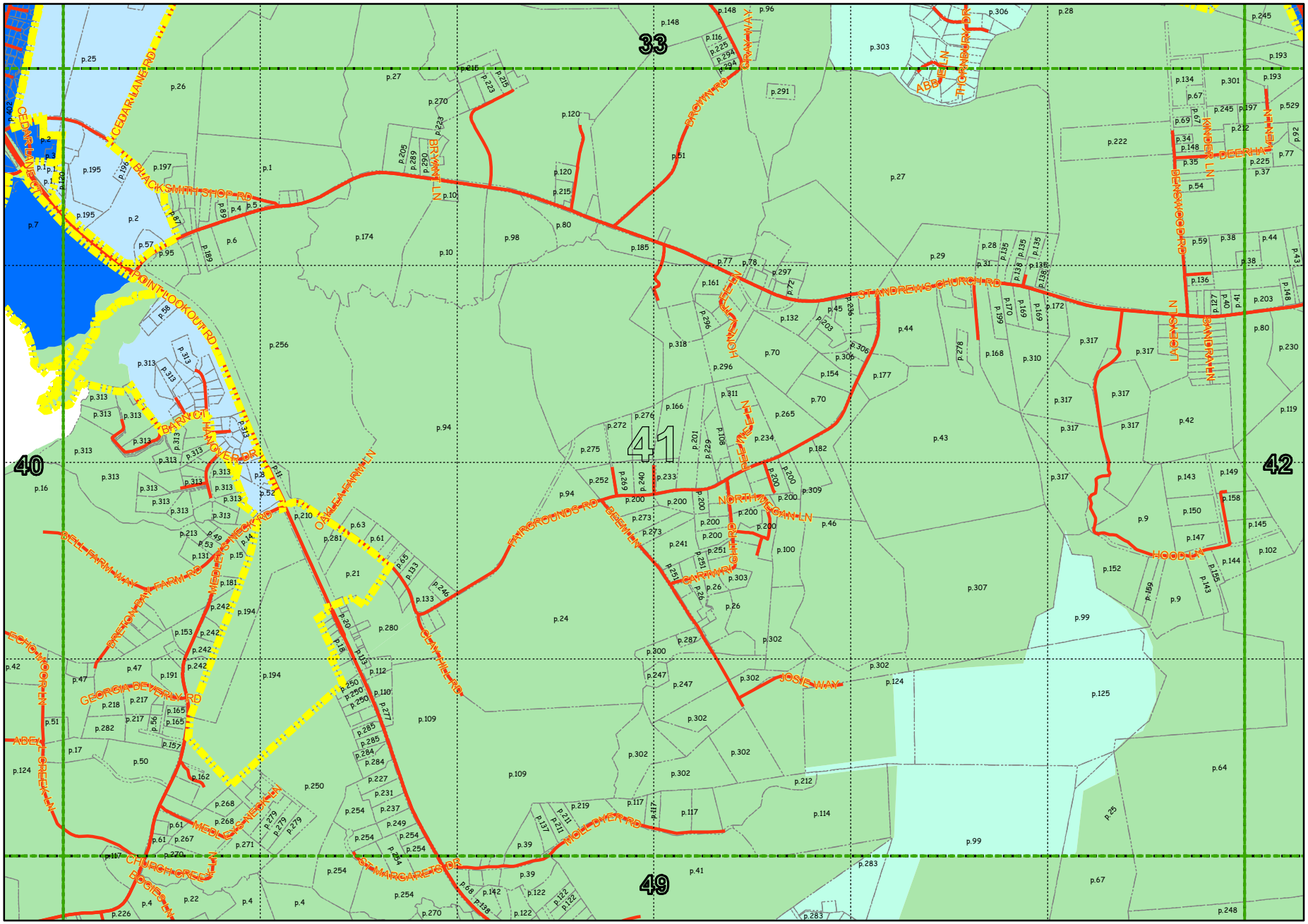
31
38
39
40
47
MIDDLETONS FARM LN
BANERJEE CT
SUGAR HOLE RD
DONALDSON LN
COBRUMS WHARF RD
MAYCROFT RD
SWAMP LN
HODGES RD
OAKLEY RD
DENT RD
BURCH RD
BOUND OAK LN
BURLINGTON RD
FARRELL WAY
GRYER RD
SWEET PEA LN
STILLWATER LN
ST CLEMENTS AVE
CEDAR ST
ARCHER ST
BAYSIDE RD
BUCK BRISCOE RD
NEWTOWNE NECK RD
TOBACCO LN
PERROTTA LN
COMBS RD
ARBOR FARM LN
JOE HAZEL RD
FOLLY COVE LN
ROSEBUD LN

MAP 39

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update


Water Service
1,000 0 1,000 2,000 3,000 Feet
Tax Map grid
Growth Areas
Property Lines
Roads
32
39
40
41
48
MAP 40
Water Category:
W-1
W-3D
W-6D
RW-1
RW-D
NPS
2017 Update



Water Service

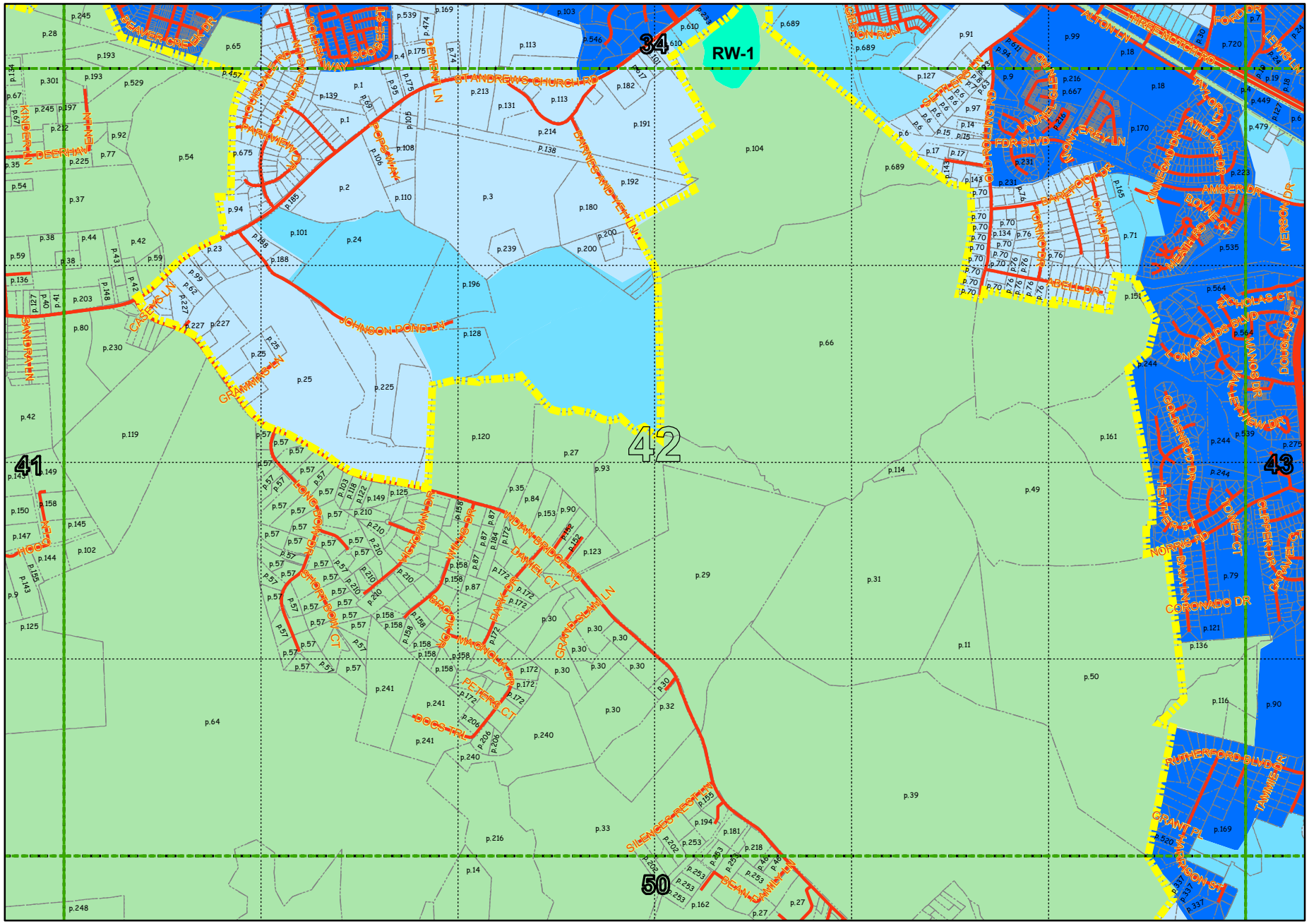
1,000 0 1,000 2,000 3,000 Feet

Tax Map grid Growth Areas Property Lines Roads

MAP 41

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update



Water Service

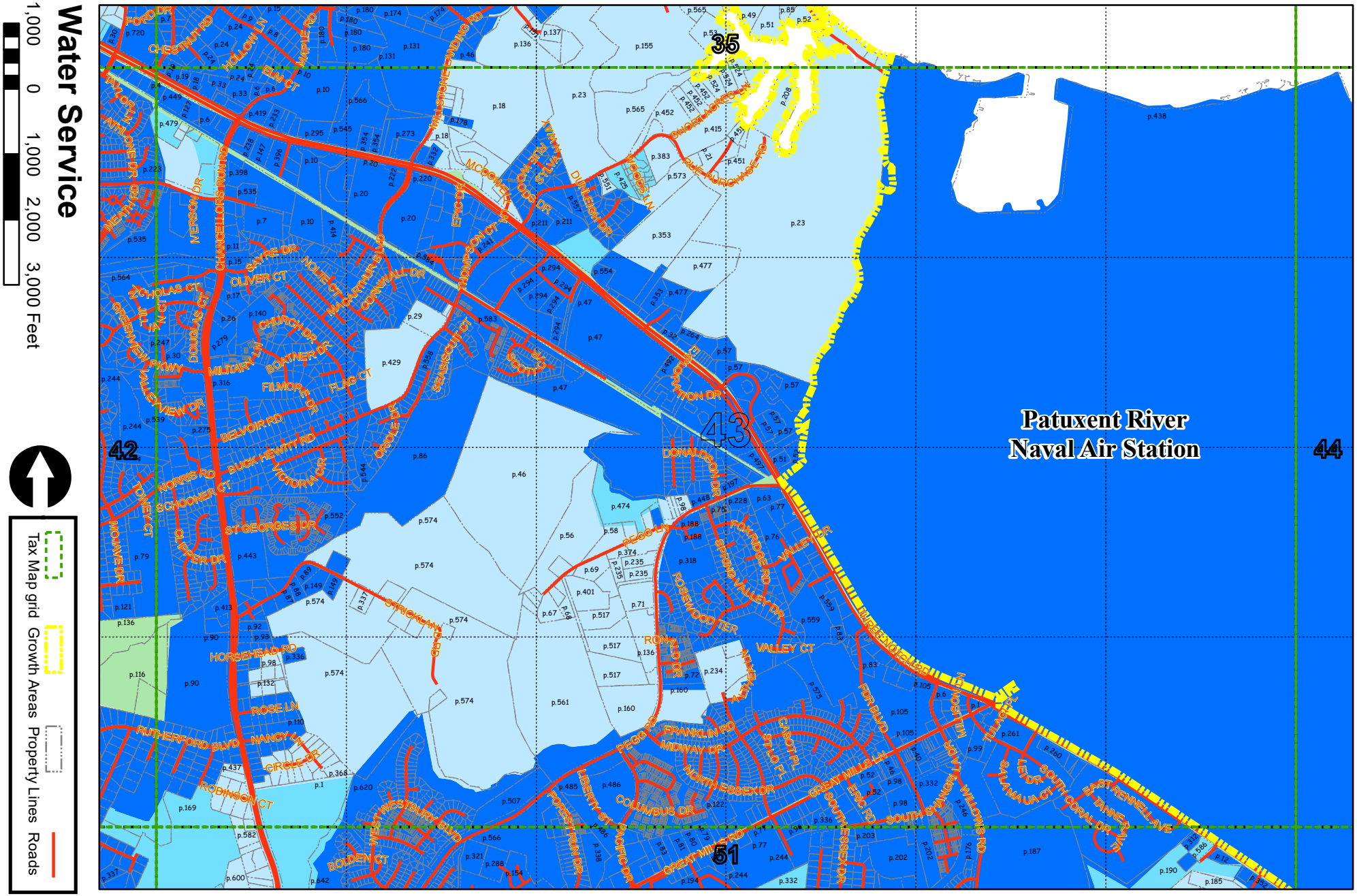
1,000 0 1,000 2,000 3,000 Feet

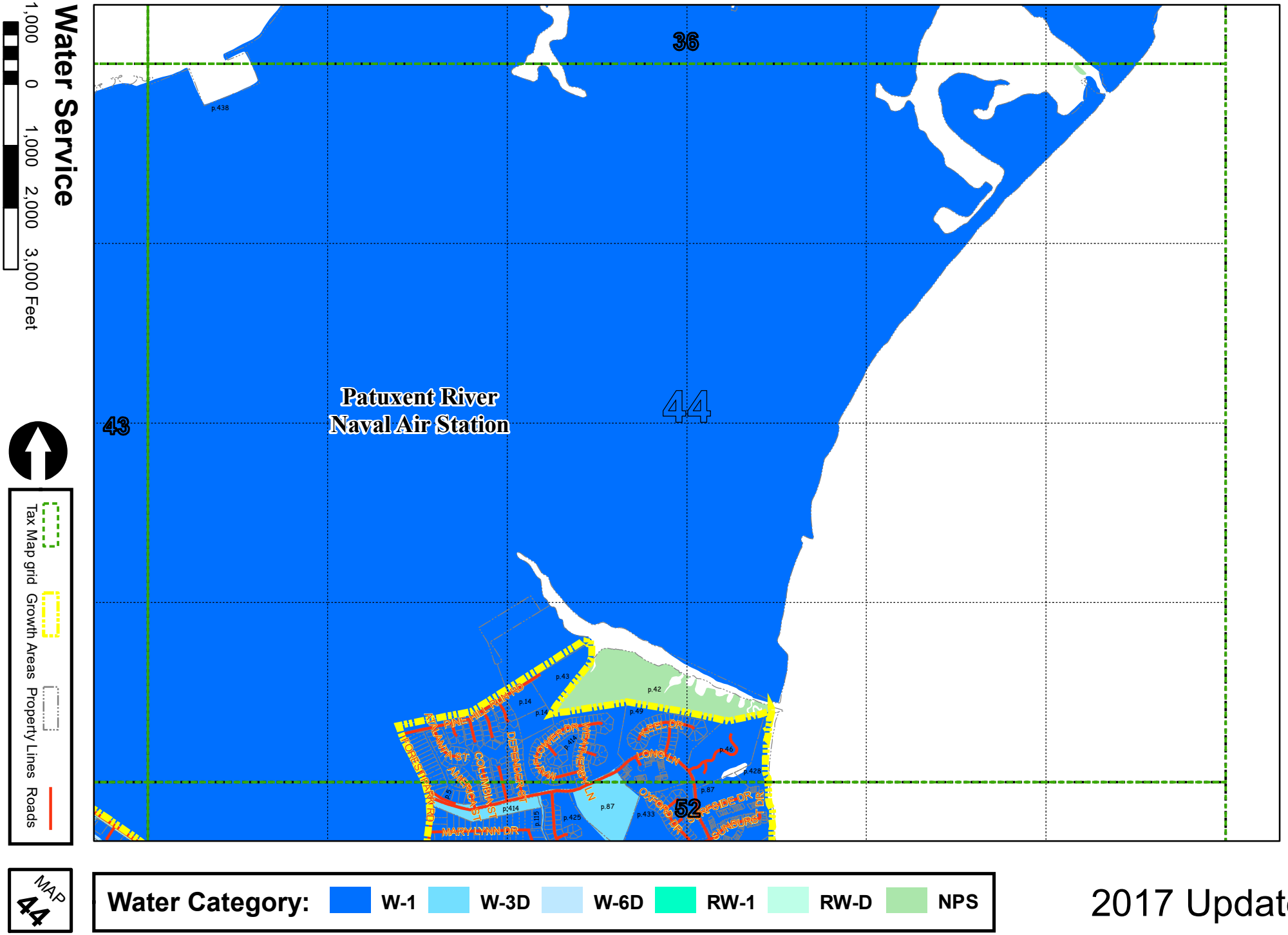
Tax Map grid
Growth Areas
Property Lines
Roads

MAP 42

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

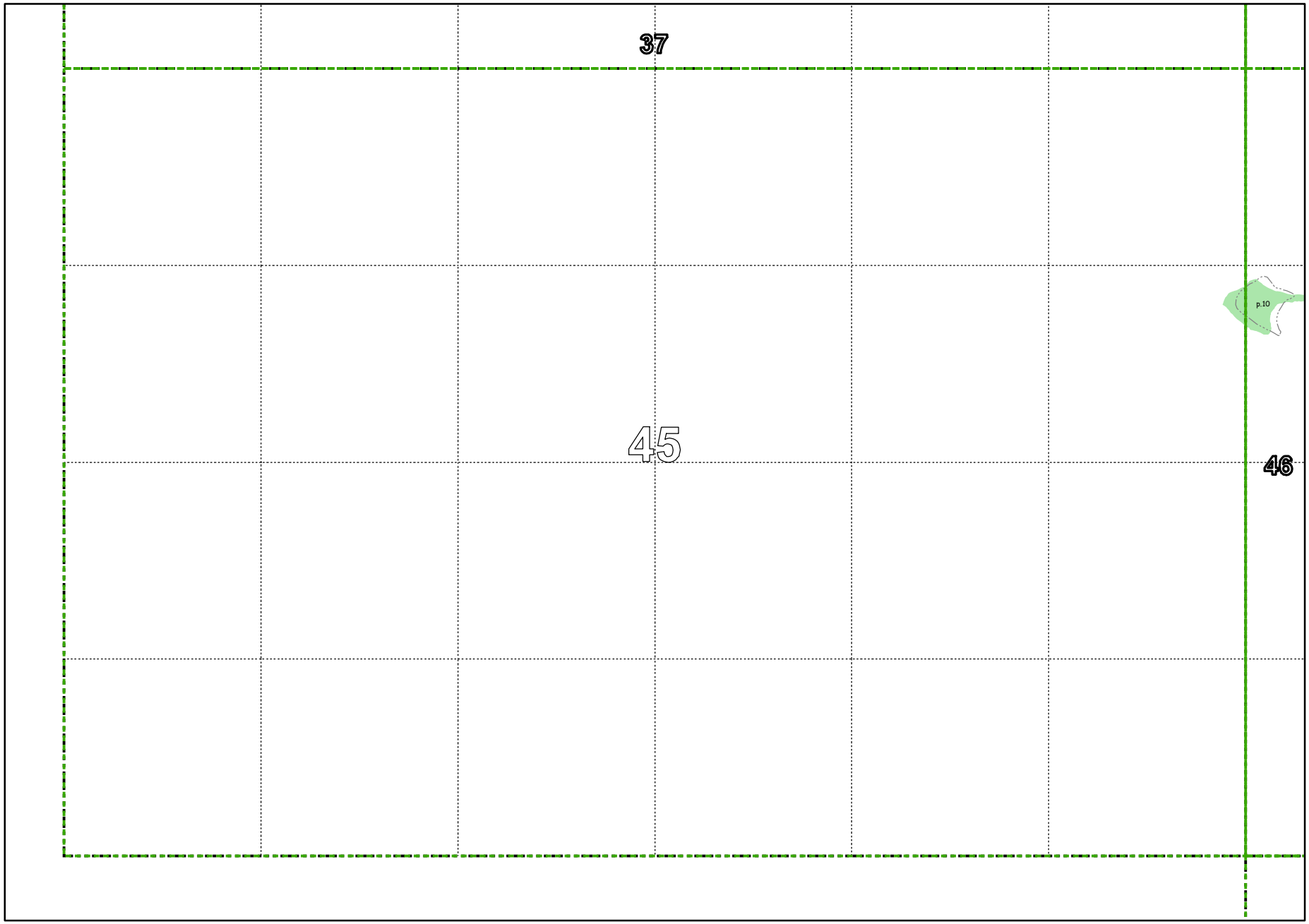
2017 Update


Water Service
1,000 0 1,000 2,000 3,000 Feet
Tax Map grid
Growth Areas
Property Lines
Roads
Patuxent River
Naval Air Station
35
42
43
44
51
MAP 43
Water Category:
W-1
W-3D
W-6D
RW-1
RW-D
NPS
2017 Update


Water Service
1,000 0 1,000 2,000 3,000 Feet
36
43
44
52
Patuxent River
Naval Air Station
Tax Map grid
Growth Areas
Property Lines
Roads
MAP 44
Water Category:
W-1
W-3D
W-6D
RW-1
RW-D
NPS
2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet

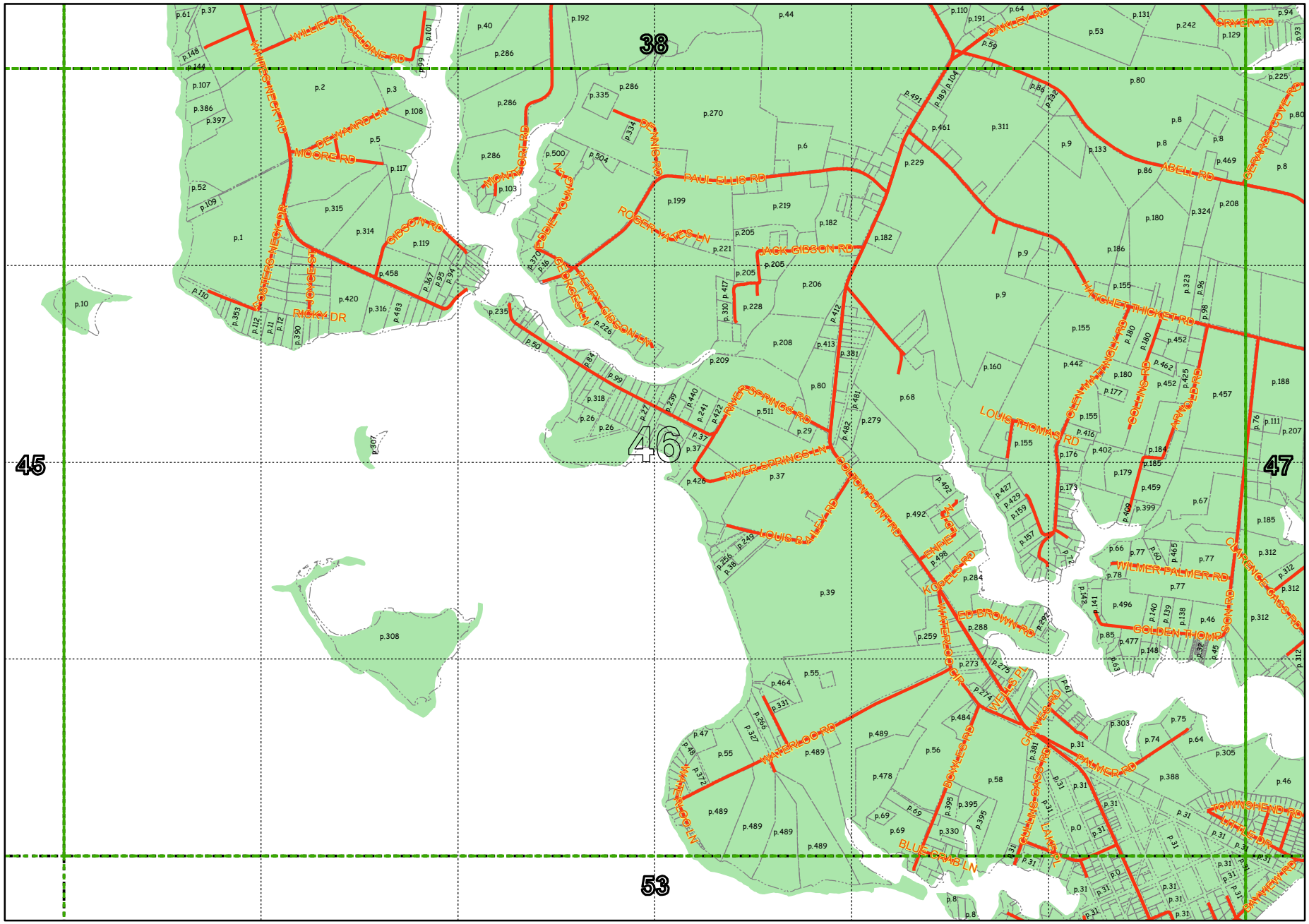


Tax Map grid
Growth Areas
Property Lines
Roads

MAP 45

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update



Water Service

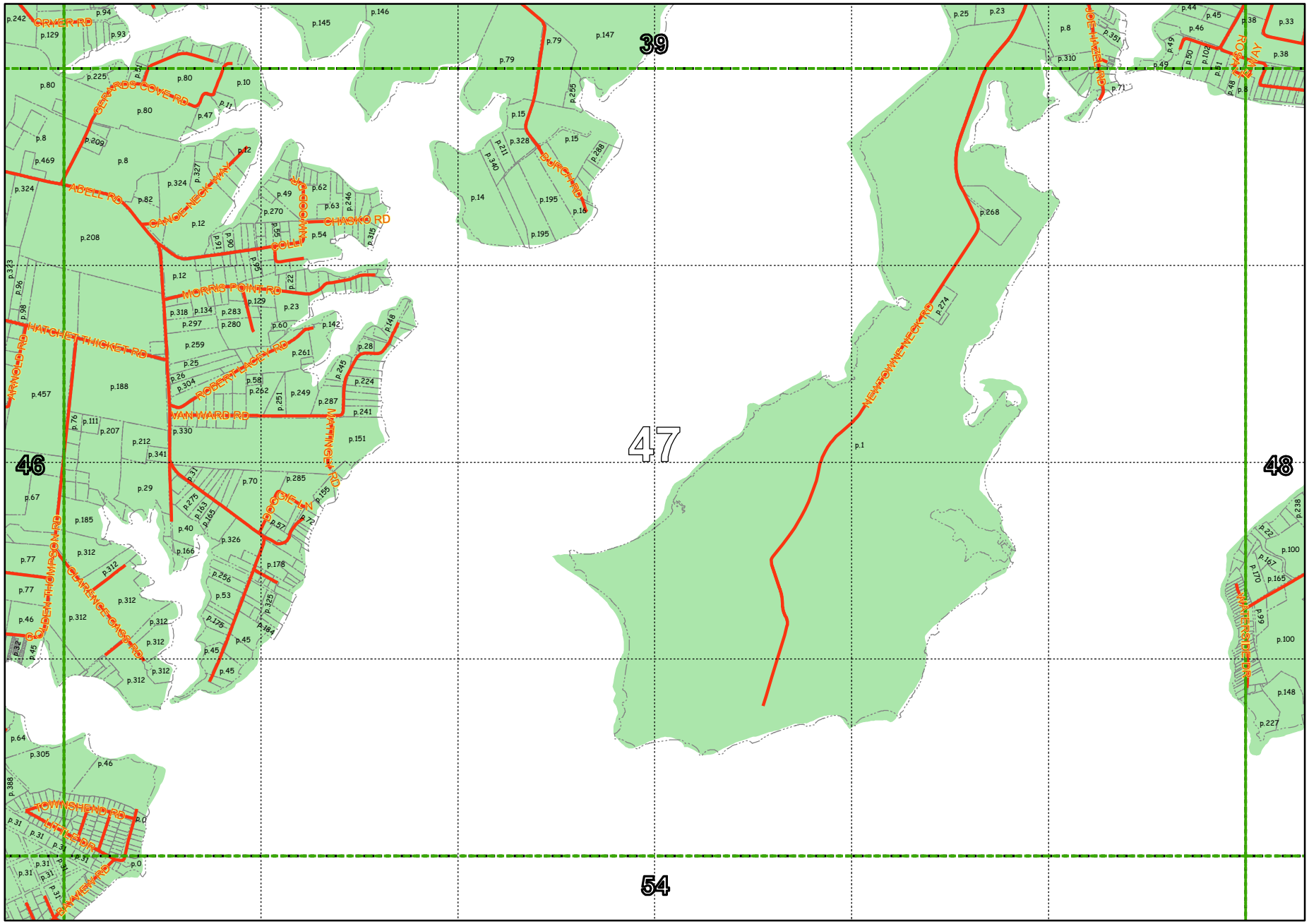
1,000 0 1,000 2,000 3,000 Feet

Tax Map grid
Growth Areas
Property Lines
Roads

MAP 46

Water Category: W-1 | W-3D | W-6D | RW-1 | RW-D | NPS

2017 Update



Water Service

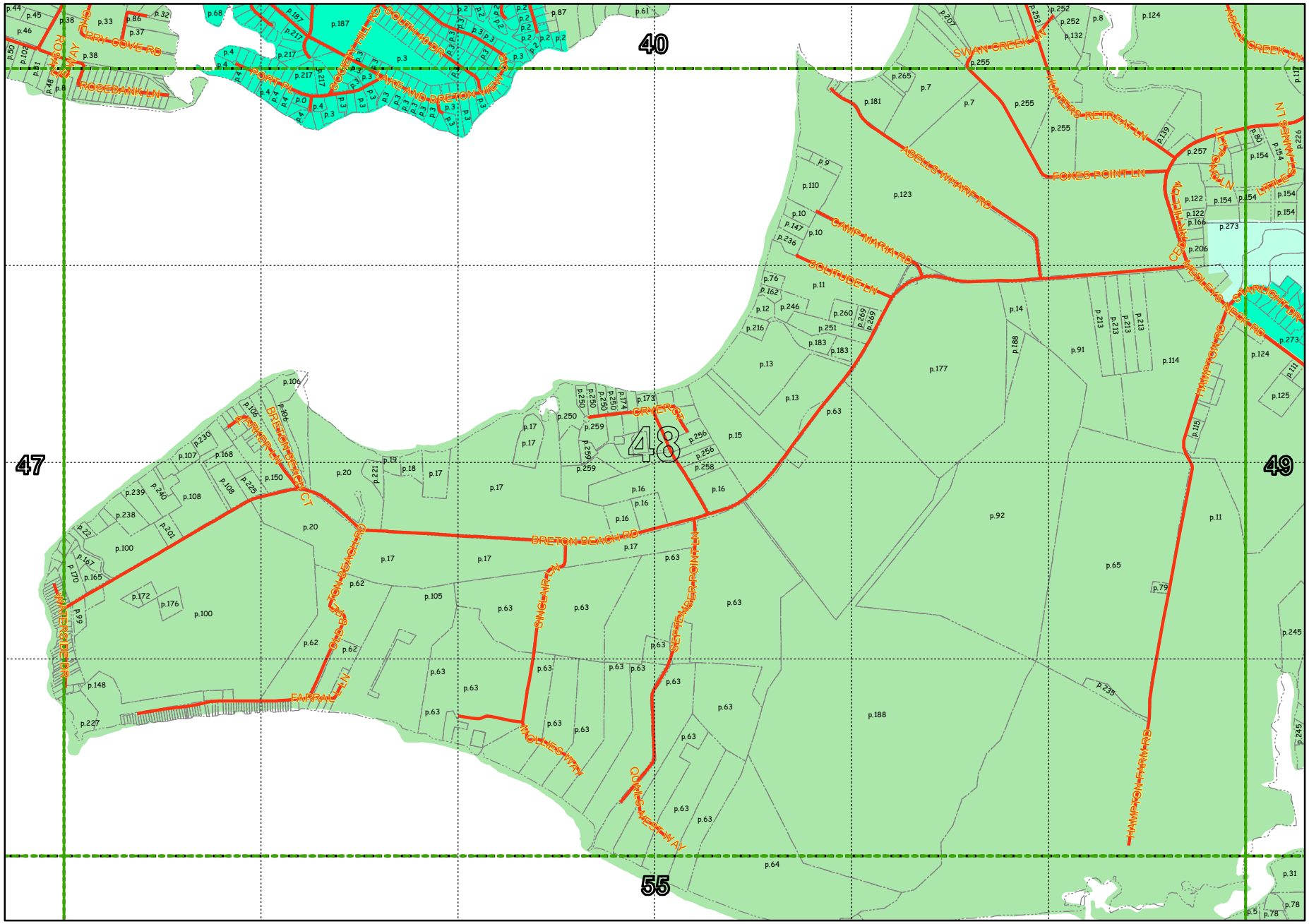
1,000 0 1,000 2,000 3,000 Feet

Tax Map grid
Growth Areas
Property Lines
Roads

MAP 47

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update



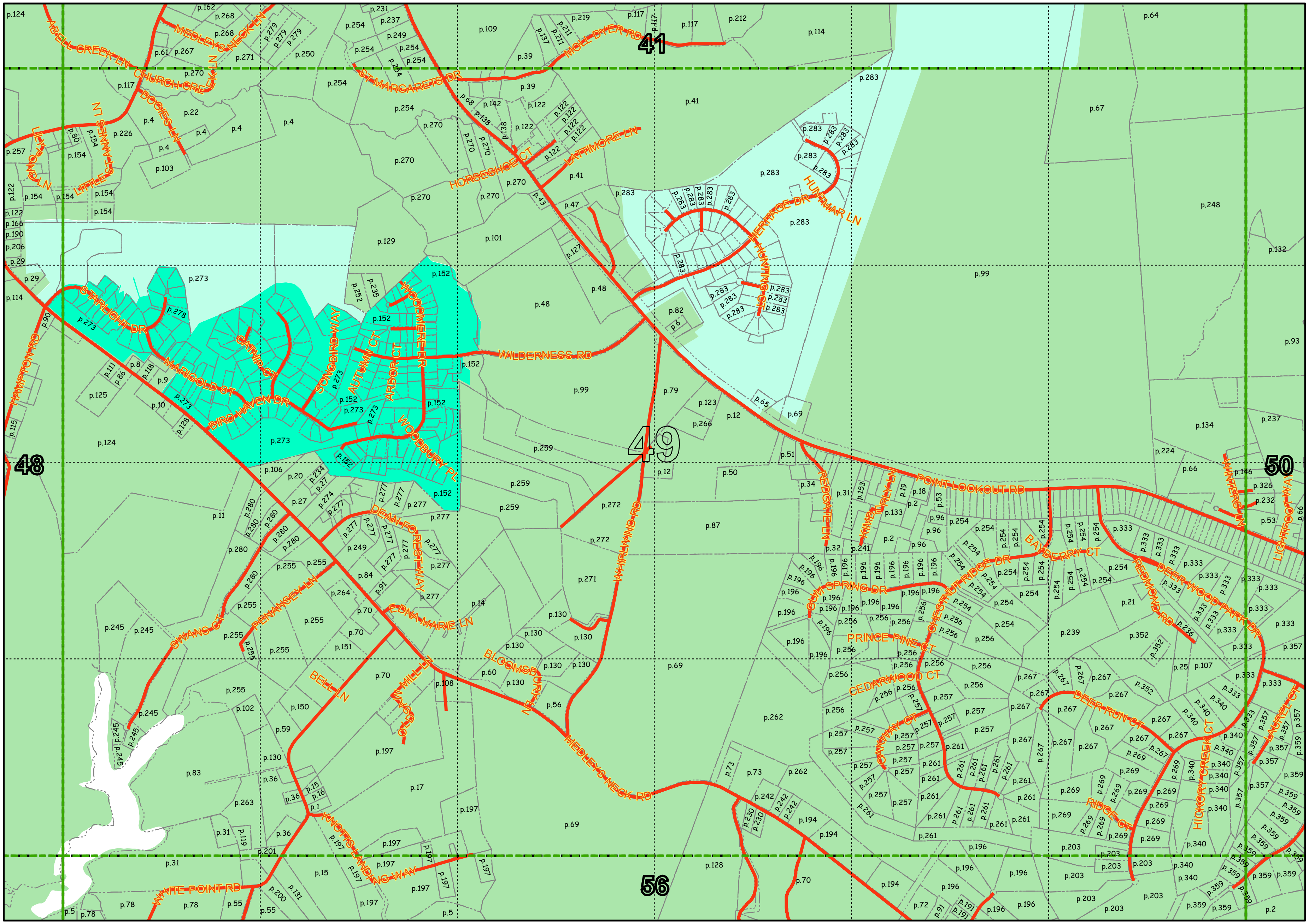
MAP 48

Water Category: W-1 | W-3D | W-6D | RW-1 | RW-D | NPS

2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet



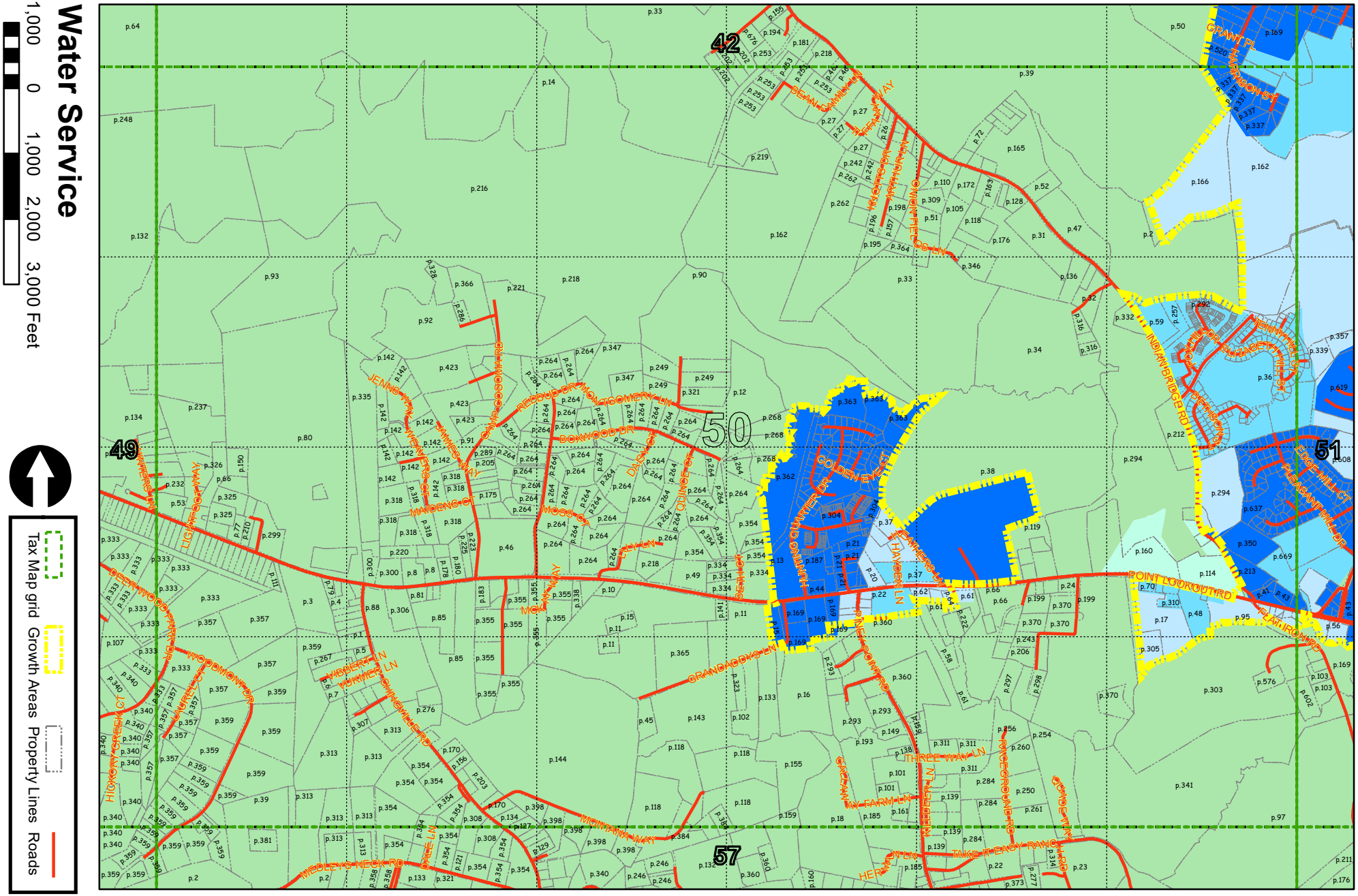
41
48
49
50
56
ABELL CREEK LN
MEDLEY'S NECK LN
CHURCH CREEK LN
BOGIE'S LN
LITTLE LN
ST MARGARETS DR
HORSESHOE CT
LATTIMORE LN
NOEL DYER RD
HERITAGE DR
HUNTMAR LN
HUNTING CT
STARLIGHT DR
MARIGOLD ST
CATNIP CT
SONGBIRD WAY
AUTUMN CT
ARBOR CT
WOODMERE DR
WILDERNESS RD
BIRDHAVEN DR
WOODBURY PL
HAMPTON RD
DEAN FOREST WAY
PENANSEY LN
SWANG CT
EDNA MARIE LN
BELL LN
BLOOMSBURY LN
WHIRLWIND RD
MEDLEYS NECK RD
KNOTTS LANDING WAY
WHITE POINT RD
POINT LOOKOUT RD
REDGATE LN
BAYBERRY CT
GUNSPRING DR
PRINCE PINE CT
CEDARWOOD CT
DEER RUN CT
DEERWOOD PARK DR
REDMOND RD
HICKORY CREEK CT
RIDGE CT
LIGHTFOOT WAY

Tax Map grid
Growth Areas
Property Lines
Roads

MAP 49

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update

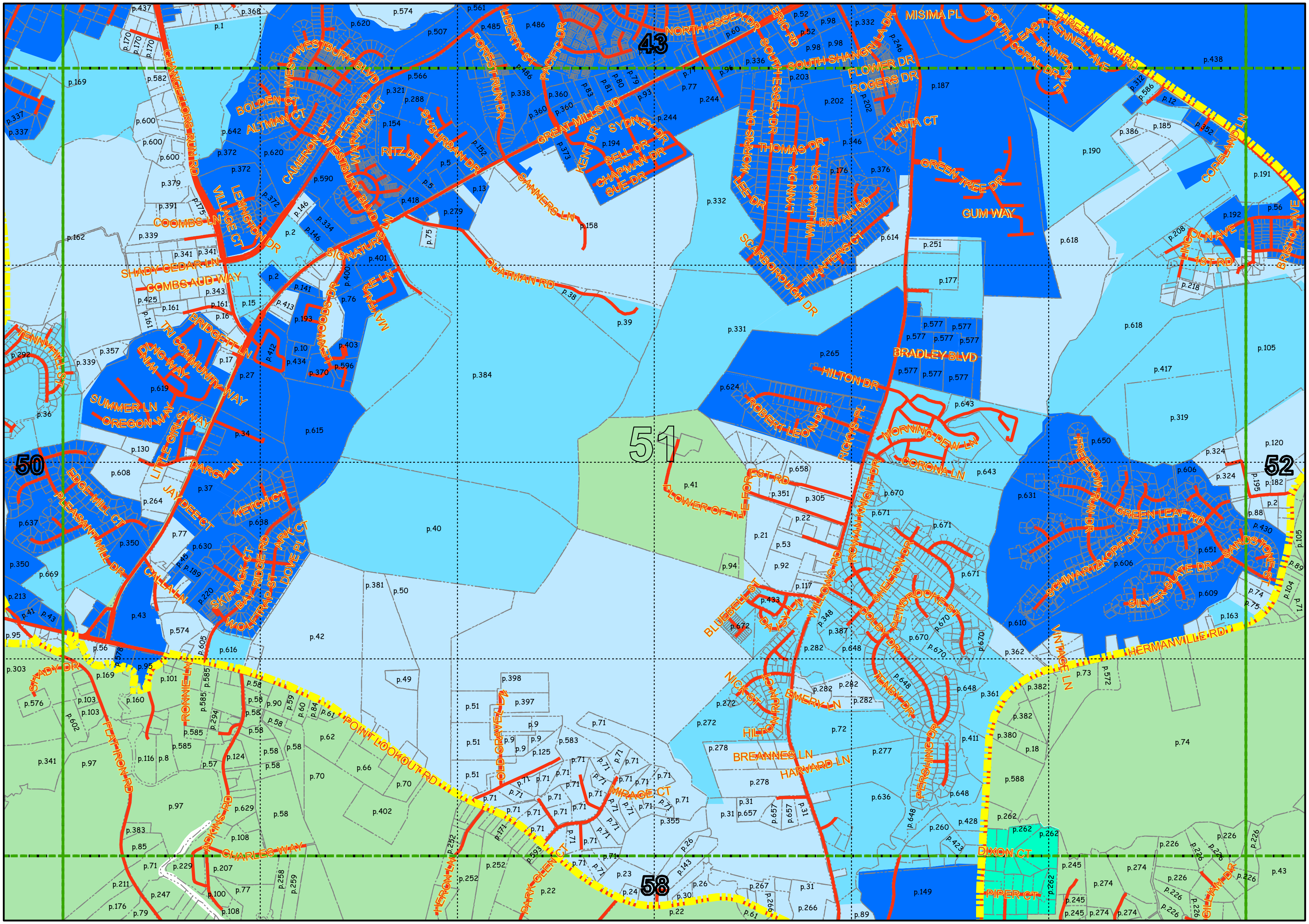


Water Category: W-1 | W-3D | W-6D | RW-1 | RW-D | NPS

2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet

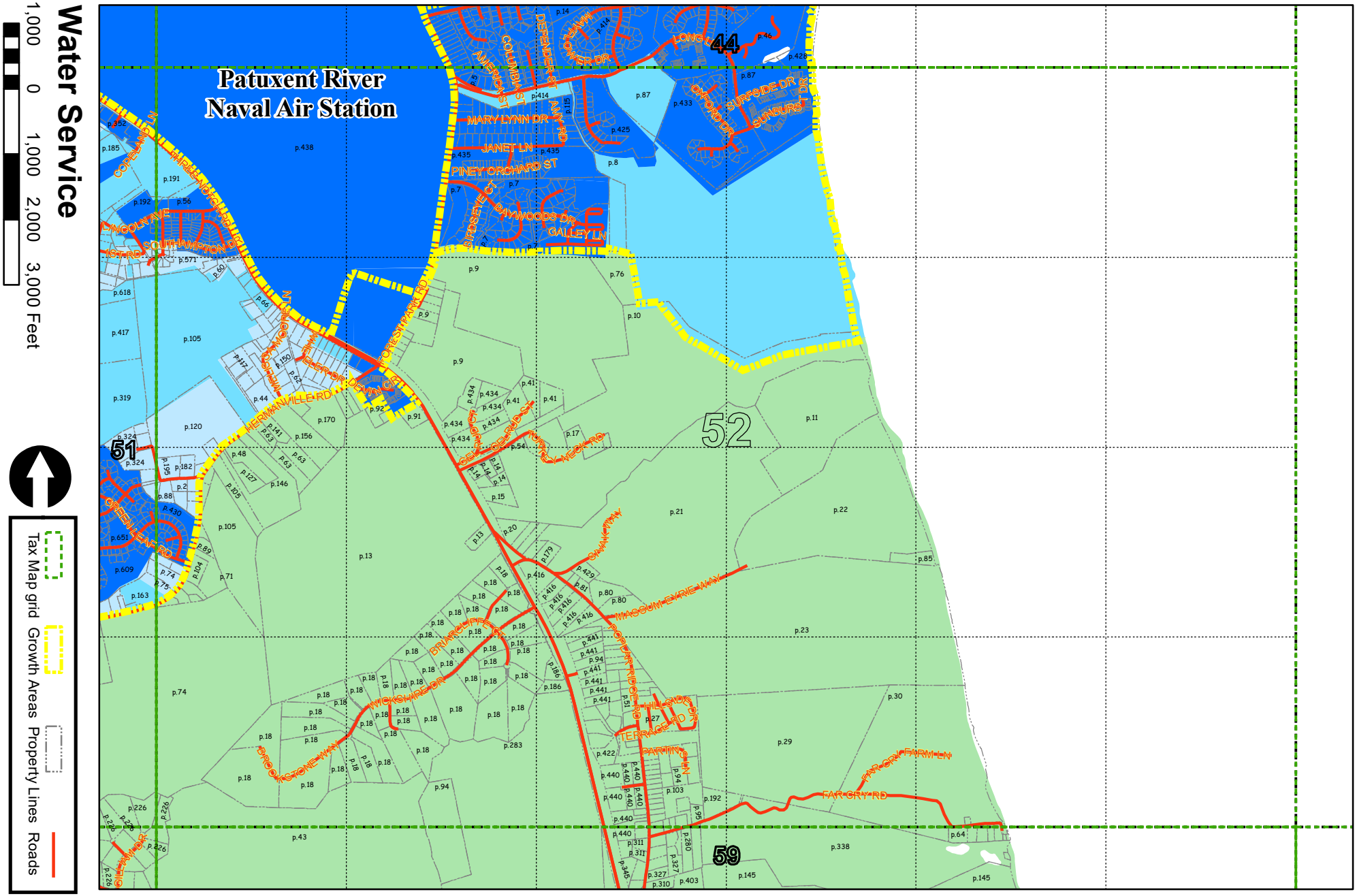


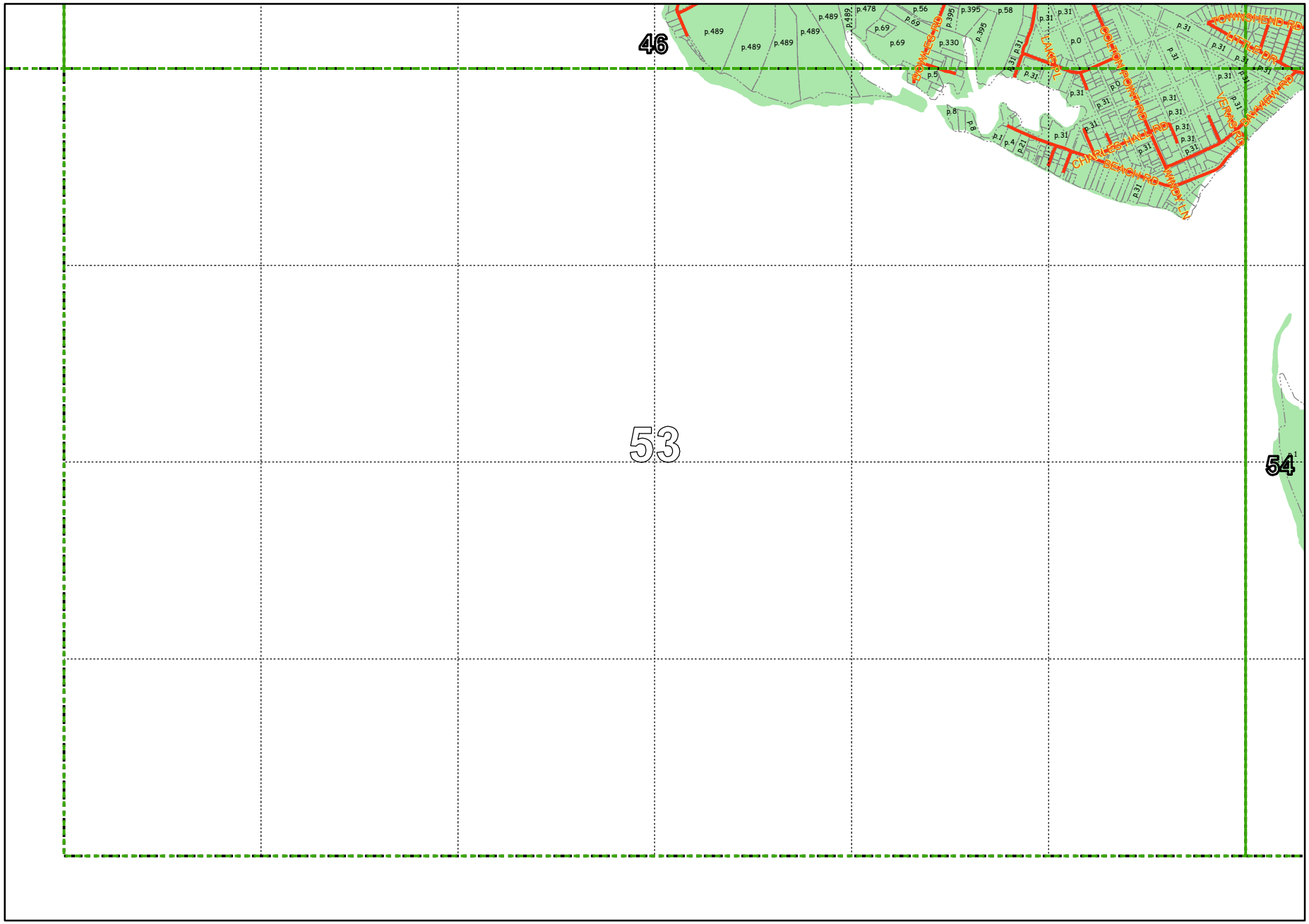
Legend: Tax Map grid; Growth Areas; Property Lines; Roads

MAP 51

Water Category: W-1 | W-3D | W-6D | RW-1 | RW-D | NPS

2017 Update


Water Service
1,000 0 1,000 2,000 3,000 Feet
Patuxent River
Naval Air Station
Tax Map grid
Growth Areas
Property Lines
Roads
MAP 52
Water Category:
W-1
W-3D
W-6D
RW-1
RW-D
NPS
2017 Update



Water Service

1,000 0 1,000 2,000 3,000 Feet

Tax Map grid
Growth Areas
Property Lines
Roads

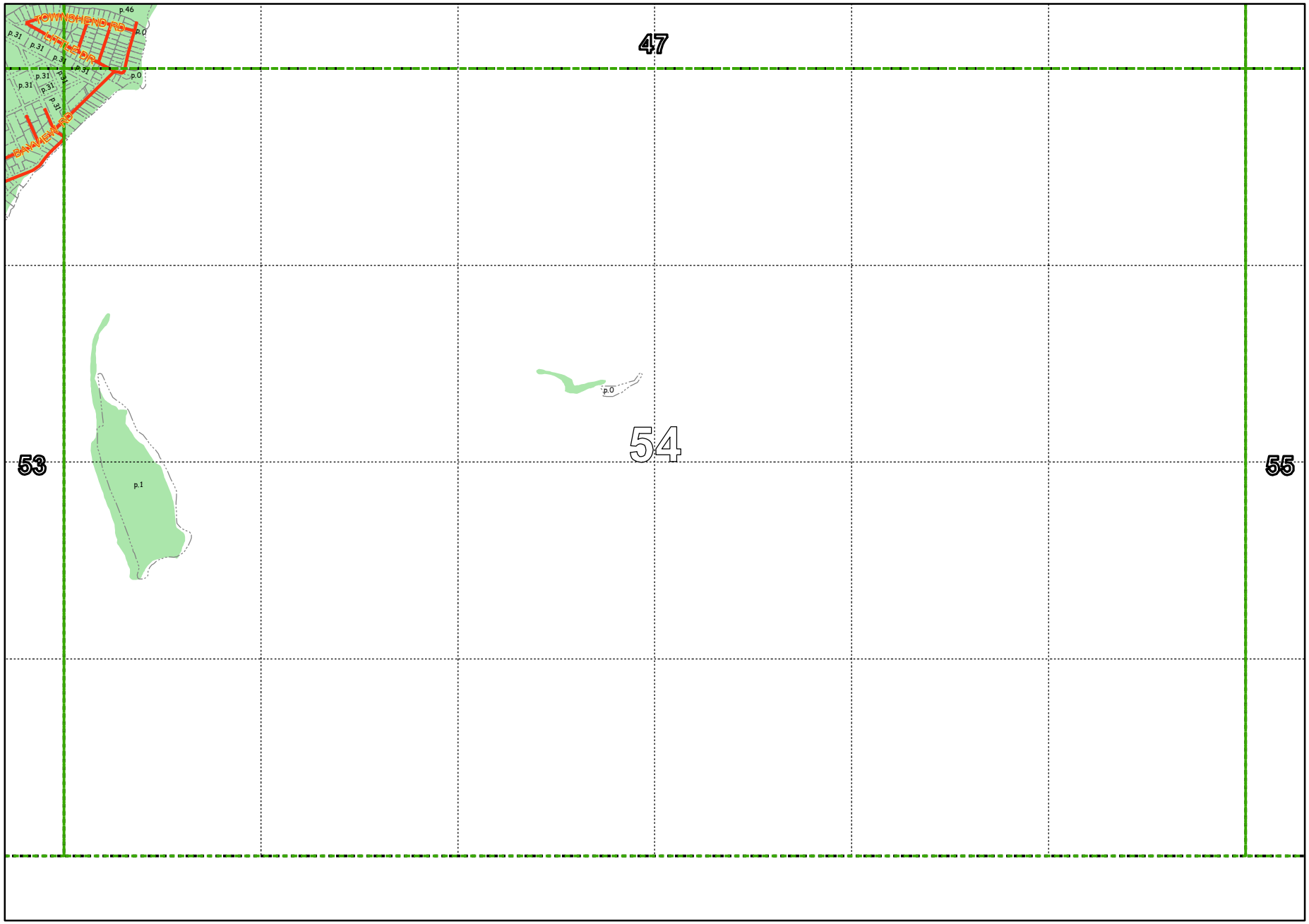
MAP 53

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet

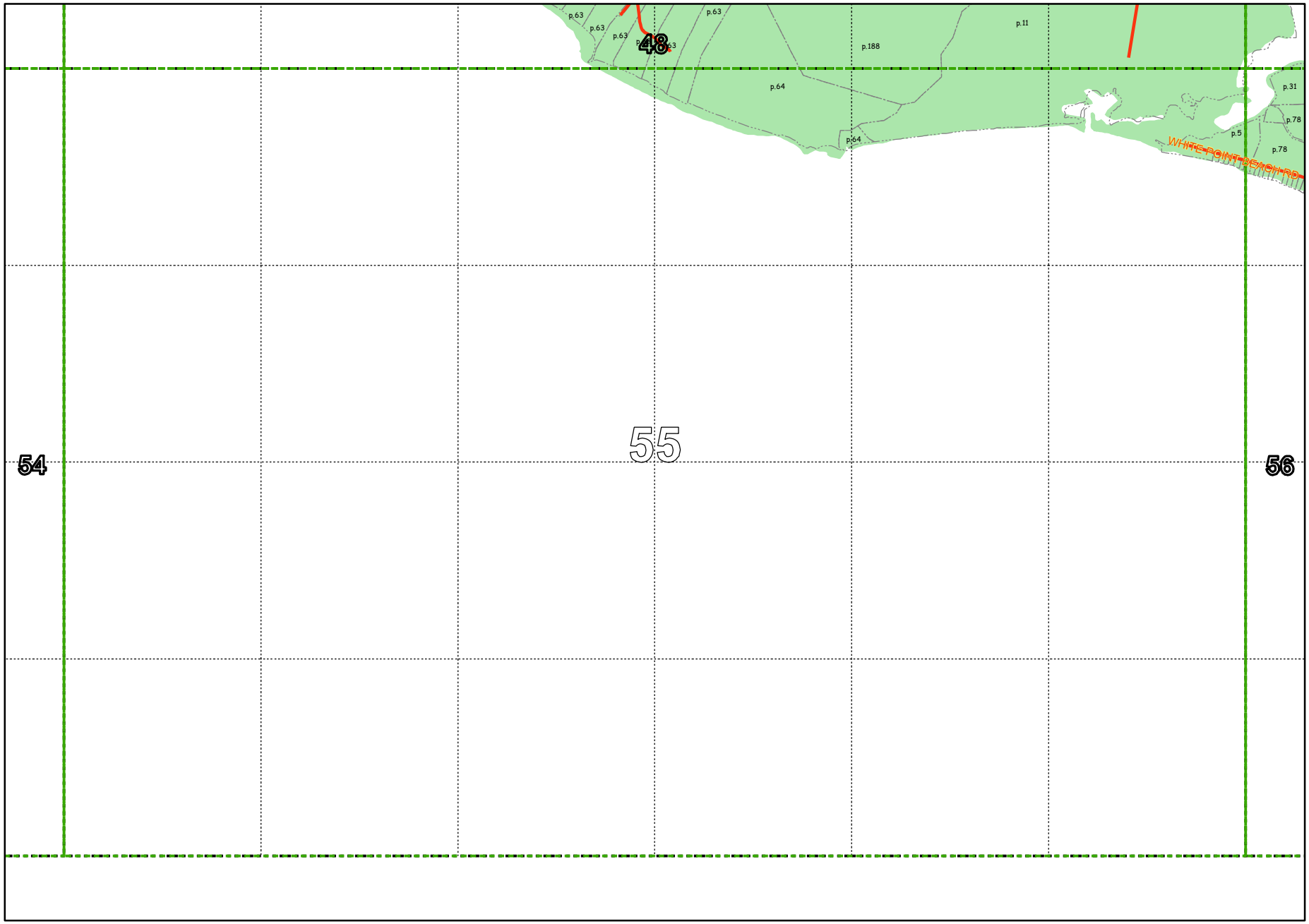


Tax Map grid
Growth Areas
Property Lines
Roads

MAP 54

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

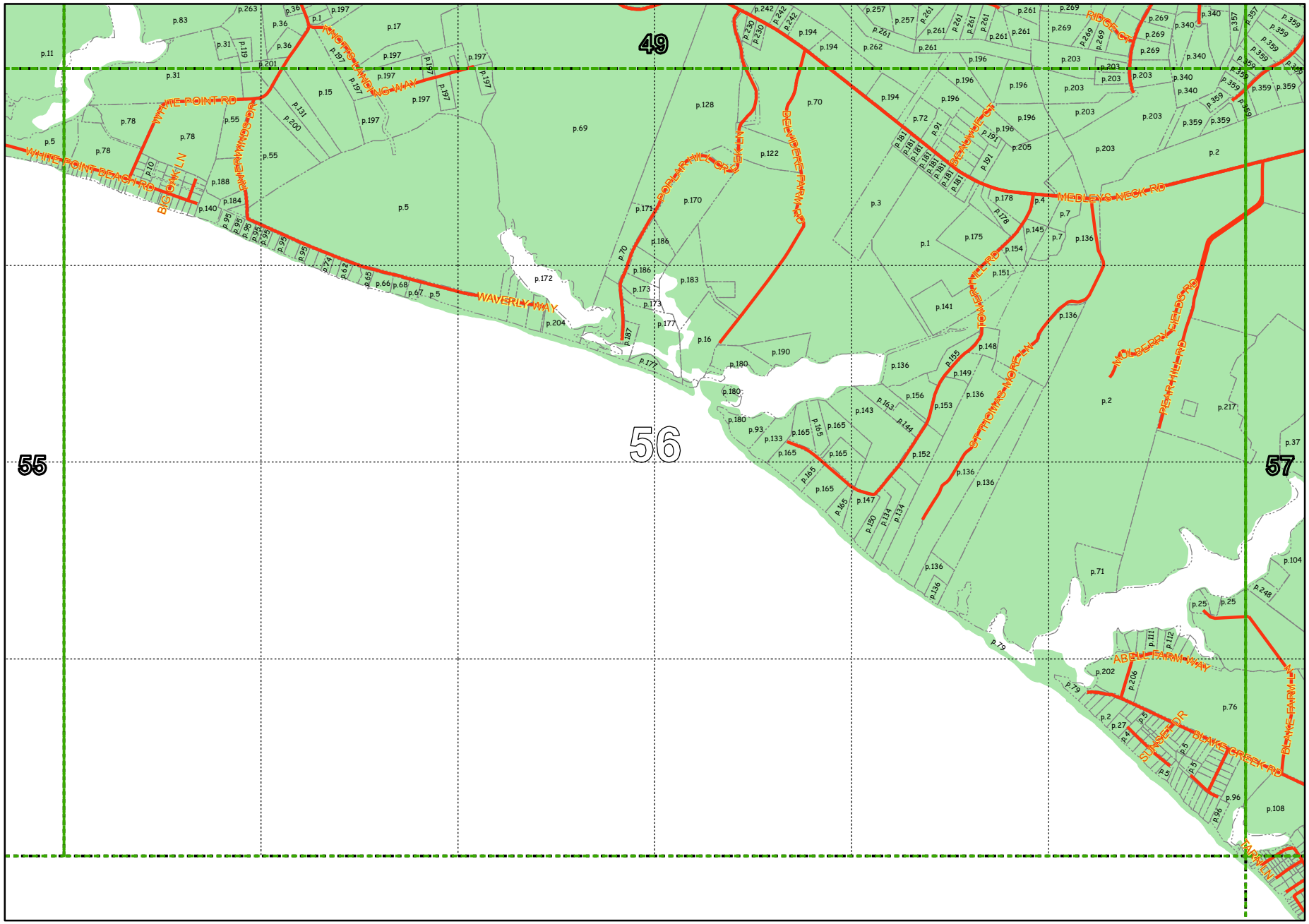
2017 Update



MAP 55

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update



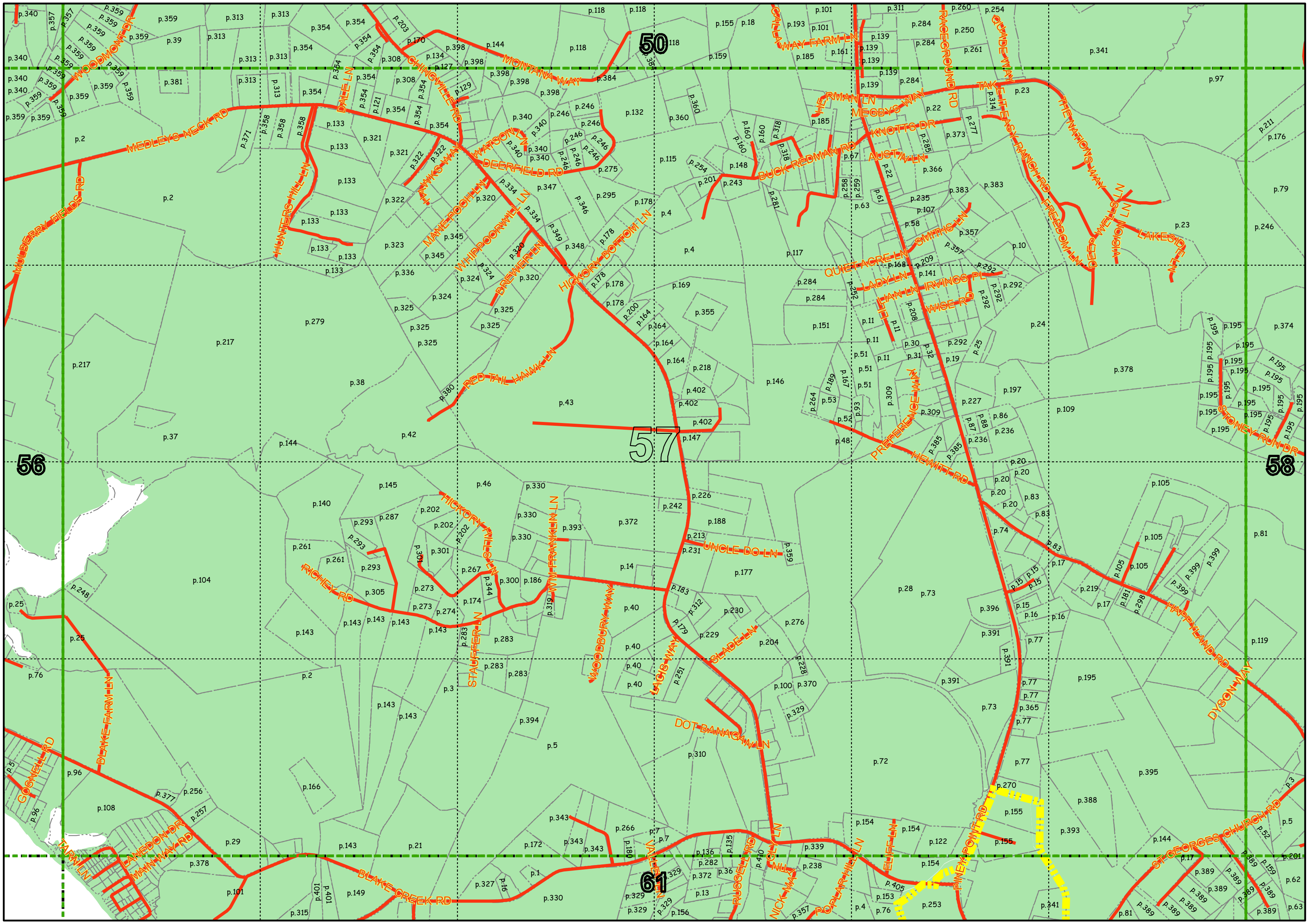
MAP 56

Water Category: W-1 | W-3D | W-6D | RW-1 | RW-D | NPS

2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet

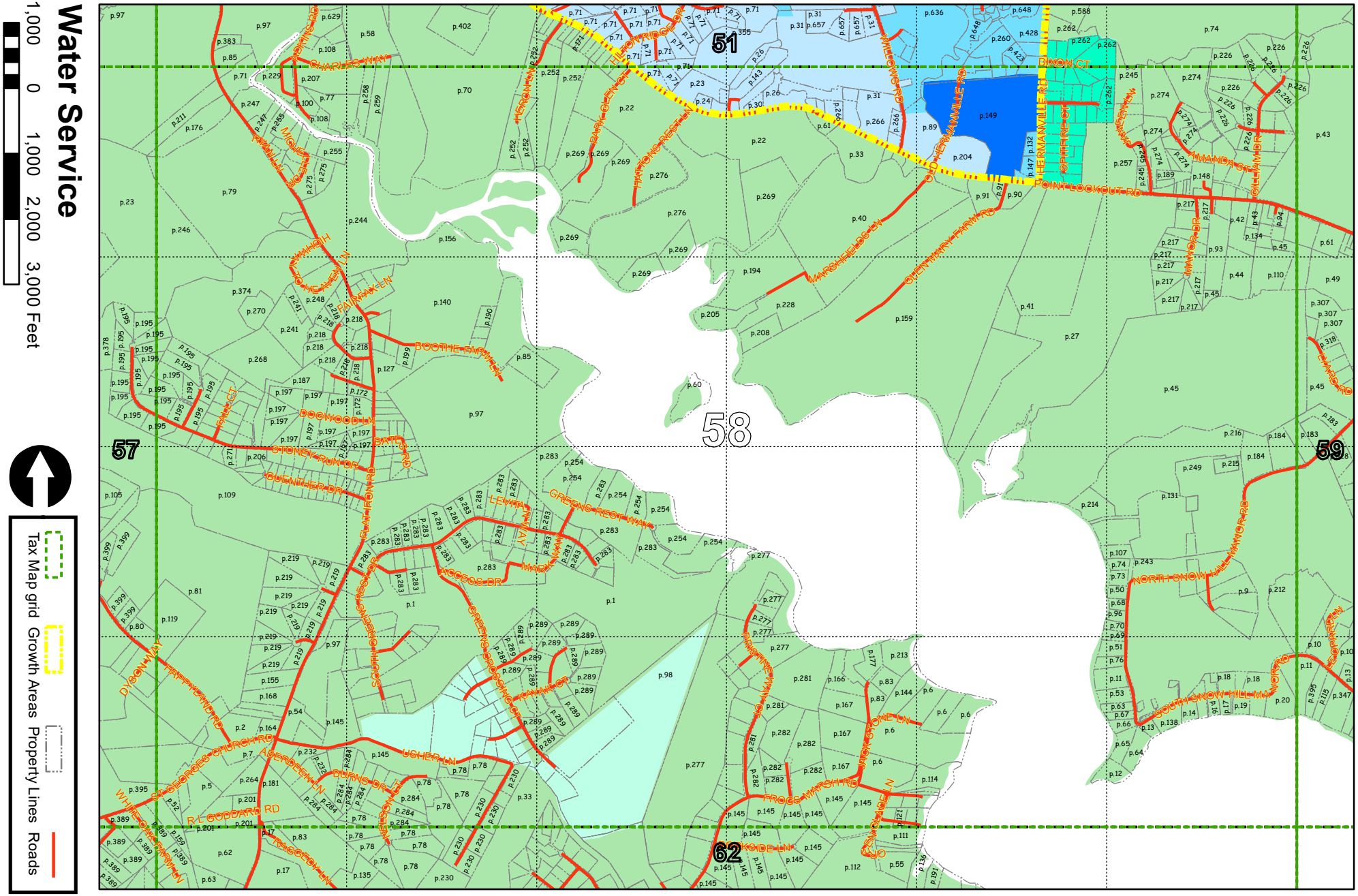


Tax Map grid
Growth Areas
Property Lines
Roads

MAP 57

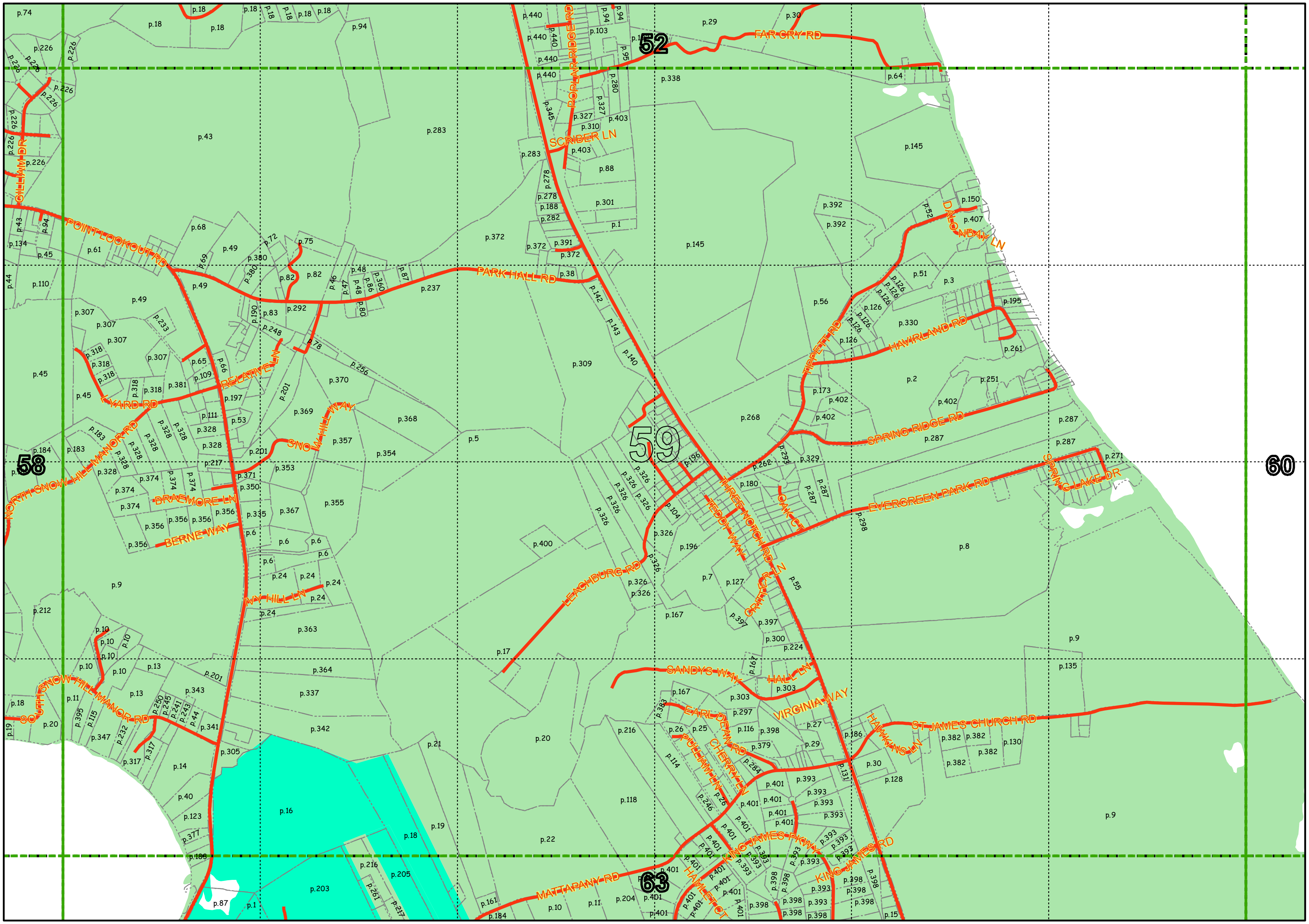
Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update


Water Service
1,000 0 1,000 2,000 3,000 Feet
Tax Map grid
Growth Areas
Property Lines
Roads
MAP 58
Water Category:
W-1
W-3D
W-6D
RW-1
RW-D
NPS
2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet



52
58
59
60
63
POINT LOOKOUT RD
PARK HALL RD
FAR CRY RD
SCRIBER LN
POPLAR RIDGE RD
GILLIAM DR
RELATIVE LN
YARD RD
NORTH SNOW HILL MANOR RD
BRAEMORE LN
BERNE WAY
SNOW HILL WAY
LEACHBURG RD
THREE NOTCH RD
TEDDY WAY
OAK CT
HAVILAND RD
TRIPLETT RD
SPRING RIDGE RD
EVERGREEN PARK RD
SPRING LAKE DR
DALO NEWAY LN
SANDYS WAY
HALL LN
VIRGINIA WAY
EARL DEWARD RD
CHERRY LN
ST JAMES CHURCH RD
HAWKINS LN
KING JAMES PKWY
KING JAMES RD
MATTAPANY RD
SOUTH SNOW HILL MANOR RD

Tax Map grid

Growth Areas

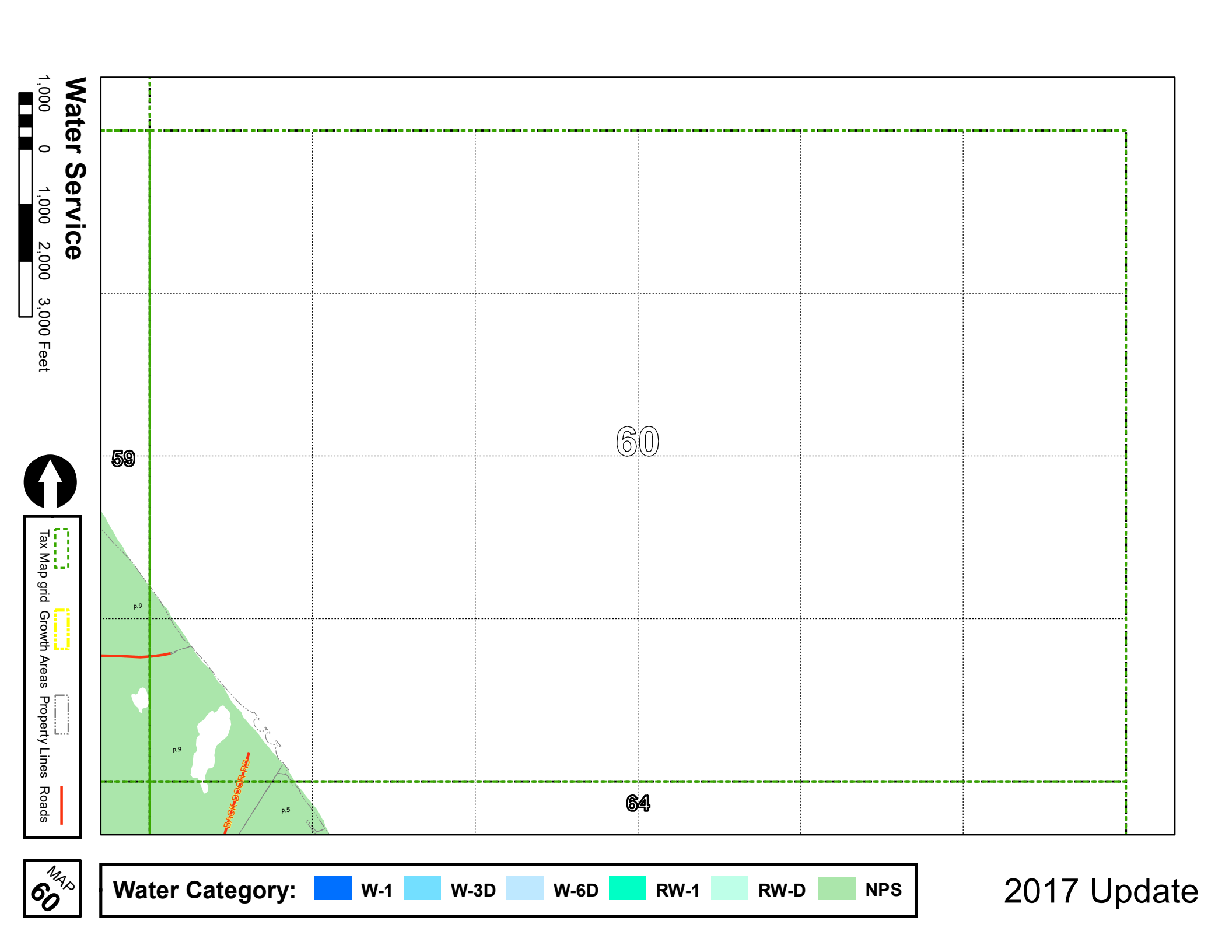
Property Lines

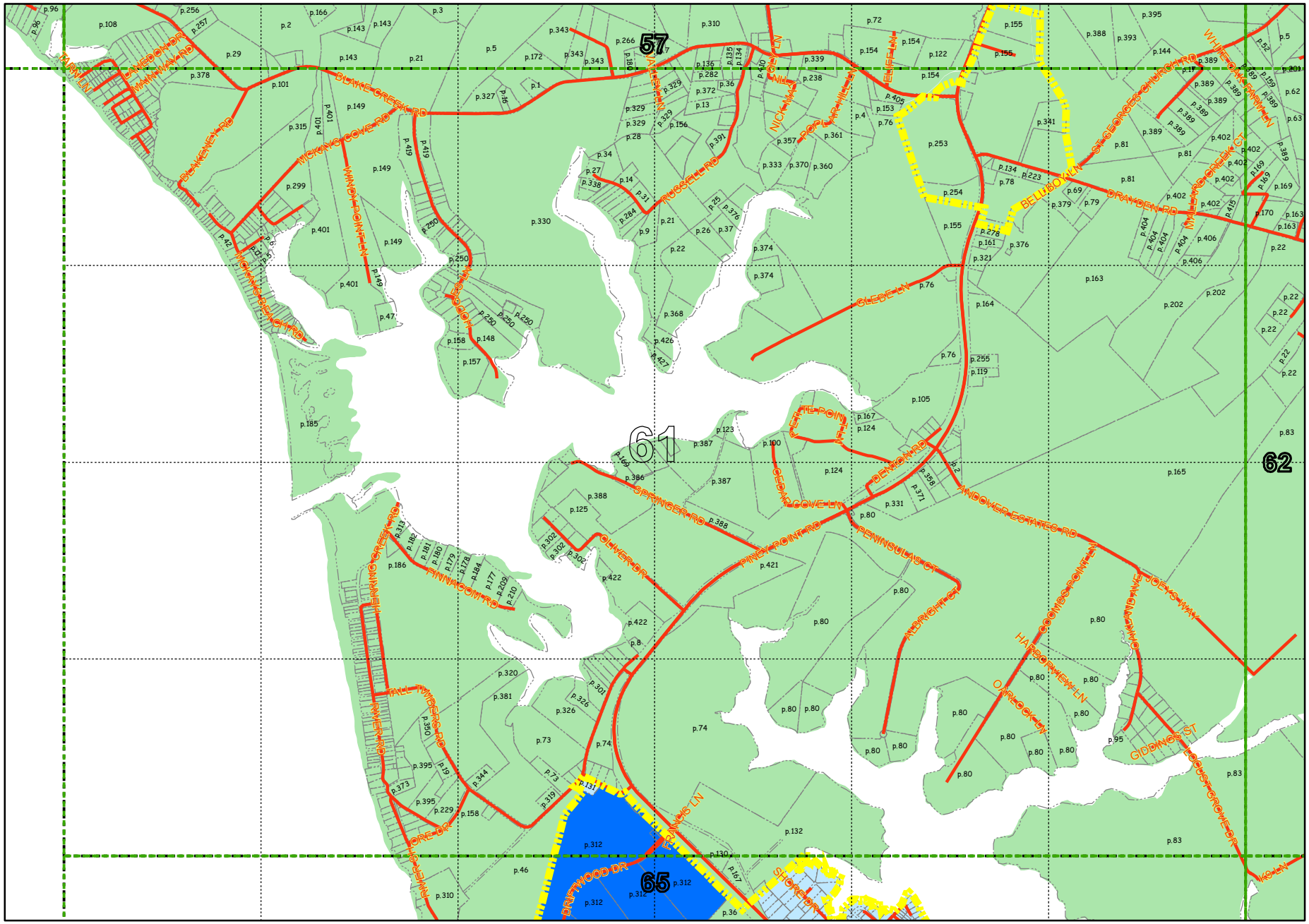
Roads

MAP 59

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update


Water Service
1,000 0 1,000 2,000 3,000 Feet
59
60
64
p.9
p.9
p.5
BACKDOOR RD
Tax Map grid
Growth Areas
Property Lines
Roads
MAP 60
Water Category:
W-1
W-3D
W-6D
RW-1
RW-D
NPS
2017 Update



Water Service

1,000 0 1,000 2,000 3,000 Feet

Tax Map grid
Growth Areas
Property Lines
Roads

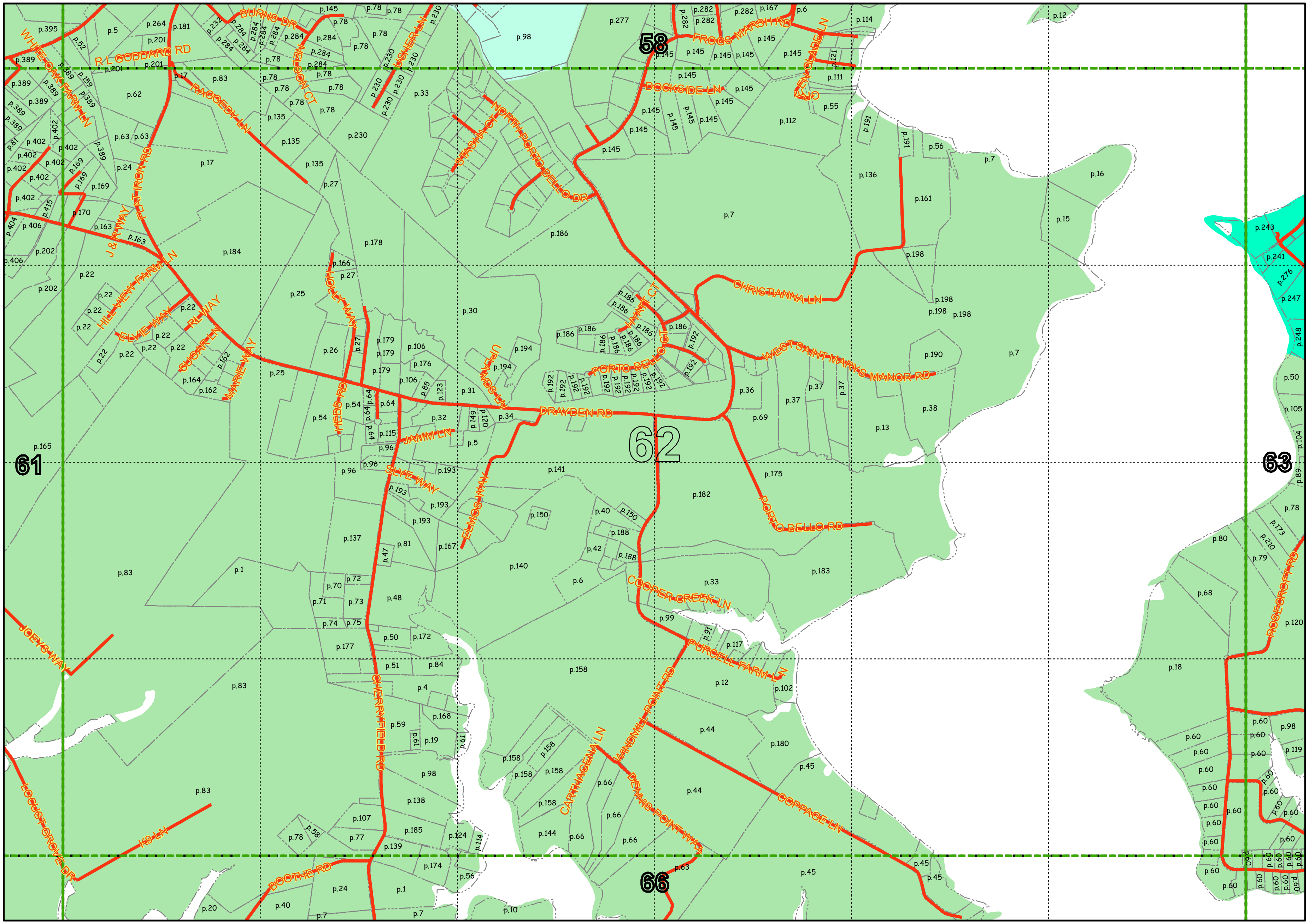
MAP 61

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet

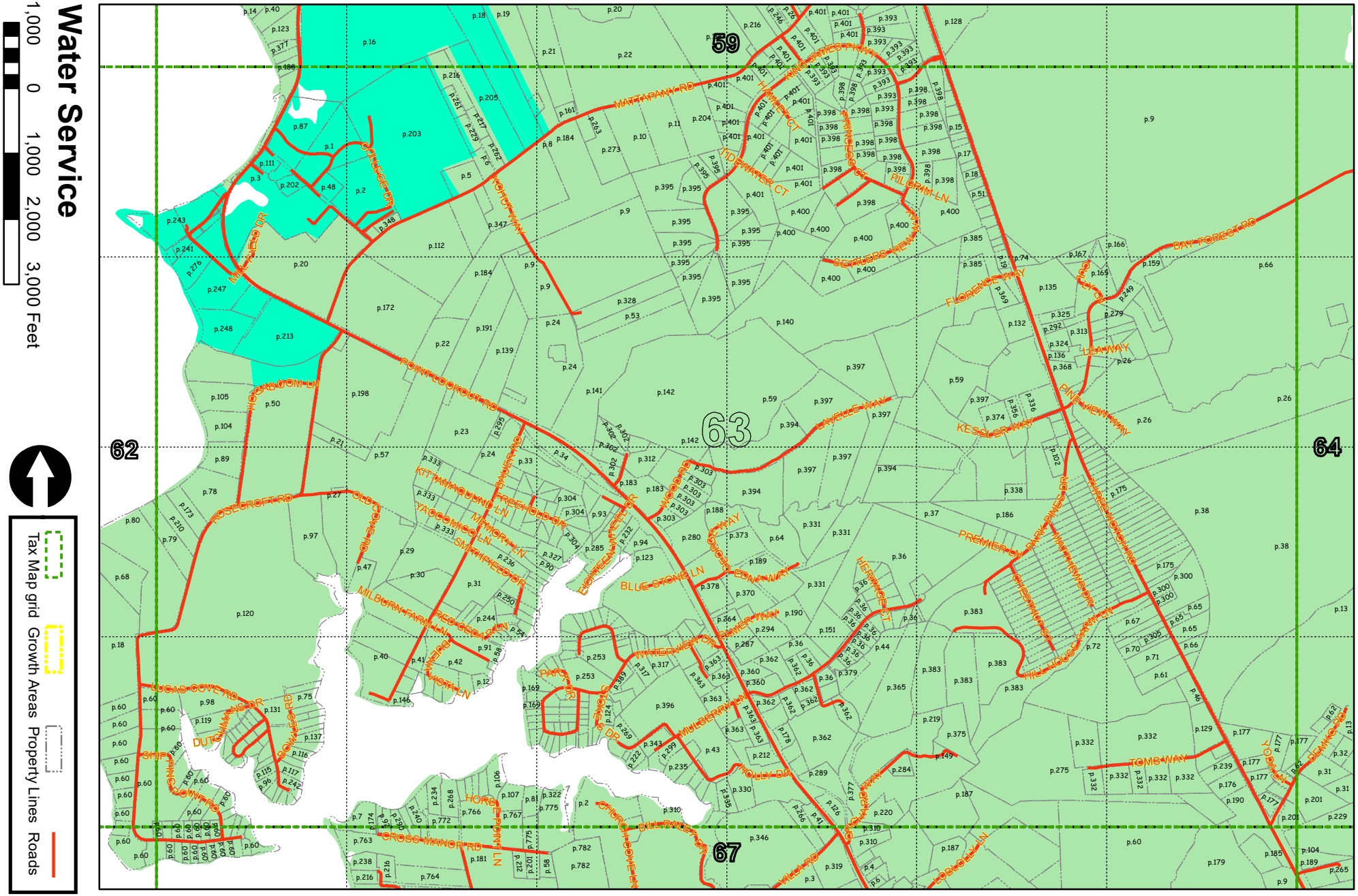


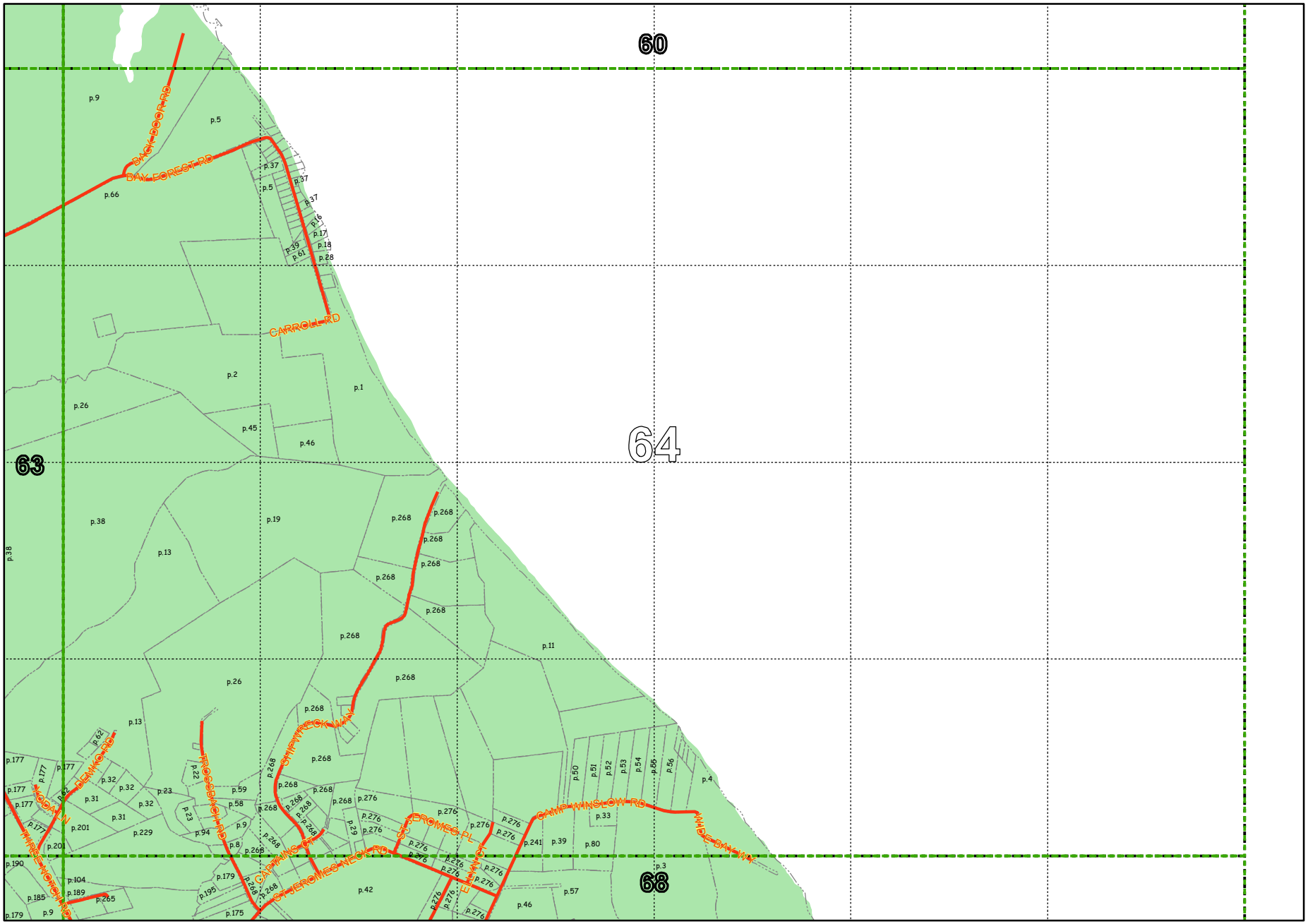
Tax Map grid
Growth Areas
Property Lines
Roads

MAP 62

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update


Water Service
1,000 0 1,000 2,000 3,000 Feet
Tax Map grid
Growth Areas
Property Lines
Roads
59
62
63
64
67
MAP 63
Water Category:
W-1
W-3D
W-6D
RW-1
RW-D
NPS
2017 Update



Water Service

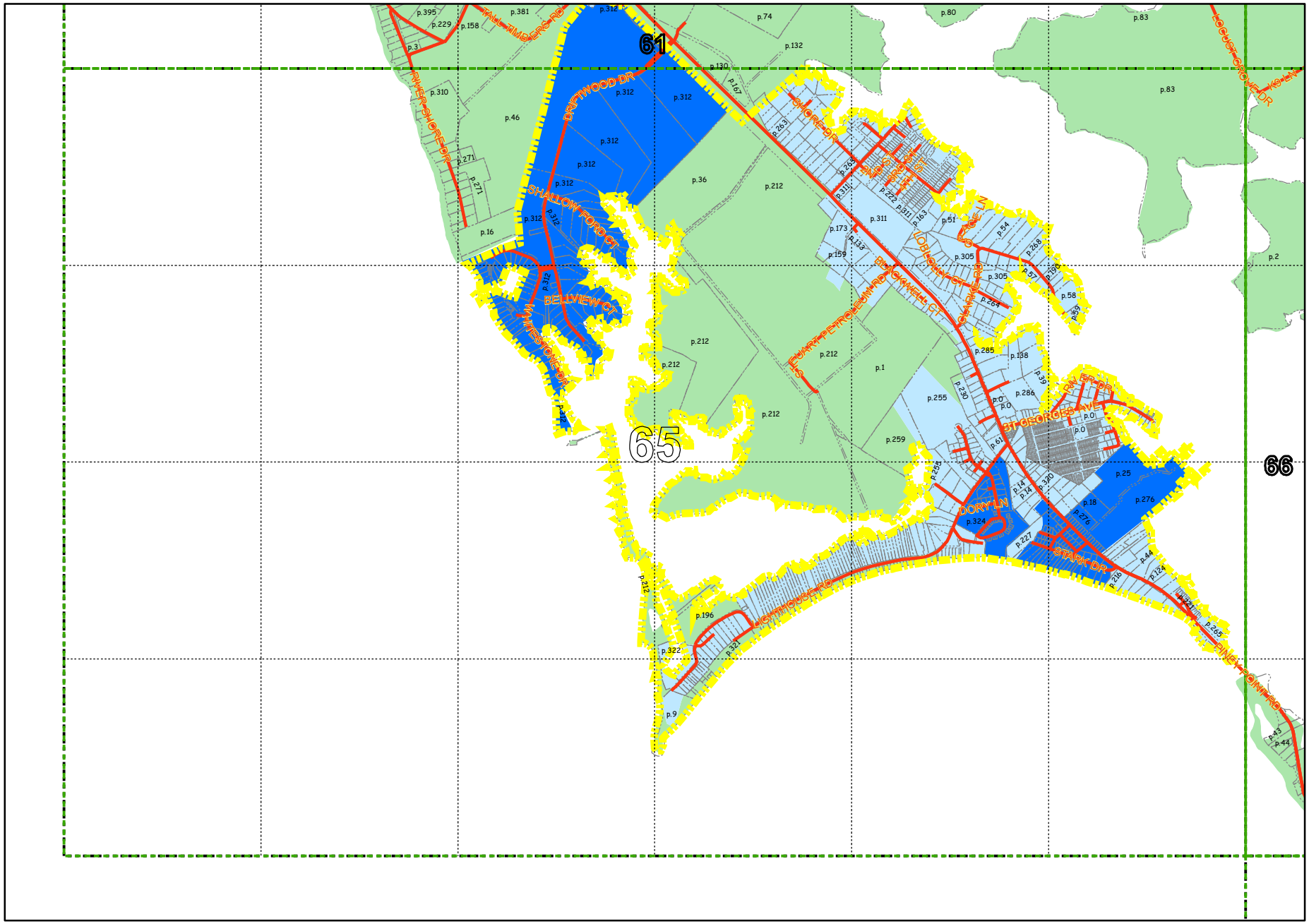
1,000 0 1,000 2,000 3,000 Feet

Tax Map grid
Growth Areas
Property Lines
Roads

MAP 64

Water Category: W-1 | W-3D | W-6D | RW-1 | RW-D | NPS

2017 Update



Water Service

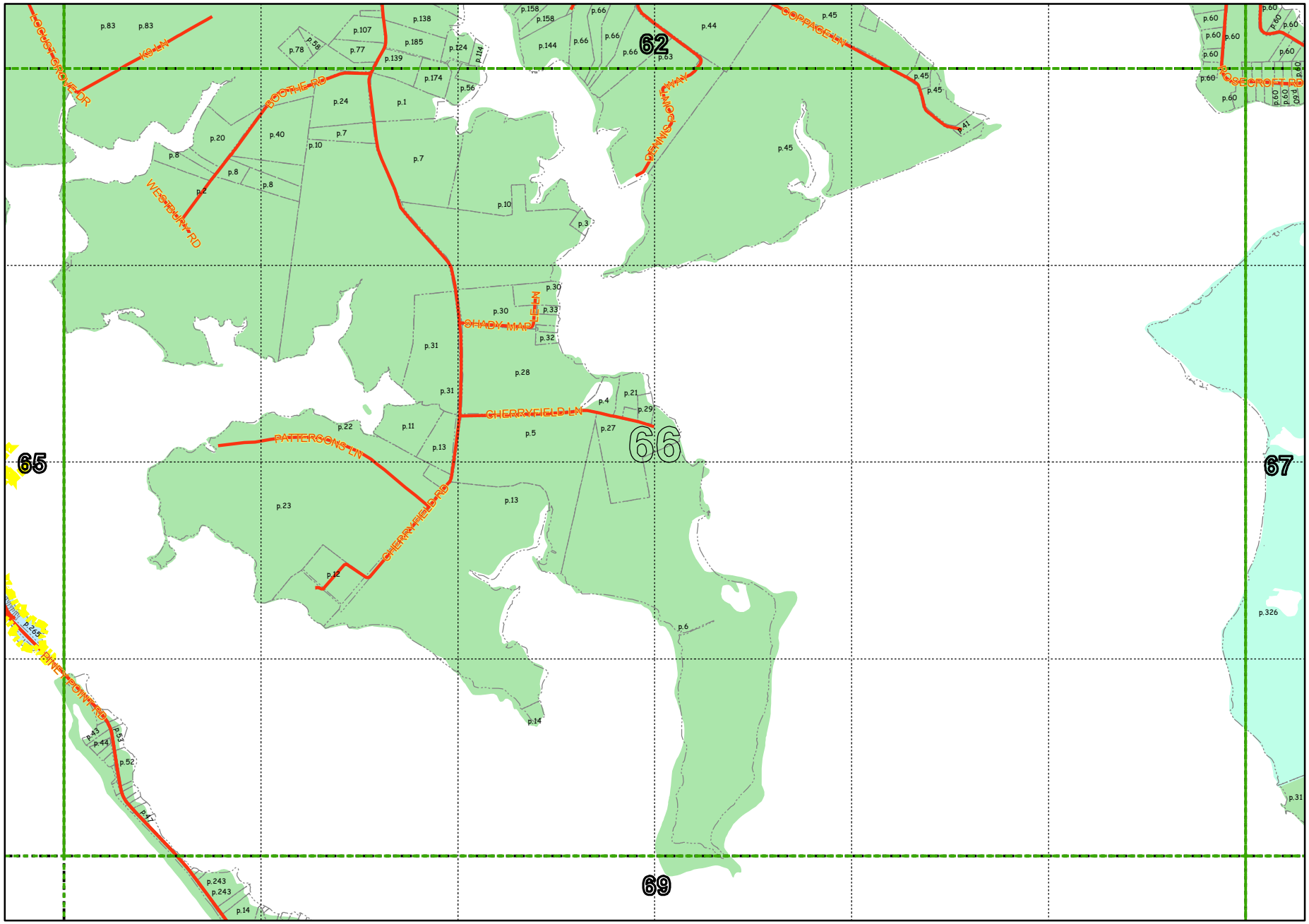
1,000 0 1,000 2,000 3,000 Feet

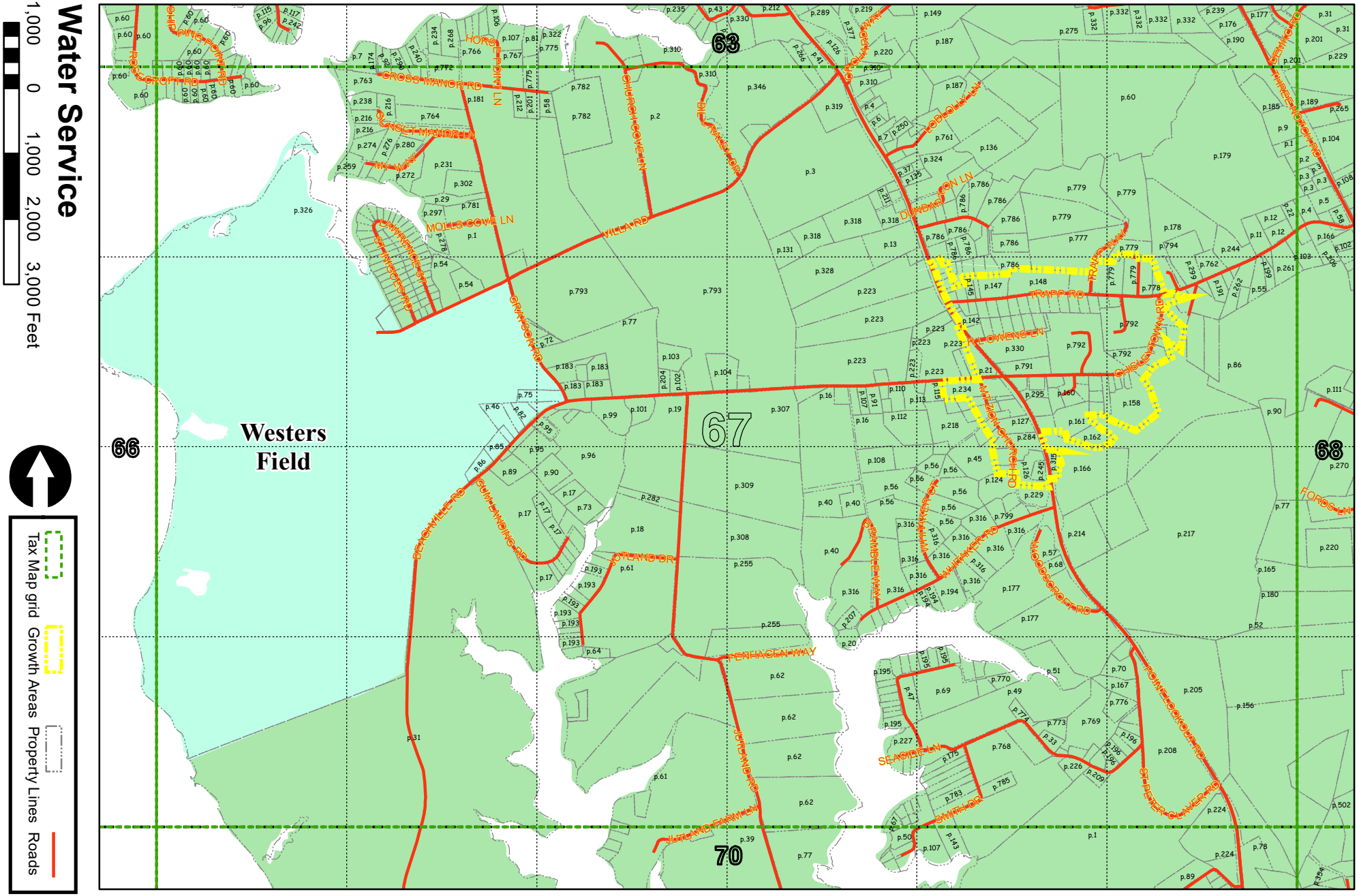
Tax Map grid
Growth Areas
Property Lines
Roads

MAP 65

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

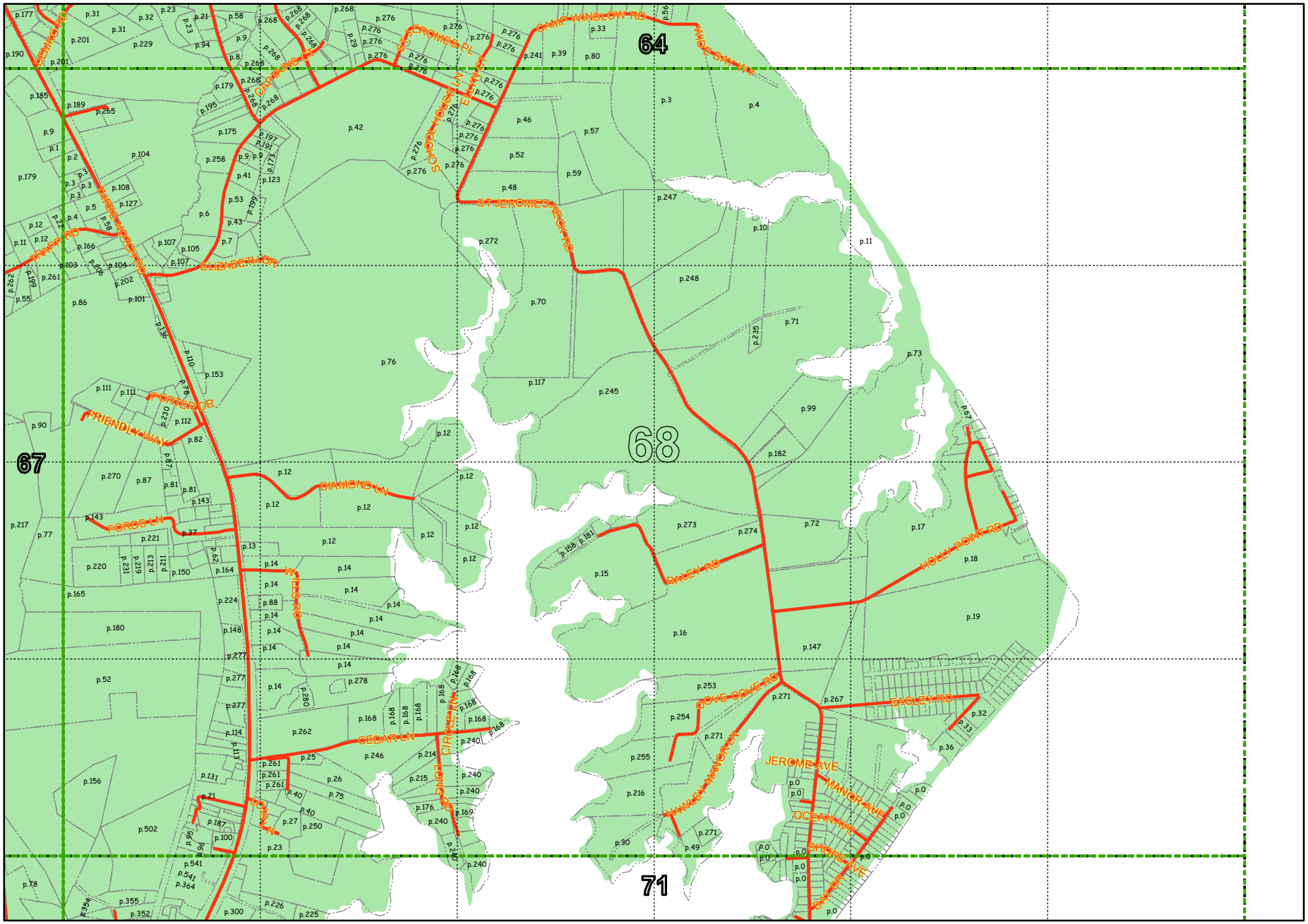
2017 Update


Water Service
1,000 0 1,000 2,000 3,000 Feet
HOLLY GROVE DR
KOLEN
BOOTHE RD
WESTBURY RD
COPPAGE LN
DENNIS CHAPEL WAY
ROSECROFT RD
SHADY MAPLE LN
CHERRYFIELD LN
PATTERSONS LN
CHERRYFIELD RD
PINE POINT RD
62
65
66
67
69
Tax Map grid
Growth Areas
Property Lines
Roads
MAP 66
Water Category:
W-1
W-3D
W-6D
RW-1
RW-D
NPS
2017 Update


Water Service
1,000 0 1,000 2,000 3,000 Feet
Tax Map grid
Growth Areas
Property Lines
Roads
Westers Field
63
66
67
68
70
MAP 67
Water Category:
W-1
W-3D
W-6D
RW-1
RW-D
NPS
2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet

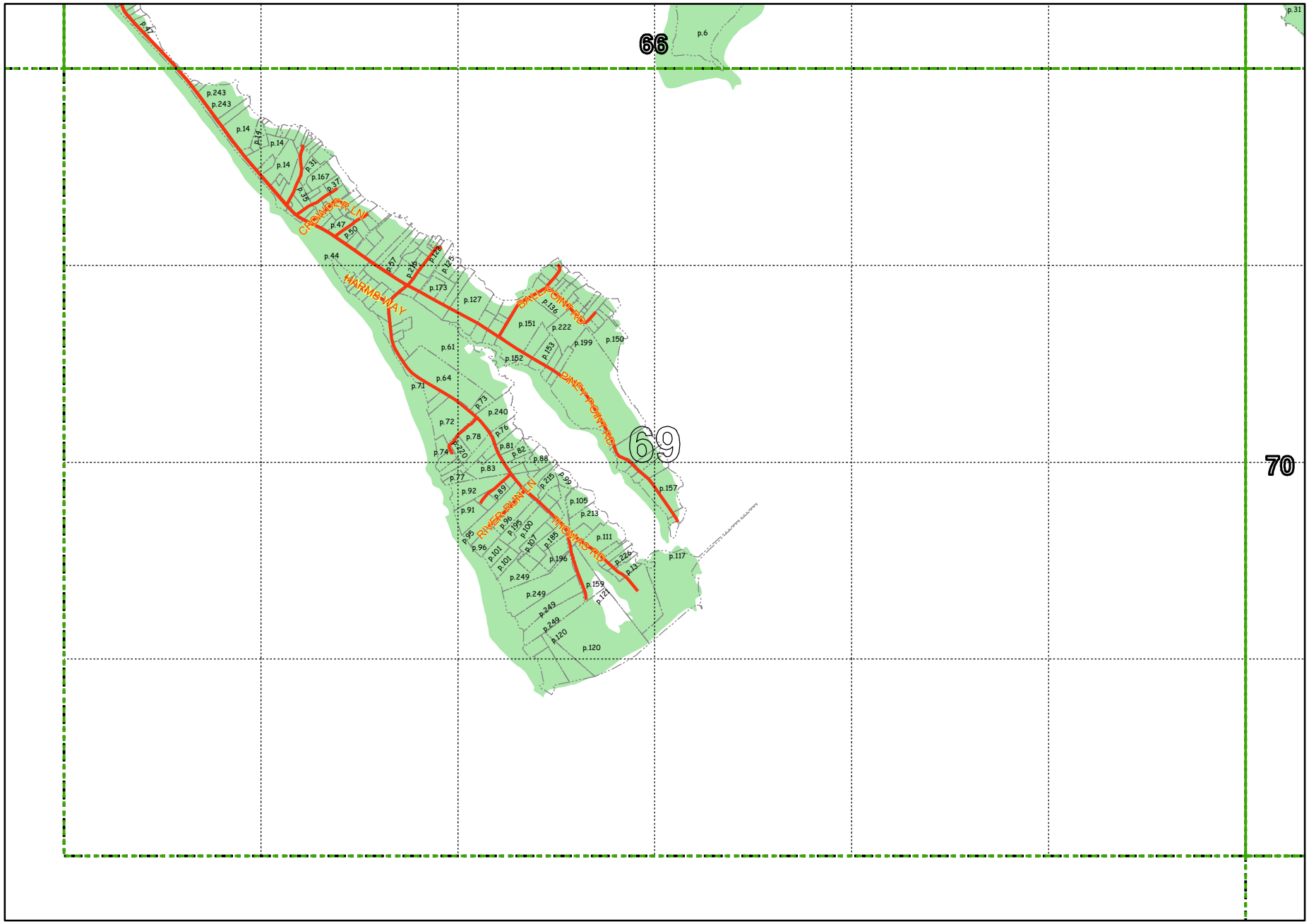


Tax Map grid
Growth Areas
Property Lines
Roads

MAP 68

Water Category: W-1 | W-3D | W-6D | RW-1 | RW-D | NPS

2017 Update



Water Service

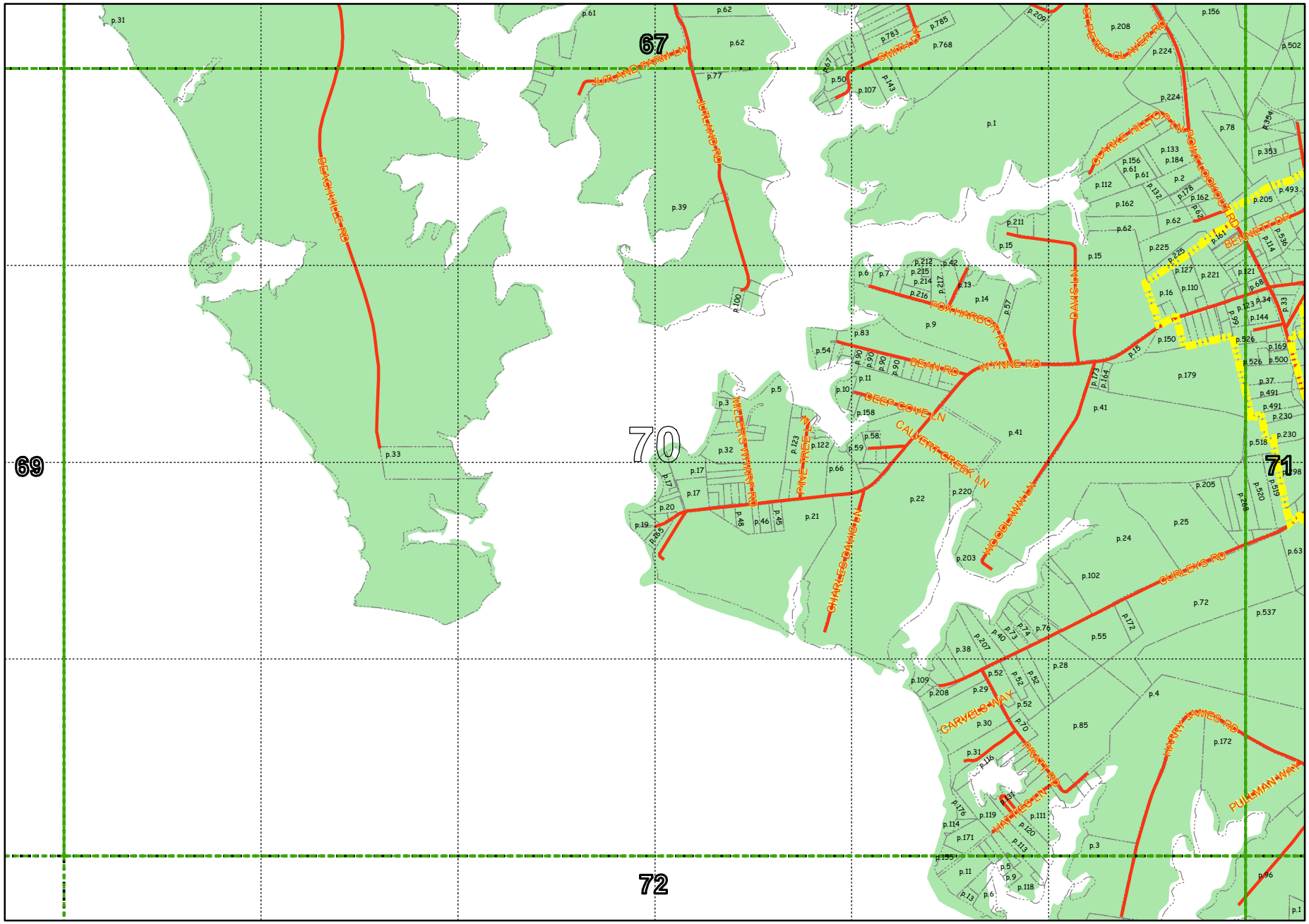
1,000 0 1,000 2,000 3,000 Feet

Tax Map grid
Growth Areas
Property Lines
Roads

MAP 69

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update



Water Service

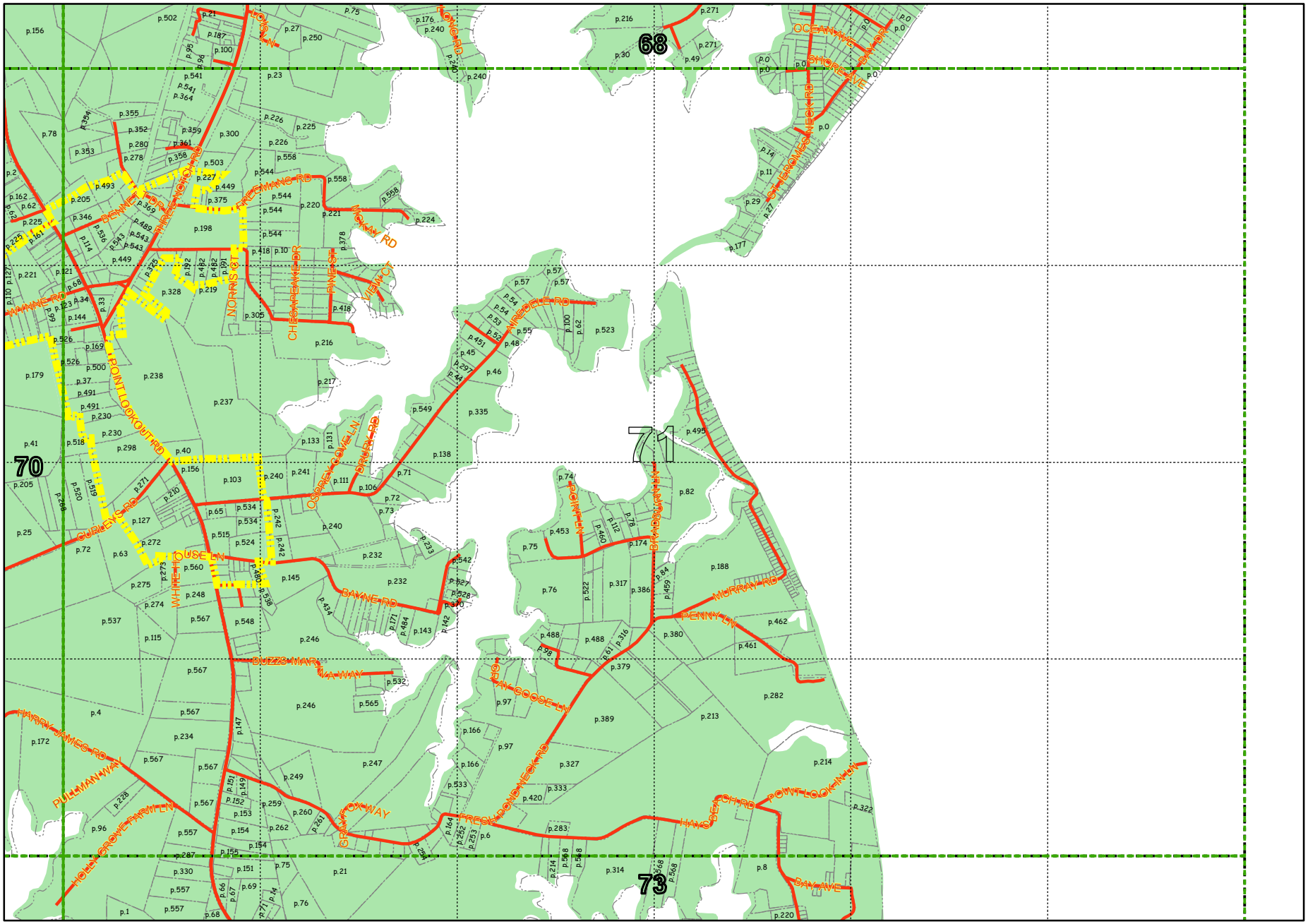
1,000 0 1,000 2,000 3,000 Feet

Tax Map grid
Growth Areas
Property Lines
Roads

MAP 70

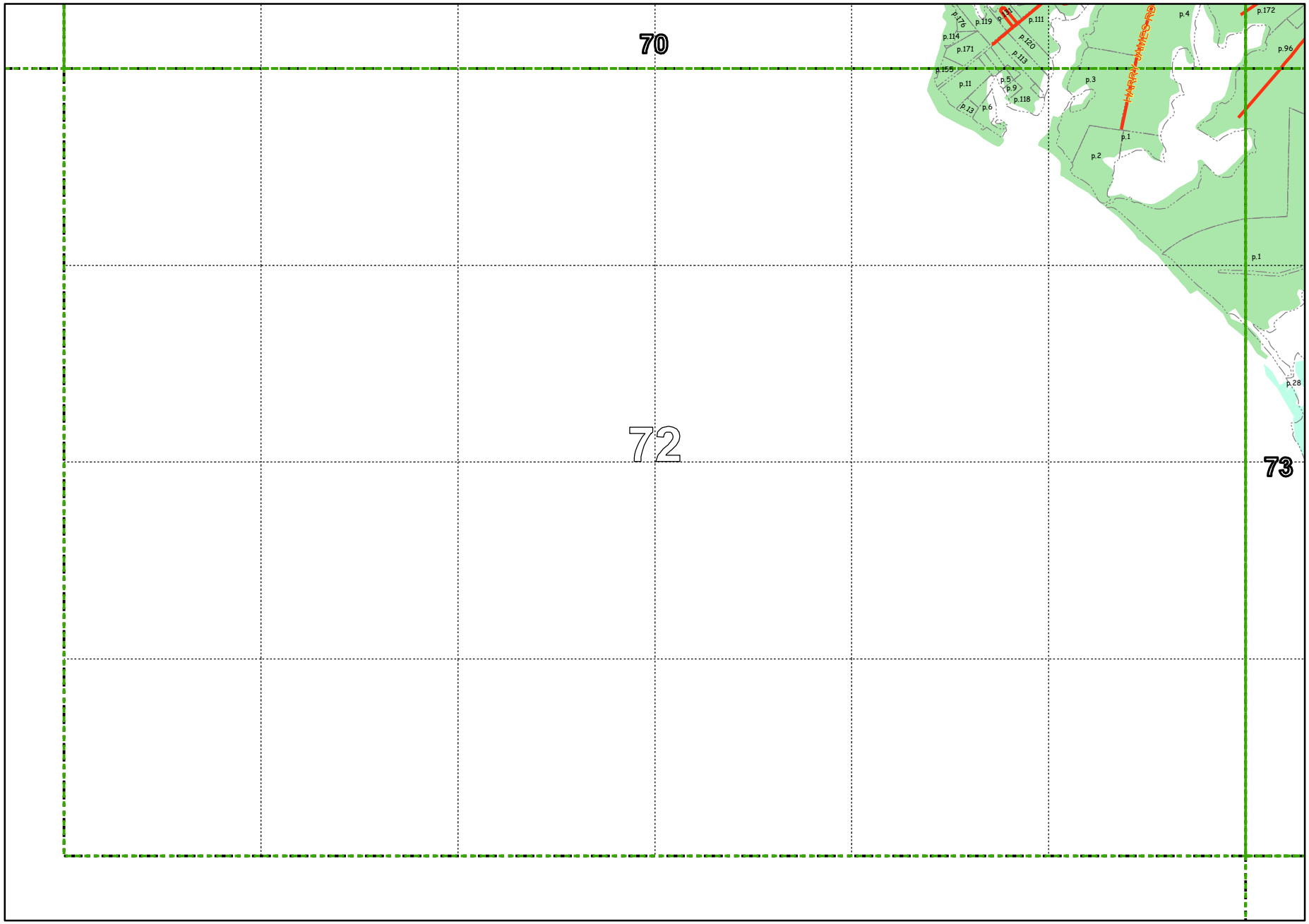
Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update



Water Category: W-1 | W-3D | W-6D | RW-1 | RW-D | NPS

2017 Update



Water Service

1,000 0 1,000 2,000 3,000 Feet

Tax Map grid

Growth Areas

Property Lines

Roads

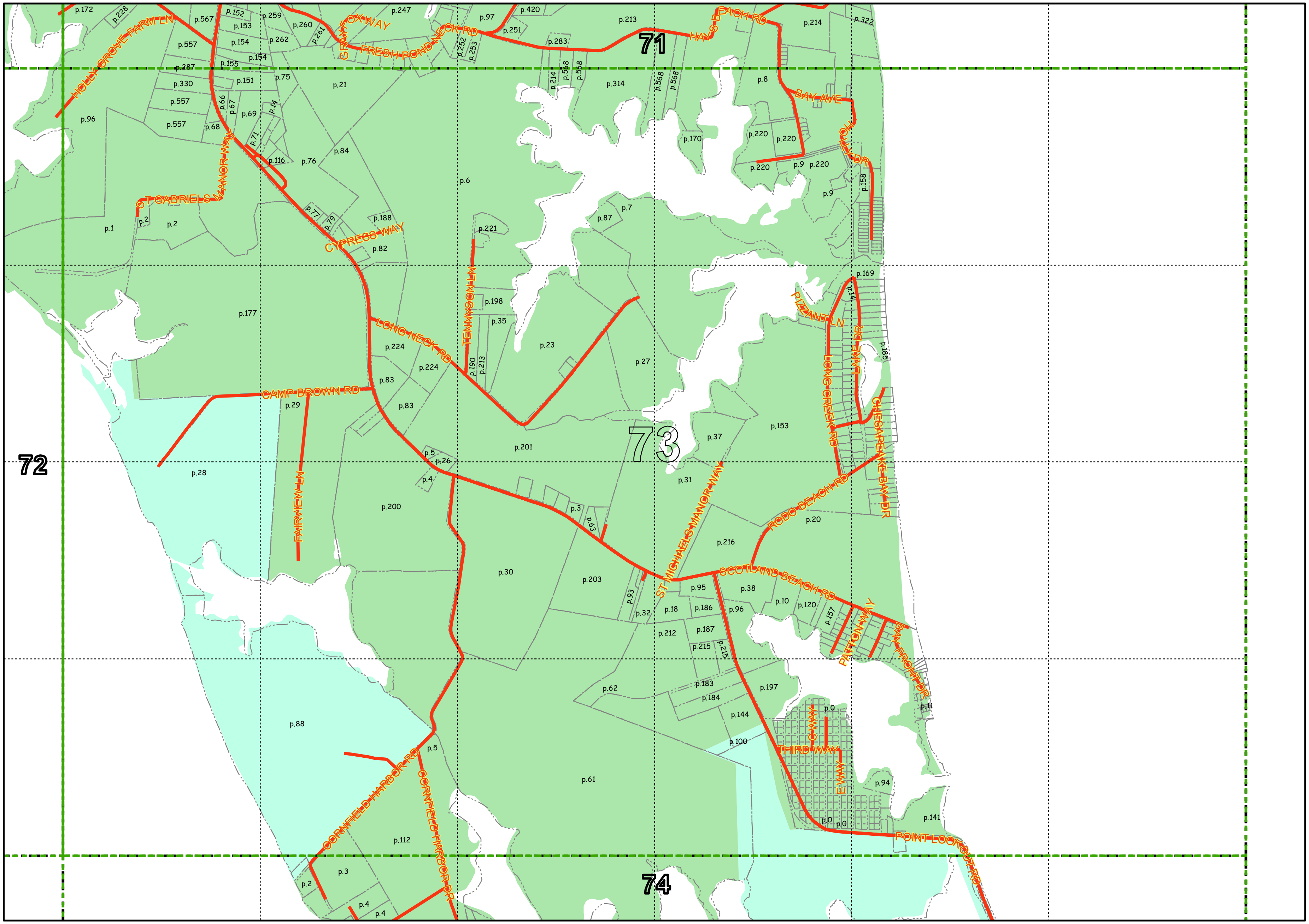
MAP 12

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid
Growth Areas
Property Lines
Roads

MAP 73

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update

Water Service

1,000 0 1,000 2,000 3,000 Feet

Tax Map grid
Growth Areas
Property Lines
Roads

MAP 74

Water Category: W-1 W-3D W-6D RW-1 RW-D NPS

2017 Update

Chapter 4: Sewerage
Table of Contents

List of Tables

Sewer Service Area Maps

4. SEWERAGE

This chapter covers public and private sewerage and wastewater treatment facilities, both existing and planned. It meets state requirements for the delineation of existing systems and the scheduling of future extensions and improvements. The regulations indicate that individual sewage systems may be installed in any no planned service (NPS) area. Construction of individual sewage systems elsewhere in the County is prohibited except on an interim basis. Interim systems may be permitted on properties within an S-6D service area that are granted waivers from connecting to the nearest existing public sewer line. Such interim systems must be approved by the Health Department and the Metropolitan Commission. Interim systems must comply with state and local regulations and will be abandoned in favor of a connection to a community system when such a system is available.

4.1 Administration

Authority for the design, construction, and operation of public sewerage and wastewater facilities in St. Mary's County is vested in the Metropolitan Commission. Their jurisdiction is countywide but does not include responsibility for federal, state run, or municipal (Leonardtown) systems. Operators of these systems are directly responsible to the Maryland Department of the Environment (MDE) for their systems. State owned systems are operated by the Maryland Environmental Service. The Maryland Department of the Environment regulates the operation of public sewerage systems.

4.2 Present and Future Demands

Present and future demands are summarized by service area in Table 4.1. For calendar year 2006, an average of 4.02 mgd was treated at the Marlay-Taylor WRF. Leonardtown accounts for the second largest quantity, where .42 mgd was treated at its municipal plant. Projections indicate future growth will center on areas of present population concentration, primarily in the Leonardtown and Lexington Park Development Districts, and in the Town Centers stipulated by the Land Use Plan. It is in the Lexington Park and Leonardtown areas of higher density zoning that a large portion of future sewer service is planned. Flows have been estimated on the assumption that most of the projected population growth for these respective service areas will reside in urbanized rather than outlying rural areas. The balance of the County is zoned for a density of one (1) dwelling unit per five (5) acres, for which density it is difficult to economically justify a community sewer system. Planned unit developments are permitted only in the Development Districts and Town Centers stipulated by the Land Use Plan, and they must be served by community sewerage systems.

4.3 Financing

The St. Mary's County Metropolitan Commission is responsible for providing public sewerage service throughout the County's jurisdiction. Several methods are available to pay for public sewerage facilities. All are based on the principle that financing will ultimately be by the users who benefit from the facilities. The annual income from all sources must equal the debt service or borrowed funds, capital construction costs, administrative, operation and maintenance costs.

4.3.1 Charges to Aid in Construction

Design and construction costs for new sewerage systems or extensions of existing systems that are intended to serve only new developments are paid entirely by the developer under a public works agreement with the Metropolitan Commission. When the new systems are completed and approved by the Commission, they are required by local law to be dedicated to the Commission for the sum of one dollar. If the Commission finds it necessary to increase the capacity of the new sewerage system in order to serve other existing or projected public needs, it has the authority to construct the facilities and require the developer to pay a proportionate share of the cost.

4.3.2 System Improvement Charge

With the passing of Maryland House Bill 969 in April 2007, a rate restructuring was approved that eliminated the collection of Benefit Assessment Charges. This established a new per EDU assessment,

called the System Improvement Charge, which will be used to finance the cost of upgrading and replacing existing facilities, as well as include the cost of redistributing the outstanding debt service on bonds that have been previously issued by the Commission. The creation of the System Improvement Charge will average the cost of upgrades and replacements over all of the Commission's customers, instead of just the few who are served by the specific improvements.

4.3.3 Capital Contribution Charge

Paid by new customers at the time of connection, Maryland House Bill 969 of 2007 established a per EDU capital contribution charge to cover the construction costs of new sewer infrastructure. This charge will be based on the cost of building new sewer infrastructure as well as extending existing infrastructure to existing neighborhoods using a multi-year, multiple project basis consistent with the Metropolitan Commission's Six Year Capital Improvement Budget.

4.3.4 Sewerage Service Charge

The charges are primarily for, but not limited to, payment of administrative, maintenance and operation costs. The amounts of the charges are changed by the Metropolitan Commission from time to time to reflect projected expenditures. The volume of sewage produced is metered wherever practical, but the charges are otherwise based upon a flat rate times the standard volume for the number of equivalent dwelling units connected. Surcharges are assessed to sewer customers who discharge excessive volumes or concentrations of sewage. An industrial user's charge system is contained in the St. Mary's County Sewer Use Ordinance and is applicable to any industrial users that may connect to the system. The Metropolitan Commission shall fix the amount of these charges from time to time.

4.3.5 Federal and State Assistance

Federal and state laws have over the last several years provided the Metropolitan Commission a large source of revenue appropriated on a cost-shared basis. The Federal Water Pollution Control Act Amendments of 1987 provide sewerage construction low interest loans to local governments for wastewater facilities. Additionally, state grants are available for projects in which affordability causes a hardship for the users of the projected wastewater facilities.

4.3.6 St. Mary's County Financial Assistance - Planning Loans

To pay for the cost of conducting planning studies in the sanitary districts where no customers currently exist, the County Commissioners may lend the Metropolitan Commission the required funds. If the planning studies result in the construction of new facilities and new customers, the loan must normally be repaid out of the Commission's next bond issue. To finance capital improvement projects, general revenue bonds are issued by the Metropolitan Commission with the approval of the Board of County Commissioners and backed by their full faith and credit. In the event the Commission is unable to obtain the necessary debt service revenue, the County Commissioners are empowered to levy a special tax upon all of the assessable properties in the sanitary district where debt was incurred, sufficient to meet the difference between revenues and bond obligations.

4.3.7 Developer Financing

Developer financing is a widely accepted method of providing sewerage facilities. The developer constructs the facilities under a Public Works Agreement with the Commission, and recovers his investment as part of lot or home costs. The buyer amortizes the capital cost as part of his mortgage payment, and the facilities are eventually deeded to the Metropolitan Commission as required by Board of County Commissioners Resolutions No. 71-13 and 71-22. Construction of the facilities must be in accordance with the St. Mary's County Standard Specifications for Water and Sewerage Construction.

4.4 Non-point Pollution Problems

Areas of concern include on-site sewage treatment systems, agricultural uses, and marine activities. Individually, all failing septic systems may be considered point sources of pollution. Major problems

arise in areas where failures are common enough to create the need for alternative forms of collection and treatment. Generally, these areas are the older, high-density subdivisions that were developed under less stringent controls than are in effect today. Some have evolved from seasonal occupancy into year round use, thus compounding the problem through continuous usage. While a technical solution to the problem is available, the related financial aspects may be overwhelming. Many of the areas cannot bear the total cost for the corrective measures, and some will even find it difficult to finance the local share of the grant programs. Some, of course, are more fortunate. New technological and fiscal approaches should be investigated to solve this problem.

Conventional septic systems have been identified as a significant and increasing source of nutrient pollution entering the Chesapeake Bay and its tributaries. There are more than 20,000 onsite sewage disposal systems installed in St. Mary's County. A significant and increasing number of these systems in the County are located in the Chesapeake Bay Critical Area, in areas with high water tables and a number of these areas have failing septic systems in need of replacement but are outside of the planned sewer service areas. In an effort to facilitate the upgrade systems in these areas by 2008 the County will map specific areas within which the County will require an upgrade to the best available technology (BAT) for nitrogen removal when new or replacement systems are necessary.

Since October 2005 county landowners have been paying $30 per year into the Chesapeake Bay Restoration Fund which is used to implement practices to upgrade sewage treatment plants, and implement Best Management Practices to reduce non-point sources of nitrogen, including onsite sewage disposal systems (OSDS), entering the Bay. Sixty percent of the collected funds will be available for OSDS upgrades. With priority given to failing OSDS in Critical Areas, funds are available to upgrade OSDS to Best Available Technology (BAT) for nitrogen removal. To help defray the cost of upgrading replacement systems the County will submit an application to the Maryland Department of the Environment for grant funding from the Bay Restoration Fund to reimburse landowners for part of the increased system cost of installation and maintenance.

Agricultural activity continues to be a major economic resource within St. Mary's County, and is still by far the most extensive economic user of land. An unfortunate by-product from the standpoint of environmental protection is the water pollution potential of agricultural activities. The trouble stems from the delivery of pesticides, fertilizers, and animal waste to the County's waterways by stormwater run-off.

The problem is not unique to St. Mary's County, and steps taken elsewhere may apply here. Its success depends greatly on improved farmer education, implementing farming techniques that minimize runoff, control and recycling of animal waste, and the use of biodegradable insecticides or biological pest control.

The third source of pollution having County-wide implications is marine activities. The number of boat registrations is increasing every year, as more and more people utilize St. Mary's County's waterways.

4.5 Sewerage Service Areas

The County is divided into 10 sanitary districts as shown on map 2-2 in Chapter 2. The limits of these districts were established after considerable study and each district represents major drainage basins. Recommendations follow for sewerage service in each sanitary district.

4.5.1 Luckland Run Sanitary District No. 1

The area of this sanitary district is 32,768 acres. It is comprised largely of the drainage area of the Chaptico Creek and its tributaries. A small portion of the district drains westward into Charles County. The Land Use Plan designates this sanitary district primarily for rural preservation, allowing agriculture and low-density residential development, although it also extends neighborhood conservation status to areas such as Wicomico Shores and Mill Point Shores.

A. Wicomico Shores: Currently serving this community is a 141,000 gallon per day public

treatment facility that is owned and operated by the Metropolitan Commission. Wastewater is collected through a system of 8-inch gravity lines, three pumping stations and 4" and 6" force mains. The wastewater is then treated by a "Biolac" treatment system (proprietary system of wave oxidation) with disposal via 4 rapid infiltration basins. There are currently 477 platted lots and EDUs being served by this facility, which has reached its planned capacity. In order to serve the remainder of the planned lots and EDUs in the Wicomico Shores community, a second treatment system of 181,000 gallons per day and additional rapid infiltration basins will have to be constructed. There are currently no plans to expand the facilities at Wicomico Shores.

B. Remainder of the District: No service is planned in the remainder of the district.

4.5.2 Dukehart's Creek Sanitary District No. 2

This area is comprised of the drainage areas of St. Clement's Creek and Bay, Tomakokin Creek, Canoe Neck Creek, St. Patrick Creek, Dukehart's Creek and Whites Neck Creek. The area of the sanitary district is 36,934 acres. Besides the St. Clement's Shores subdivision, the treatment plant serves a number of other properties as approved by the planning commission pursuant to Allocation Policy 84-22 described in Chapter 1.

A. St. Clement's Shores/Compton: This area is served by the St. Clement's Shores wastewater treatment facility. This facility previously consisted of two 2.7-acre treatment lagoons, one 2.0-acre storage lagoon followed by chlorination and disposal through spray irrigation of fields. In 2000 the facility was upgraded to a "Biolac" treatment system and four rapid infiltration basins (RIB) were constructed to supplement spray irrigation. The spray irrigation and treatment facility is located on a 115-acre site. The 4 one acre RIB's are located on a separate 30 acre site.

Sewerage in the area is collected primarily by individual grinder pumps and conveyed through a network of 1.25" to 3" diameter PVC pressure sewer. St. Clement's Shores subdivision has a 280 gallon per minute pumping station and 6" force main which conveys sewerage to the treatment plant. There is also a small pumping station on Rosebank Court. The Breton Bay PUD has a gravity collection system to a pump station that pumps to the treatment plant.

In 1996 and 1997 the Compton Area Project (self-help-project) connected Comb's Road, Joe Hazel Road, and Tippett Road areas to the system due to health department determination that the residences in the area were in failure. Due to these connections the plant's capacity has been totally committed. The system has reached EDU and organic loading capacity. As the Compton area is not in the growth area designated by the comprehensive plan, there are no plans to expand the plant for growth. No additional EDUs will be allocated unless existing allocations are relinquished. Effort is being made to accommodate failing systems.

B. In 2010, the Margaret Brent Middle School system and the Chopticon High School system were approved to interconnect by way of a "denied access" main. The connection does not facilitate the expansion of public sewer capacity, nor does it permit connections for septic failures or new development.

C. Remainder of the District: No service is planned in the remainder of the district..

4.5.3 Leonardtown Sanitary District No. 3

The Town of Leonardtown and surrounding area are served by a .680 mgd wastewater treatment plant. An Inter-jurisdictional Agreement was signed by the Town and the Metropolitan Commission on April 25, 1980 to divide the plant's capacity between areas within and beyond town limits. The Metropolitan Commission's capacity under the agreement for use beyond town limits was fully allocated as of June

2001. Therefore no further allocations may be made outside town limits until the Leonardtown wastewater treatment system is expanded and a separate agreement is executed. The Town is currently planning an upgrade of the treatment plant from Biological Nutrient Removal (BNR) and an expansion of treatment capacity to 1.2 mgd. The Inter-jurisdictional Agreement requires the Town to make a reasonable effort to accommodate an expansion of capacity for the County when it expands the plant.

The Leonardtown Sanitary District is central to the County, covering 26,434 acres, most of which lies north of Leonardtown. It is comprised of the drainage areas of McIntosh Run, Town Run, and Glebe Run.

Leonardtown is the only incorporated town in the County and is the largest center of population in this service area. A smaller area of residential growth is located at the Breton Bay Society Hill area, but this is outside of the Leonardtown Development District. Future growth is expected to center around the Town of Leonardtown. The Leonardtown Sanitary District Facility Plan was completed in 1976 and revised in 1977, and was subsequently approved by the U. S. Environmental Protection Agency. It anticipates the service area extending from the Town's western boundary along McIntosh Run in an easterly direction, and from its southeastern boundary in an east - southeasterly direction along State Route 5 to the public school complex across from the County fairgrounds. It was amended in 1988 to specifically address the Tin Top Hill area, and the Tin Top Hill force main has subsequently been constructed as part of the Leonardtown Sanitary District.

A. Leonardtown Wastewater Treatment Plant: The Town owns and operates a secondary treatment facility with a treatment process that consists of biolac reactors, clarification, chlorination, and dechlorination. The outfall discharges into Town Run and eventually into Breton Bay. Currently the .68 mgd plant capacity is operating at .400 mgd. The next upgrade will need to be designed to treat up to 1.2 mgd. The facility also contains an 115,000-gallon sludge holding tank and 12,000 square feet of open drying beds. The Metropolitan Commission shares the expense of operating the facility in accordance with the inter-jurisdictional agreement. The treatment plant was upgraded in March 2003 to include Biological Nutrient Removal (BNR) which will reduce both nitrogen and phosphorus entering Breton Bay. This project did not increase the treatment capacity of the plant.

B. McIntosh Run Interceptor: In 1985, construction of the McIntosh Run pumping station, force main, and interceptor was completed. The facility serves a number of businesses south of the pumping station via a 10-inch gravity sewer. A smaller 8-inch interceptor sewer diverts sewage from the north end of Leonardtown directly to the McIntosh Run pumping station by way of Point Lookout Road. This new flow pattern has diverted a substantial portion of flow away from the Lawrence Avenue main thereby relieving its function as a primary collector. In addition, the McIntosh Run pumping station serves the Leonardtown Centre that is also at the north end of Town. The larger 18-inch interceptor flows south and east to eventually discharge into the treatment facility. The McIntosh Run pumping station is currently operating at 150,000 gallons per day. It has a capacity of 500 gpm, and can be upgraded to a capacity of 1,700 gpm.

C. Town Run Interceptor: Construction of a twelve-inch interceptor on Leonardtown's eastern boundary was completed in 1987. This interceptor flows southward serving a portion of the governmental center complex and the force main from Tin Top Hill. The Town and the County shared in the cost of the construction and will be reimbursed as connection fees are collected pursuant to a reimbursement agreement.

D. Southeast of Leonardtown: Outside the corporate limits services are extended to St. Mary’s Ryken High School, Leonardtown High School, the technical center, Leonardtown Middle School and the fairgrounds. This system consists of an 8-inch gravity sewer that feeds to the Glebe Road wastewater pumping station, which then uses

a 6-inch force main to transport the sewage to the Leonardtown treatment plant

E. Tin Top Hill Force Main: In 1987 a sanitary survey was conducted by the Health Department in the Tin Top Hill area north east of Leonardtown. 55% of the homes in the study area were found to have failing septic systems. To correct these failures, a low-pressure grinder pump sewer collection system was installed and became operable in June of 1991. The pressure system discharges in the Town Run Interceptor by way of a 6-inch force main which runs through the St. Mary's County Governmental Center. The Tin Top Hill collection system has a design capacity of 333 EDUs. In November 1991 the Planning Commission allocated 223 of those EDUs to properties within the service area delineated by the force main's facilities plan. In addition, 7 homes on Greenbrier Road are incorporated into the collection system.

F. Banneker Line: A pressure sewer connection to the Banneker – Loveville School complex was made in 2000 to alleviate a health hazard (flow from the schools is equivalent to 18 dwellings). The St. Mary's County Commissioners and the Metropolitan Commission entered into a denied access management agreement that precludes service to new development from this pressure sewer, but allows existing structures between Banneker School and the Town of Leonardtown to be connected for alleviation of health hazards as confirmed by the County Health Department (12 dwellings were listed by the Health Department and have been connected). As the Banneker line was being prepared, a separate gravity line was being designed to serve 88 dwellings within a subdivision known as the Villages of Leonardtown, which is located between Banneker and the town limits. This subdivision had been approved for access to the Leonardtown wastewater treatment system in 1999 before a Comprehensive Plan amendment removed lands north and west of Leonardtown from the Development District. To optimize efficiency, the Villages at Leonardtown subdivision was connected to the Banneker line.

G. Forrest Farms: This system, at build-out, will serve 230 units at an average daily flow of 57,500 gallons. This is a low pressure sewer system comprised of grinder pumps. Wastewater treatment is provided by a Parkson Biolac system with subsurface discharge.

H. Remainder of the District: No service is planned for the remainder of the district.

4.5.4 Flood Creek Sanitary District No. 4

This service area includes 13,216 acres along the Potomac River and is bounded on the north by Breton Bay. It is comprised largely of the drainage areas of Moll-Dyer Creek, Medley Creek, Flood Creek, Popular Hill Creek and Blake Creek. There are no communities of sufficient density to justify a public system, and none proposed for the immediate future. No service is planned in this district.

4.5.5 Piney Point Sanitary District No. 5

This service area covers 13,478 acres in the southern part of the County, as a peninsula between the Potomac and St. Mary's Rivers. The service area is comprised largely of the drainage areas of Herring Creek, Piney Point Creek, St. George Creek, Island Creek, Carthagena Creek and Craney Creek. Nowhere does the land elevation exceed 15 feet above river level. All of the soils in the Piney Point peninsula have been categorized into either the E2A or F3 Natural Soil Groups. Both are characterized as having severe limitations for septic tank use due to high ground water table, perched water table and slow permeability. The subsoils are too dense to absorb the effluent, and if the tile field is placed above the dense layers, the effluent builds up and seeps to the surface, either over the tile field or down slope.

Despite its remote location, the Piney Point Area has experienced significant development. In addition to residential development, two distinct land use activities are located in this service area because of its strategic location on the Potomac River. The VALERO (formerly STS) Petroleum Company's

transshipment and storage facilities occupy a large tract of property west of State Route 249, between Piney Point Creek and the Potomac River. The facility is of regional importance since it supplies petroleum to the entire Washington, D.C. - Southern Maryland area. The Harry Lundeberg School of Seamanship, located on State Routes 249 and the shores of St. George Creek, has specialized for several years in providing vocational training to those persons seeking a career in the Merchant Marines. South of the school on St. George Island is a low-density residential area connected to the mainland by a bridge. Marinas and boating activities are features of this area, particularly in the vicinity of St. George Creek and Herring Creek.

A residential and light commercial area surrounds the intersection of Maryland Route 249 and Lighthouse Road. This area consists of approximately 400 EDUs and includes Piney Point Shores, Piney Point Beach, the Piney Point housing development and several scattered houses and trailers. The Piney Point Elementary School, located in Tall Timbers, accommodates approximately 600 students and is connected to the Tall Timbers pressure sewer system.

A. Pump-over to Marlay-Taylor Water Reclamation Facility: Sewerage service to the Piney Point Town Center is provided by way of a combined gravity and pressure sewer collection system. A pumping station and force main system includes one 400 gpm capacity pumping station located near Stark Drive in Piney Point, and approximately 51,400 linear feet of 8-inch diameter PVC force main. Access to the system is limited by the November 1986 consent agreement entered into by the Board of County Commissioners, the Metropolitan Commission and the Water Management Administration of the Maryland Department of the Environment (see chapter 1 for details of the agreement), and by the 1985 Addendum No. 1 to the Piney Point Facilities Plan.

B. The Landings at Piney Point: This subdivision containing 95 dwelling units is provided with sewerage service by way of the Pump-Over to Marlay-Taylor.

C. St. George Island: St. George Island is outside of the Piney Point Town Center and is therefore not a growth area stipulated by the Land Use Plan. Access to sewer service on St. George Island is strictly limited by an agreement entered into by the Board of County Commissioners and the St. George Island Improvement Association. Any future growth on the island will be controlled by 1) the zoning ordinance, including the critical area ordinance, 2) the existing consent agreement for the Piney Point Sanitary District, 3) the practical hydraulic capacity of the existing force main, and 4) the consent agreement between the St. George Island Improvement Association, the Metropolitan Commission and the Board of County Commissioners of St. Mary's County. The latter agreement is incorporated in resolution 92-01 by which the Board of County Commissioners established the St. George Island service area and set a limit of 220 EDUs to be served within that area (see also case no. 91-0121, St. Mary's County Department of Land Use and Growth Management). Resolution 92-01 has subsequently been amended to include lots that were omitted from a survey performed in 1994. There are currently 238 EDUs to be served on St. George Island per resolution 02-01 (see also resolutions: 93-02, 94-01, 94-04, 95-02, 99-01 and 00-01(A)). The sewerage system for the island is comprised of approximately 27,000 linear feet of 1½-inch to 4-inch diameter collection pipeline, a network of grinder pumps, one collection system pumping station with a standby generator, one conveyance system pumping station with a standby generator, and 7,500 linear feet of 6-inch diameter force main. Flows are collected at the northern portion of the island and conveyed via a pumping station across the bridge and into the existing gravity collection system in Piney Point. This flow, along with the flow from Piney Point, is pumped via the existing Piney Point pumping station and force main to Marlay-Taylor Water Reclamation Facility for treatment and disposal.

D. Tall Timbers: Tall Timbers is outside of the Piney Point Town Center and is therefore

not a growth area stipulated by the Land Use Plan. It is, however, an area where septic systems typically fail, and the Health Department has identified a health hazard. By resolution 92-01 the Board of County Commissioners established the Tall Timbers service area and set a limit of 162 EDUs to be served within that area (see case no. 91-0121).

The Tall Timbers collection system consists of approximately 18,000 linear feet of one-and-one-half-inch to six-inch diameter pressure collection pipelines and grinder pump network, one collection system pumping station with a standby generator, and one conveyance system pumping station with a standby generator located near the entrance to the Landings at Piney Point. From there the flow is conveyed by way of 6,000 linear feet of 6-inch diameter force main to the existing Piney Point pumping station. The flow is then re-pumped through the 8-inch force main northerly to Great Mills and subsequently to Marlay-Taylor WRF for treatment and disposal. This system also collects flow from Piney Point Elementary School.

E. Andover Estates: The Andover Estates sewer project (2007) will provide public sewer service to about 50 developed properties located just south of Valley Lee, Maryland, generally along Piney Point Road (MD249). These properties have been the subject of a sanitary survey, and all of the septic systems were declared to be in failure by the St. Mary's County Health Department. The collection system to be constructed to serve these properties will be composed of grinder pumps and small diameter force mains. The collected sewage will be pumped into an existing force main located in the Piney Point Road right-of-way and conveyed to the Marley-Taylor Water Reclamation Facility, where it will be treated and discharged into the Chesapeake Bay. The area to be served by the new collection system borders on both Herring Creek and St. George Creek, both of which are tributaries flowing into the Potomac River and on to the Chesapeake Bay. The elimination of these failed septic systems will help reduce nutrient load, thus enhancing the quality of these bodies of water.

F. Valley Lee Volunteer Fire Department: Located at the intersection of Drayden Road and Piney Point Road (MD249) in Valley Lee, this facility was cited in 2006 by the Health Department as having a failing septic system. An amendment to this plan was completed in 2007 to authorize connection to the Piney Point force main. Discharge from the facility, which includes a banquet hall, is equivalent to 14 dwelling units.

G. Cedar Cove: In 1993 service from the Piney Point pump-over was extended to Parcel 100 of Tax Map 61 based on findings by the Health Department that on-site sewage disposal was failing. Discharge from the marina and from associated residential uses is equivalent to seven dwelling units.

H. Shetland Acres: The license for this mobile home park in Valley Lee expired in 2005. By the spring of 2007 three dwellings remained. Based on findings by the Health Department that the septic systems are failing and cannot be corrected by conventional on-site means, the remaining dwellings are eligible for connection to the Piney Point force main.

I. Oliver Drive: In 2007 the Health Department identified five properties with failing septic systems and advised that they be connected to the Piney Point pump-over force main. Specifically identified are Lots 1, 5, 6 and 9 of Parcel 302 of Tax Map 61, and Parcel 240 of Tax Map 61.

J. Remainder of the District: No service is planned for the remainder of the district.

4.5.6 Lake Conoy Sanitary District No. 6

Southernmost in the County, this service area of 8,954 acres is triangular in shape and almost totally

surrounded by water. It is very low and dissected by numerous estuaries. The population of this service area is expected to increase by only 90 persons over the next 10 years. It should be noted that the use of conventional septic systems is extremely limited within the Lake Conoy sanitary district because of high water table and impermeable soils.

A. Point Lookout State Park: Point Lookout State Park, which is comprised of 1,042 acres, is a Department of Natural Resources (DNR) facility located on the southern tip of the County at the junction of the Potomac River and the Chesapeake Bay. The park features a boat launch, boat rental, camp fire programs, camp sites, cabins, camp store, dump station, fishing, flat water canoeing, hiking trails, hunting, historic interest, hook ups, pet trail, picnic area, playground, swimming, Civil War Museum/Marshland Nature Center, pavilion and cottage. The park is open year-round and has 143 improved campsites. The facilities accommodate approximately 440,000 visitors per year.

   The Maryland Environmental Services operates the park's water and wastewater treatment systems. The wastewater treatment system for the park consists of a gravity wastewater collection system that discharges into 14 individual pump stations that convey the sewage to the wastewater treatment plant. A flow equalization tank is used to hold the sewage during low flow conditions which allows for the treatment system to be shut down. The tank is also used to regulate the flow being sent to the treatment process. The existing plant is a 90,000 gpd Rotating Biological Contactor (RBC) treatment plant with Sedimentation Tanks and Effluent Sand Filters. A Ultra Violet (UV) system is use for disinfection. The sludge treatment process is accomplished with an Aerobic Digestion process with the treated sludge hauled off site for disposal.

   In addition to sewerage generated at the park, the plant also receives flow from Camp Riverview and Camp Ernest Brown which are located near the park. The Camps are connected to the Point Lookout sewerage treatment plant by way of two pumping stations and a 4-inch force main. Camp Brown is used as a seasonal facility and Camp Riverview has recently (winter 2006) been converted to a year round facility. In the past, during the winter months the facility would be shut down and the small amount of sewage generated daily would be stored in the equalization tank. However, the sewage generated by the year round activities at Camp Riverview necessitated year round operation of the treatment plant.

B. Airedele Road: Adjacent to Ridge, but outside of the village center designated by the Land Use Plan is the Airedele Road neighborhood. By resolution 92-01, dated March 10, 1992, the Board of County Commissioners established the Airedele Road sewerage service area and set a limit of 75 EDUs to be served by the facility intended and designed to correct septic failures identified by the Health Department (reference case no. 91-0121). The Airedele Road sewerage system consists of a low-pressure (grinder pump) collection system that transports the sewage to an on-site disposal field in the vicinity of Point Lookout Road (MD 5) and Bayne Road.

C. Remainder of the District: No service is planned in the remainder of the district.

4.5.7 Carroll Pond Sanitary District No. 7:

This area lies to the north of Service Area No. 6 and spans from Chesapeake Bay to the St. Mary's River, encompassing 18,455 acres. The area is very low in places and dissected by numerous creeks and estuaries. There are no existing public systems in this area.

A. Webster Field: The Navy operates a 45,000-gpd package plant for its facilities at Webster Field and the US Coast Guard station. No additional service is planned.

B. St. Inigoes Village Center: The Land Use Plan designates St. Inigoes as a village center, but the population there is not expected to grow in the next ten years to a number

sufficient to support community sewerage facilities.

C. Remainder of the District: No service is planned in the remainder of the district.

4.5.8 Pine Hill Run Sanitary District No. 8

This service area, the largest in the County, includes 53,859 acres and is the center of population density for the County. It is comprised mainly of the drainage area of the St. Mary's River, and includes the drainage areas of St. Thomas Creek, Cuckhold Creek, Mill Creek, Town Creek, Lewis Creek, Green Holly Pond, Pine Hill Run, Beaverdam Creek, Fisherman's Creek, and Western Branch.

This sanitary district includes the Lexington Park Development District stipulated by the Land Use Plan. Most of the future population will be located within the area bounded by Three Notch Road (MD 235), Point Lookout Road (MD 5), Hermanville Road and the Wildewood PUD. Some development in the Hollywood - Sandy Bottom area and in the vicinity of the St. Mary's County Industrial Park is expected within the next ten years or so and has therefore been designated S-6D.

A. Lexington Park Sewerage System: The Lexington Park sewerage system is the largest system in the County. In 1985 the Metropolitan Commission completed an extensive inflow analysis of this system which indicated the need to eliminate numerous sources of inflow. All of the major sources have since been eliminated, but numerous minor sources still need to be corrected because flows at the Marlay-Taylor treatment plant reach 15 mgd during periods of heavy rain. As with any gravity system, inflow and infiltration (I&I) is always a concern. Hence, the I&I of the system is monitored and corrected when conditions warrant.

(1) Marlay - Taylor: The Marlay - Taylor Water Reclamation Facility (WRF), which serves this district, also receives sewerage from the Patuxent Naval Air Station, St. Mary's City Historical area, St. Mary's College of Maryland, and the Piney Point vicinity in District 5. Of the treatment facility's current 6.0 mgd design capacity, 1.2 mgd and .03 mgd respectively are reserved by contract for the Navy and St. Mary's City area. In 1997-1998 the plant was upgraded from 4.5 mgd to 6.0 mgd. In addition a major change in sewerage processing was constructed. Previously, the plant had utilized trickling filters for its treatment process. The upgrade installed two "Schieber" reactors. These are proprietary systems that utilize activated sludge as their treatment process and provide enhanced biological nutrient removal which has been mandated by the state and federal regulations. Additionally, a fourth secondary clarifier was added, the chlorination system was modified and other changes were made to the plant treatment process. A major upgrade to the sludge processing facility was completed in 2005. The Chesapeake Bay Restoration Act requires that treatment facilities be upgraded to Enhanced Nutrient Removal (ENR) by 2011 and that no nitrogen or phosphorus be discharged from any additional flow above the current 6.0 mgd capacity. A facilities plan is currently underway to determine the ENR process that will be used.

(2) Bay Interceptor: The interceptor was designed to receive St. Mary's College sewage, to permit abandonment of a small sewage treatment plant at Evergreen Park, and to accommodate new development along the sewer's drainage area in accordance with the densities permitted by the Comprehensive Plan and Zoning Ordinance in effect in the 1970's. Pursuant to a December 28, 1977 agreement between the Metropolitan Commission and the State of Maryland, 0.3 mgd of effluent was to be conveyed from the college by way of the interceptor and treated at the Pine Hill Run (now Marlay - Taylor) plant. The design capacity of the interceptor varies between St Mary's City and the point at which it connects with the water reclamation facility, but overall the average capacity is 2.4 mgd. The 1988 Comprehensive Plan designated interceptor's drainage area for rural preservation.

The remaining interceptor capacity may be utilized by parcels of land that abut the interceptor as they were of record as of August 1, 1990 (i.e., no improvement of a lot or parcel subdivided or created after August 1, 1990 may be granted access to the interceptor).

(3) Patuxent River Naval Air Station: The Patuxent River Naval Air Station has grown into a small community of over 22,000 workers and residents. All sewage is pumped to the Marlay - Taylor Water Reclamation Facility. The 2006 average daily flow from Pax River was 574,000 gpd. The base anticipates continuous growth in the next 3 to 5 years, which will put added pressure on the Lexington Park area and the Three Notch Road (MD235) corridor.

(4) Callaway: Callaway is unique among the designated Village Centers in that it already has access to public sewer and water service operated by the St. Mary's Metropolitan Commission (MetCom). Sewage is pumped east along MD 5 from a pump station on Hunting Quarter Drive; this station receives additional flow from two smaller stations in the community. Near Holy Face Church the sewer changes to a gravity line. From Great Mills, sewage is pumped to the Marlay - Taylor Water Reclamation Facility. The pump station at Hunting Quarter is designed to serve approximately 222 EDUs. As of January 2007, 253 units are being served.

B. Remainder of the District: The balance of the sanitary district will remain served by individual septic systems.

4.5.9 Manor Run Sanitary District No. 9

This area includes 10,016 acres along a 7-mile frontage of the Patuxent River, but its width is only approximately 2 ½ miles. The land is very rough and steep. It is a most difficult area to develop satisfactorily or service economically. At present, no community systems are in existence and none are proposed.

4.5.10 Indian Creek Sanitary District No. 10

The district is bounded by the Charles County line on the north and northwest, by the Patuxent River on the east and on the south by Delabrook Road and New Market – Turner Road (MD6); from the southern intersection of New Market – Turner Road and Three Notch Road (MD235), the boundary runs generally due west to the Charles County line. It contains 20,954 acres, most of which is fairly rugged terrain. It is comprised of the drainage areas of Spring Creek, Mud Creek, Cremona Creek, Persimmon Creek, Flora Branch, Washington Creek, Trent Hall Creek, Swamp Creek, Hunters Branch, Killpeck Creek, Plains Run, Acorn Run, and the south slopes of the valleys of Indian Run and Indian Creek. A small part (approximately 1.2 square miles) of the district drains westward into Charles County. The area lies on a flat peninsula terminating in Long Point at the eastern tip. The area is part of the narrow indented coastal plain that extends north along the west bank of the Patuxent River from a point five miles below the Charles County line. The peninsula is backed immediately to the west by a steep, deeply dissected scarp slope. The slope rises unevenly to nearly 200 feet along the northwest outer-east ridge that is the spine of St. Mary's County and is traversed by Three Notch Road (MD 5) north and south of New Market, respectively. The drainage pattern reflects this basic topography, with many small individual watersheds of Indian Creek and its tributaries to the north, and Killpeck Creek and Locks Swamp Creek flowing into Trent Hall Creek to the south. Low-lying swamp and marshland border the lower reaches of both creeks. The district is, therefore, heavily defined by natural boundaries of creek, river, wetland, and sharp slope.

A. Charlotte Hall, New Market and Mechanicsville Town Centers: The Land Use Plan designates Charlotte Hall, New Market and Mechanicsville as Town Centers or secondary growth areas. The provision of public sewerage facilities is an objective for these centers. Areas not already served by community sewerage facilities are included on the service area maps as planned for service within six (6) to ten (10) years. Not all

properties included in a 6 to 10 year service area will necessarily be provided with public sewerage service within the next 10 years, but rather this service area category is provided to facilitate the planning and staging of capital improvements to meet the needs of projected population increases. There are several residential and commercial developments that create a need for community sewerage systems. Adequate wastewater treatment systems should be planned to accommodate on-going development in these growth areas. Systems currently providing such service include the following:

(1) Charlotte Hall Veterans Home: This facility is served by private water and wastewater systems that are operated by the Maryland Environmental Service (MES). As with the water system discussed in chapter 3, the entire wastewater facility was constructed in 1984 and was upgraded during the latter half of the 1990's from a facultative lagoon to a Biolac Activated Sludge Treatment process. Treated effluent is stored in the old facultative lagoon and discharged into the groundwater through Rapid Infiltration Basins (RIB). There are three basins that are alternated to dispose of the treated effluent. The original spray fields have not been used since the RIBs were placed in service but may be used again in the future if the need arises. The current flow to the Activated Sludge plant is approximately 50,000 gpd.

Treated effluent from the activated sludge plant is disposed of in 1 of 3 rapid infiltration basins. The spray fields total 7 acres and are permitted for a maximum use of one inch per week in Phase I and two inches per week in Phase II. The spray irrigation permit allows a higher loading rate of two inches per week if it can be shown that no ponding or ground water contamination will occur. MES is not currently using the spray fields but is maintaining the discharge permit for future use.

A Facility Capital Improvement Plan was recently completed and will be submitted to the State for funding. This plan does not include any expansion of the facility's capacity. It does recommend refurbishing/replacing several process components including: air diffusers and blowers, spray irrigation piping and distribution equipment, storage lagoon aerators, and Pump Station #1 pumps and control system. The plan includes constructing the previously approved fourth Rapid Infiltration Basin.

(2) Charlotte Hall LC: serving properties along Three Notch Road (MD 5) between Mt. Wolfe Road and Golden Beach Road is a gravity collection system that conveys effluent to a Hoot pretreatment system. The flow is then pumped to a subsurface low pressure distribution field. In 2009 the Maryland Department of Environment issued Permit 09-DP-3225 for this system. In 2014 MDE was asked to reissue the permit to modify the discharge to a maximum daily flow of 37,500 gallons per day and an average daily flow of 18,750 gallons per day.

B. The Remainder of the District: Area between Golden Beach and Charlotte Hall are expected to see continued moderate growth. This area does not pose an immediate health hazard.

Summary: As noted previously, this area will face considerable pressure to develop during the next two decades. The constant escalation of housing costs has greatly increased the demand for higher density housing stock such as townhouses, apartments and condominiums. In addition, clustering has become an attractive form of development of single family units because of the lower site development costs. To enable such growth, the locations will have to be chosen carefully to avoid the many areas in the district that have severe natural site limitations. In addition, either alternative on-site sewage disposal systems or central sewage treatment will have to be provided. Because of County and state restrictions on new

discharges to the Patuxent River, land treatment appears to be the most feasible central treatment alternative. The relatively large amounts of land required for such a facility should be identified and protected now if there is a potential need for the future. Otherwise, the County should diligently maintain its current policy of requiring sufficiently large lot single family residential growth.

It is important to emphasize that sewerage planning for this area should seriously consider potential water supply problems. Surface water supplies such as the two potential reservoir sites on Persimmon Creek and Killpeck Creek should be protected. It is important that both development in these areas and the risk of influence from septic failures be avoided if there is a serious chance that the reservoirs may be needed. It is the recommendation of this plan that growth in the 10th sanitary district be watched closely. The County should undertake a comprehensive analysis of the area to determine the most favorable Land Use Plan for the area, considering the previously mentioned water and sewage limitations.

4.6 Marinas

St. Mary's County is 367 square miles in extent, and the 16th largest County in Maryland. It is bounded by water on all sides except for the border with Charles County to the north. The County is primarily rural in nature with farming and harvesting of seafood as important sources of income. Both of these industries are heavily dependent upon the quality of the natural resources which they utilize. Of particular concern to the seafood industry are waterfront land uses, specifically marinas, and their impact upon the tidewater. In most cases, the marinas in St. Mary's County do not have a detrimental impact on the surrounding tidewaters. The potential, however, for future pollution does exist as the number and size of such facilities increases. The fact that no marina in the County has any sewage collection system or oil spill equipment is of major concern. The introduction of untreated waste into the rivers, creeks, and their environs is a potential threat to the environment and public health. They are particularly damaging to an area with strong farming and shellfish interests such as St. Mary's County. The spillage of gasoline and oil products destroys marine life and any other associated wildlife. Private, commercial, and industrial marinas are particularly specialized types of enterprise, with great potential for causing pollution and environmental damages unless provided with suitable service facilities. Because of projected growth in the County, especially along the shoreline, the marinas and the surrounding environment have become of special concern to the state and County. In light of this concern, it is appropriate that some guidelines and policies be outlined and considered. Special requirements related to waterfront and marina activities can be found in the Comprehensive Zoning Ordinance.

4.7 Sludge Disposal

The disposal of wastewater sludge is one of the most important aspects of an environmentally acceptable and economically sound wastewater management program. Most of the wastewater sludge produced in St. Mary's County is disposed by land application at various locations throughout the County.

The St. Mary's County Soil Conservation Service estimates that there are approximately 50,000 acres of cropland in St. Mary's County of which approximately 50% are suitable for sludge disposal. The Marlay-Taylor Sanitary District Facility Plan estimates that at the design capacity of 4.5 mgd, approximately 807 tons of dried sludge will be produced per year. In 2000, 792 dry tons or 2.91 dry tons a day of sludge were produced. Based on an application rate of (10) tons per acre per year of dried sludge solids, approximately (79) acres of cropland were required for sludge disposal through the year 2001. Due to the Commission's reliance on agricultural application of sludge, it is imperative that adequate storage facilities be provided. A new rotary press sludge dewatering system and a sludge aerating system was constructed in 2006. Sheet metal roofs over the former drying beds are used as sludge storage facilities. The structures are of sufficient size to store dried sludge for at least (6) months, which should be more than enough to cover the winter months and the growing season.

Table 4-1 Projected Wastewater Treatment Demands and Planned Capacity

(as of December 2012)

Treatment Facility Name	Total Capacity (EDU's)	EDU's Allocated	Not Allocated	Gallons per EDU	Average Demand 2012 (MGD)	Capacity (MGD)	Projected Demand 2017 (MGD)	Planned Capacity (MGD)
Wicomico Shores	522	460	62	270	0.1143	0.141	0.186	0.141
St. Clement's Shores	400	529	-129	250	0.0749	0.100	0.117	0.060
Forrest Farm	230	209	21	250	0.0363	0.058	0.025	0.058
Marlay - Taylor	26,086	20,919	5,167	230	3.6852	6.000	5.053	6.000
Leonardtown	2,720	2,300	420	250*	0.4257	.680	0.760	.940

* 225 GPD after 12/31/11 2.1% = Assumed Growth Rate

Source: MetCom, Town of Leonardtown

Table 4-2 A: Inventory of Community and Rural Shared Systems

Facility	Design Capacity (MGD)	NPDES Permit (MGD)	Calendar Year 2012 Avg Daily Flow (MGD)	Gross Adjusted Available Flow (MGD)
Marlay-Taylor	6.0	6.0	3.6852	2.3148
St. Clement's Shores	0.1	0.1	0.0749	0.0251
Charlotte Hall LC	0.01875	0.01875	.006473	.012277
Wicomico Shores	0.141	0.141	0.1143	0.0267
Forrest Farm	0.0575	0.0575	0.0363	0.0212
Airedele Road	0.021	0.021	0.015	0.006
Leonardtown	.68	.68	0.4257	.2543

Source: MDE, MetCom, Town of Leonardtown

Table 4-2B: Inventory of Multi-Used Sewerage Systems *

Facility	Design Capacity (MGD)	NPDES Permit (MGD)	2006 Avg Daily Flow (MGD)	Gross Adjusted Available Flow (MGD)
Margaret Brent Middle School	.008	.008	.003	.005
Hollywood Elementary School	.005	.00113	Unavailable #	Unavailable #
Park Hall Elementary School	.005	.00117	Unavailable #	Unavailable #
Chopticon High School	.017	.017	.007**	.010
Charlotte Hall WaWa	.0064	.0064	.0025	.0039
Charlotte Hall Center Inc (Burroughs)	.056			
Charlotte Hall Veterans Home	.067 RIB*** .020 Spray System	0.067		
Point Lookout State Park	0.09	0.09	.0185	.0715
NAS Pax River Webster Field Annex	.045	.045	.022	.023
Winters Apartments	.0013	.0013	.0004	.0009

Source: MetCom, St. Mary's County Health Department

* Inventory of "Muli-Used Sewerage System" means a single system serving a single lot, whether owned or operated by an individual or group of individuals under private or collective ownership and serving a group of individuals for the collection and disposal of sewerage or industrial wastes of a liquid nature, including various devices for the treatment of sewerage and industrial wastes having a treatment capacity in excess of 5,000 GPD.

No flow meters on the systems.

The County, Metcom and the Health Department recognize that there are smaller users in the County that are less than 5,000 gallons.

** 2012 Avg Daily Flow

Note: The sewerage from Margaret Bent Middle School is now pumped to Chopticon High School Wastewater Treatment Facility via a pump station and restricted-use sewer force main.

***Rapid Infiltration Basin

Table 4-2C: Inventory of Pumping Stations

Station Name	CY2014 Average Daily Flow, MGD	Maximum Design Daily Flow, MGD	Number of Pumps	Capacity of Each Pump, GPM	Force Main Diameter, Inches
Abberly Crest	0.012	0.494	2	343	8
Breton Bay	0.037	0.099	2	69	3
Airport Road	0.004	0.029	2	20	2
Black Duck	0.011	0.069	2	48	4
Bradley Boulevard	0.046	0.518	2	360	8
Breton Bay	0.037	0.099	2	69	3
Broad Creek	0.021	0.215	2	149	6
California Run	0.257	1.320	2	917	10
Cecil's Mill	0.015	0.096	2	67	3
Cedar Cove	0.061	0.245	2	170	6
Dunleigh	0.006	0.105	2	73	3
Esperanza Farms	0.007	0.192	2	133	4
Essex South	0.184	1.129	2	784	4
Evergreen Park	0.033	0.072	2	50	3
First Colony #1	0.019	0.269	2	187	3
First Colony #2	0.043	0.756	2	525	6
Forest Run	0.506	1.548	2	1075	12
Glebe Run	0.021	0.350	2	243	6
Great Mills	0.196	0.577	2	401	8
Greenbrier	0.073	0.657	2	456	8
Hickory Hills	0.051	0.549	2	381	8
Hilton Run	0.047	0.435	2	302	8
Hunting Creek	0.021	0.167	2	116	4
Hunting Quarters	0.035	0.467	2	324	6
Joy Chapel	0.015	0.179	2	124	4
Kingston	0.009	0.451	2	313	
Laurel Glen	0.008	0.147	2	102	4
Leyland Park	0	0.038	2	115	4
Lynn Drive	0.017	0.144	2	100	4
Meadow Lake	0.026	0.124	2	86	4
Moorings	0.021	0.085	2	59	4

Station Name	CY2014 Average Daily Flow, MGD	Maximum Design Daily Flow, MGD	Number of Pumps	Capacity of Each Pump, GPM	Force Main Diameter, Inches
Oak Crest (Interim)	0	0.015	2	50	2
Patuxent Park West	0.024	0.431	2	299	6
Pegg's Road	0.009	0.132	2	92	6
Pembrooke #1	0.045	0.913	2	634	8
Pembrooke #2	0.025	0.288	2	200	8
Pickett's Harbor	0.019	0.216	2	150	4
Piney Point	0.157	0.474	2	329	12
Piney Point Landings	0.028	0.297	2	206	6
Planters Court	0.019	0.166	2	115	4
Riverbay	0.04	0.275	2	191	6
Rosebank	0.002	0.036	2	25	4
Rue Woods	0.008	0.055	2	38	4
Sheehan	0.016	0.189	2	131	4
Southgate	0.014	0.128	2	89	4
Spring Valley	0.063	0.278	2	193	6
St. Clement's Shores	0.027	0.360	2	250	6
St. George's Island	0.021	0.196	2	136	6
St. George's Peninsula	0.006	0.186	2	129	4
St. Mary's City	0.056	0.665	2	462	10
St. Mary's Industrial Park	0.06	0.445	2	309	10
St. Mary's Square	0.03	0.176	2	122	4
Villages at Leonardtown	0.018	0.058	2	40	3
Waters Edge	0.031	0.187	2	130	4
Westbury	0.059	0.369	2	256	6
Wicomico Shores #1	0.032	0.619	2	430	4
Wicomico Shores #2	0.024	0.174	2	121	4
Wicomico Shores #3	0.017	0.348	2	242	6
Widgeon	0.014	0.014	2	10	2
Wildewood #1	0.065	0.720	2	500	8
Wildewood #2	0.033	0.380	2	264	8
Wildewood #3	0.159	0.917	2	637	4
Willow Woods	0.036	0.040	2	28	2
Woods @ Myrtle Pt Sec 5		0.018		65	

Source: MetCom, MDE

Table 4-3 Inventory of Sewer Problem Areas

Sanitary District	Location	Nature of Problem	Dwelling Units	Demand	Options
1	Longview Beach	High water table; small lots; impermeable soils	Greater than 100 Residences (some seasonal)	Minimum 100 EDUs	Package treatment plant
1	Mill Point Shores	High water table; small lots; impermeable soils	Greater than 100 Residences (some seasonal)	Minimum 100 EDUs	Package treatment plant
	Colton's Point/ Point Blackistone	high water table; impermeable soils; small lots	30 Residences	Minimum 30 EDUs	Package treatment plant
	Rose Bank	High water table; small lots; impermeable soils Failing septic systems	59 Residences	59 EDUs	Possible tie into St. Clements Shores WWTP, if expanded
2	Mt. Pleasant Subdivision	Failing septic systems; small lots; impermeable soils; high water table	30-40 Residences	Minimum 30-40 EDUs	Package treatment plant
3	Holly Gaf	Failing septic systems; high water; topographical limitations	75 residences	75 EDUs	Possible tap into future Hollywood lines
	McKay's Beach Subdivision	Failing septic systems; small lots; critical area; impermeable soils; high water table.	40 Residences	Minimum 40 EDUs	Package treatment plant
5	Spring Ridge	Failing septic systems; some small lots; critical area; some impermeable soils; high water table	40 Residences	Minimum 35 EDUs	Possible tap into Bay Interceptor line
6	Fish Commission Subdivision on Murray Rd.	Failing septic systems; small lots; critical area; impermeable soils; high water table. Beach erosion also a factor, many homes have existing septics between house and beach.	30 Residences	Minimum 30 EDUs	Package treatment plant
6	Rodo Beach	Failing septic systems in the critical area; small lots; some impermeable soils; high water table		Minimum 40 EDUs	Package treatment plant or force main to Bay Interceptor
6	Scotland Beach	Failing septic systems in the critical area; small lots; some impermeable soils; high water table	45 Residences	Minimum 45 EDUs	Package treatment plant or force main to Bay Interceptor

Sanitary District	Location	Nature of Problem	Dwelling Units	Demand	Options
6	Hays Beach	Failing septic systems; small lots; critical area; impermeable soils; high water table. Beach erosion also a factor, many homes have existing septics between house and beach	14 Residences	Minimum 14 EDUs	Package treatment plant
6	St. Jerome's Shores & St. Jerome's Beach Subdivision	Failing septic systems; small lots; critical area; impermeable soils; high water table	30 Residences	Minimum 30 EDUs	Package treatment plant
7	Cornfield Harbor	Failing septic systems; small lots; critical area; some impermeable soils; high water table	20 Residences	Minimum 20 EDUs	Possible force main to Bay Interceptor
8	Rt. 489 Park Hall Rd	Soils in this area are typically impermeable for conventional drain field systems and there is usually a lack of a 4 foot buffer from the water table	34 Residences, 1 Church	35 EDUs	Package treatment plant and/or possible tap into Marley Taylor
8	Langley Trailer Park and Adkins Road	Small lots; failing septic systems; impermeable soils; poor drainage; critical area	57 Residences	57	Remove or elevate trailers. Adkins Rd possible tie into Marley Taylor at Great Mills Rd
8	Patuxent Beach/Levering	Small lots; critical area	147 Residences, 1 Restaurant, 2 Marinas	Minimum 150	Package treatment plant
8	Gross Drive (off Kingston Creek Rd)	Topography and soil limitations	20 Residences	Minimum 20 EDUs	Package treatment plant
8	Town Creek	Topographical limitations; impermeable soils; high water table on some lots close to the water	To be determined by survey	TBD	Package treatment plant
10	Golden Beach	Failing septic systems; small lots; critical area; soils limitations in areas; high water table in areas	585	585	Package treatment plant

Source: St. Mary's County Health Department

Table 4-4 Equivalent Dwelling Units

CLASSIFICATIONS	Gallons Per Day/EDU[1,2]
INSTITUTIONAL	
Elementary School	4 gpd/person
Middle School	6 gpd/person
High School	8 gpd/person
Child Day Care/Nursery School	6 gpd/person
Hospital or Nursing/Group Home	125 gpd/bed
SUBDIVISION RESIDENTIAL - One Dwelling	250 gpd
MULTI-UNIT RESIDENTIAL*	
1 Trailer Space	250 gpd
1 Apartment/unit	250 gpd
1 Condominium/unit	250 gpd
*Apartments, residential condominiums, housing projects for the aged can be designed based on 200 gpd/unit, but will be billed based on 250 gpd/unit	
COMMERCIAL/INDUSTRIAL	
Auto Dealership	Gross s.f. x 0.08 = ____ gpd
Bakery/Food Retail Store (No seating)	Gross s.f. x 0.15 = ____ gpd
Bank	Gross s.f. x 0.04 = ____ gpd
Bar - No Health Dept. Food Permit required (see Restaurant or Social Hall if food services are provided)	5 gpd/seat
Barber Shop	Gross s.f. x 0.20 = ____ gpd
Beauty Salon	Gross s.f. x 0.35 = ____ gpd
Car Wash - Self Service Bay	250 gpd/bay
Car Wash - Recycled Bay	2,500 gpd/bay
Car Wash - Non-Recycled Bay	4,000 gpd/bay
Church (Worship center 1 EDU, add for accessory uses such as schools, etc.)	250 gpd
Commercial Condominium (Billing charges based on 250 gpd/unit)	Gross s.f. x 0.03 = ____ gpd
Drug Store (Not to exceed 2 EDU's)	Gross s.f. x 0.13 = ____ gpd
Food Carryout (With no indoor seating, i.e. donut, ice cream, some fast	Gross s.f. x 1.00 = ____

food)	gpd
Funeral Home (With embalming services)	Gross s.f. x 0.31 = ____ gpd
Funeral Home (No embalming service)	Gross s.f. x 0.02 = ____ gpd
Garage/Service Station (No Food Service)	Gross s.f. x 0.04 = ____ gpd
Gas Station/Convenience Store (With Food Service)	Gross s.f. x 0.35 = ____ gpd
Laundry & Cleaner (Professional service facilities)	Gross s.f. x 0.31 = ____ gpd
Laundromat (Self-serve facilities)	Gross s.f. x 2.00 = ____ gpd
Library	Gross s.f. x 0.03 = ____ gpd
Marina (per slip)	25 gpd/slip
Medical Office Building[4]	Gross s.f. x 0.13 = ____ gpd
Motel/Hotel Unit	63 gpd/room
Motel/Hotel Unit Efficiencies (with kitchen facilities; extended stay)	125 gpd/room
Office Building[5]	Gross s.f. x 0.03 = ____ gpd
Post Office (Community - not to exceed 2 EDU's)	Gross s.f. x 0.09 = ____ gpd
Recreational Facility	
Theatre/Sports Arena/Recreational Facility (No food service)	1 gpd/seat
Theatre/Sports Arena/Recreational Facility (With food service)	5 gpd/seat
Health Club or Public Park based on fixture table below	Fixture Table Below
Restaurant (Requires Health Dept. Food Permit)	13 gpd/seat
Retail/Dept. Store (stand-alone) less than 12,000 s.f. (Sq. ft. for accessory uses subtracted from store total and calculated by category of use)	Gross s.f. x 0.03 = ____ gpd
Retail/Dept. Store (stand-alone) greater than 12,000 s.f. (Sq. ft. for accessory uses subtracted from store total and calculated by category of use)	Gross s.f. x 0.02 = ____ gpd
Shopping Center/Strip Mall (mixed use or uncertain)[6]	Gross s.f. x 0.18 = ____ gpd
Social Hall/Meeting Rooms (for rental i.e. Elks, Knights of Columbus etc.)	Gross s.f. x 0.07 = ____ gpd
Supermarket	Gross s.f. x 0.05 = ____ gpd
Swimming Pool 500 gpd/pool minimum or based on fixture table below	500 gpd minimum

Warehouse	Gross s.f. x 0.015 = ____ gpd
AGRICULTURAL - No properties currently being served	

St. Mary's County Metropolitan Commission, Adopted March 1, 2009

An alternative method used to project average daily flows generated from commercial establishments, public service buildings or dwelling units can be figured on the basis of total floor area, number of building units or service seats multiplied by a statistical factor[3].

FLOW PROJECTION FOR USES WHERE THE SIZE OF THE FACILITY MAY NOT BE PROPORTIONAL TO THE POTENTIAL FLOWS

Type of Fixture	Proposed Gallons per Day per Fixture
Showers	200
Baths	300
Lavatories	100
Toilets	98
Urinals	65
Sinks	33

Flow Projection for country clubs and similar type establishments may be made on the basis of plumbing fixtures with the approval of the Chief Engineer. The related statistical flow figures per unit of plumbing fixture are shown in the tables above.

Determination of EDU's for proposed uses not listed in this document will be determined on a case-by-case basis by the Chief Engineer. Notwithstanding the guiding factors listed elsewhere in this table, the Chief Engineer at his/her discretion, may establish flow projections for specific properties on a case-by-case basis, at rates lower than those published on this table, if in the Chief Engineer's opinion the owner has demonstrated that significantly less water should be used and/or significantly less sewage should be produced by a specific building or use because of the proposed utilization of water saving technology or because the owner has demonstrated that similar buildings in other locations use significantly less water and/or produce significantly less sewage.

[1] Equivalent Dwelling Unit (EDU) is based on the average daily water use and the average daily volume of sewage produced by a single family home. Billing and allocation of EDUs are based on 250 gpd/EDU. Fraction of an EDU gets rounded up to the nearest whole number.

[2] For design purposes an EDU is based on 300 gpd for water, and 250 gpd for sewer.

[3] Adopted from the MDE "Wastewater Capacity Management Plan Guidance Document" and the Anne Arundel County "Flows Estimate for Capital Facility Connection Charges"

[4] Includes doctor, dental and veterinary offices

[5] Each condominium office unit to be a minimum of 1 EDU.

[6] EDU's assigned for individual units within a shopping center to be adjusted based upon actual occupancy

Originally adopted October 1, 1977; revised July 1, 1981, September 13, 2007, October 11, 2007, and March 1, 2009.

Table 4-5 MetCom Capital Improvements Budget (Sewer) FY18-23

Project Name	Status	Project ID	Prior Approved	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	Totals
Replacement										
Patuxent Park Sewer Replacement Phase 3	4	8124SR	$2,191,640							$2,191,640
Lynn Dr. Force Main Upgrade & Replacement	5	8121FM	$642,030							$642,030
St George's Park Sewer Sys Imp & Sheehan WWPS Ph. 1	4	5-9-S	$360,000 [A]							$360,000
Interceptor Rehabilitation, Pine Hill Run Road	2	8152SR	$2,547,900							$2,547,900
Patuxent Park Sewer Replacement Phase 4	2	8161SR	$2,242,375							$2,242,375
Piney Point Road Sewer Line Analysis	1	5171MS	$190,000		$307,965 [C]					$497,965
Interceptor Rehabilitation, Shangri-La Dr. to Colony Square	2	8131SR	$88,704			$1,265,296 [B]				$1,354,000
Southampton Sewer System Rehabilitation	1				$70,000 [C]		$803,592 [C]		$1,696,927 [C]	$2,570,519
Manhole Rehabilitation	4	SM1705	$95,000	$95,000	$97,645	$100,520	$108,500	$111,750	$115,125	$723,540
I&I Sewer Replacement, Rehabilitation & Upgrade	4	SM1706	$220,000	$220,000	$226,560	$233,280	$240,360	$247,560	$255,000	$1,642,800
Replacement Subtotal =			**$8,577,649**	**$315,000**	**$702,170**	**$1,599,096**	**$1,152,452**	**$359,310**	**$2,067,052**	**$14,772,769**
Difference from FY 2017 CIB			**-$2,643,201**	**$0**	**$317,170**	**$1,284,096**	**$972,185**	**$359,310**	**$2,067,052**	**$2,356,652**

Status:
1 Planning Phase
2 Design Phase
3 Contract Phase
4 Construction Phase
5 Close-out Phase

A) Reduced from $540,500.00 based on removal of sewer system improvements
B) Project construction moved to FY2020
C) Amount based on updated cost estimate completed by consultant engineer

Project Name	Status	Project ID	Prior Approved	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	Totals
Pump Stations										
Lynn Drive WWPS	5	8122SS	$1,821,300							$1,821,300
First Colony #2 WWPS	2	8141SS	$445,500 [A]							$445,500
Glebe Run WWPS Replacement	4	3161SS	$155,250							$155,250
Forest Run WWPS	2	8131SS	$650,000							$650,000
Spring Valley WWPS	4	8161SS	$250,000							$250,000
Great Mills WWPS Upgrade	2	8081SS	$7,691,370							$7,691,370
St. Mary's Square WWPS	2	8121SS	$1,184,000 [B]							$1,184,000
Piney Point WWPS Upgrade	2	5081SR	$7,046,950							$7,046,950
Wildewood #1 WWPS	1	8132SS	$210,000		$315,418 [C,L]					$525,418
Wildewood #2 WWPS	1	8171SS	$55,000		$536,312 [D,L]					$591,312
Evergreen Park WWPS	1				$10,500 [E]	$270,386 [F,L]				$280,886
Moorings WWPS	1				$10,500 [G]	$362,800 [H,L]				$373,300
Esperanza Shopping Center WWPS	1						$329,657 [I,L]			$329,657
Bradley Blvd. WWPS	1						$321,214 [I,L]			$321,214
Greenbrier WWPS	1							$344,655 [J,L]		$344,655
Wicomico Shores #1 WWPS Replacement	1							$379,121 [L]		$379,121
Hunting Quarters WWLS	1								$324,069 [K,L]	$0
Pump Stations Subtotal =			**$19,509,370**	**$0**	**$872,730**	**$633,186**	**$650,871**	**$723,776**	**$324,069**	**$22,389,933**
Difference from FY 2017 CIB			**-$1,654,500**	**-$3,423,750**	**$332,730**	**$295,686**	**-$24,129**	**$723,776**	**$324,069**	**-$3,750,187**

Status:
1 Planning Phase
2 Design Phase
3 Contract Phase
4 Construction Phase
5 Close-out Phase

A) Reduced from $1,530,000; revised cost estimate for sewer force main bypass only
B) Reduced from $1,754,000; actual bid pricing
C) Project moved from FY2018 to FY 2019; reduced from $2,146,250 based on not relocating station and using package pump station replacement
D) Project moved from FY2018 to FY 2019; reduced from $769,500 based on using package pump station replacement
E) Project moved from FY2018 to FY2019; budget amount for property survey taken from $170,500 total previously in FY2018
F) Project moved from FY2019 to FY 2020; budget amount for WWPS upgrade moved from FY2018 to FY2019
G) Project moved from FY2018 to FY2019; budget amount for property survey taken from $337,500 total previously in FY2018
H) Project moved from FY2019 to FY 2020; budget amount for WWPS upgrade moved from FY2018 to FY2019
I) Project(s) moved from FY2020 to FY2021
J) Project moved from FY2021 to FY 2022
K) Project moved from FY2022 to FY2013; project added based on service life at the request from the Operations & Maintenance department
L) Amount based on updated cost estimate completed by consultant engineer

Table 4-5 MetCom Capital Improvements Budget (Sewer) FY18-23 - Continued

Project Name	Status	Project ID	Prior Approved	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	Totals
System Upgrades / Expansion										
MTWRF ENR Upgrade	5	8-38-S	$39,125,000							$39,125,000
Leonardtown ENR & Upgrade Project	4	3151SF	$2,092,372							$2,092,372
MTWRF Expansion (Capacity & Expansion Report and Concept Design)	2	8151SF	$500,000							$500,000
Exterior Petty Building Upgrades	2	8131BD	$460,000							$460,000
Asset Management Software Upgrade (232,095 capitalized)	4	SW1201	$380,000							$380,000
Macerators/Macerating Pumps for Stations	4	SM1710	$120,000							$120,000
CCTV Inspection System	4		$126,000							$126,000
Utility Maintenance Truck	4		$151,000							$151,000
St. Clements Shores WWTP Expansion Phase A	2	2171SF	$906,500							$906,500
Methane Co-Generator Upgrade at Marlay-Taylor WWTP	2	8171SF	$945,000							$945,000
Right of Way Clearing	4	SM1725	$54,000	$54,000						$108,000
Marlay-Taylor WRF Replacement Pumps	4		$94,500	$94,500 [A]						$189,000
SCADA Safety and Security Upgrade	1			$125,000 [B]						$125,000
Financial Software Upgrade	1			$160,000 [C]						$160,000
Facilities Condition Assessment	1			$345,000 [D,H]						$345,000
St. Clements Shores WWTP Expansion Phase B	2	2151SF	$ 70,000.00	$500,000 [E]	$3,125,000 [E]					$3,695,000
Energy Audit / Energy Efficiency Upgrades	1			$115,000 [F]	$57,500 [F]	$57,500 [F]				$230,000
Grinder Pump Replacements	4	SM1709	$840,375		$850,000 [G]		$850,000 [G]		$850,000 [G]	$3,390,375
										$0
Systems Upgrades/Expansion Subtotal =			**$45,864,747**	**$1,393,500**	**$4,032,500**	**$57,500**	**$850,000**	**$0**	**$850,000**	**$53,048,247**
Difference from FY 2017 CIB			**-$1,014,375**	**-$2,175,875**	**$3,192,125**	**$57,500**	**$850,000**	**$0**	**$850,000**	**$1,759,375**

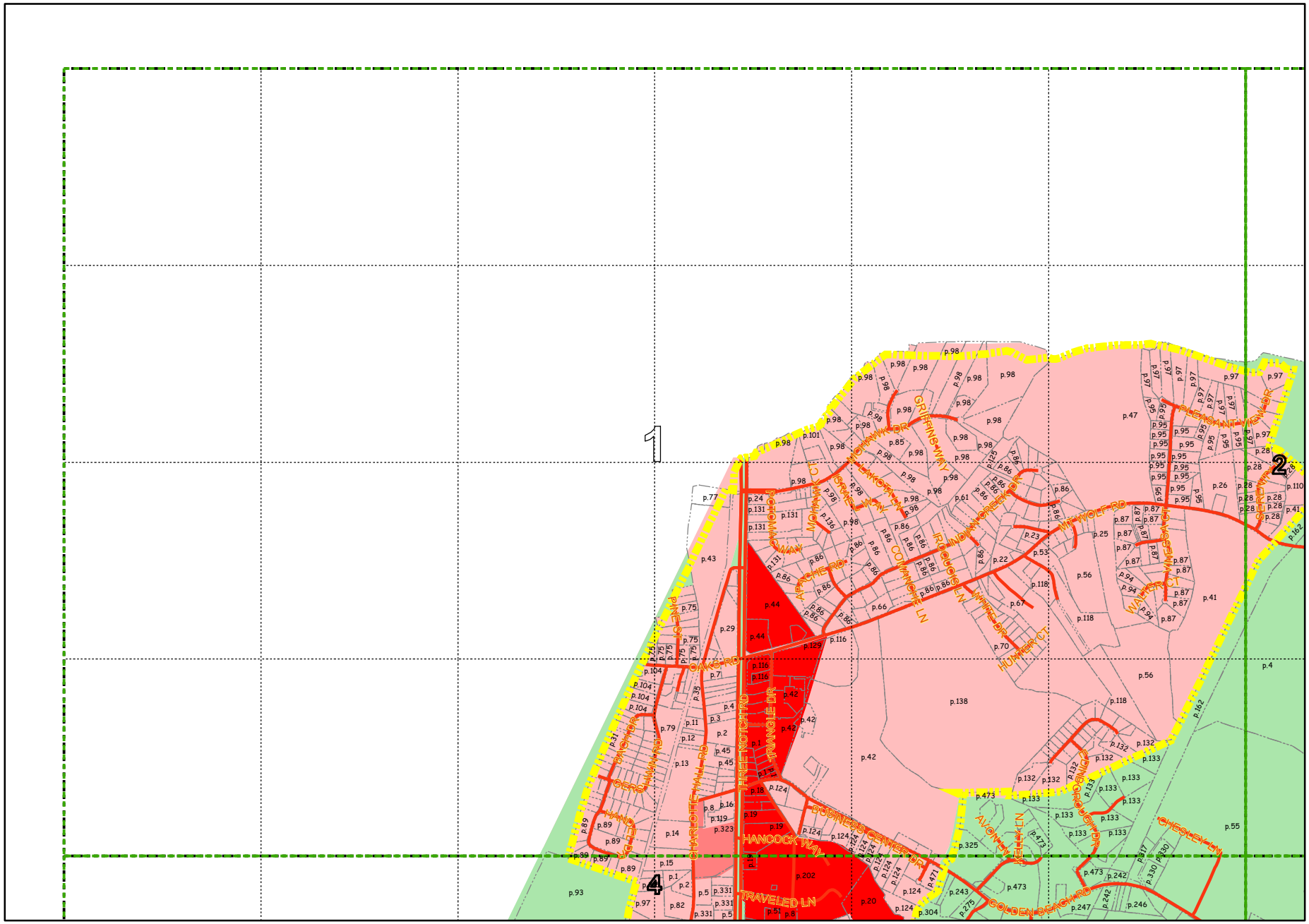
Totals										
Replacement			$8,577,649	$315,000	$702,170	$1,599,096	$1,152,452	$359,310	$2,067,052	$14,772,729
Pump Stations			$19,509,370	$0	$872,730	$633,186	$650,871	$723,776	$324,069	$22,714,002
Upgrades/Expansion			$45,864,747	$1,393,500	$4,032,500	$57,500	$850,000	$0	$850,000	$53,048,247
Subtotal			$73,951,766	$1,708,500	$5,607,400	$2,289,782	$2,653,323	$1,083,086	$3,241,121	$90,534,978
Capital Reserves[I]		**6.20%**	$4,470,000	$106,000	$348,000	$142,000	$165,000	$67,000	$201,000	$5,499,000
		Total =	**$78,421,766**	**$1,814,500**	**$5,955,400**	**$2,431,782**	**$2,818,323**	**$1,150,086**	**$3,442,121**	**$96,033,978**
Difference from FY 2017 CIB			**-$5,641,076**	**-$5,946,625**	**$4,081,025**	**$1,739,282**	**$1,910,056**	**$1,150,086**	**$3,442,121**	**$734,869**

Status:
1 Planning Phase
2 Design Phase
3 Contract Phase
4 Construction Phase
5 Close-out Phase

A) Added one additional year for estimated costs for existing pump replacement within the facility
B) Project added based on upgrade needs required for SCADA system monitoring equipment and radios along with general overhaul of system electronics
C) Project added to purchase complete financial software package
D) Moved from FY2019 to FY2018
E) Revised project budget for estimated Phase B engineering design and construction
F) Project added to upgrade and replace conventional electrical equipment to energy efficient equipment
G) Rounded annual project budget up $9,625 to account for estimated material and labor price increases; phasing updated and added year
H) Amount based on updated cost estimate completed by consultant engineer
I) Restricted Reserves requires budget amendment with CSMC to utilize

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid
Growth Areas
Property Lines
Roads

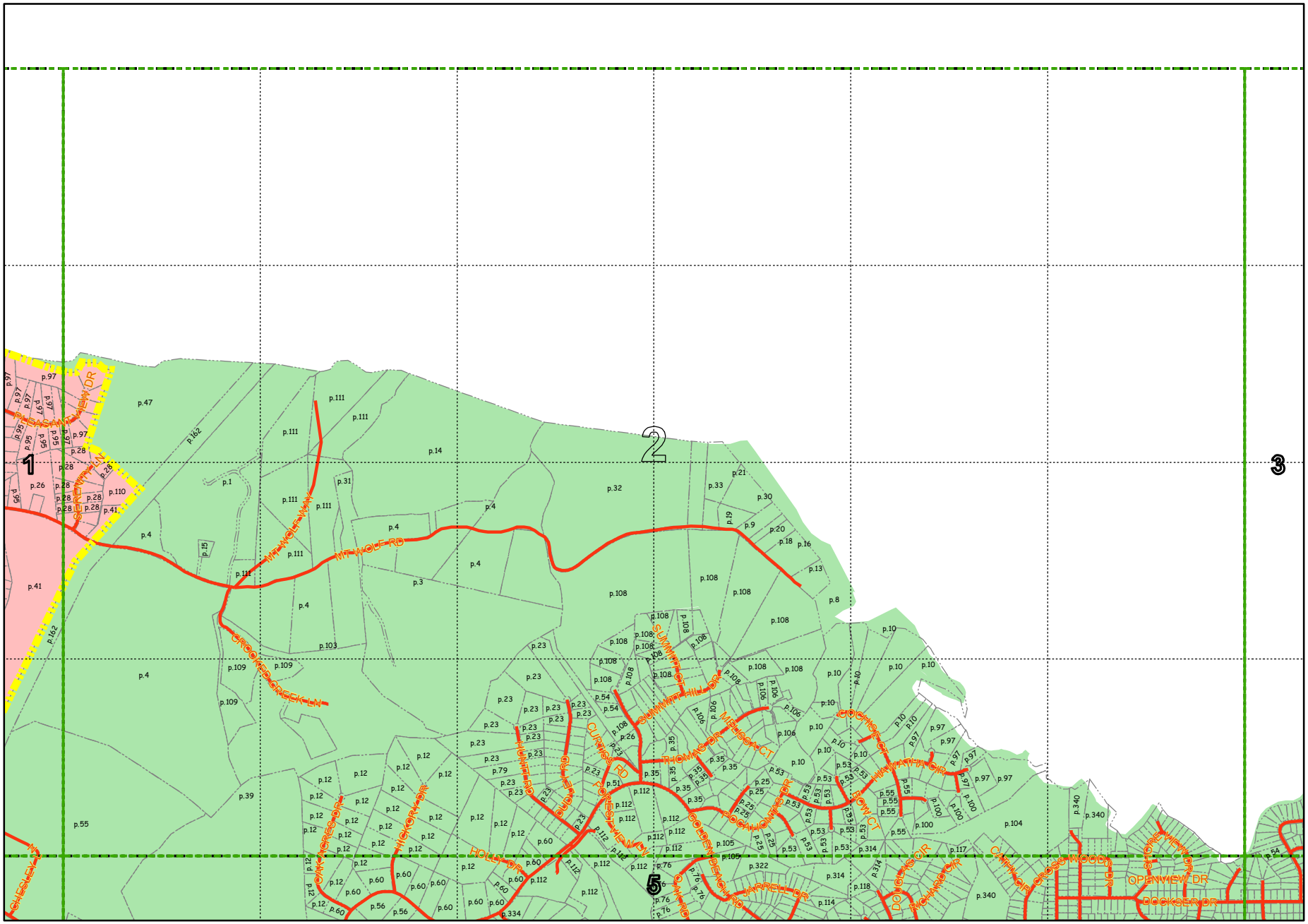
MAP

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid
Growth Areas
Property Lines
Roads

MAP 2

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

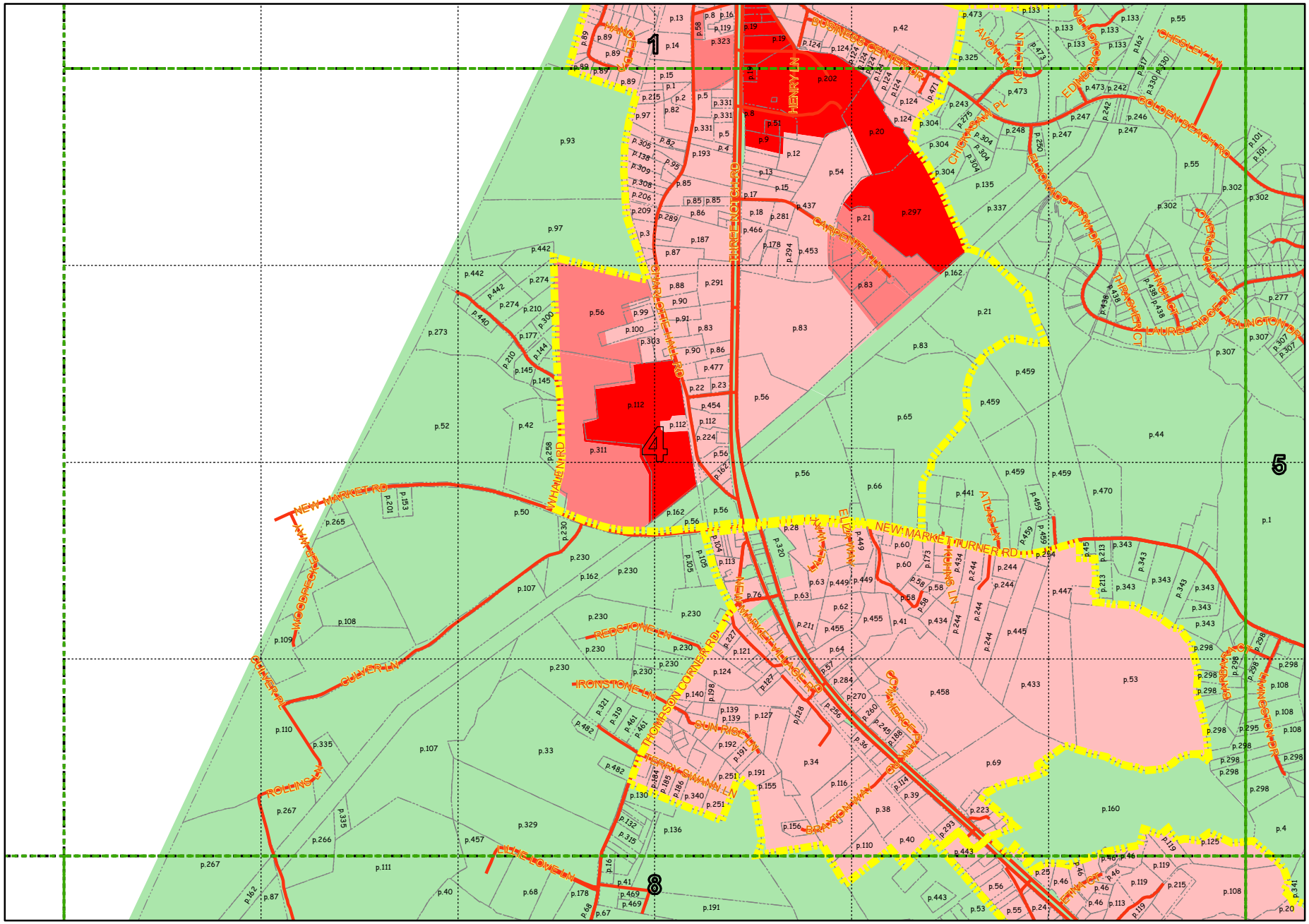
1,000 0 1,000 2,000 3,000 Feet

Tax Map grid
Growth Areas
Property Lines
Roads

MAP 3

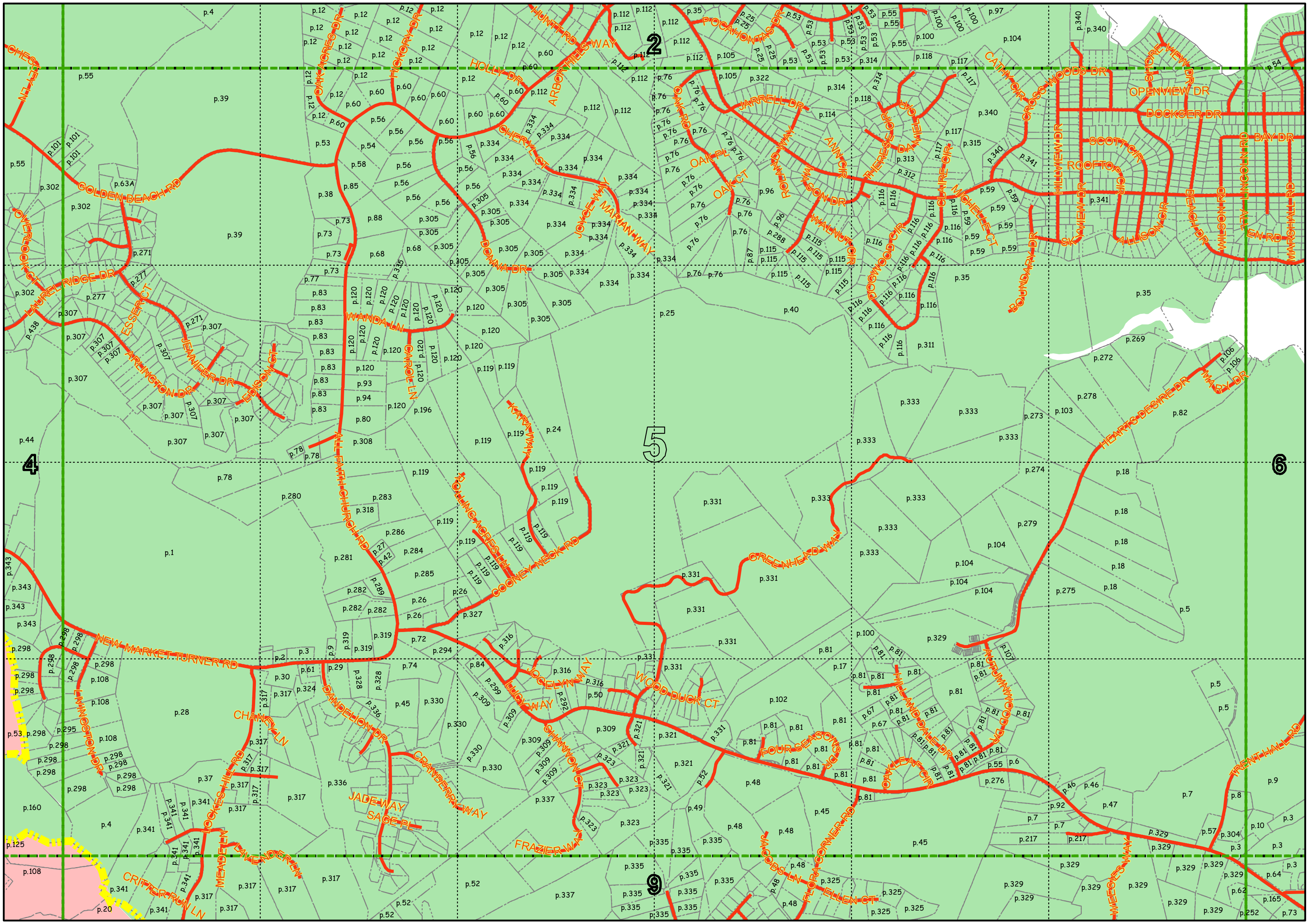
Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update


Sewer Service
1,000 0 1,000 2,000 3,000 Feet
Tax Map grid
Growth Areas
Property Lines
Roads
MAP
Sewer Category:
S-1
S-3D
S-6D
RS-1
RS-D
RS-E
NPS
2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



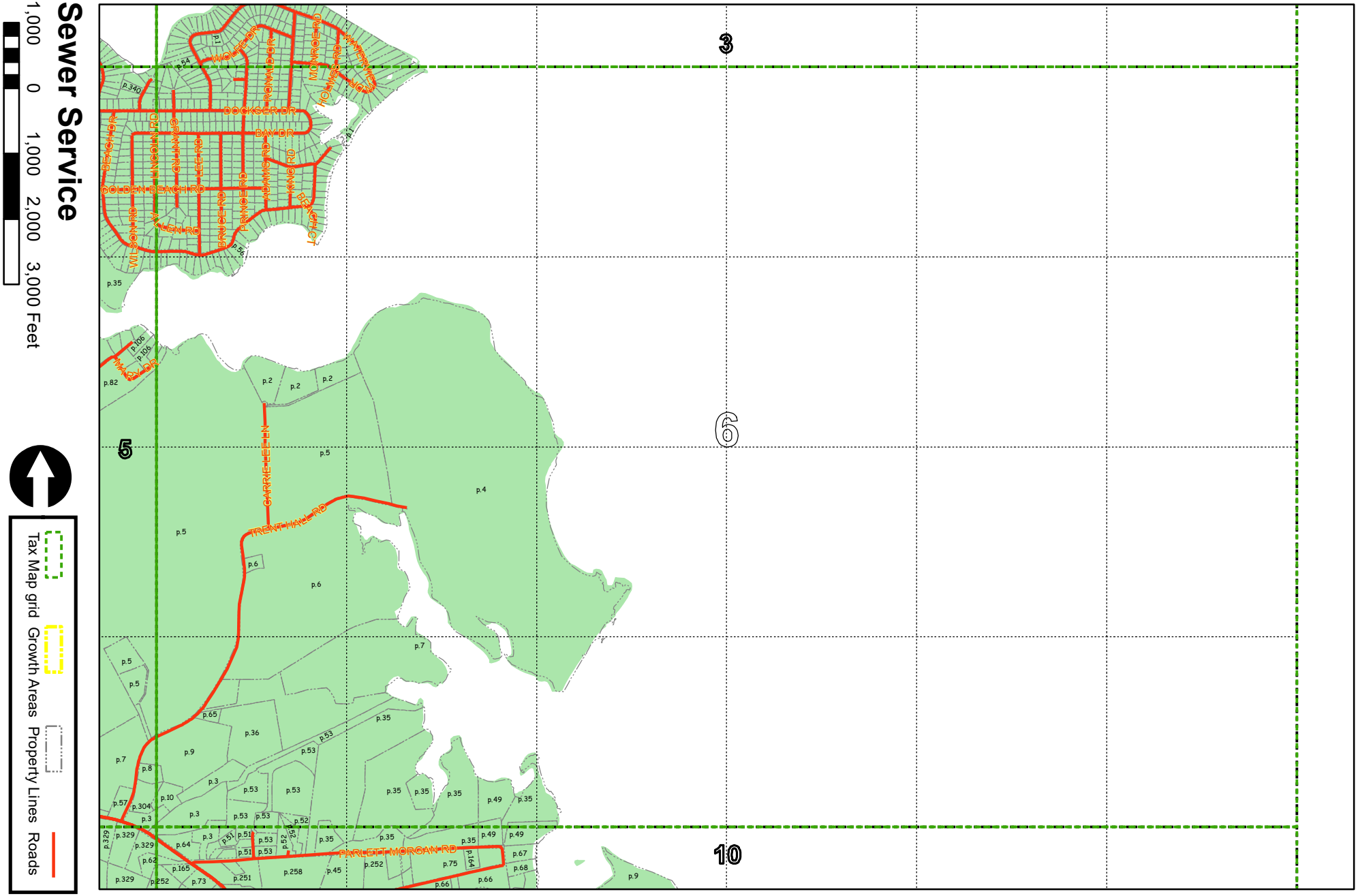
Tax Map grid
Growth Areas
Property Lines
Roads

MAP 5

Sewer Category: S-1 S-3D S-6D RS-1 RS-D RS-E NPS

2017 Update

Sewer Service



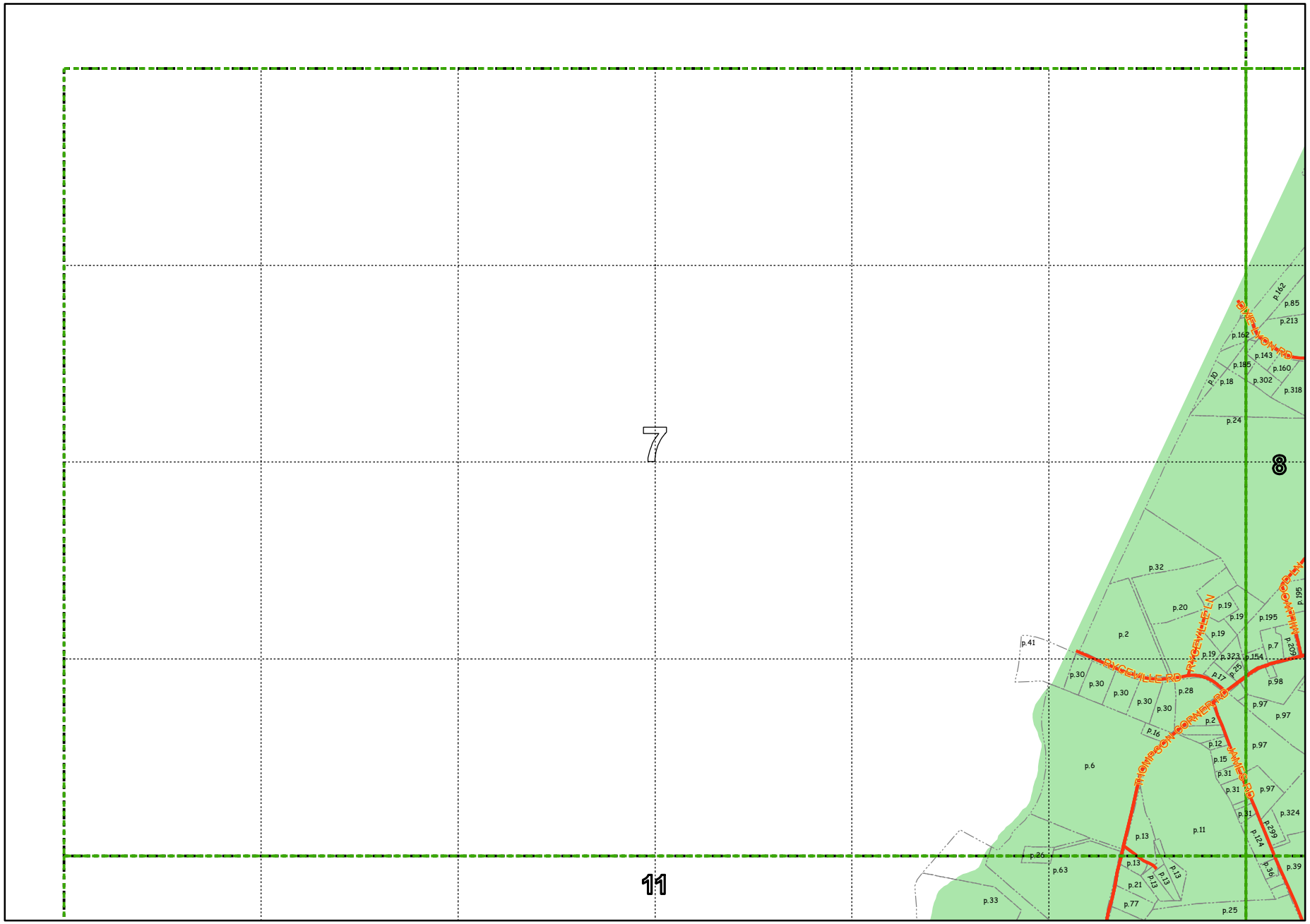
MAP 6

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid

Growth Areas

Property Lines

Roads

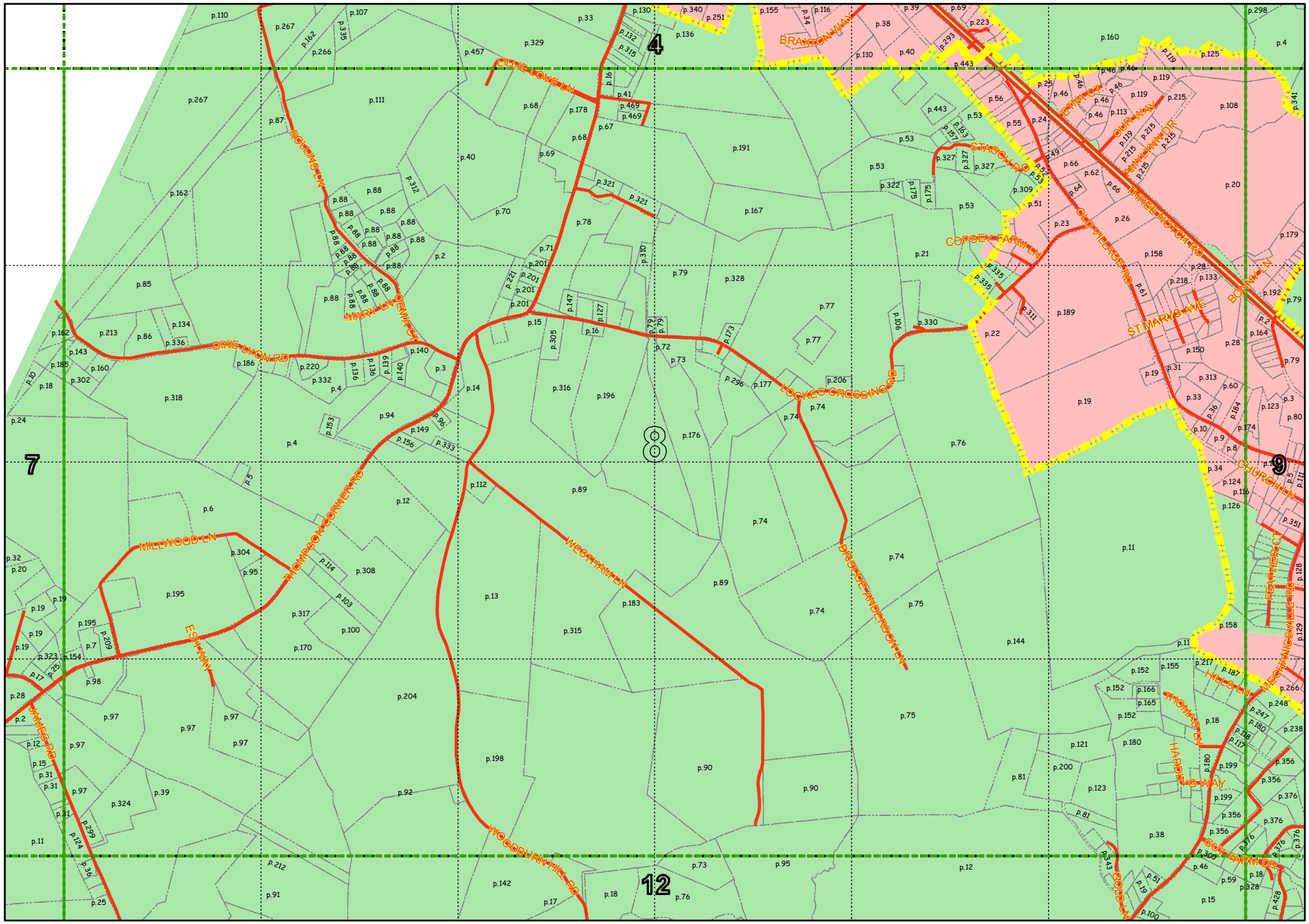
MAP 7

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid | Growth Areas | Property Lines | Roads

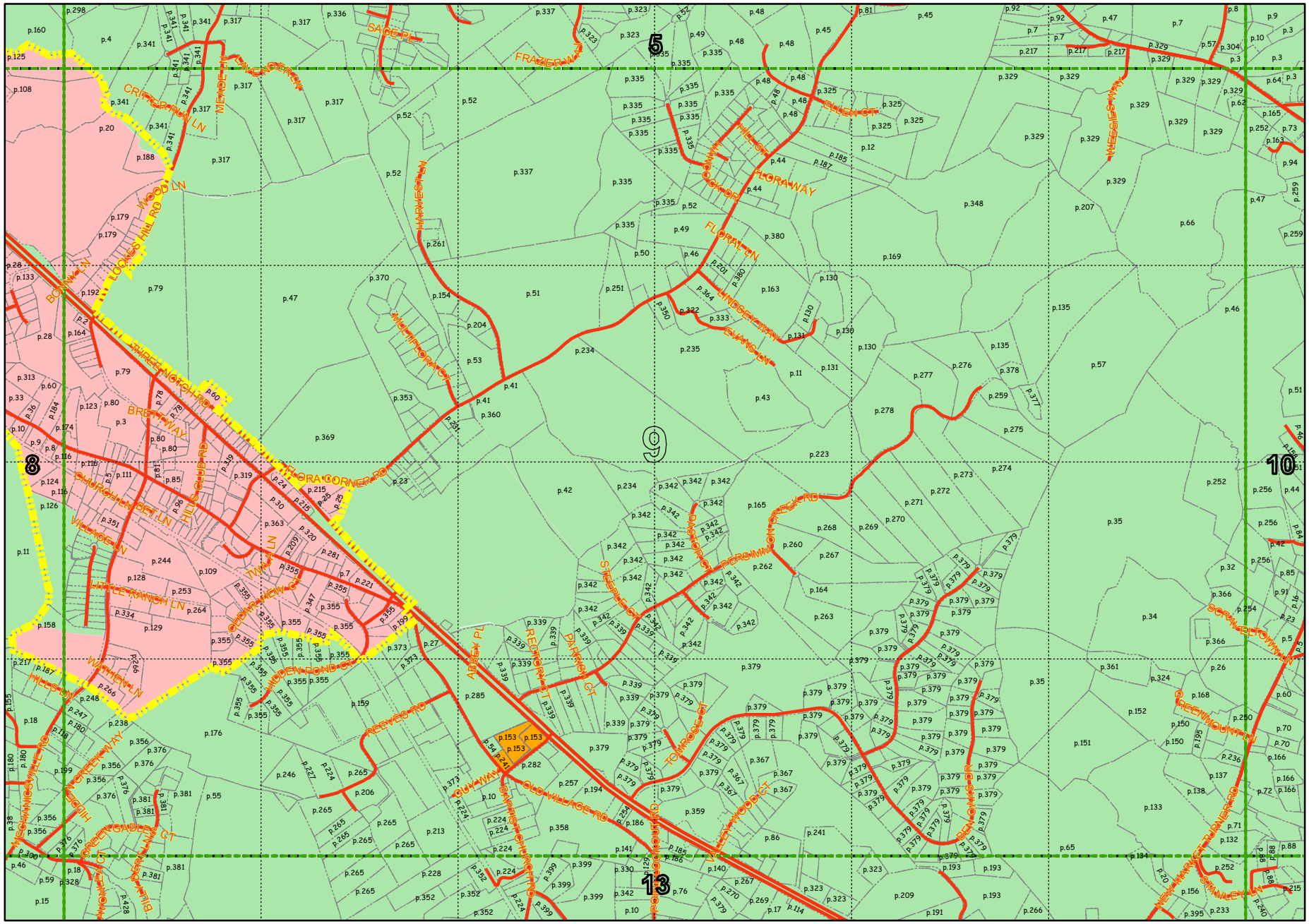
MAP 8

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid | Growth Areas | Property Lines | Roads

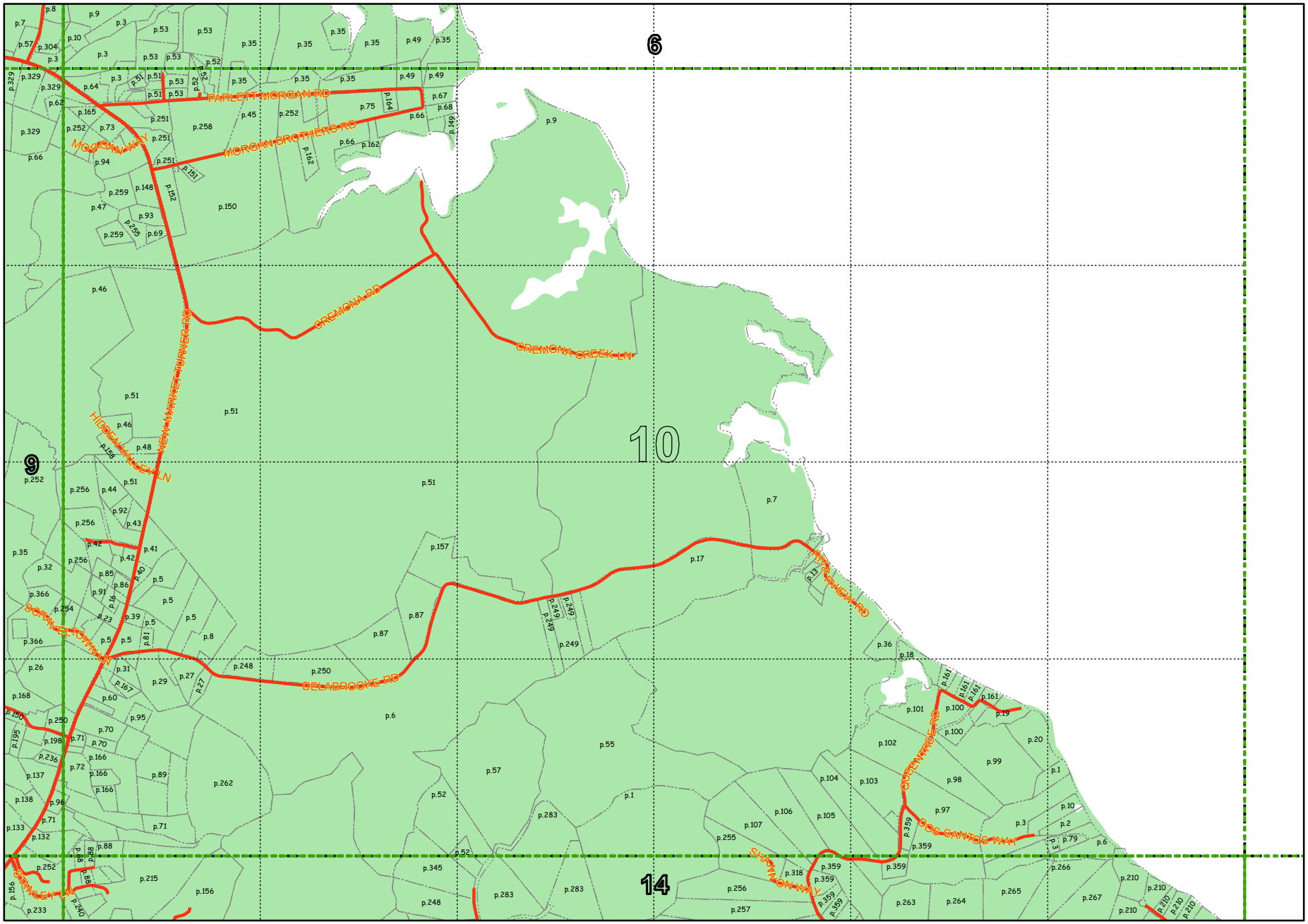
MAP 9

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid | Growth Areas | Property Lines | Roads

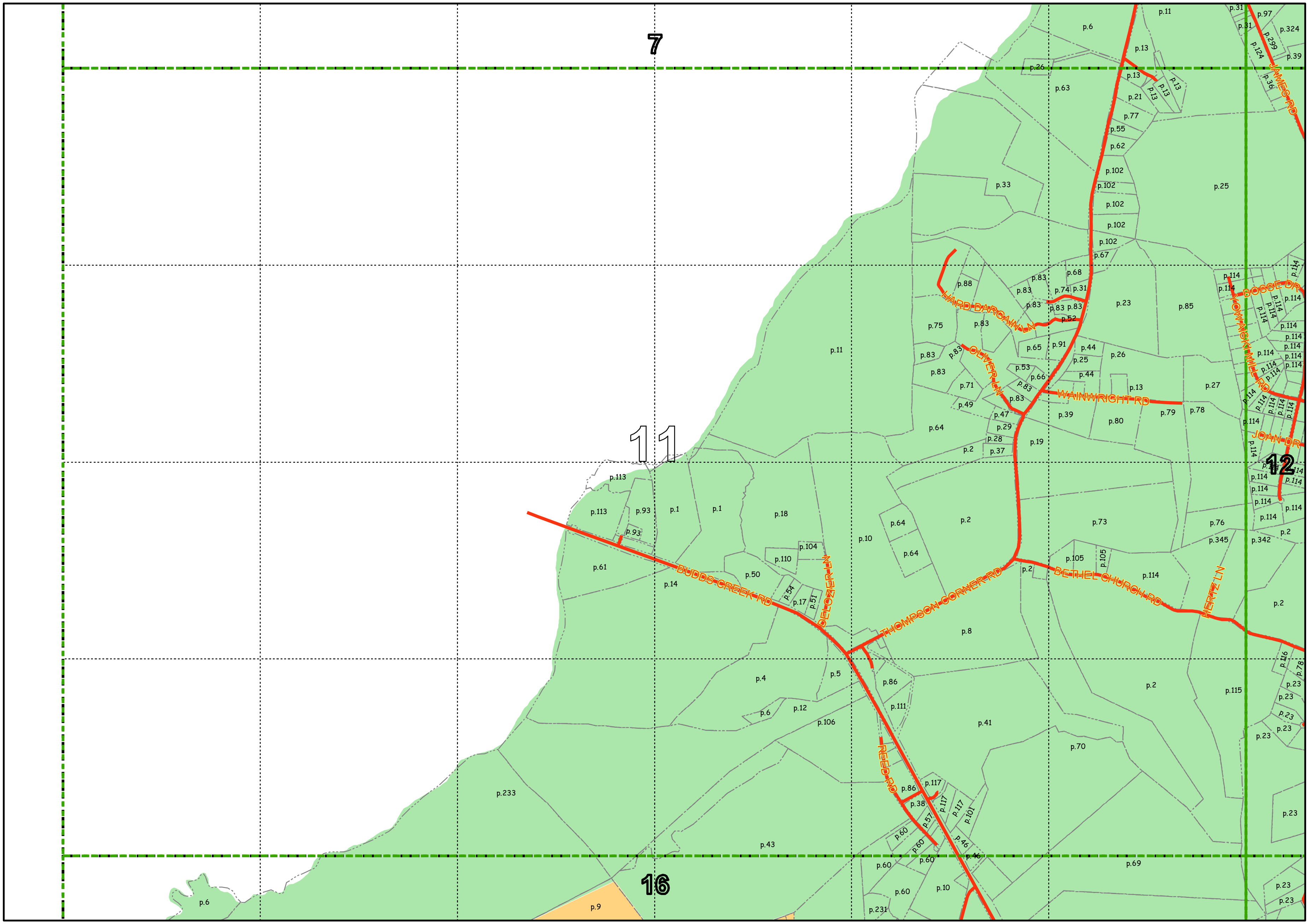
MAP 10

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid

Growth Areas

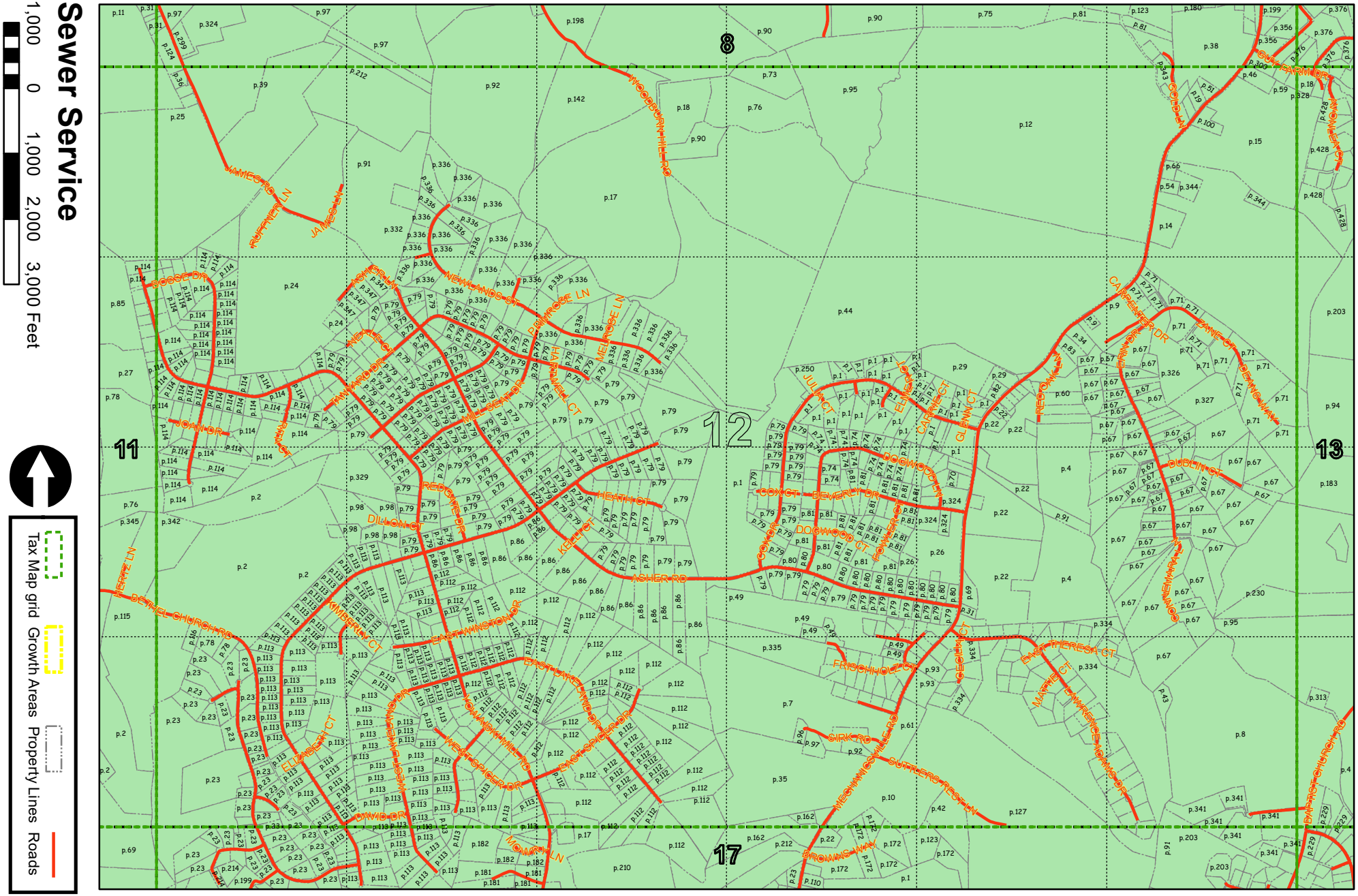
Property Lines

Roads

MAP 11

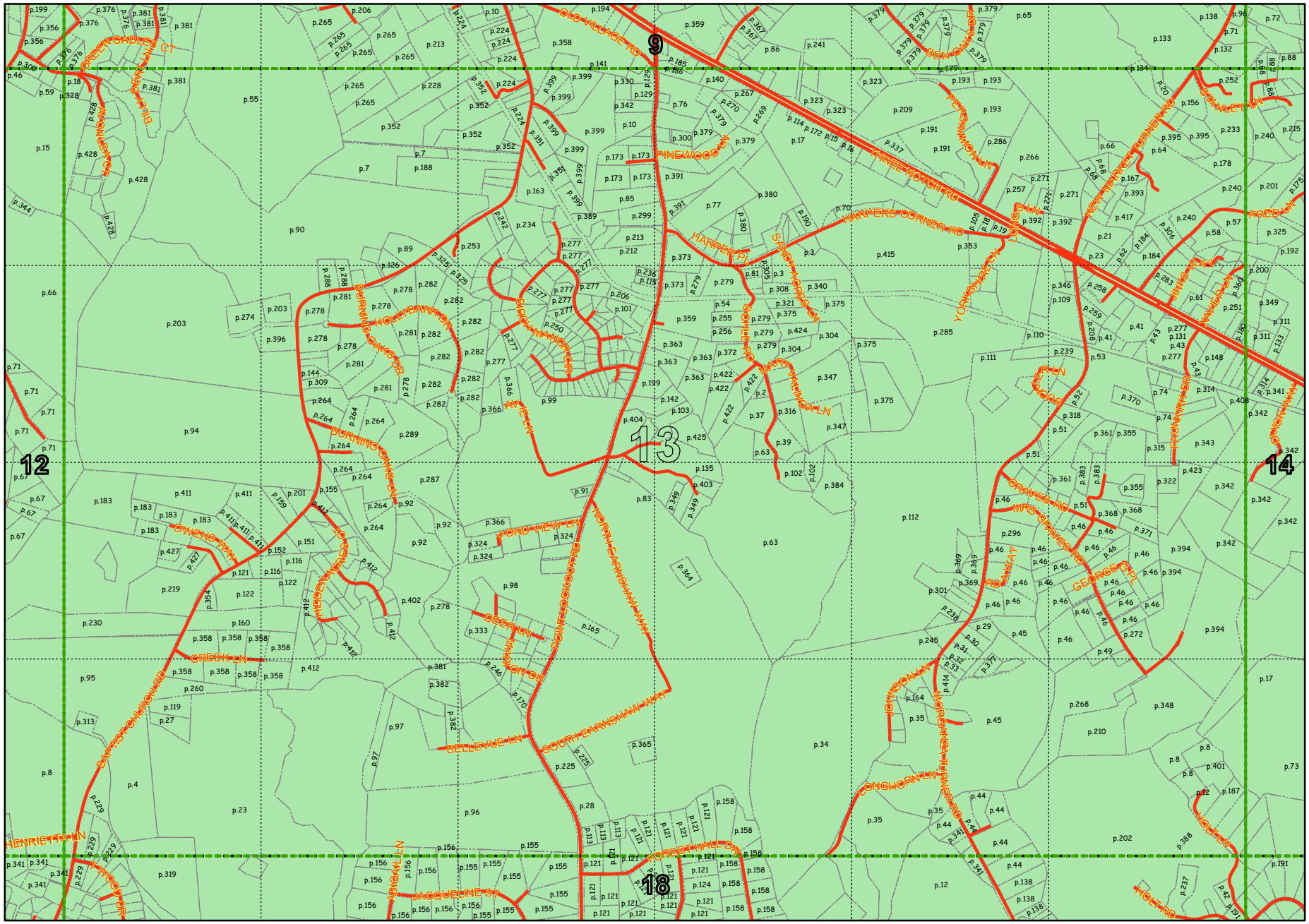
Sewer Category: S-1 S-3D S-6D RS-1 RS-D RS-E NPS

2017 Update


Sewer Service
1,000 0 1,000 2,000 3,000 Feet
Tax Map grid
Growth Areas
Property Lines
Roads
MAP 12
Sewer Category:
S-1
S-3D
S-6D
RS-1
RS-D
RS-E
NPS
2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid
Growth Areas
Property Lines
Roads

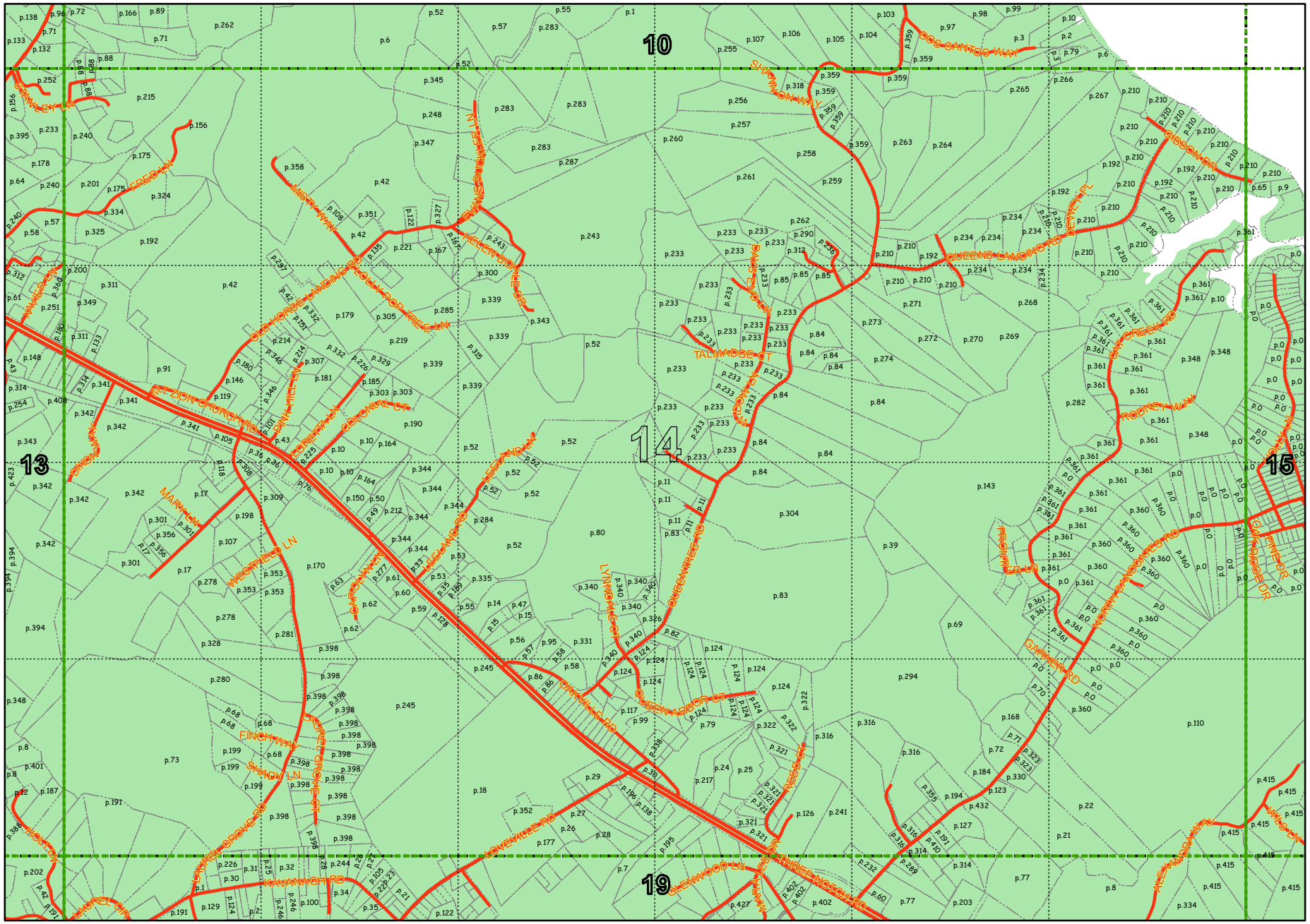
MAP 13

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid | Growth Areas | Property Lines | Roads

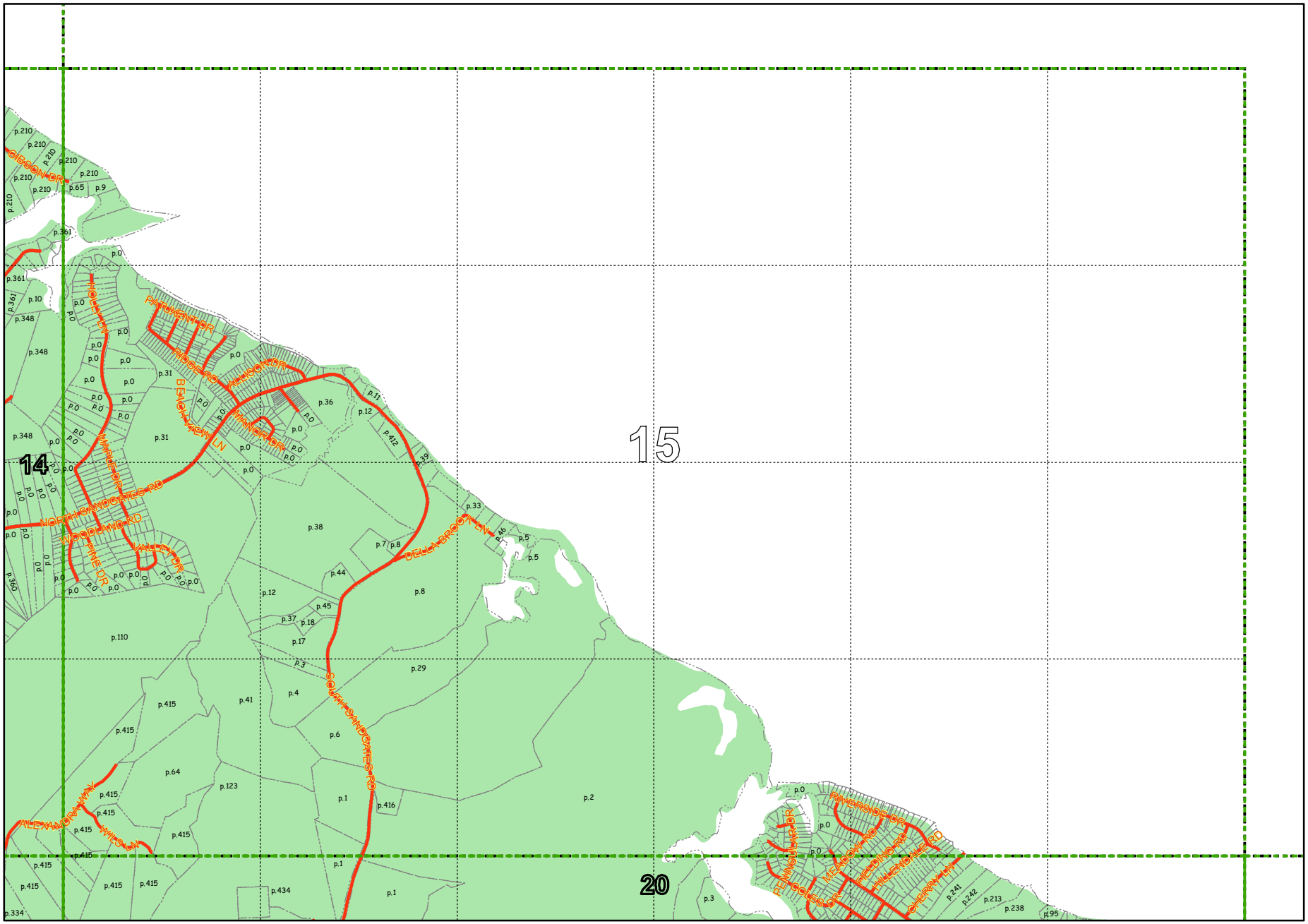
MAP 14

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid
Growth Areas
Property Lines
Roads

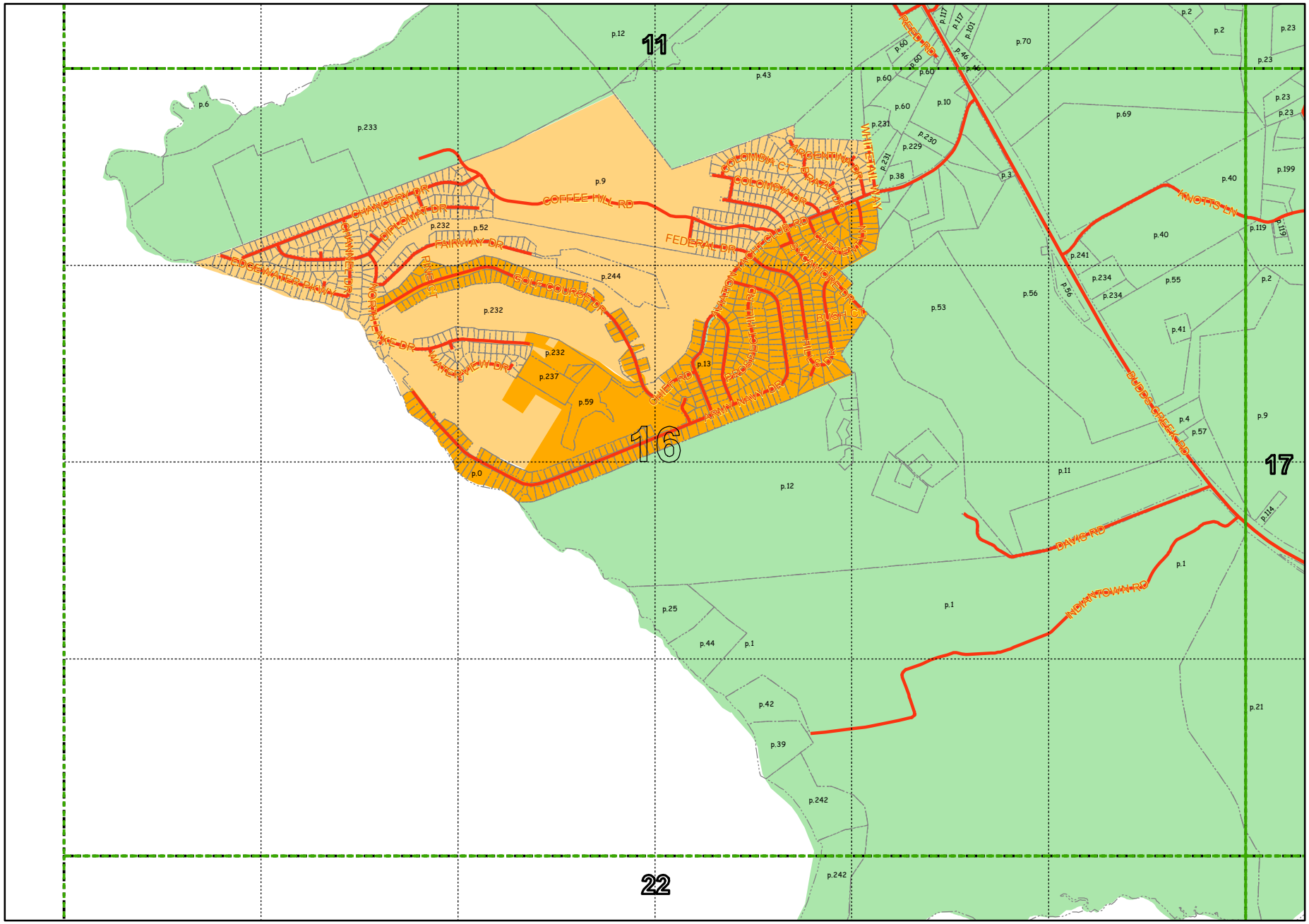
MAP 15

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid
Growth Areas
Property Lines
Roads

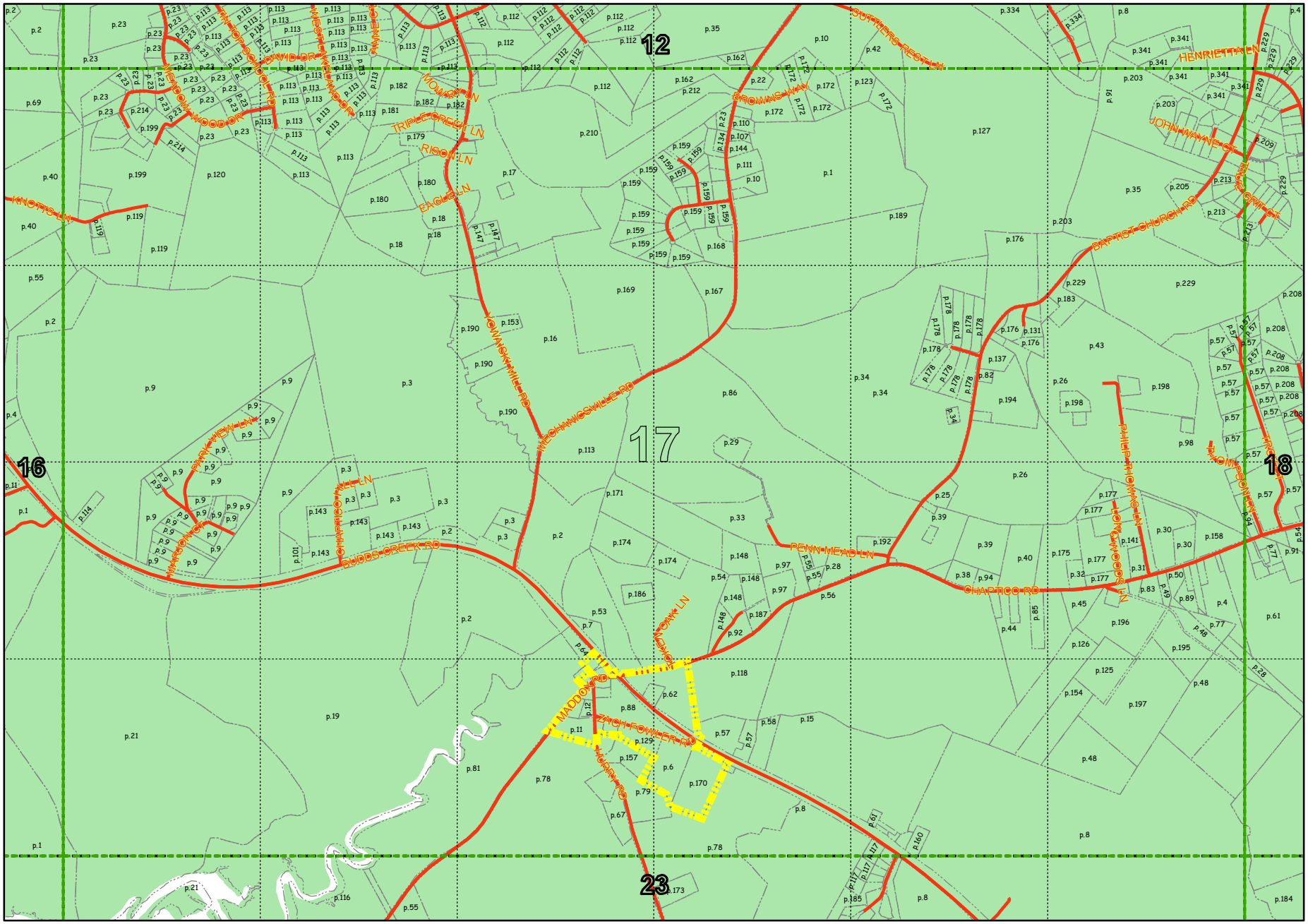
MAP 16

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid | Growth Areas | Property Lines | Roads

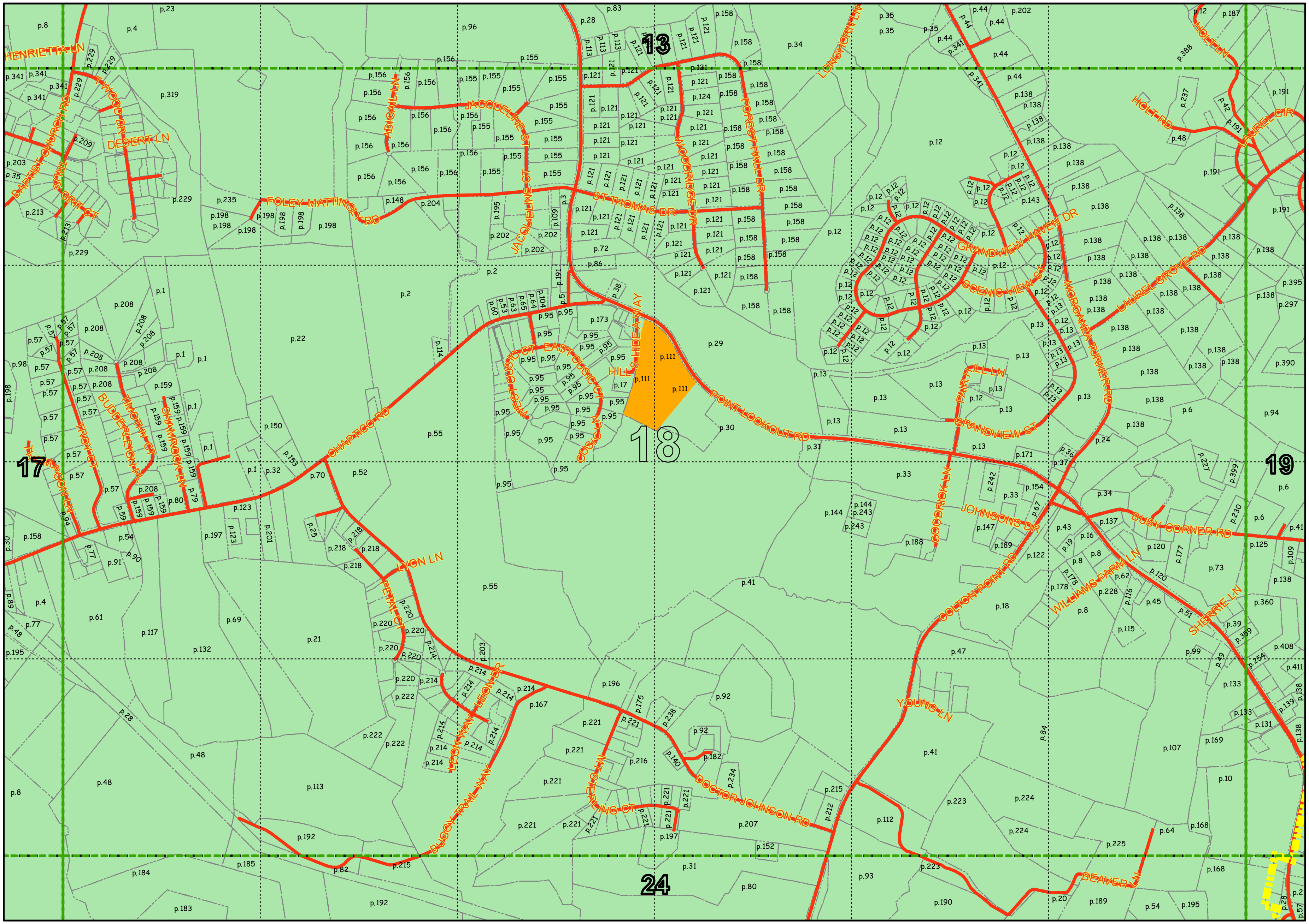
MAP 17

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



13
17
18
19
24
HENRIETTA LN
DESERT LN
BAPTIST CHURCH RD
FOLEY MATTINGLY RD
JACQUELINE ST
ST THOMAS CH DR
WOODRIDGE DR
FOREST HILL DR
LONGHORN LN
HOLT LN
HOLT RD
LAUREL CIR
GRANDVIEW HAVEN DR
SCENIC VIEW CT
LAUREL GROVE RD
MORGAN TURNER RD
FAIR HILL LN
GRANDVIEW ST
POINT LOOKOUT RD
CHAPTICO RD
GOODRICK LN
JOHNSONS DR
BUSY CORNER RD
WILLIAMS FARM LN
COLTON POINT RD
SHERRIE LN
YOUNG LN
LYON LN
DOCTOR JOHNSON RD
BUGGY TRAIL WAY
BEAVER LN

Tax Map grid
Growth Areas
Property Lines
Roads

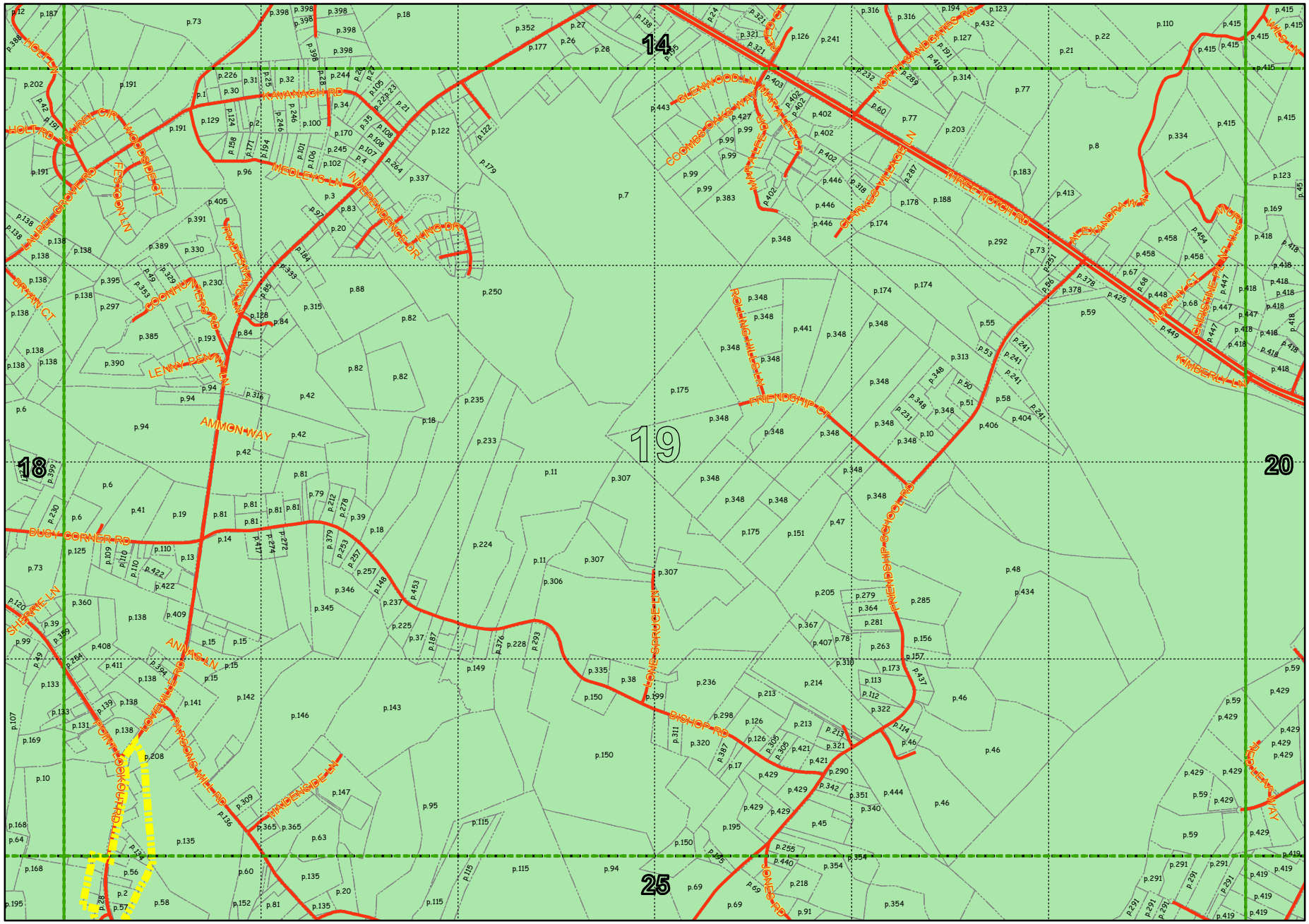
MAP 18

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid
Growth Areas
Property Lines
Roads

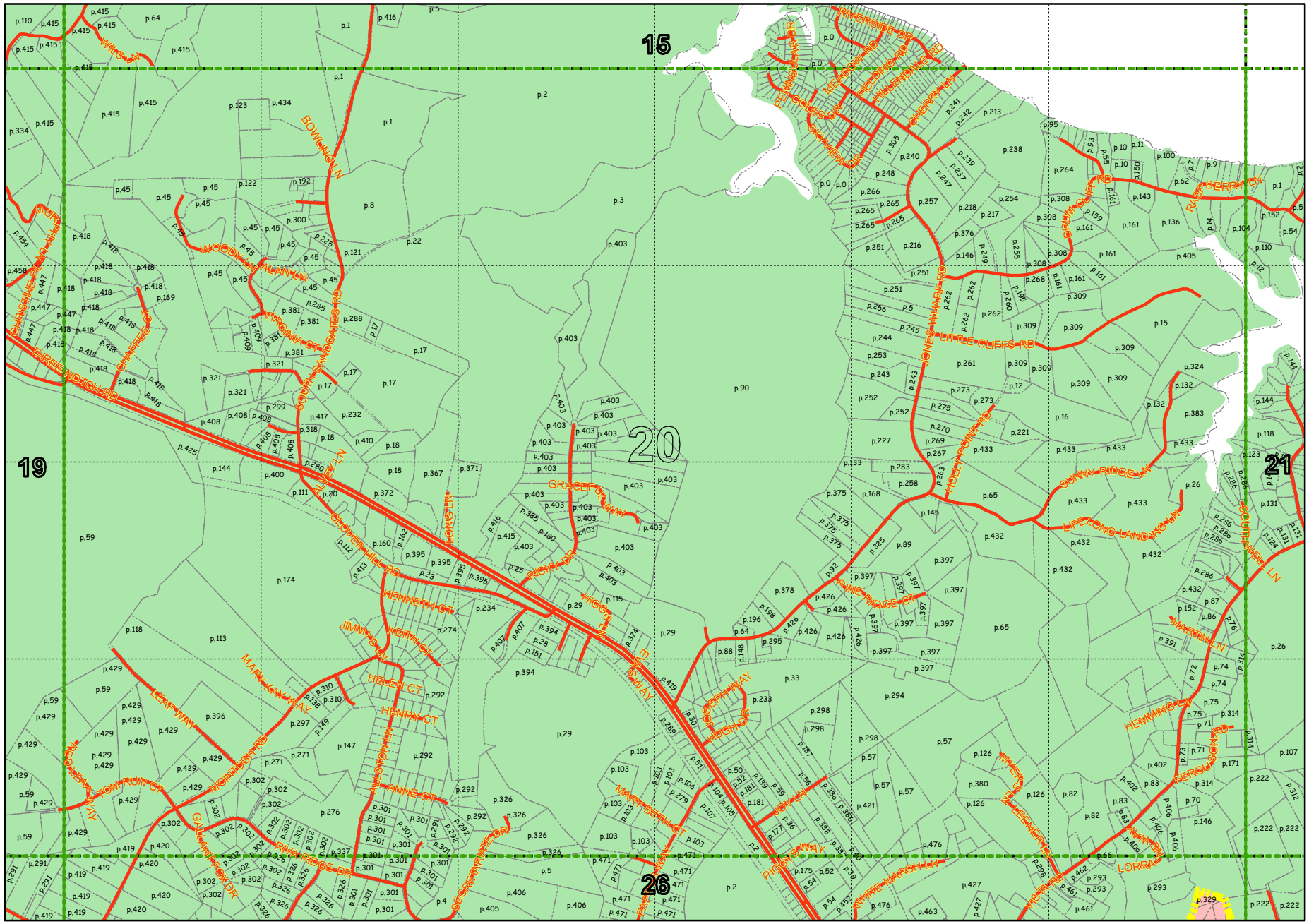
MAP 19

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid
Growth Areas
Property Lines
Roads

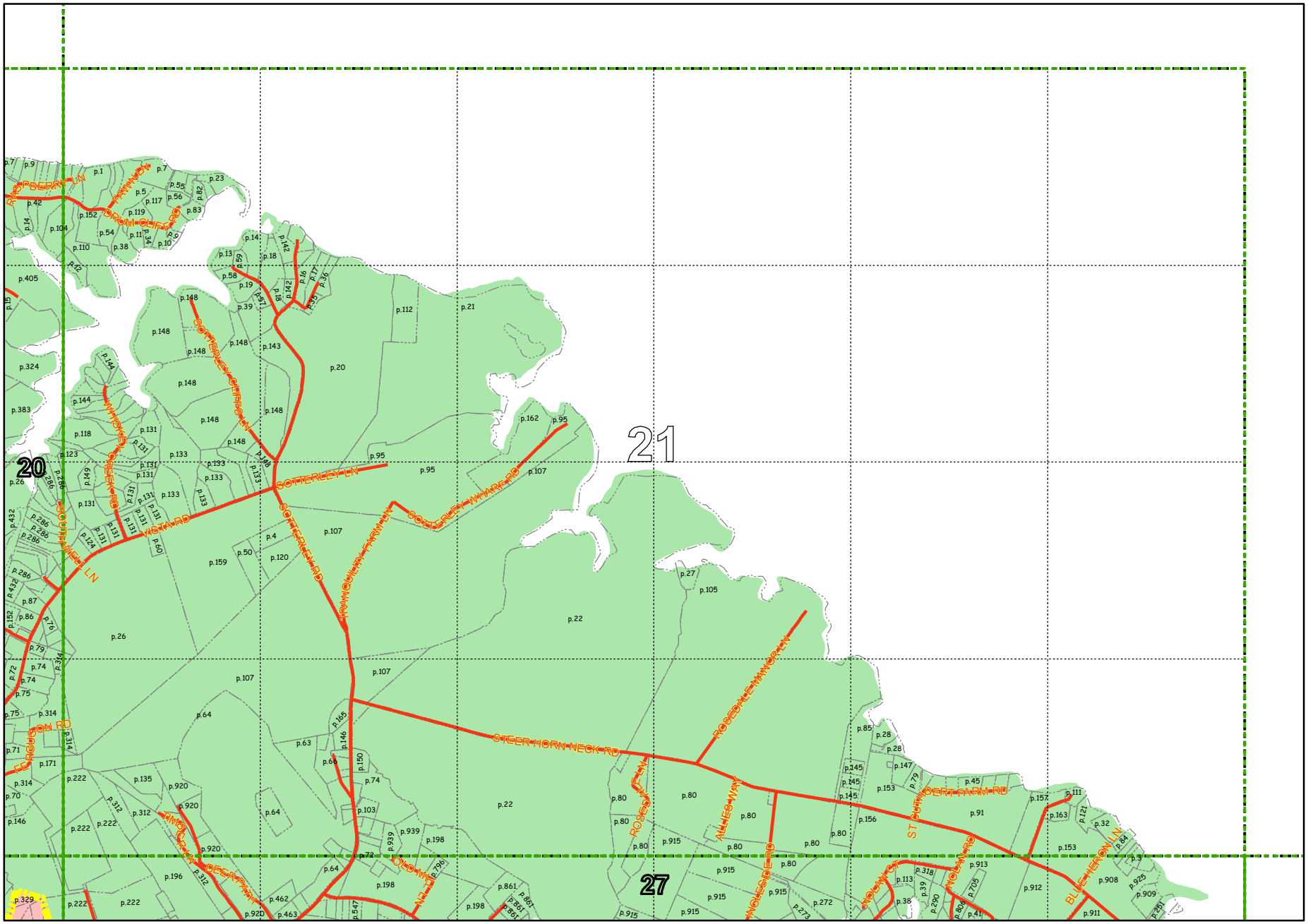
MAP 20

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet

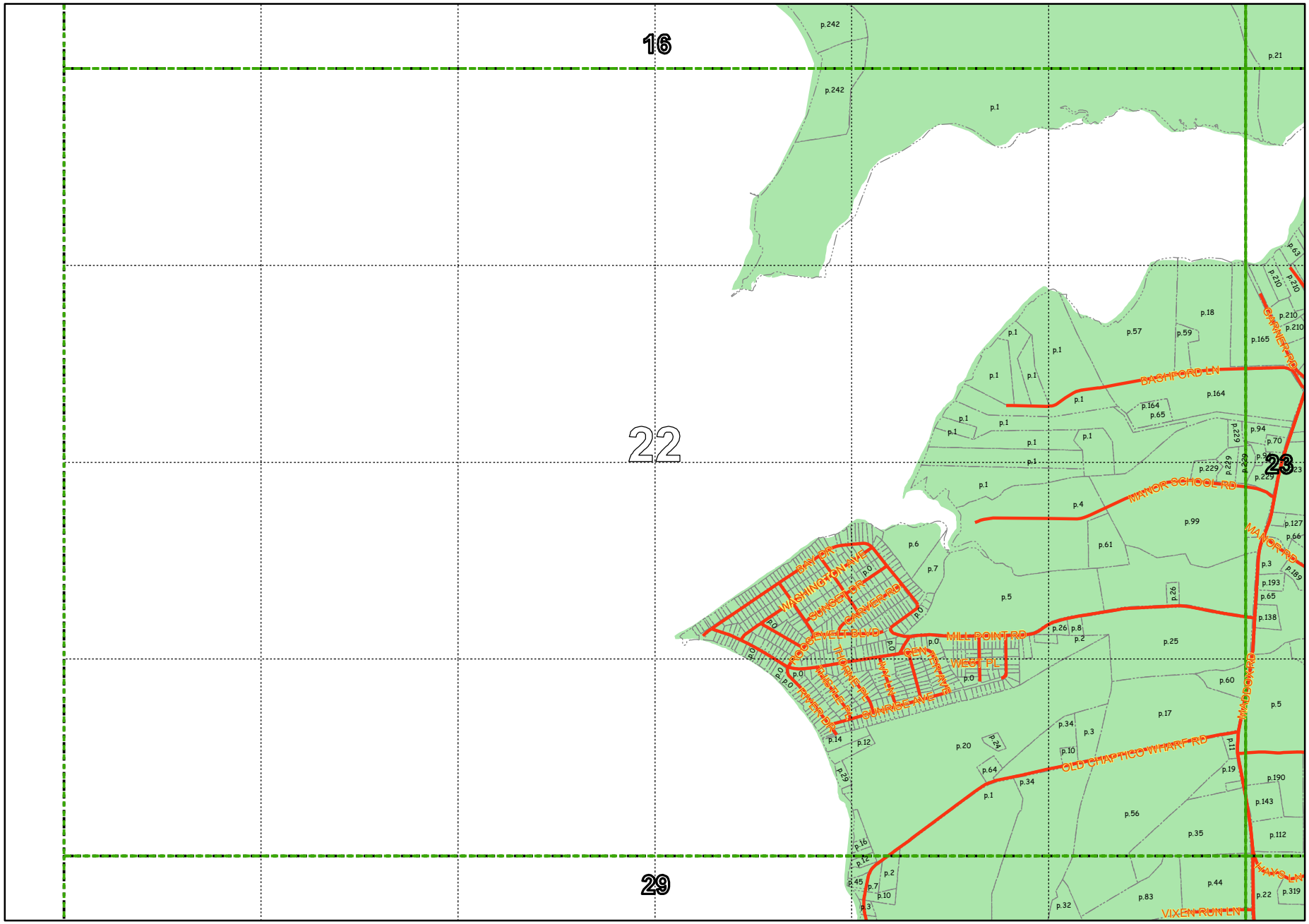


Tax Map grid
Growth Areas
Property Lines
Roads

MAP 21

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update



Sewer Service

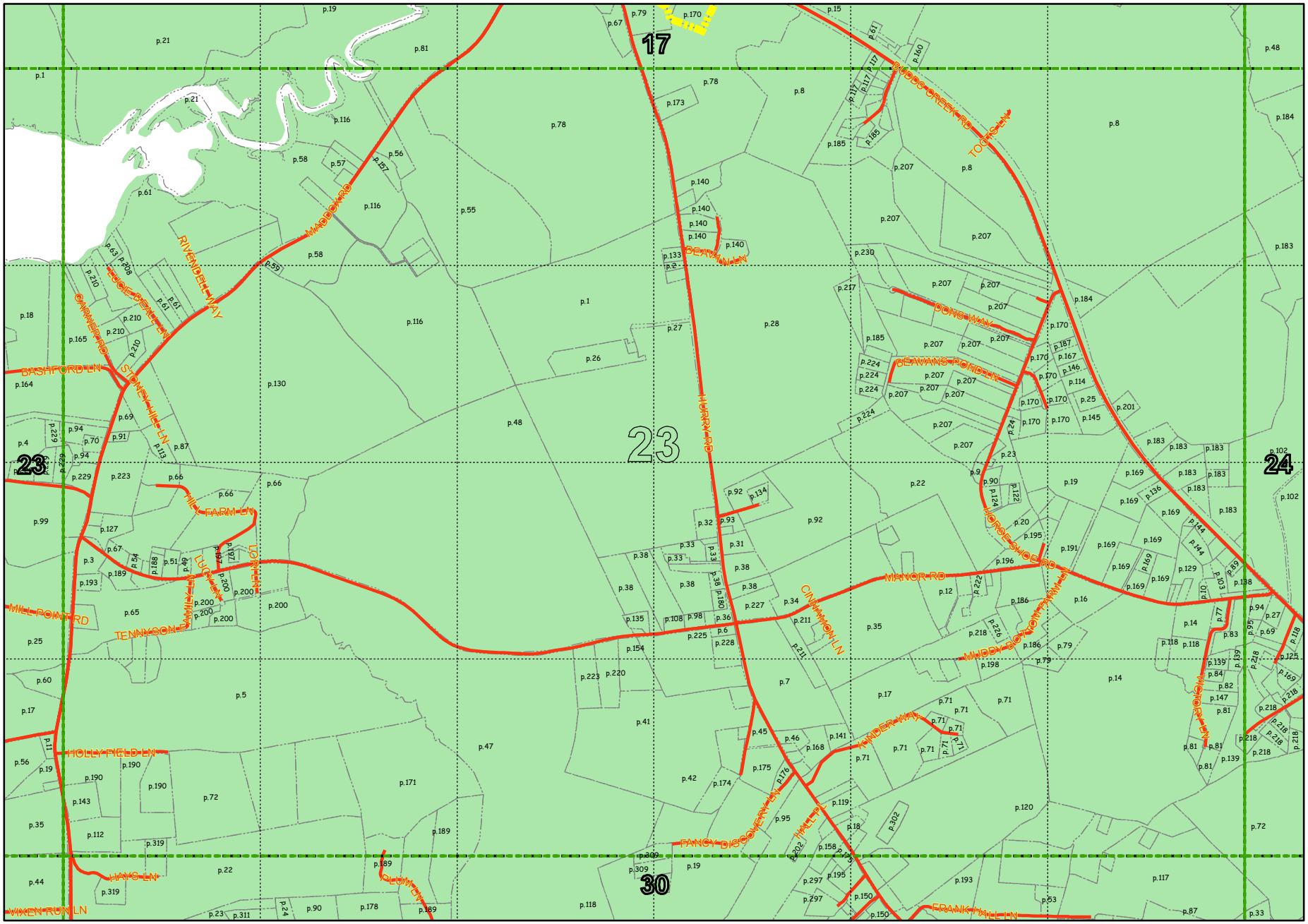
1,000 0 1,000 2,000 3,000 Feet

Tax Map grid
Growth Areas
Property Lines
Roads

MAP 22

Sewer Category: S-1 S-3D S-6D RS-1 RS-D RS-E NPS

2017 Update



Sewer Service

1,000 0 1,000 2,000 3,000 Feet

Tax Map grid
Growth Areas
Property Lines
Roads

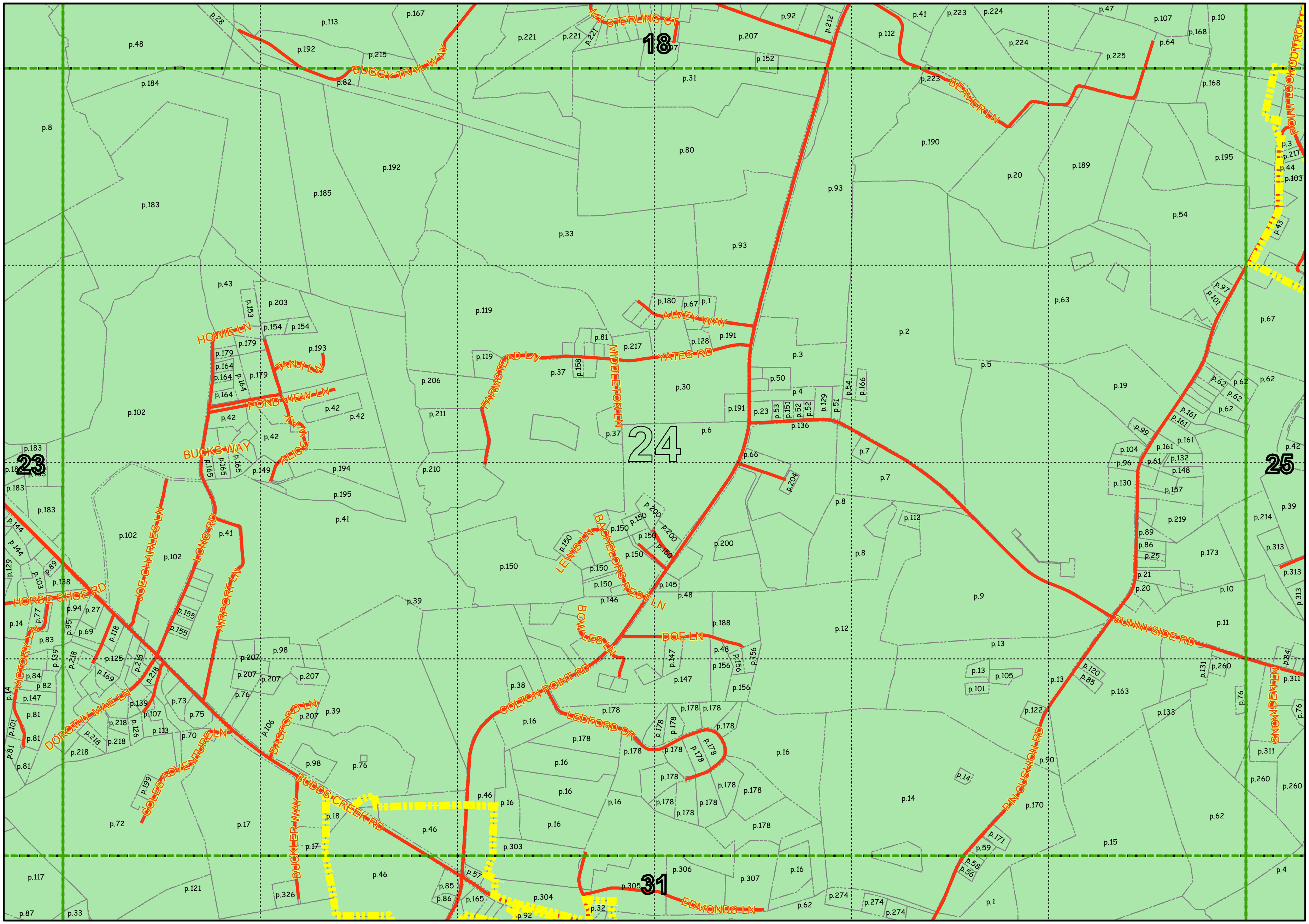
MAP 23

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid

Growth Areas

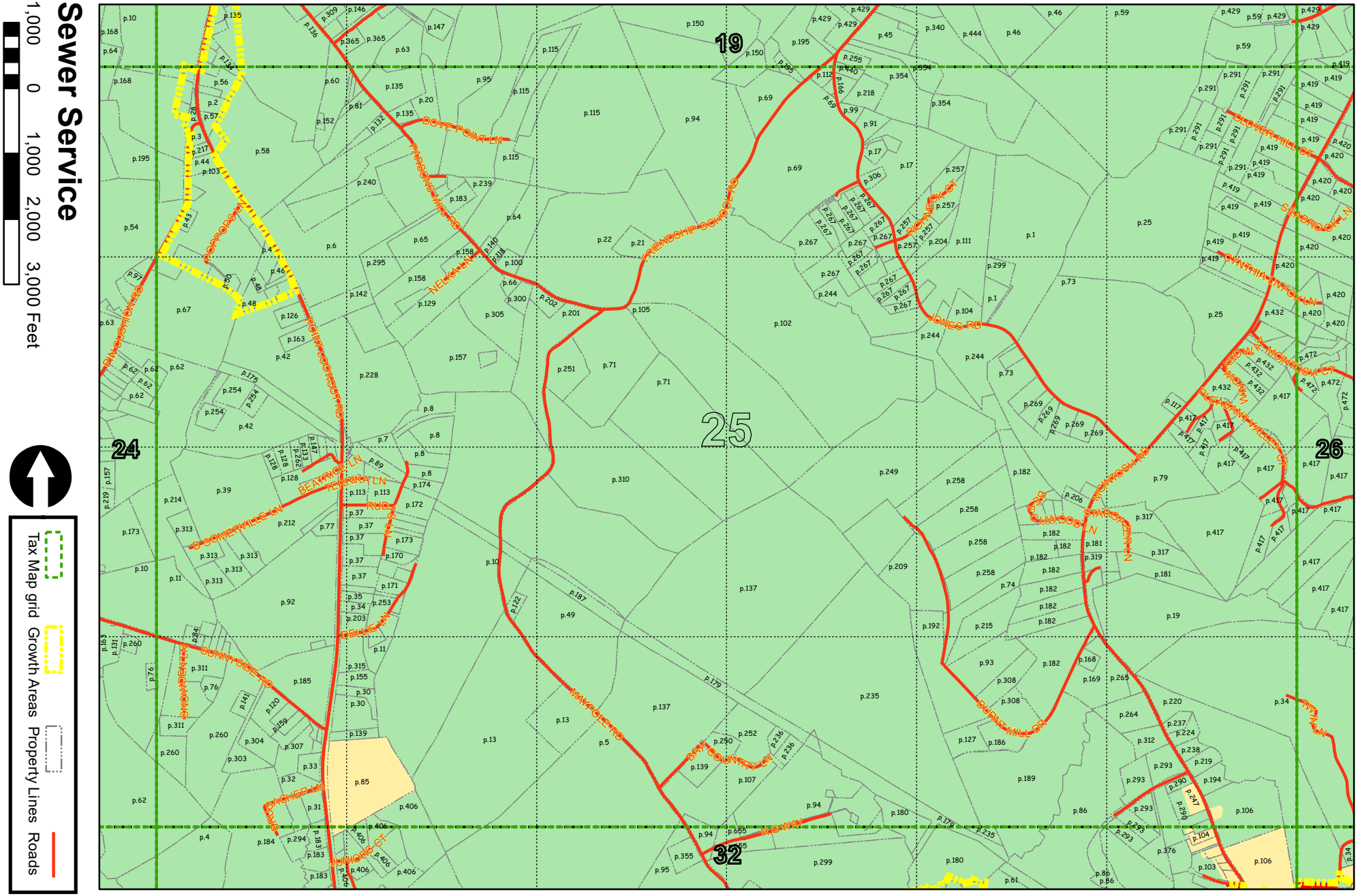
Property Lines

Roads

MAP 24

Sewer Category: S-1 S-3D S-6D RS-1 RS-D RS-E NPS

2017 Update



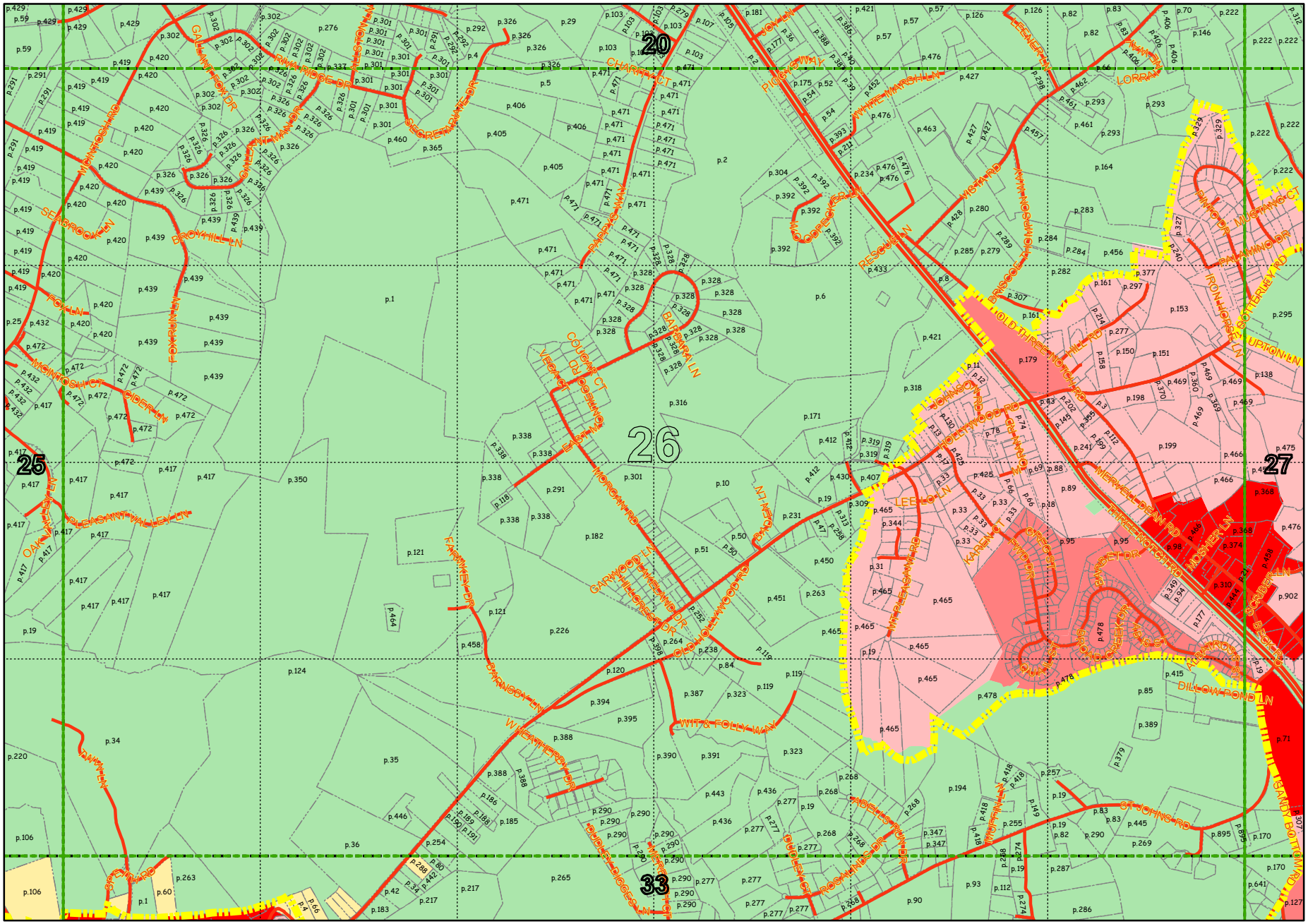
MAP 25

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid Growth Areas Property Lines Roads

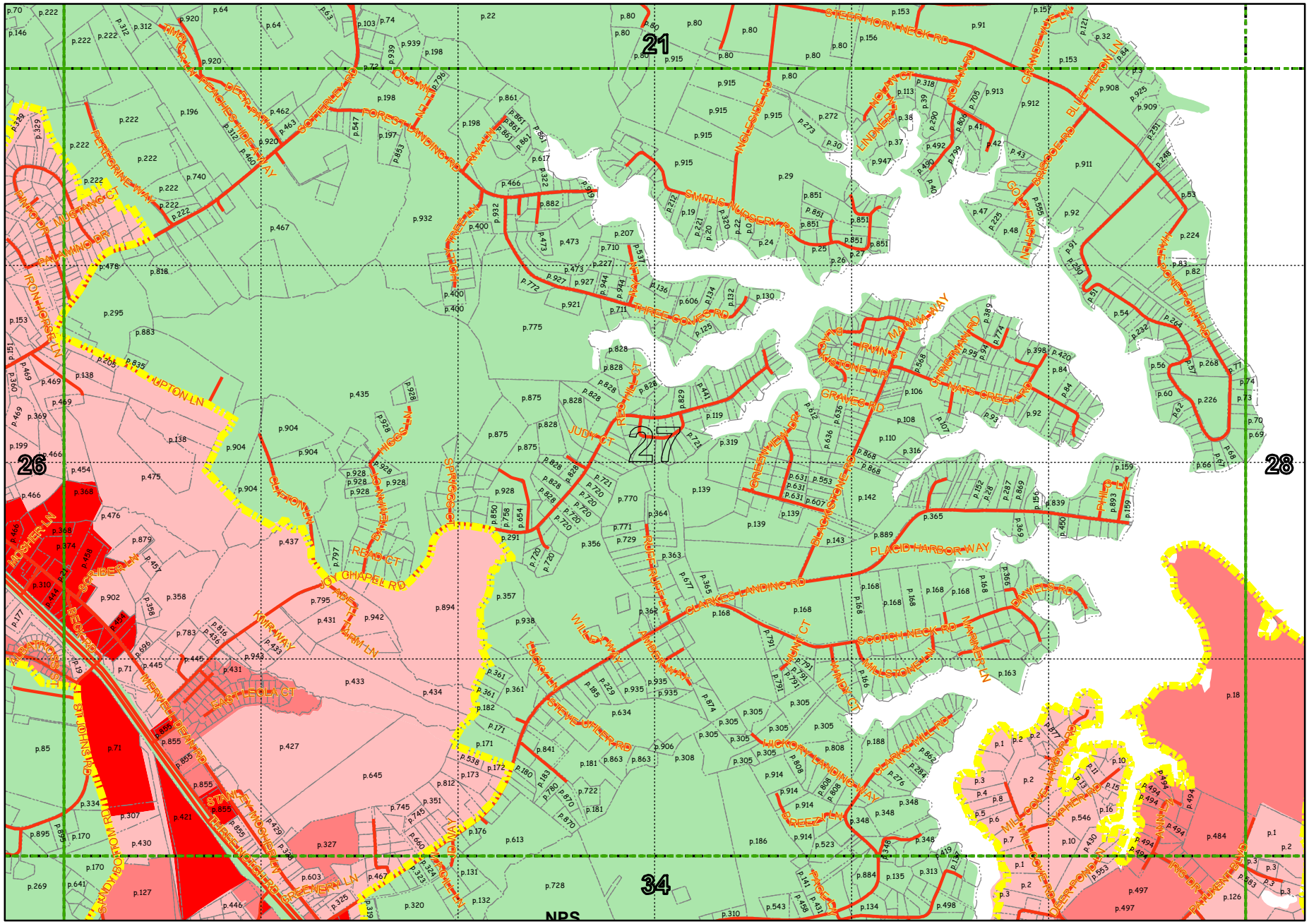
MAP 26

Sewer Category: S-1 S-3D S-6D RS-1 RS-D RS-E NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



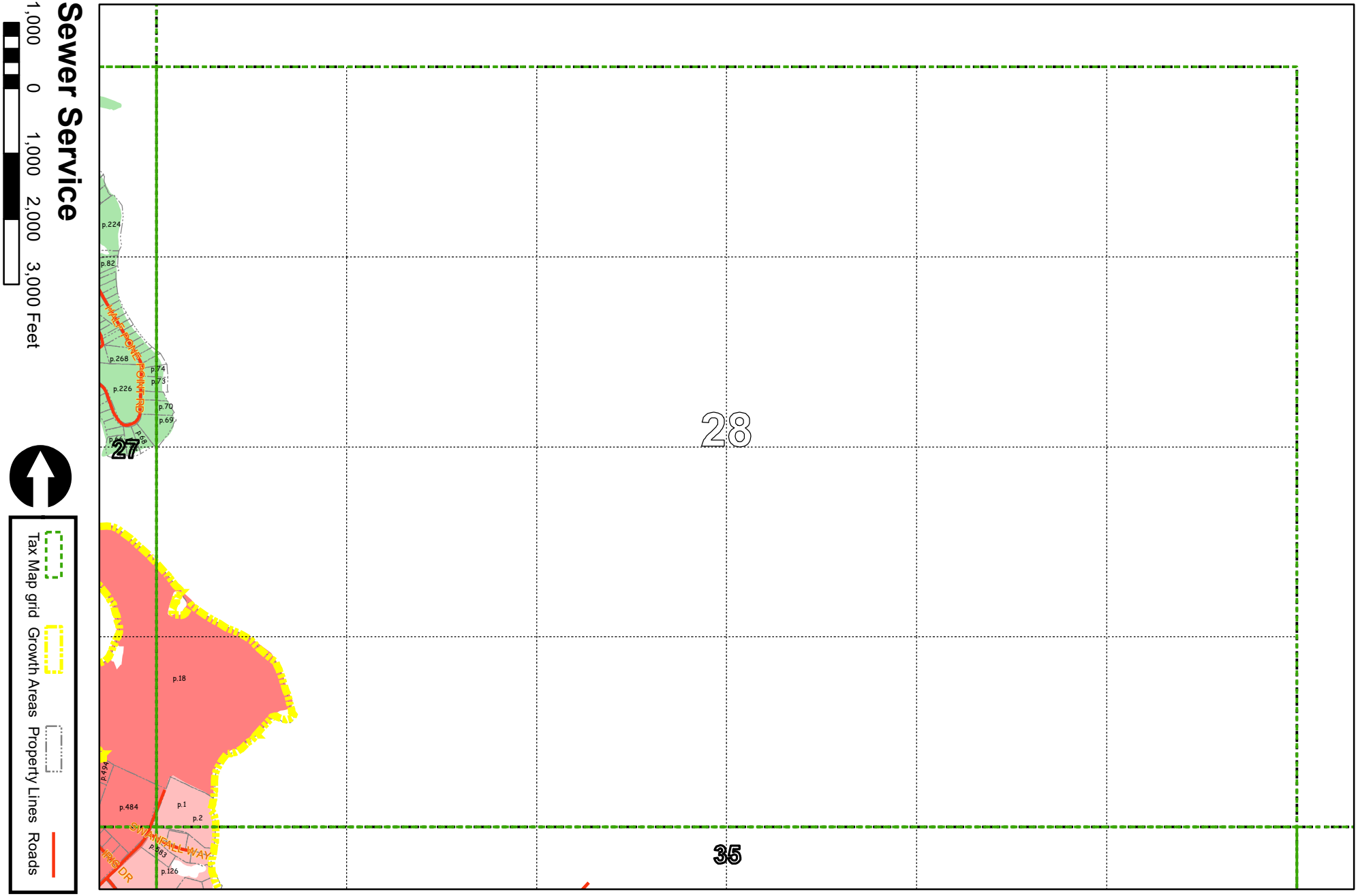
Tax Map grid
Growth Areas
Property Lines
Roads

MAP 21

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service



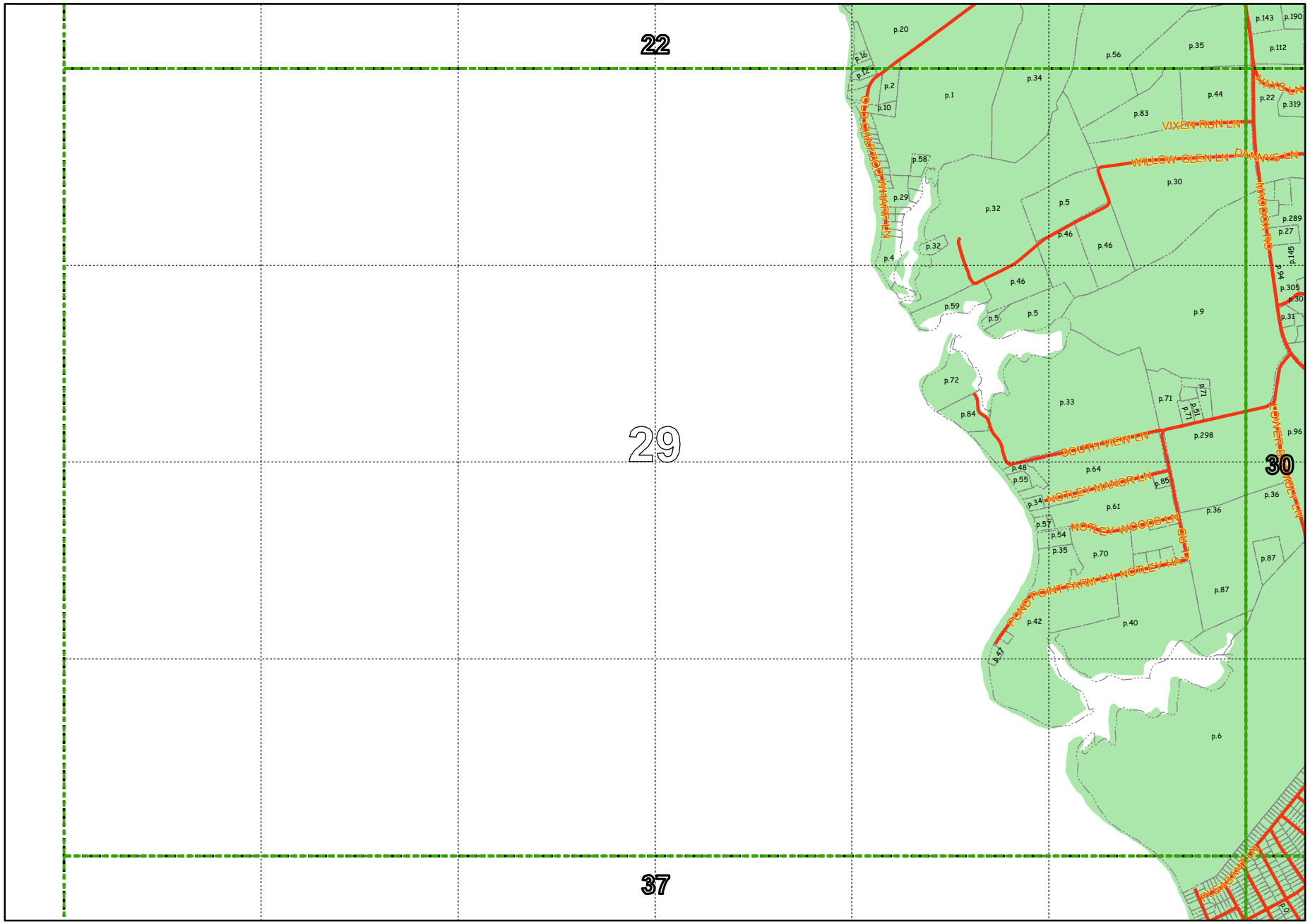
MAP 28

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid
Growth Areas
Property Lines
Roads

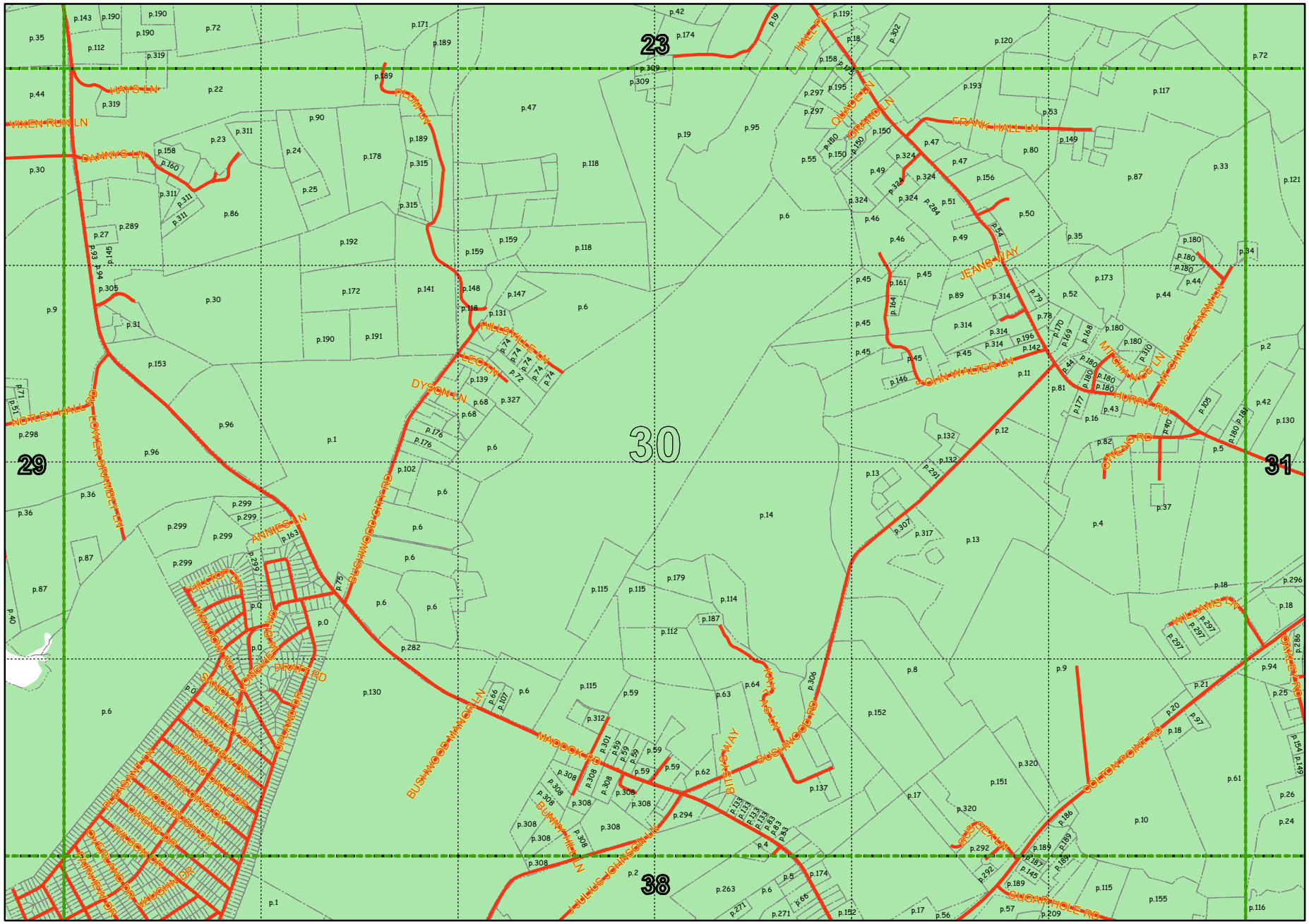
MAP 29

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet

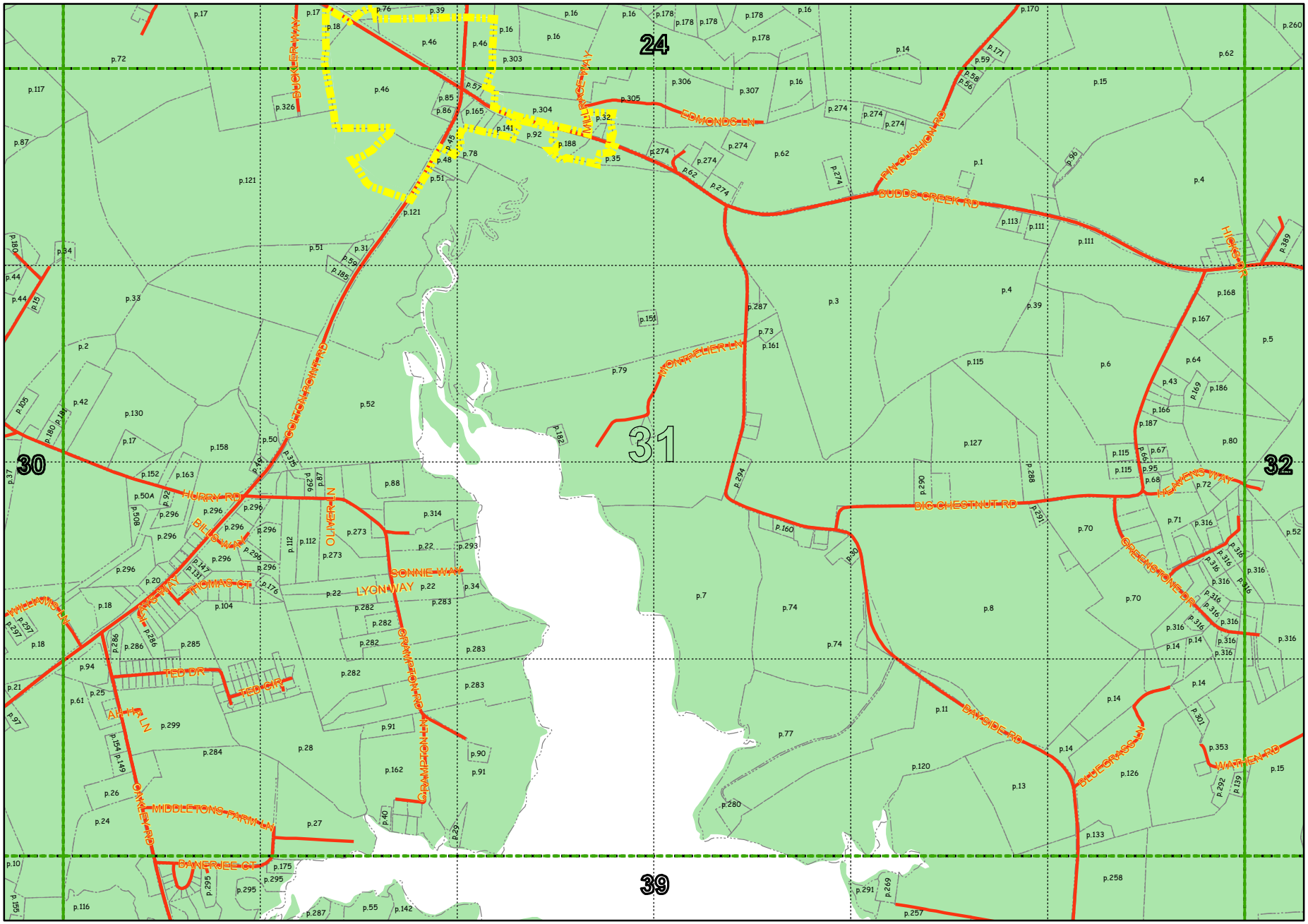


Tax Map grid | Growth Areas | Property Lines | Roads

MAP 30

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update



Sewer Service

1,000 0 1,000 2,000 3,000 Feet

Tax Map grid Growth Areas Property Lines Roads

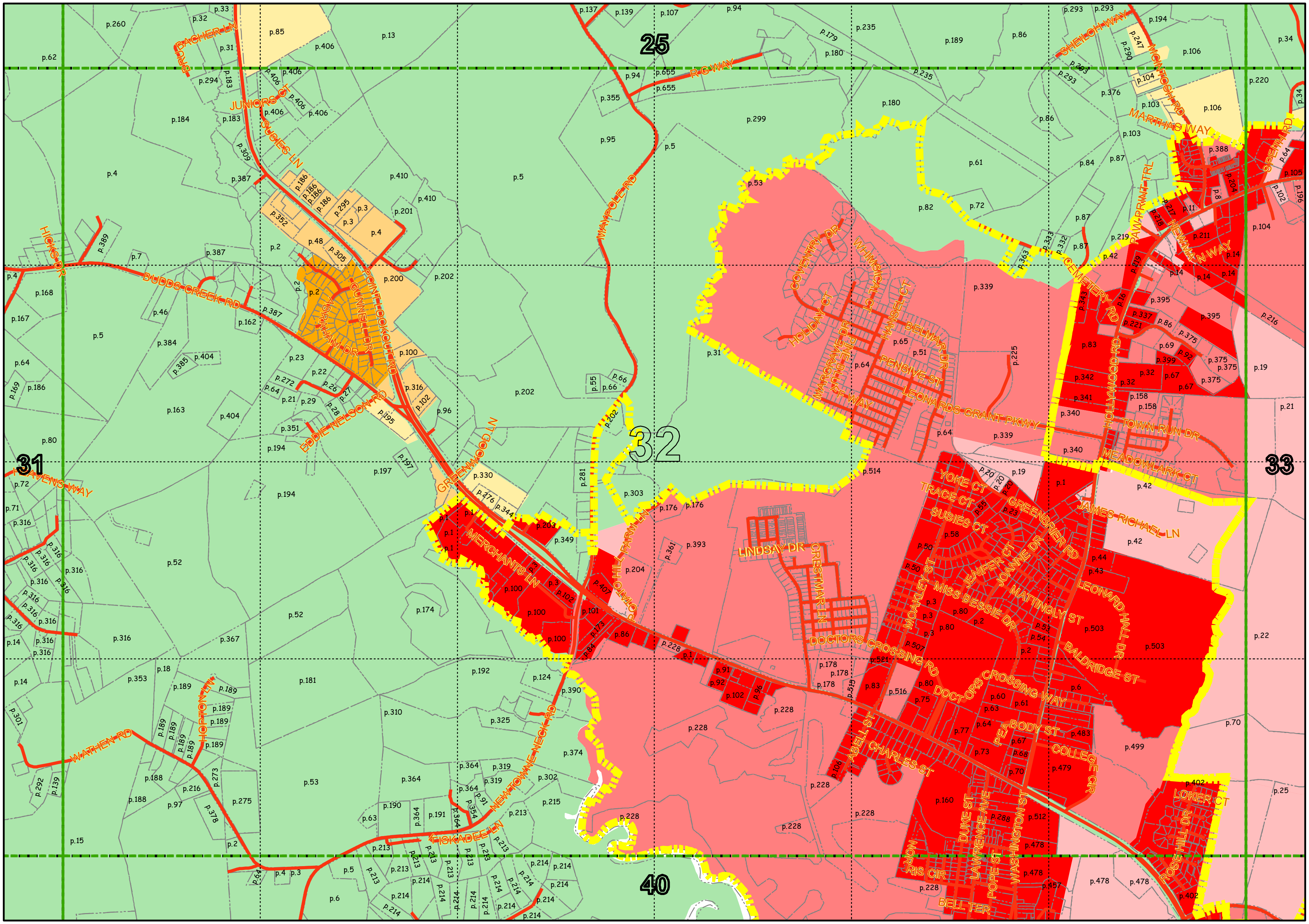
MAP 37

Sewer Category: S-1 S-3D S-6D RS-1 RS-D RS-E NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



25
31
32
33
40
BUDDS CREEK RD
HICKS DR
JUNIORS CT
SUSIES LN
BACHER LN
FLINTLOCK CT RD
BUNNELL DR
EDDIE NELSON RD
GREENWOOD LN
MERCHANTS LN
MAYPOLE RD
WATHEN RD
NEWTOWNE NECK RD
FISKADEE LN
COVENTRY DR
HOLIDAY CT
PENSIVE ST
LEONARDS GRANT PKWY
TOWN RUN DR
MEADOWLARK CT
JAMES RICHAEL LN
YOKE CT
TRACE CT
SUSIES CT
GREENBRIER RD
LINDSAY DR
CRESTMAR LN
DOCTORS CROSSING RD
DOCTORS CROSSING WAY
LEONARD HALL DR
BALDRIDGE ST
MATTINGLY ST
MISS BESSIE DR
ABELL ST
CHARLES ST
PEABODY ST
COLLEGE CIR
DUKE ST
LAWRENCE AVE
POPE ST
WASHINGTON ST
BELL TER
CEMETERY RD
MARTHAS WAY
LOKER CT

Tax Map grid
Growth Areas
Property Lines
Roads

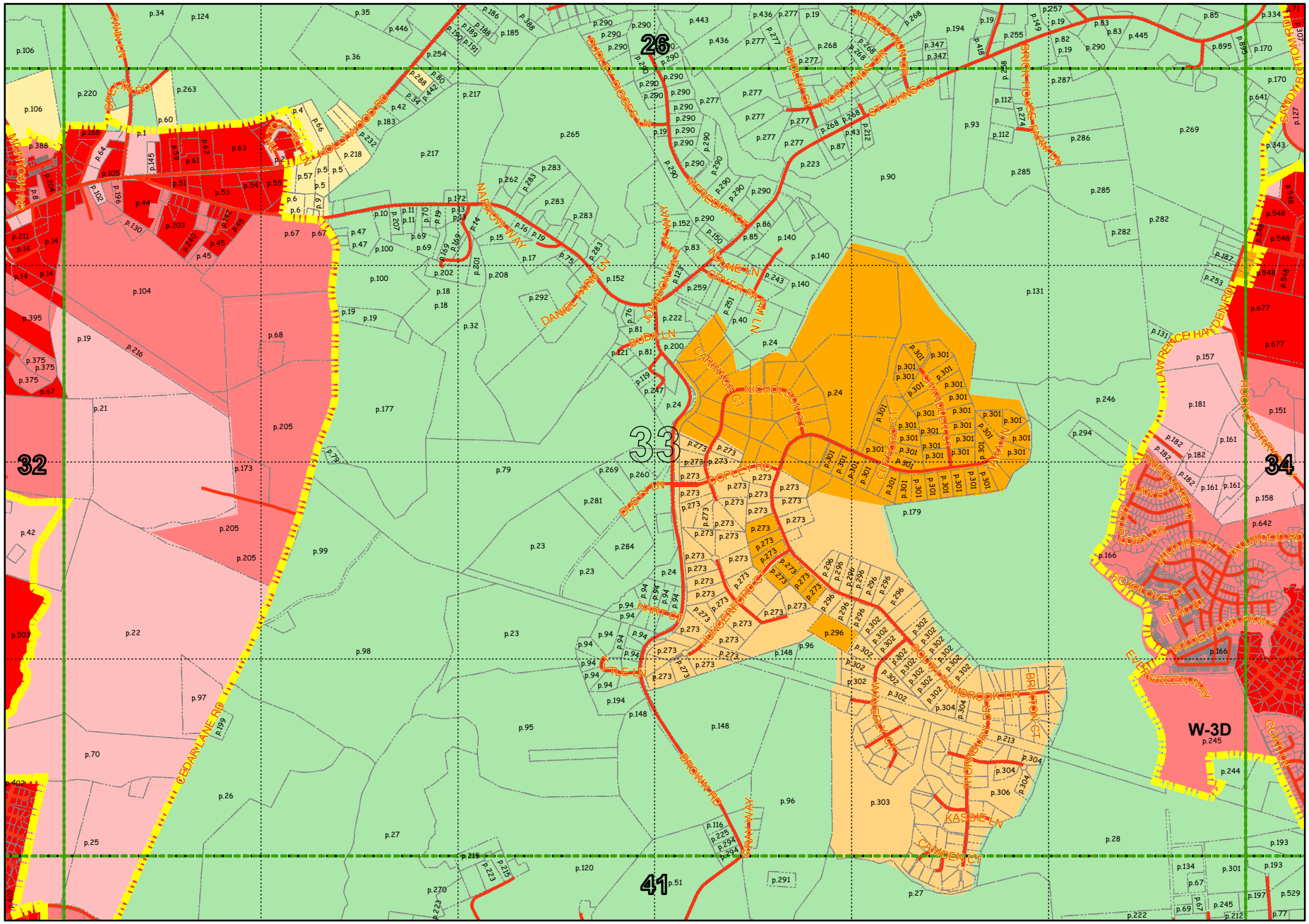
MAP 32

Sewer Category: S-1 S-3D S-6D RS-1 RS-D RS-E NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid
Growth Areas
Property Lines
Roads

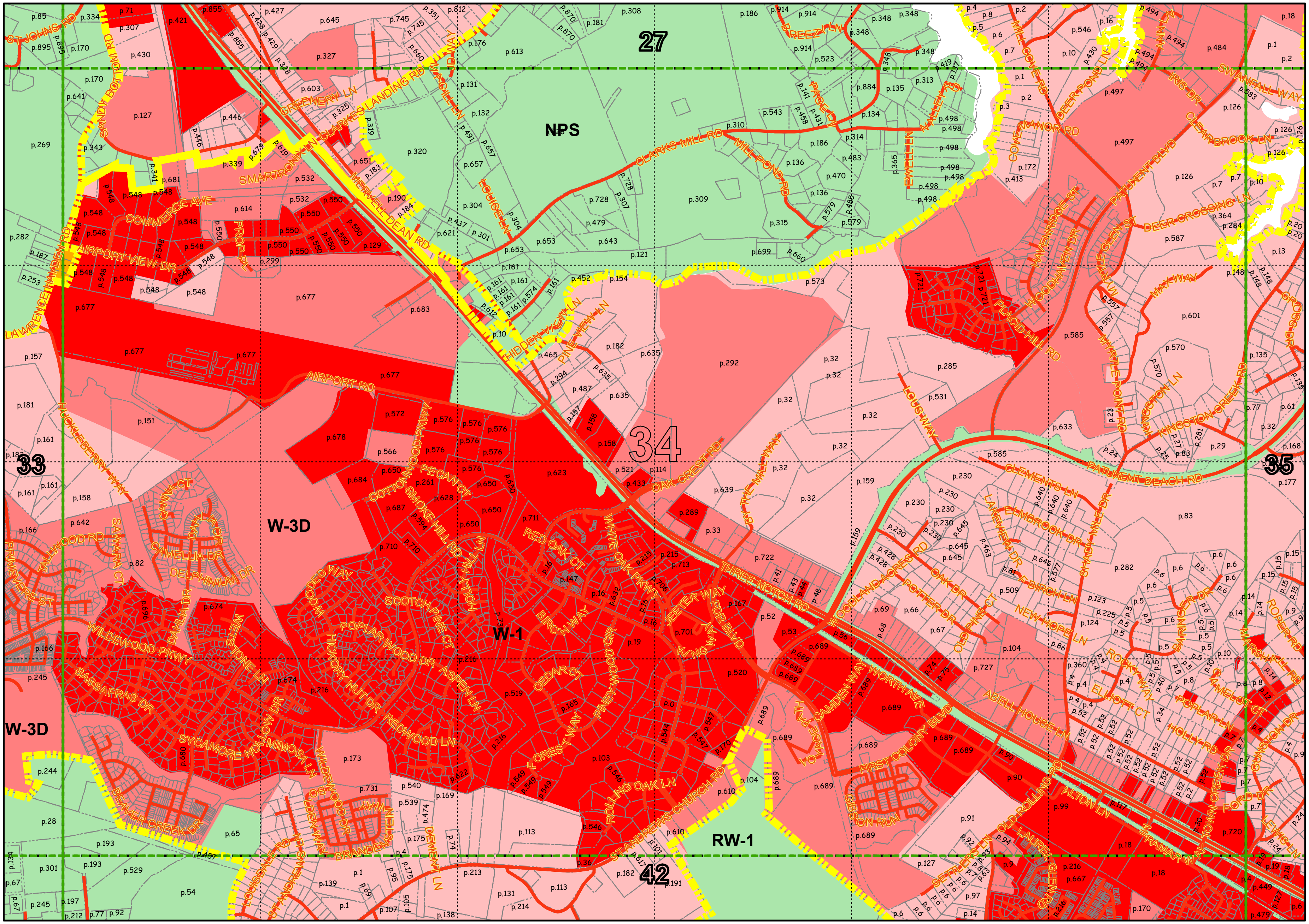
MAP 33

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid
Growth Areas
Property Lines
Roads

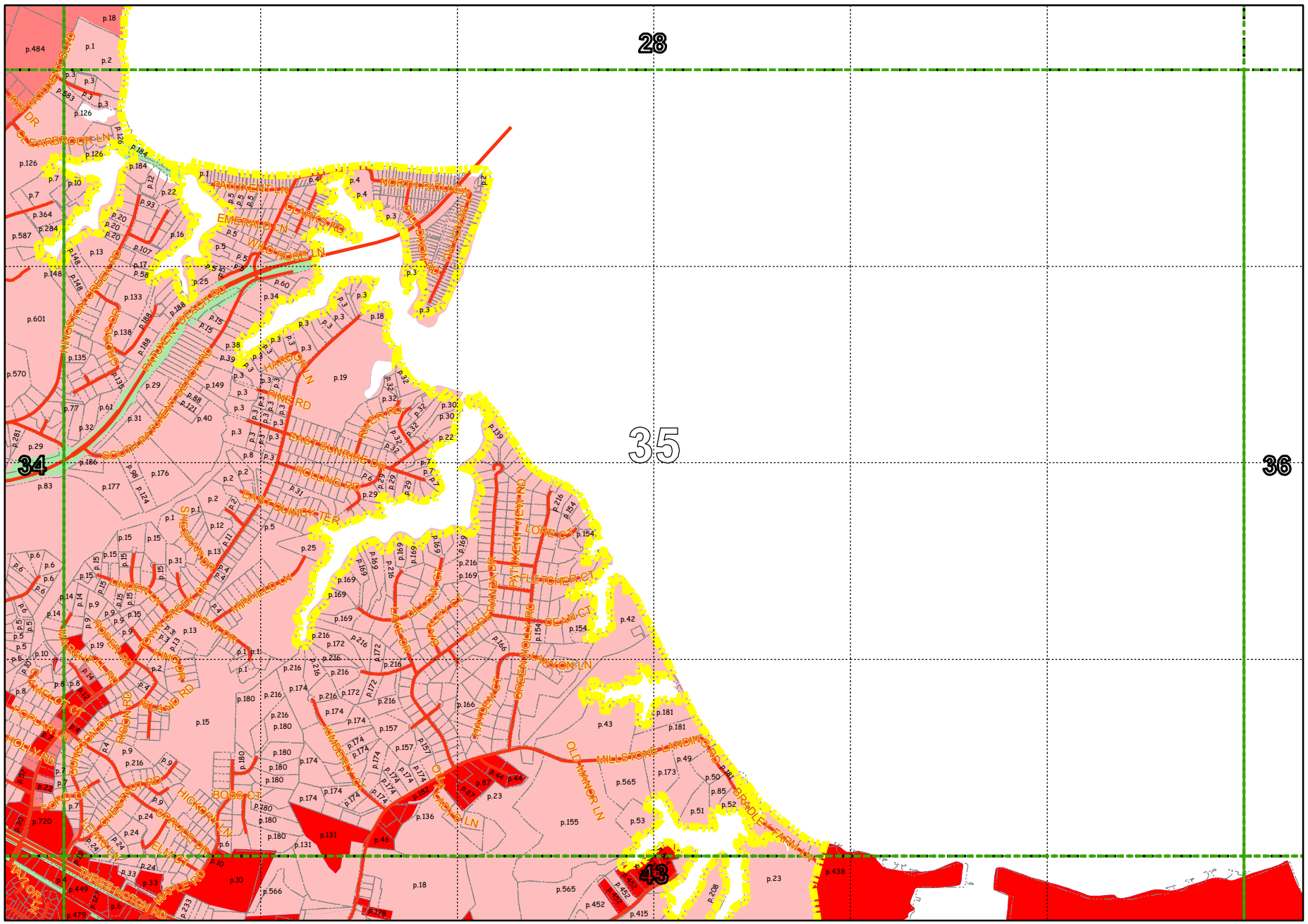
MAP 34

Sewer Category: S-1 S-3D S-6D RS-1 RS-D RS-E NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid | Growth Areas | Property Lines | Roads

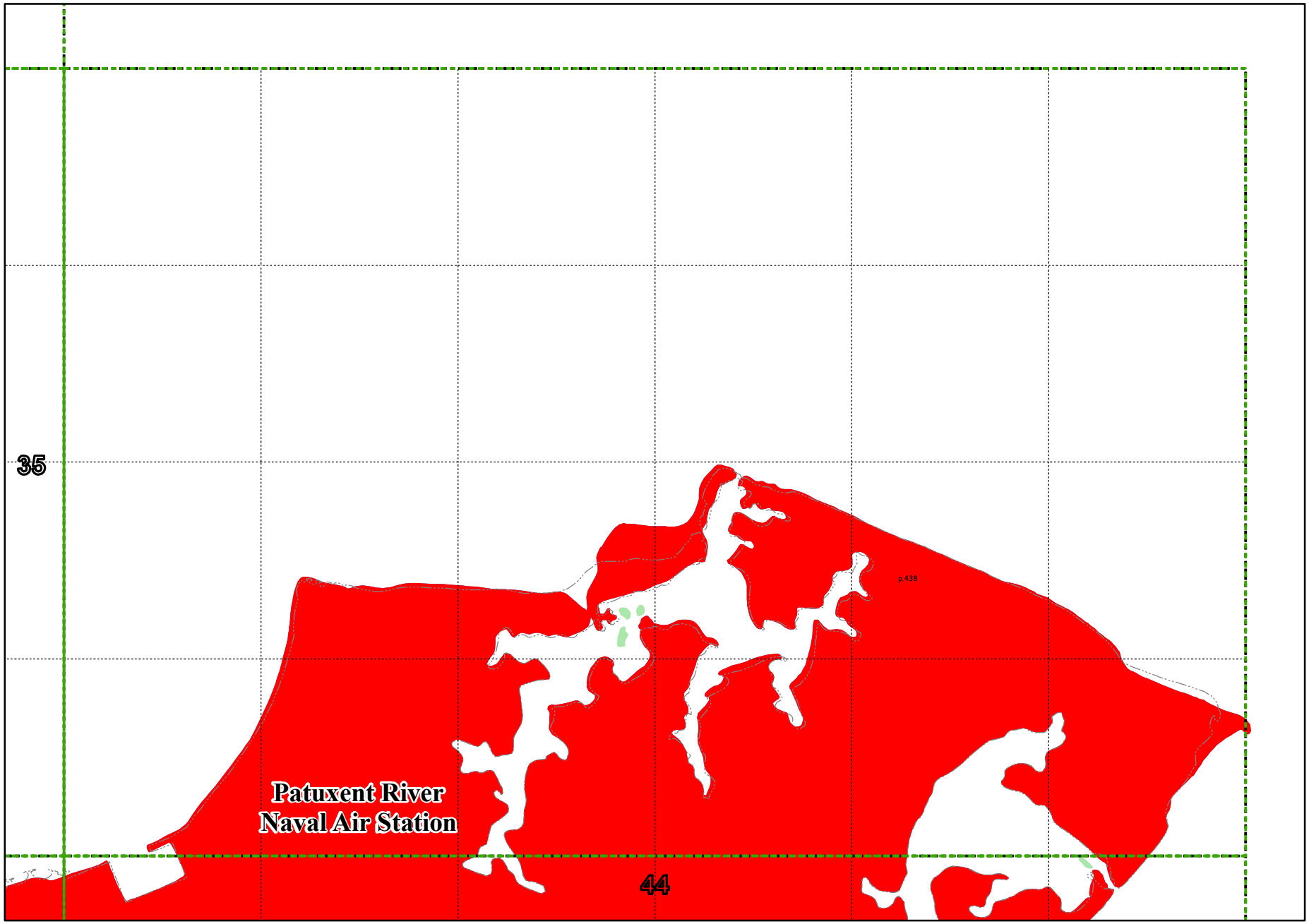
MAP 35

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid
Growth Areas
Property Lines
Roads

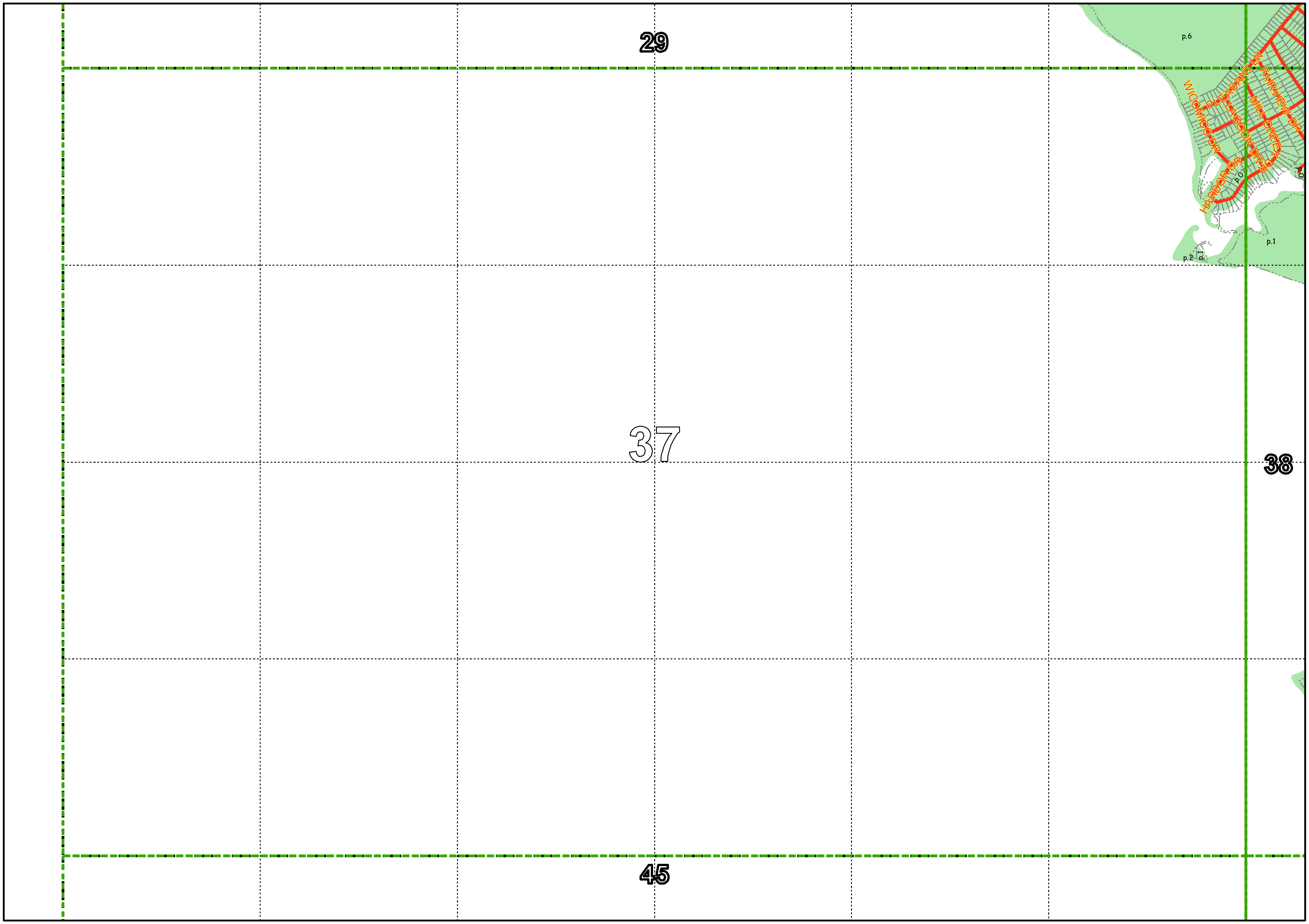
MAP 36

Sewer Category: S-1 S-3D S-6D RS-1 RS-D RS-E NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid

Growth Areas

Property Lines

Roads

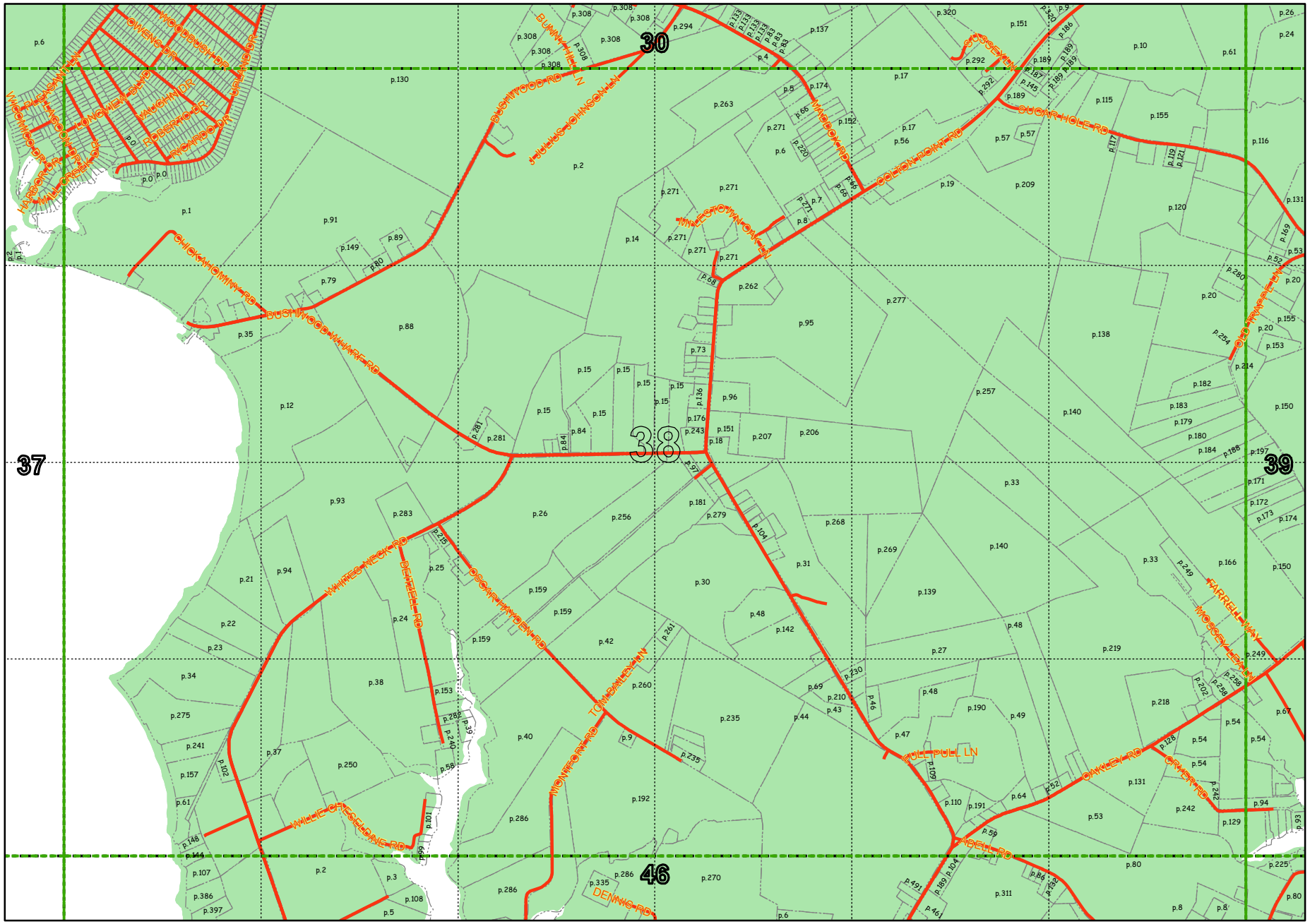
MAP 37

Sewer Category: S-1 S-3D S-6D RS-1 RS-D RS-E NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid Growth Areas Property Lines Roads

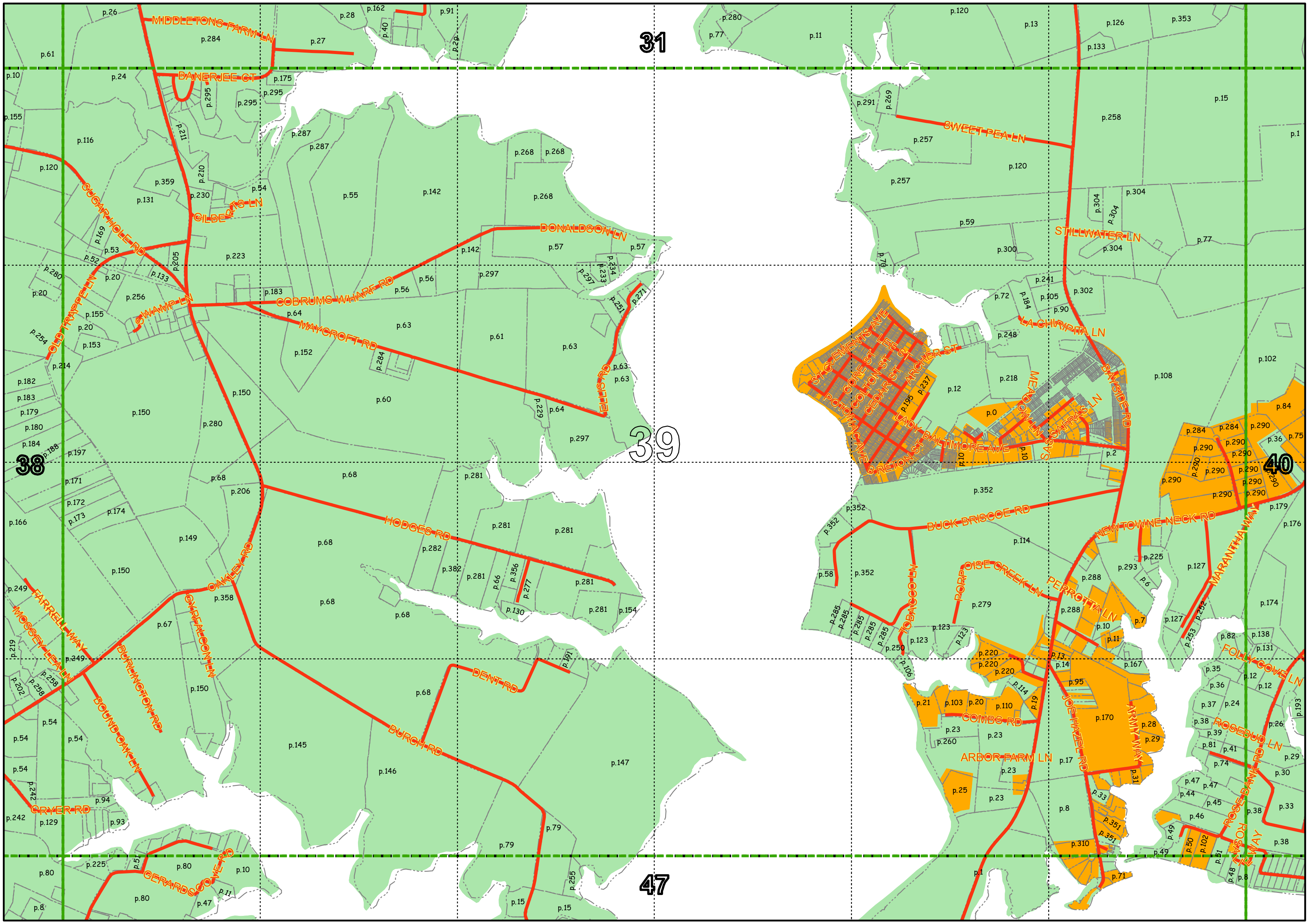
MAP 38

Sewer Category: S-1 S-3D S-6D RS-1 RS-D RS-E NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet


31
38
39
40
47
MIDDLETONS FARM LN
BANERJEE CT
SUGAR HOLE RD
GILBERTS LN
OLD TRIPPE LN
SWAMP LN
COBRUMS WHARF RD
MAYCROFT RD
DONALDSON LN
HODGES RD
OAKLEY RD
GREENCOVE LN
FARRELL WAY
MOSSEN LEA LN
BURLINGTON RD
BOUND OAK LN
DENT RD
BURCH RD
CRYER RD
GERARDS COVE RD
SWEET PEA LN
STILLWATER LN
LA CHIRIPITA LN
BAYSIDE RD
BALTIMORE AVE
BUCK BRISCOE RD
NEWTOWNE NECK RD
MARANTHA WAY
PORPOISE CREEK LN
PERROTTA LN
TOBACCO LN
COMBS RD
ARBOR FARM LN
JOE HAZEL RD
ARMY WAY
FOLLY COVE LN
ROSEBUD LN
ROSE BANK RD

Tax Map grid
Growth Areas
Property Lines
Roads

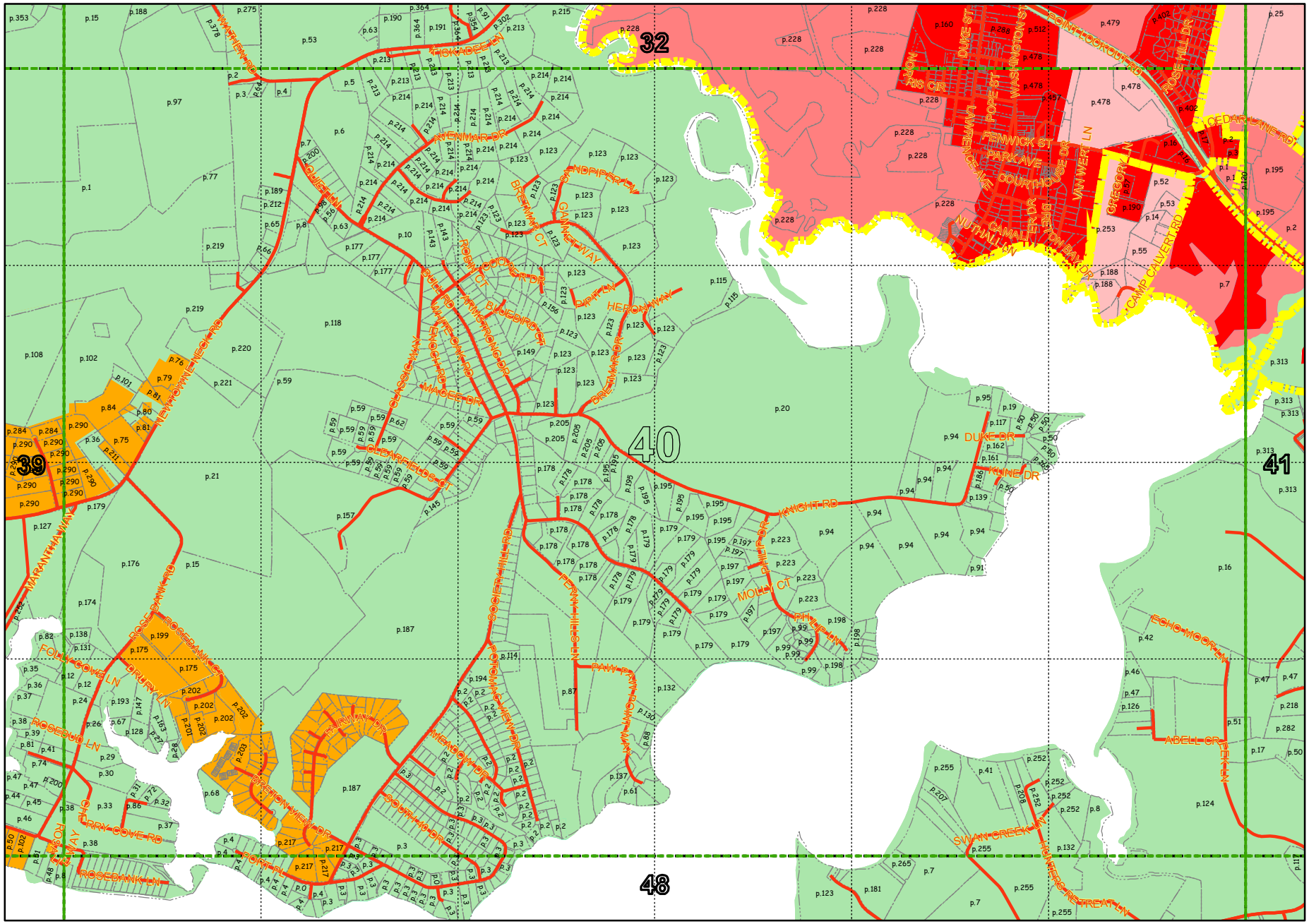
MAP 39

Sewer Category: S-1 S-3D S-6D RS-1 RS-D RS-E NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



MAP 40

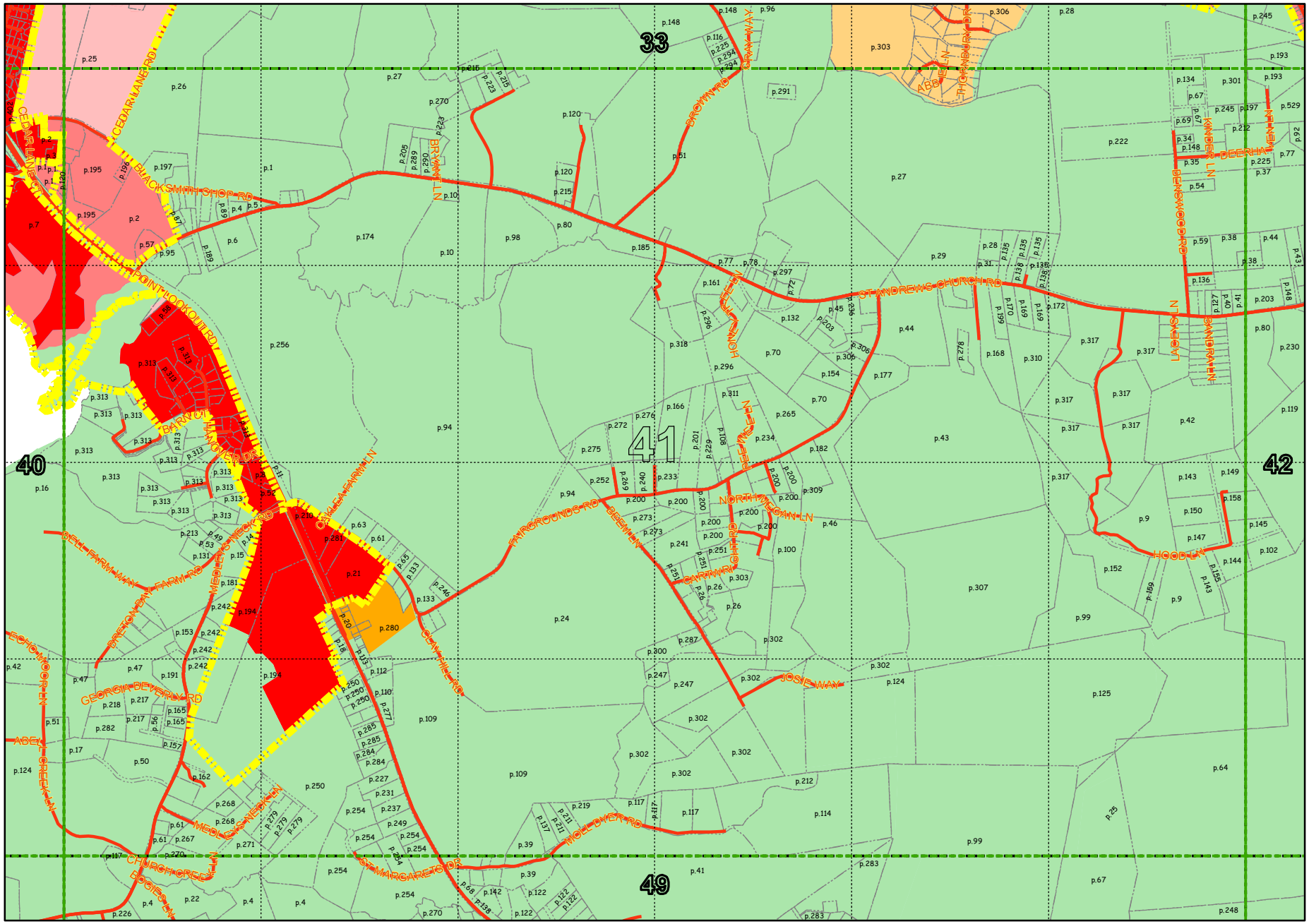
Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

Tax Map grid | Growth Areas | Property Lines | Roads

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid | Growth Areas | Property Lines | Roads

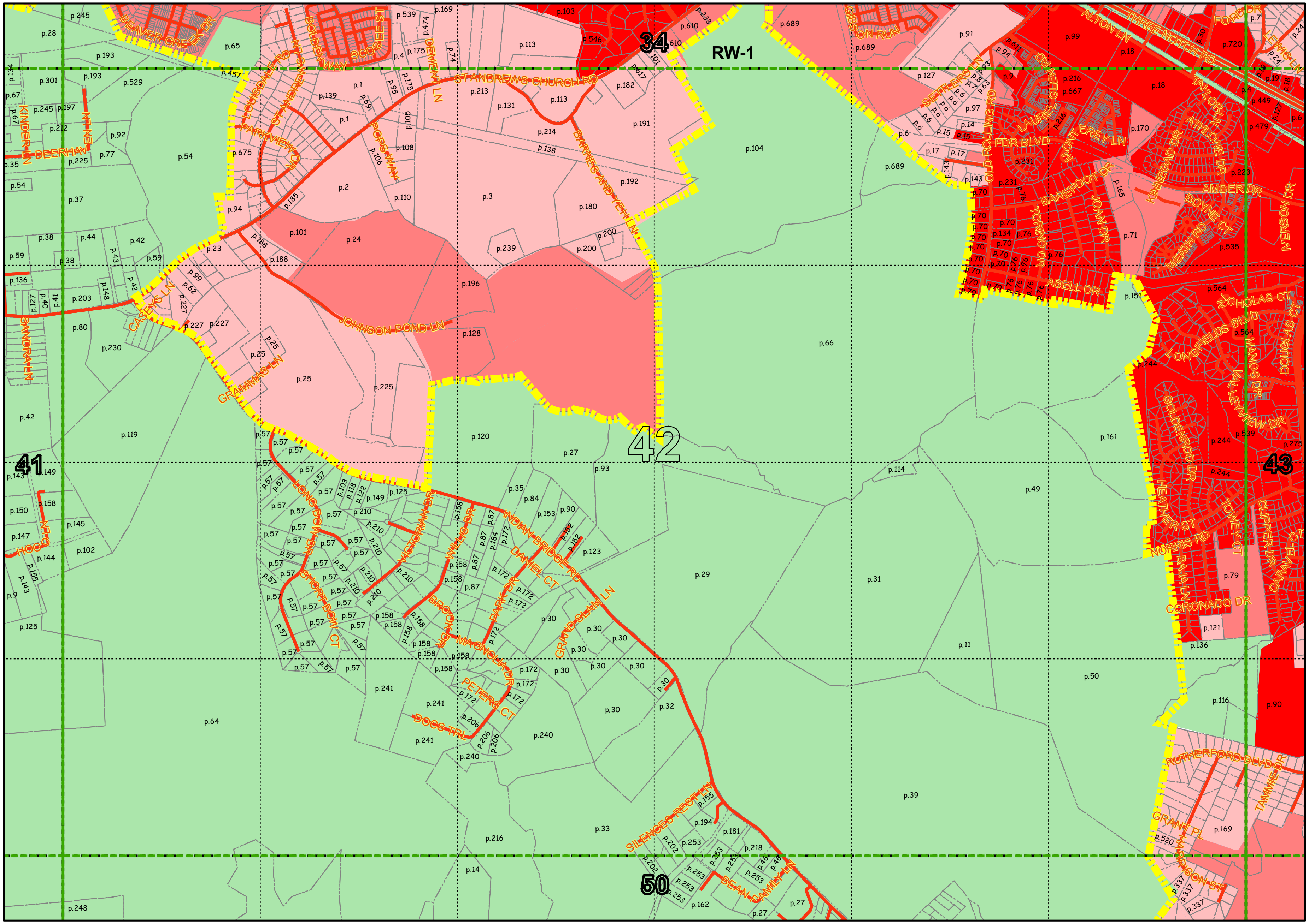
MAP 41

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet


RW-1
34
41
42
43
50
BEAVER CREEK DR
ST ANDREWS CHURCH RD
JOHNSON POND LN
PARKVIEW
GRAMMAS LN
CASENS LN
DEERHAVEN
KINDER LN
SANDRA LN
BARNES AND YETI LN
INDIAN BRIDGE RD
DANIEL CT
GRAND SLAM LN
PETERS CT
DOCS TRL
SILENCES REST LN
SEAN-DAMIEN LN
OLD ROLLING RD
FDR BLVD
ABELL DR
AMBER DR
NICHOLAS CT
LONGFIELDS BLVD
CORONADO DR
NORRIS RD
RUTHERFORD BLVD
GRANT PL
GIBSON RUN
ALTON LN
THREE NOTCH RD
FORD DR

Tax Map grid
Growth Areas
Property Lines
Roads

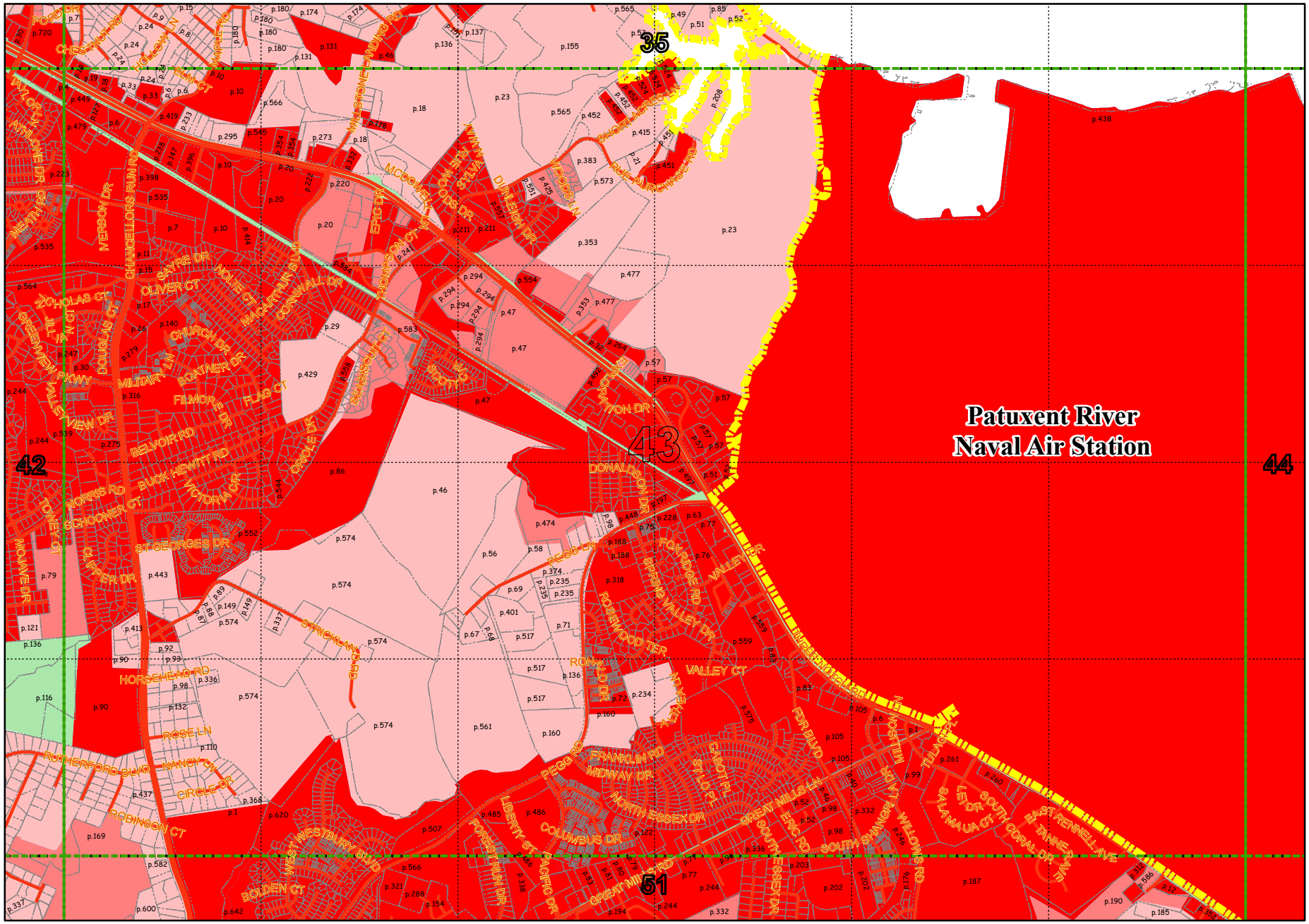
MAP 42

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid
Growth Areas
Property Lines
Roads

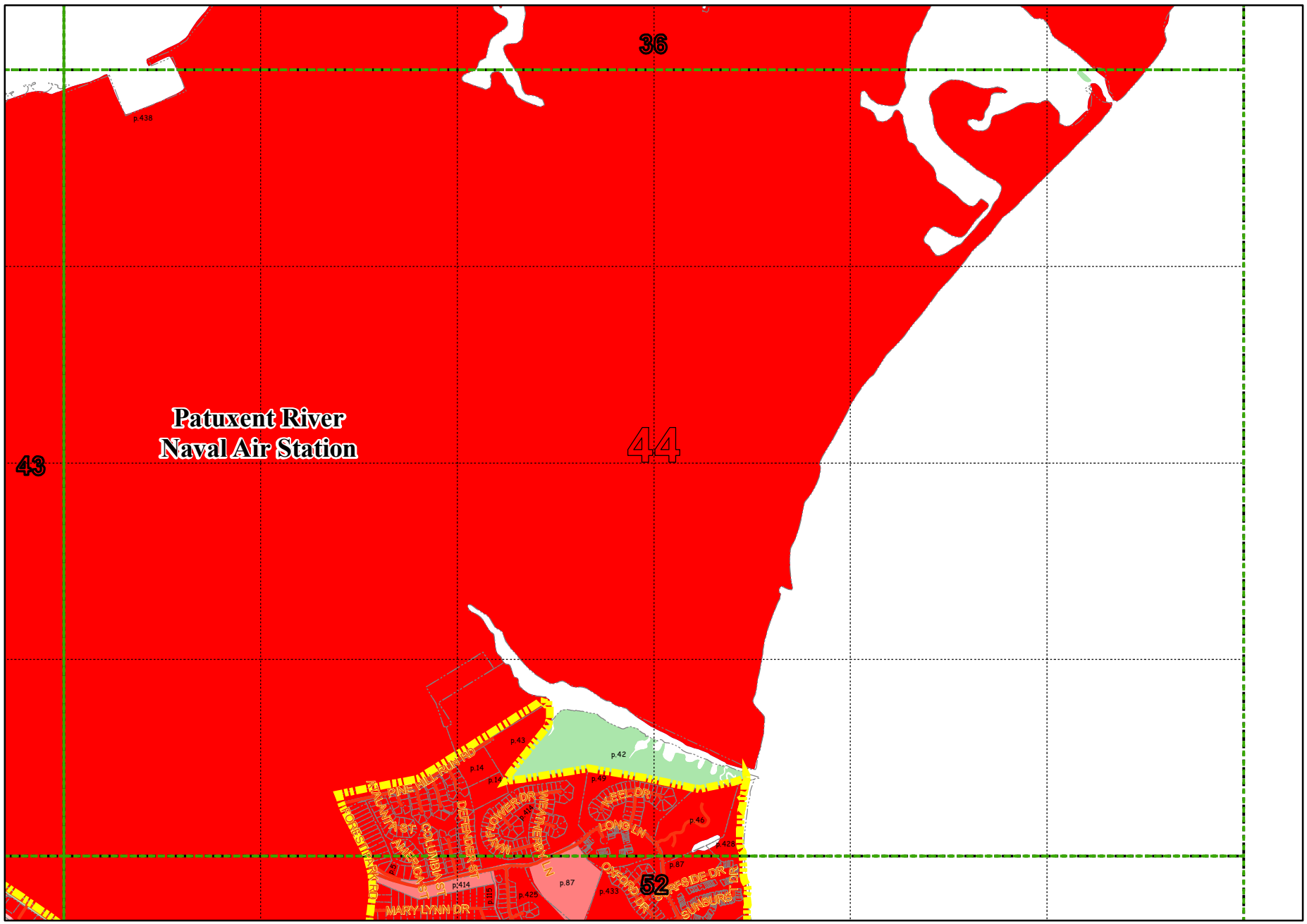
MAP 43

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid
Growth Areas
Property Lines
Roads

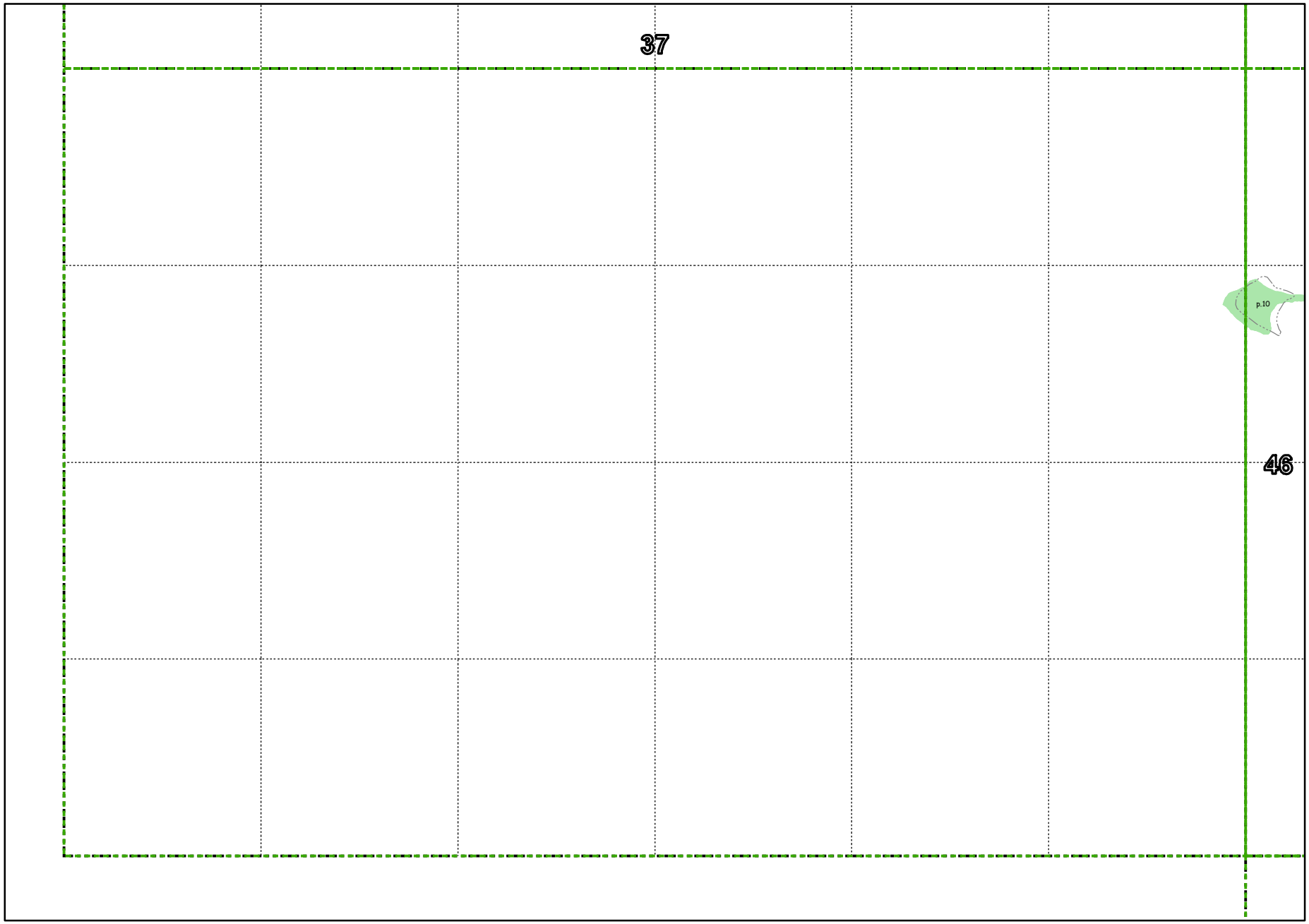
MAP 44

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet

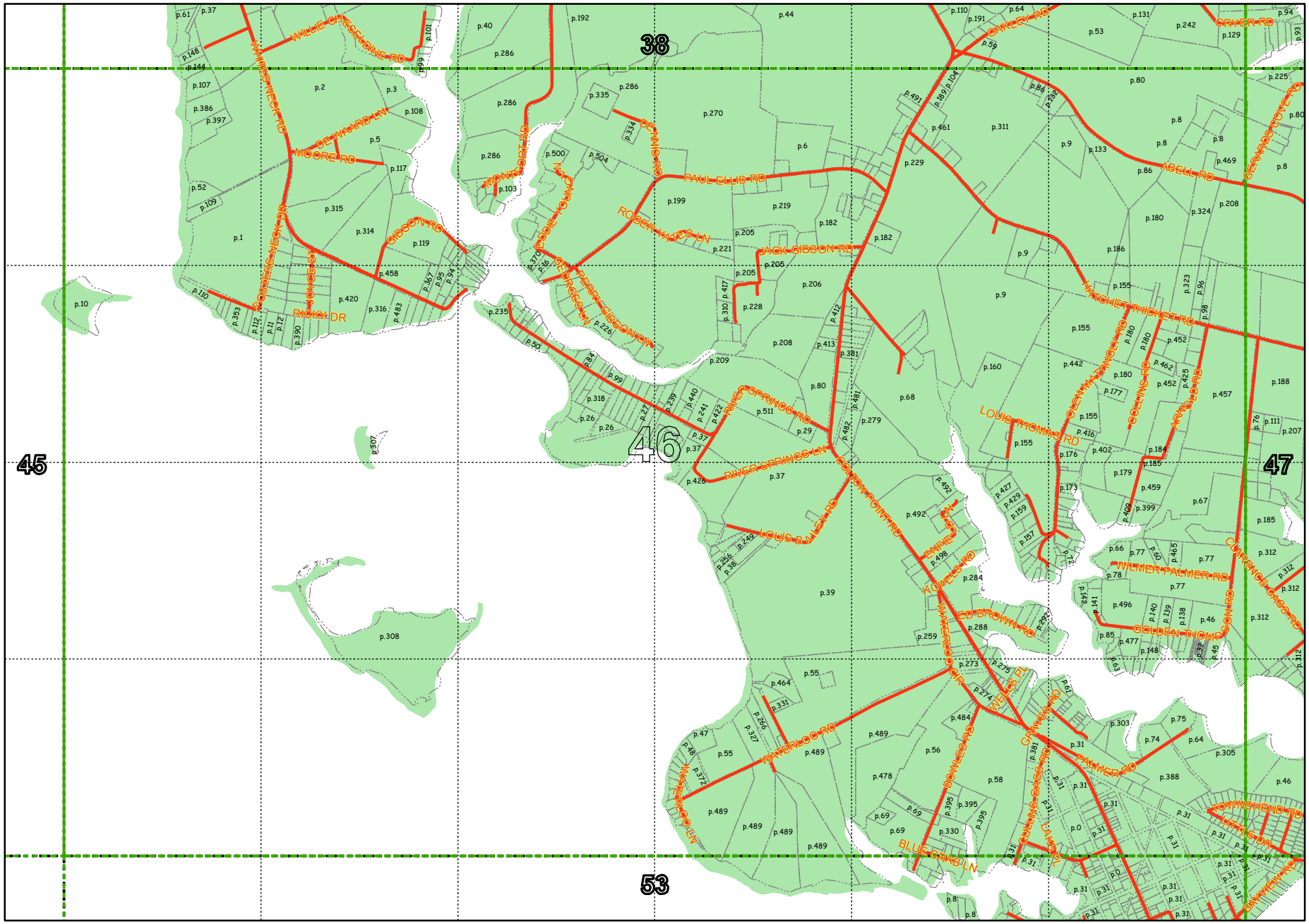


Tax Map grid
Growth Areas
Property Lines
Roads

MAP 45

Sewer Category: S-1 S-3D S-6D RS-1 RS-D RS-E NPS

2017 Update



Sewer Service

1,000 0 1,000 2,000 3,000 Feet

Tax Map grid
Growth Areas
Property Lines
Roads

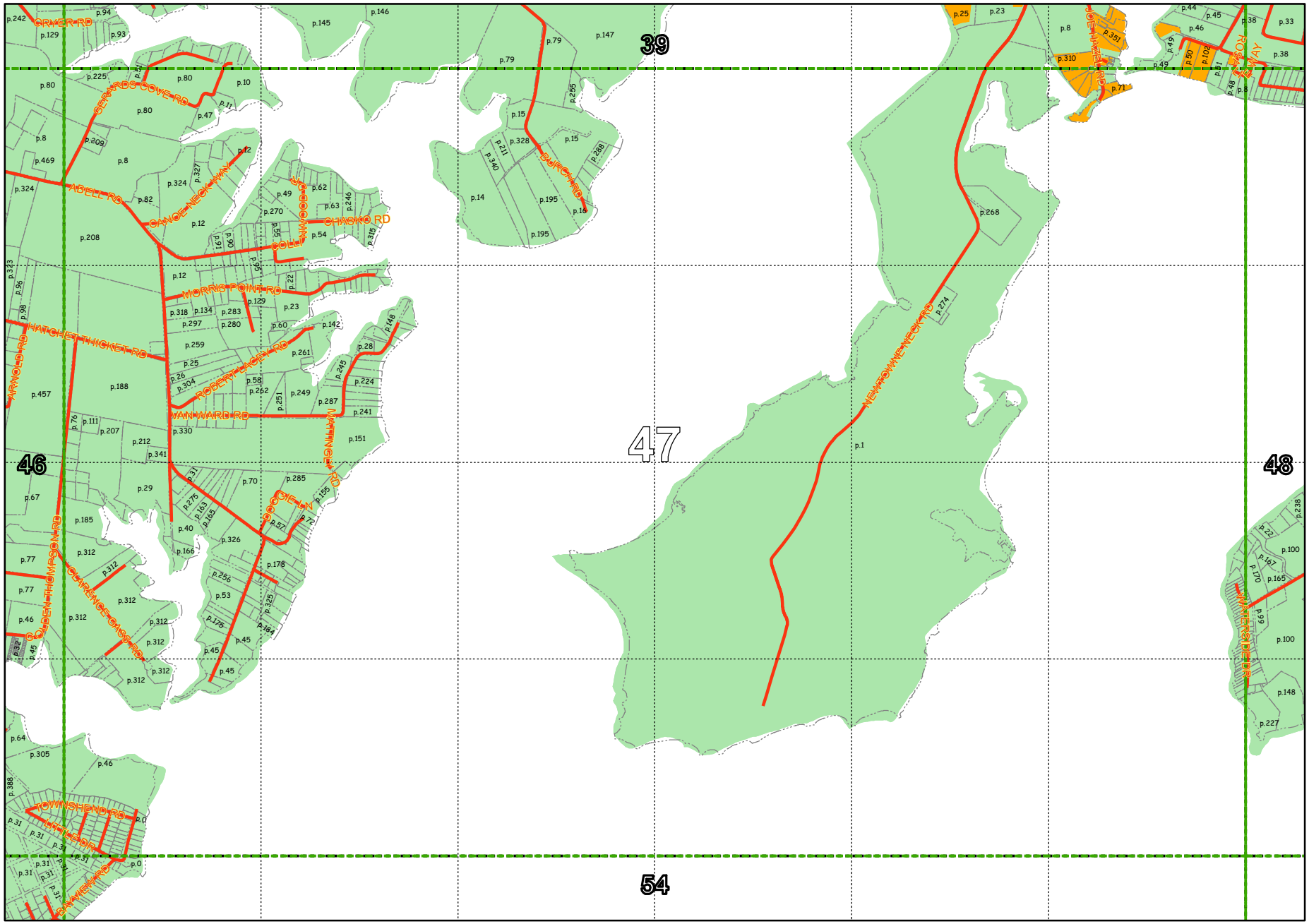
MAP 46

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid
Growth Areas
Property Lines
Roads

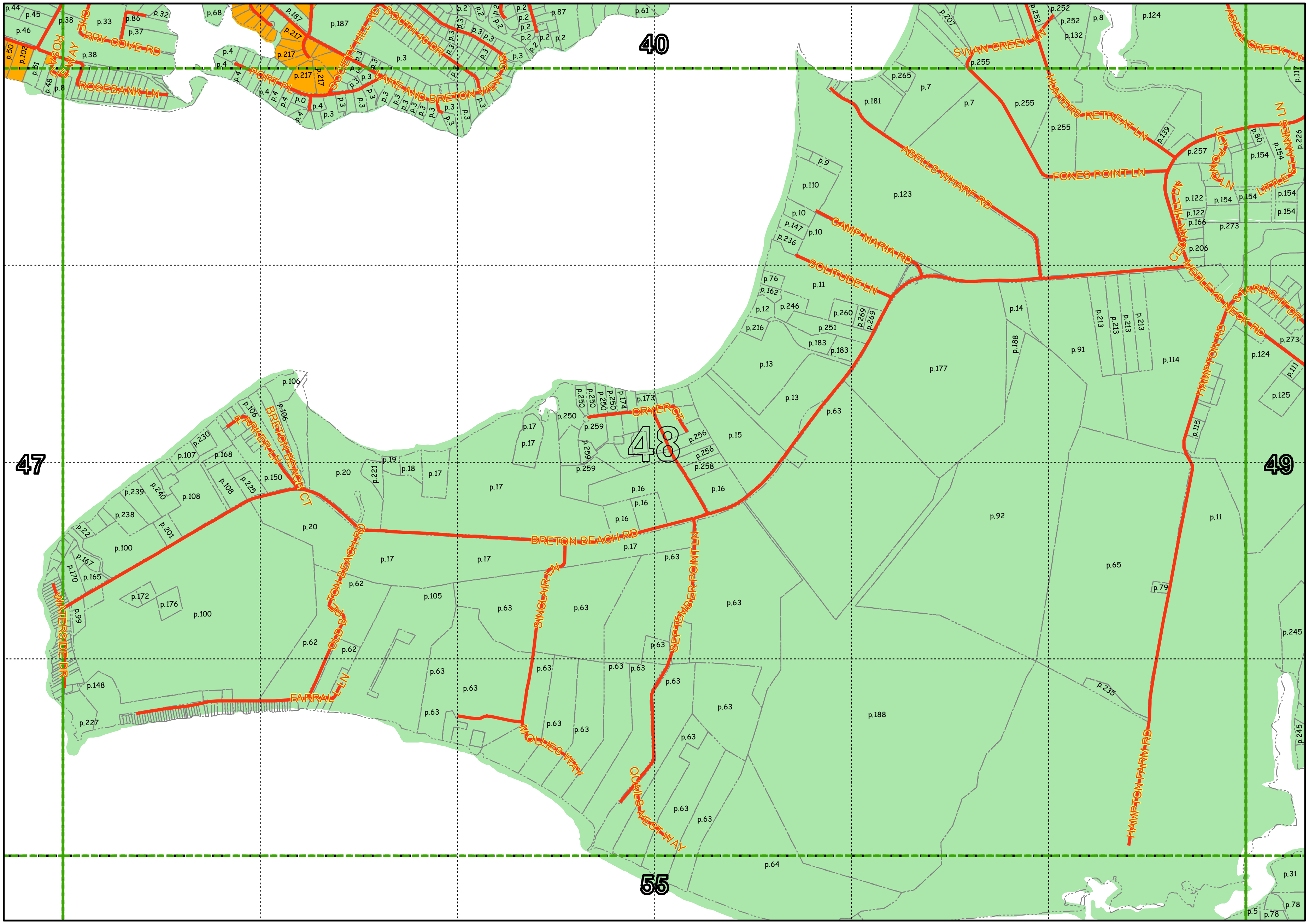
MAP 47

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid
Growth Areas
Property Lines
Roads

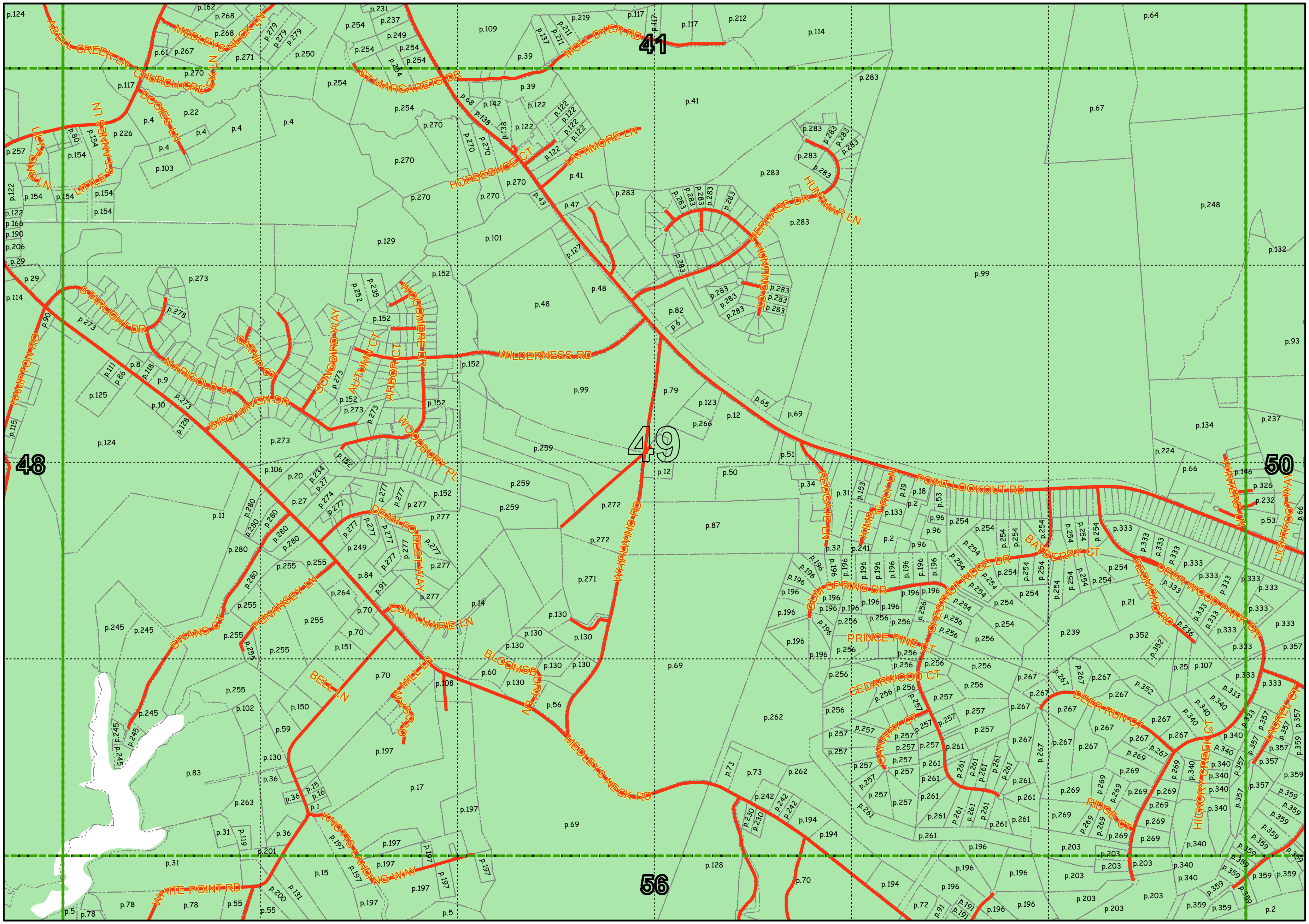
MAP 48

Sewer Category: S-1 S-3D S-6D RS-1 RS-D RS-E NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet

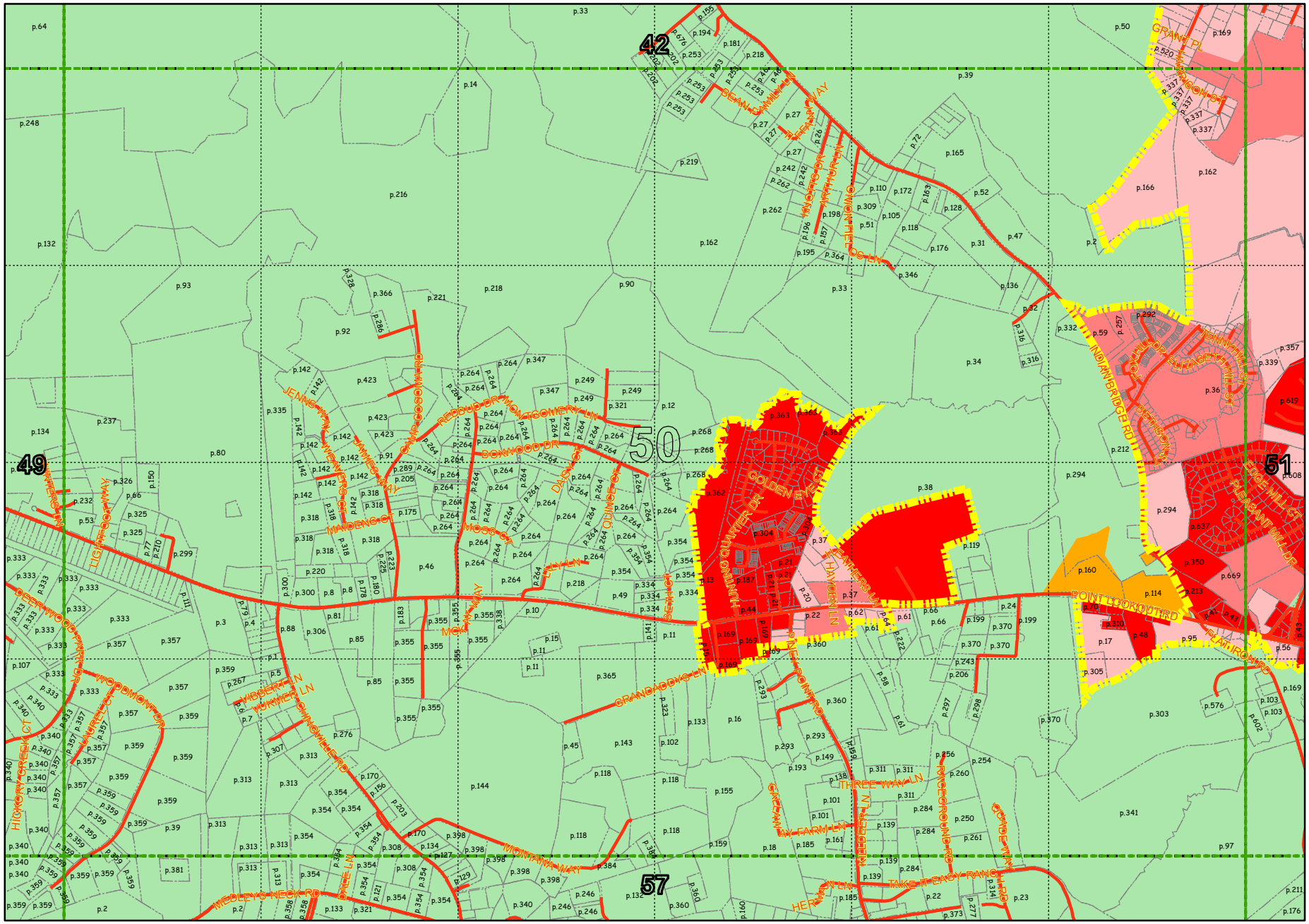

41
48
49
50
56
ABELL CREEK LN
MEDLEYS NECK LN
CHURCH CREEK LN
ST MARGARETS DR
NOEL DYER RD
HORSESHOE CT
LATIMORE LN
HERITAGE DR
HUNTING CT
STARLIGHT DR
MARIGOLD ST
CATNIP CT
SONGBIRD WAY
AUTUMN CT
ARBOR CT
WOODMERE DR
WILDERNESS RD
BIRD HAVEN DR
WOODBURY PL
HAMPTON RD
DEAN FOREST WAY
EDNA MARIE LN
PENANSEY LN
SWANG CT
BELL LN
BLOOMSBURY
WHIRLWIND RD
MEDLEYS NECK RD
WHITE POINT RD
KNOTTS LANDING WAY
POINT LOOKOUT RD
REDGATE LN
BAYBERRY CT
CHESTNUT RIDGE DR
GUM SPRING DR
PRINCE PINE CT
CEDARWOOD CT
DEER RUN CT
DEERWOOD PARK DR
REDMOND RD
HICKORY CREEK CT
RIDGE CT
LIGHTFOOT WAY

Tax Map grid
Growth Areas
Property Lines
Roads

MAP 49

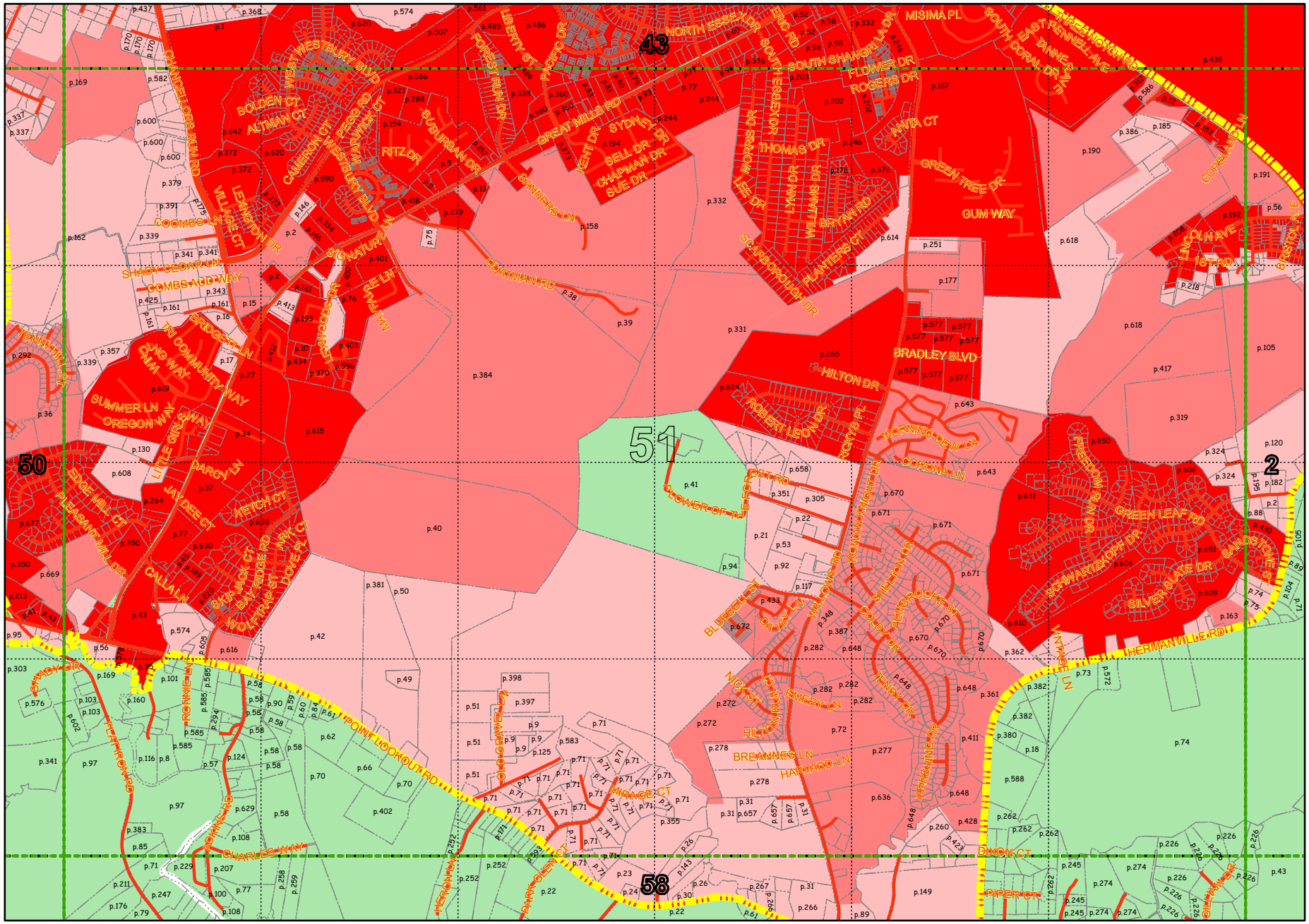
Sewer Category: S-1 S-3D S-6D RS-1 RS-D RS-E NPS

2017 Update


Sewer Service
1,000 0 1,000 2,000 3,000 Feet
Tax Map grid
Growth Areas
Property Lines
Roads
MAP 50
Sewer Category:
S-1
S-3D
S-6D
RS-1
RS-D
RS-E
NPS
2017 Update
42
49
50
51
57

Sewer Service

1,000 0 1,000 2,000 3,000 Feet

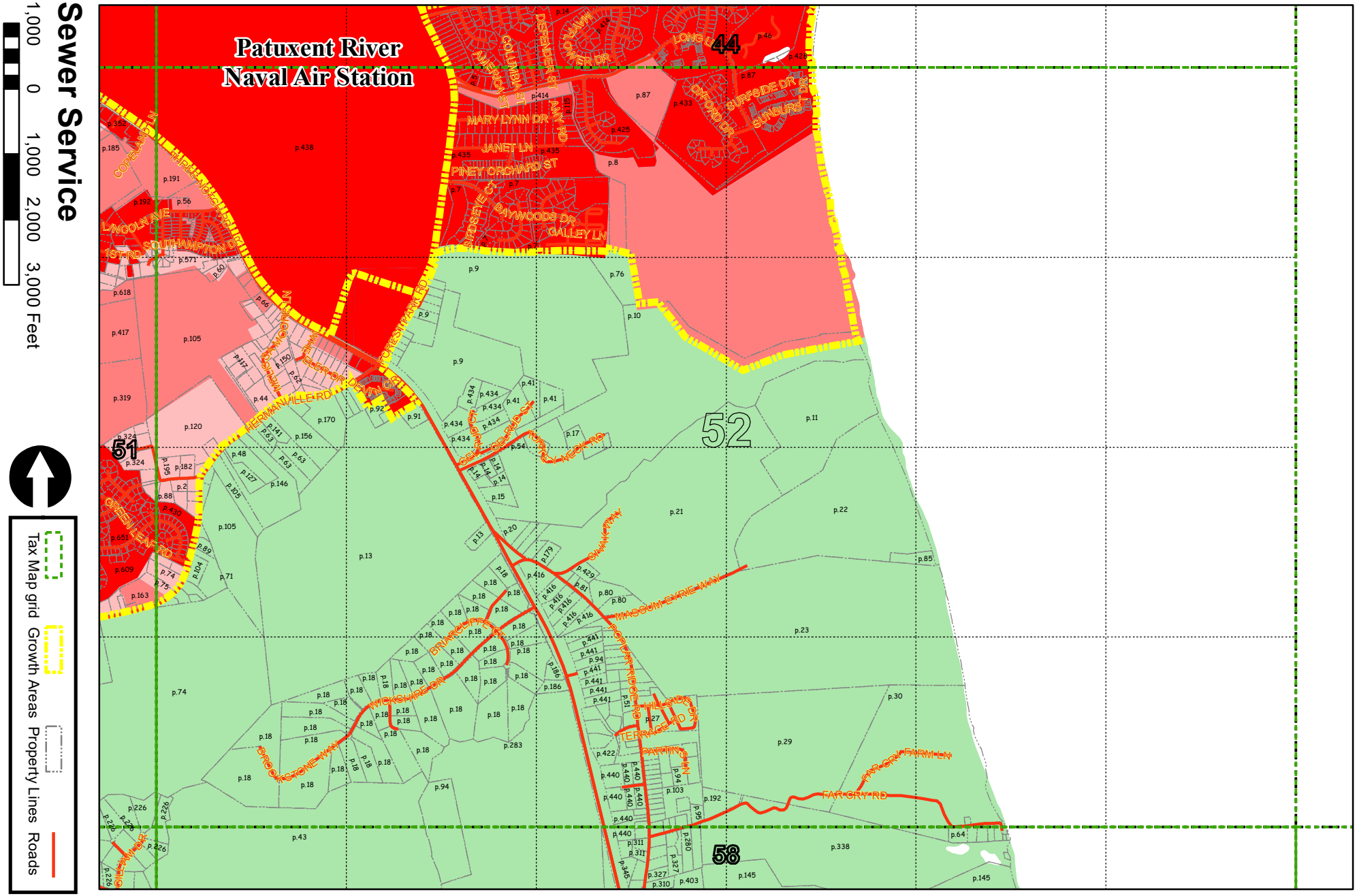


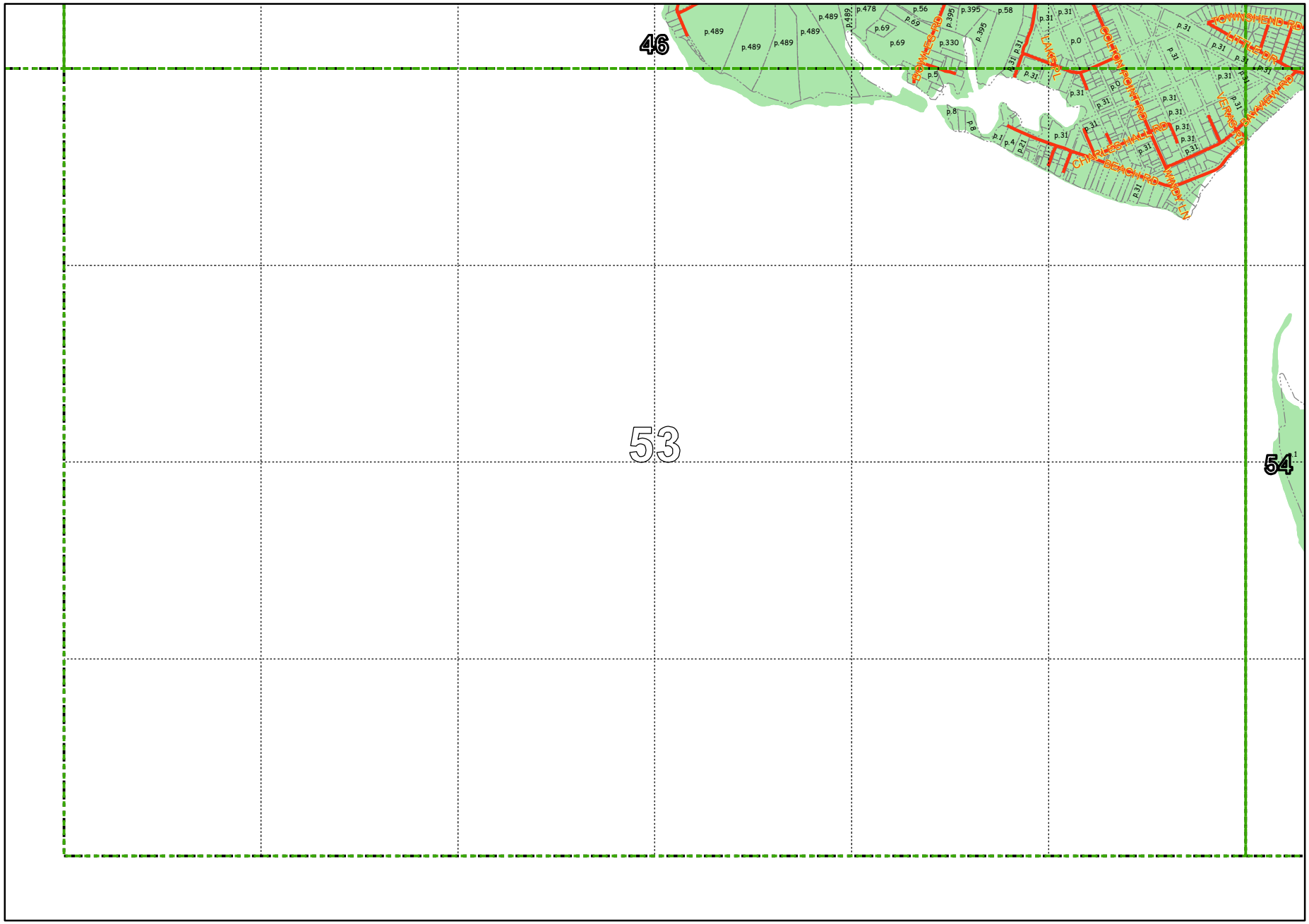
Tax Map grid | Growth Areas | Property Lines | Roads

MAP 51

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update


Sewer Service
1,000 0 1,000 2,000 3,000 Feet
Patuxent River
Naval Air Station
44
51
52
58
Tax Map grid
Growth Areas
Property Lines
Roads
MAP 52
Sewer Category:
S-1
S-3D
S-6D
RS-1
RS-D
RS-E
NPS
2017 Update



Sewer Service

1,000 0 1,000 2,000 3,000 Feet

Tax Map grid

Growth Areas

Property Lines

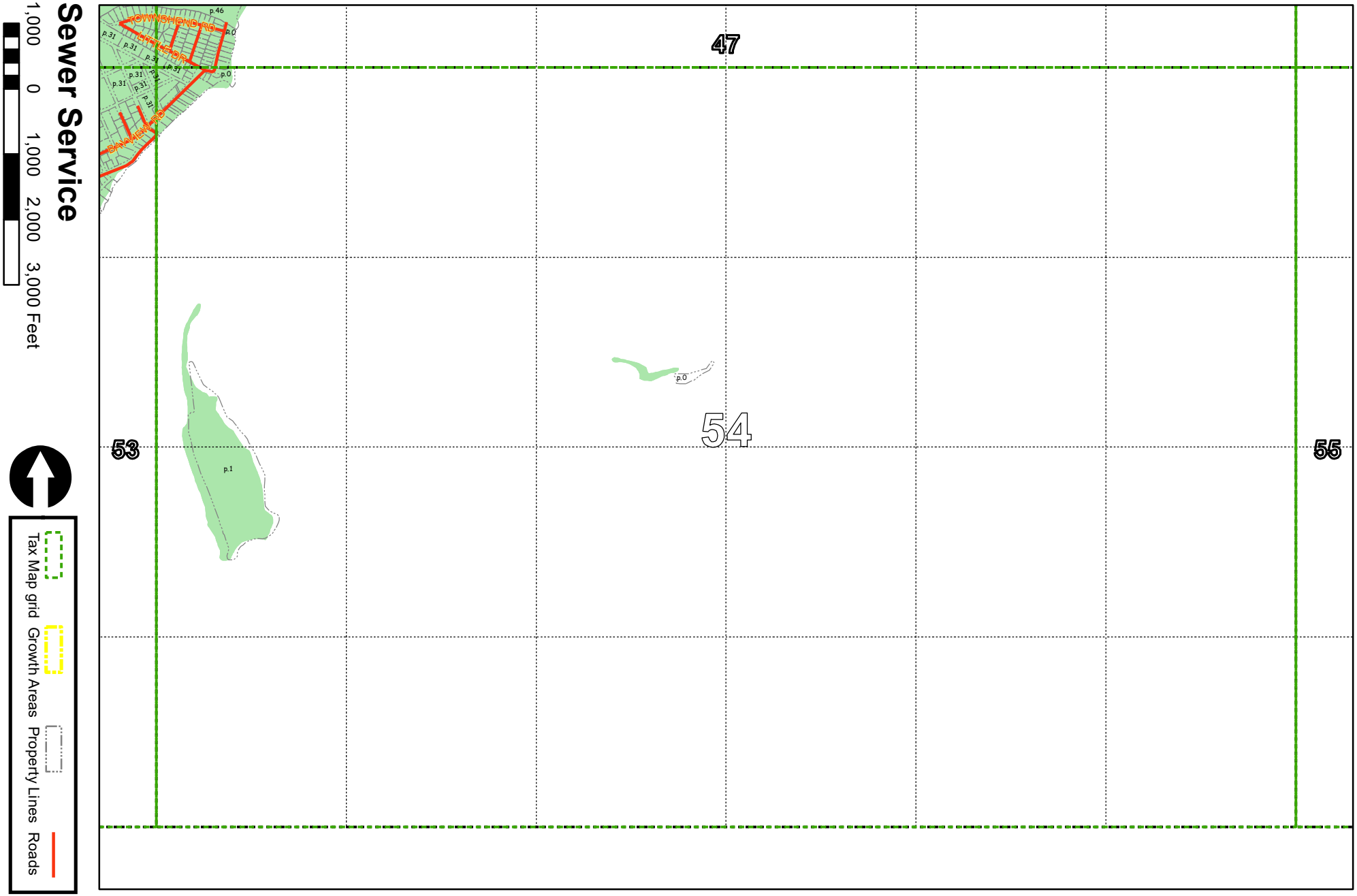
Roads

MAP 53

Sewer Category: S-1 S-3D S-6D RS-1 RS-D RS-E NPS

2017 Update

Sewer Service



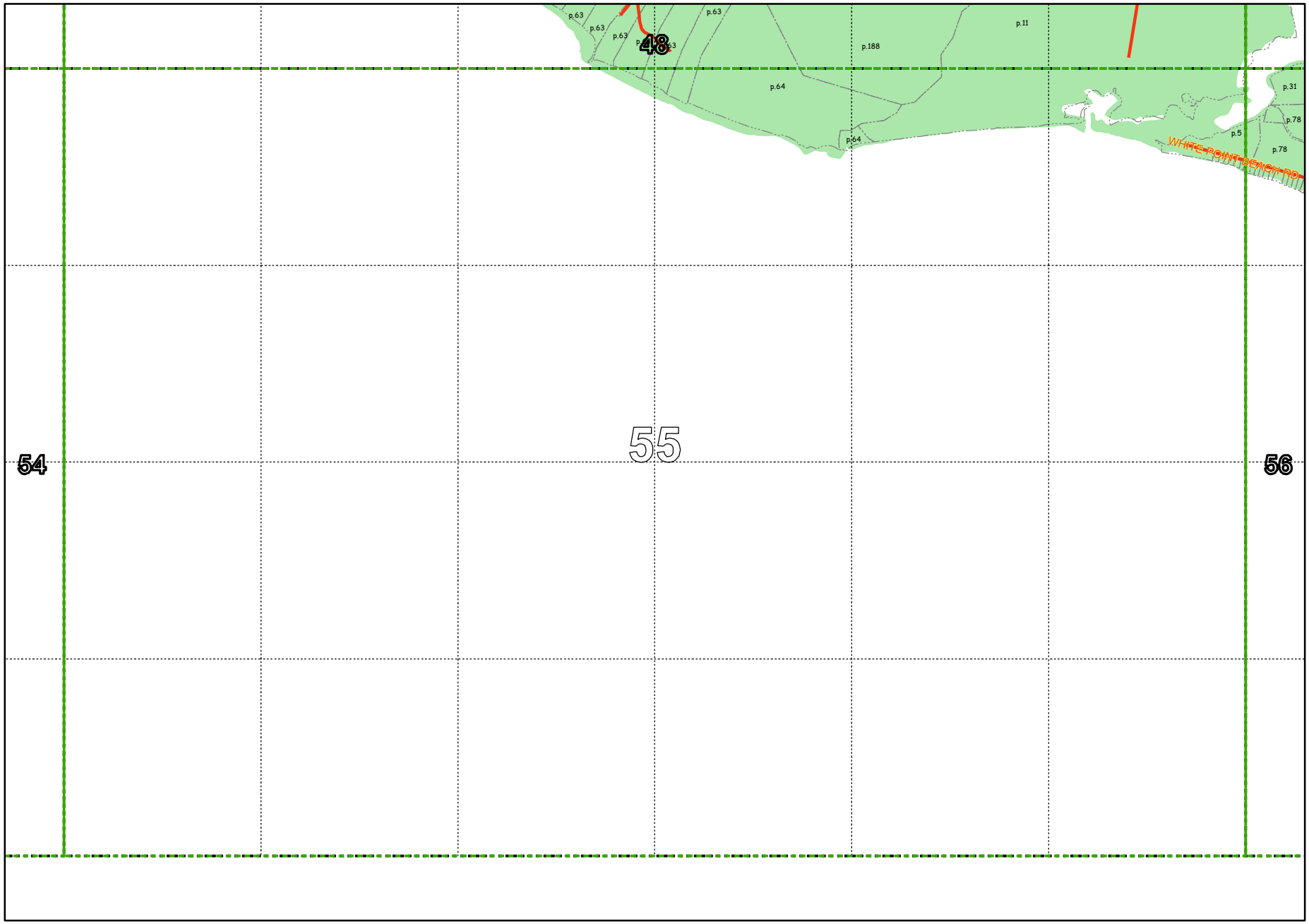
MAP 54

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet

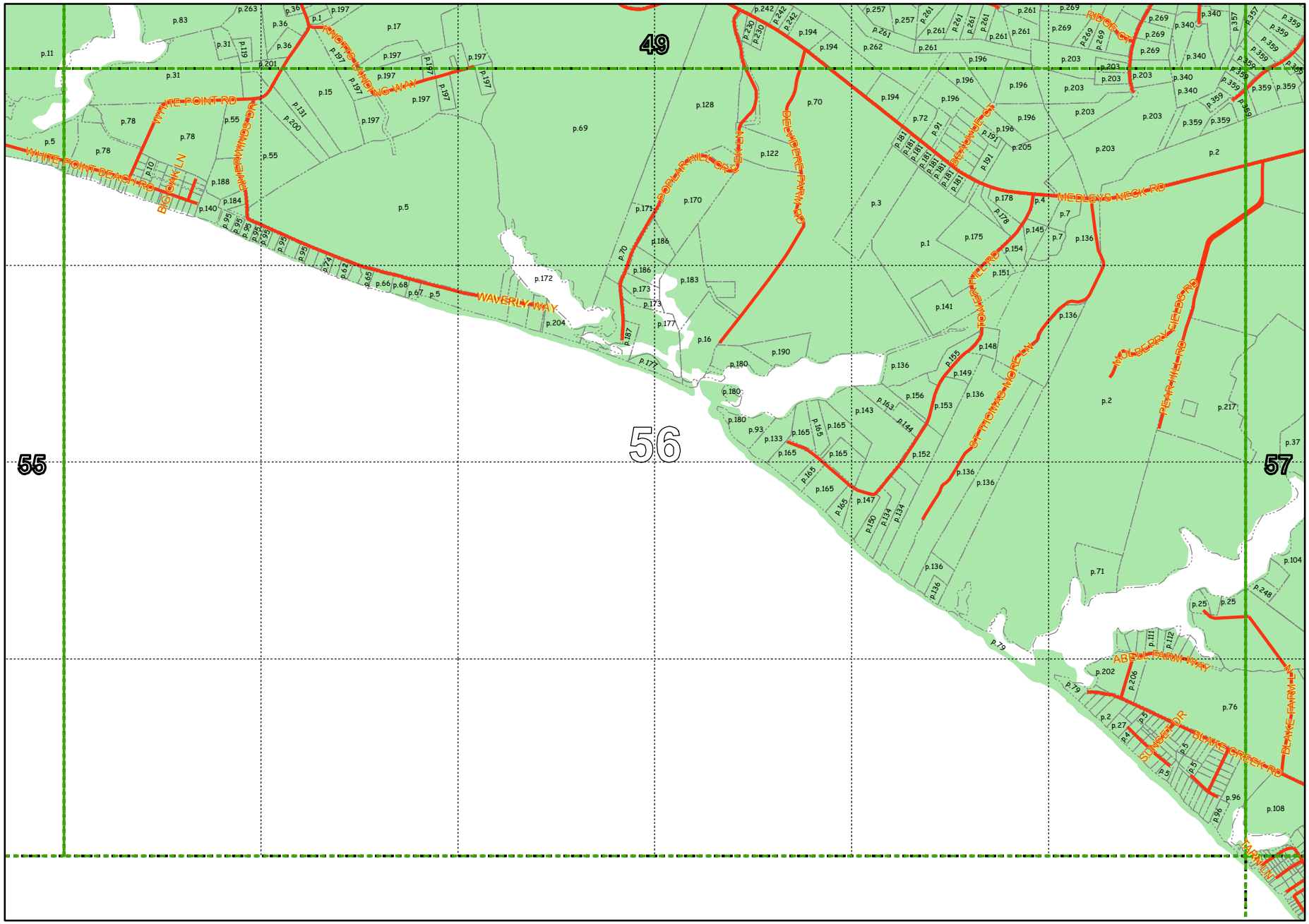


Tax Map grid
Growth Areas
Property Lines
Roads

MAP 55

Sewer Category: S-1 S-3D S-6D RS-1 RS-D RS-E NPS

2017 Update



Sewer Service

1,000 0 1,000 2,000 3,000 Feet

Tax Map grid
Growth Areas
Property Lines
Roads

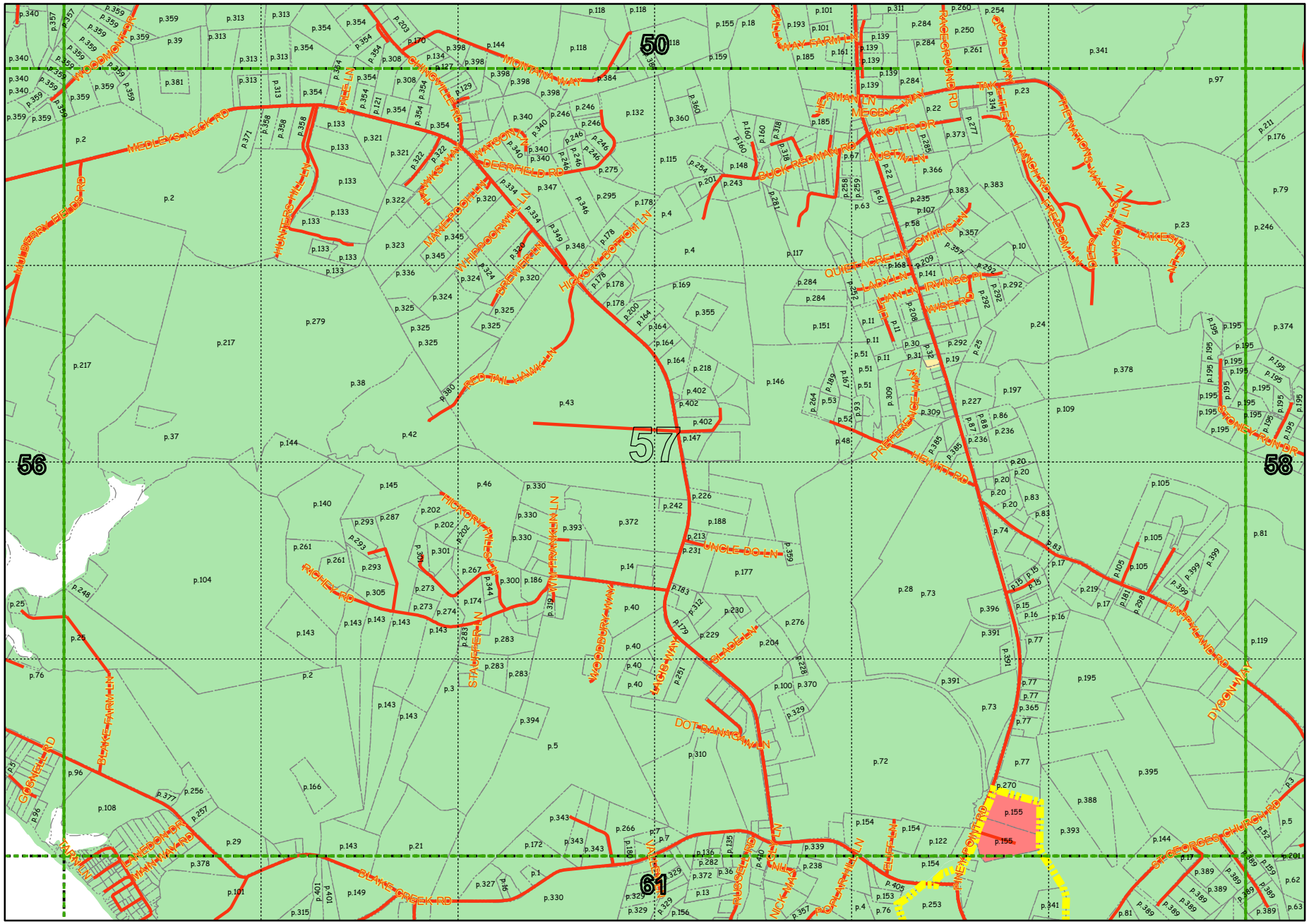
MAP 56

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid | Growth Areas | Property Lines | Roads

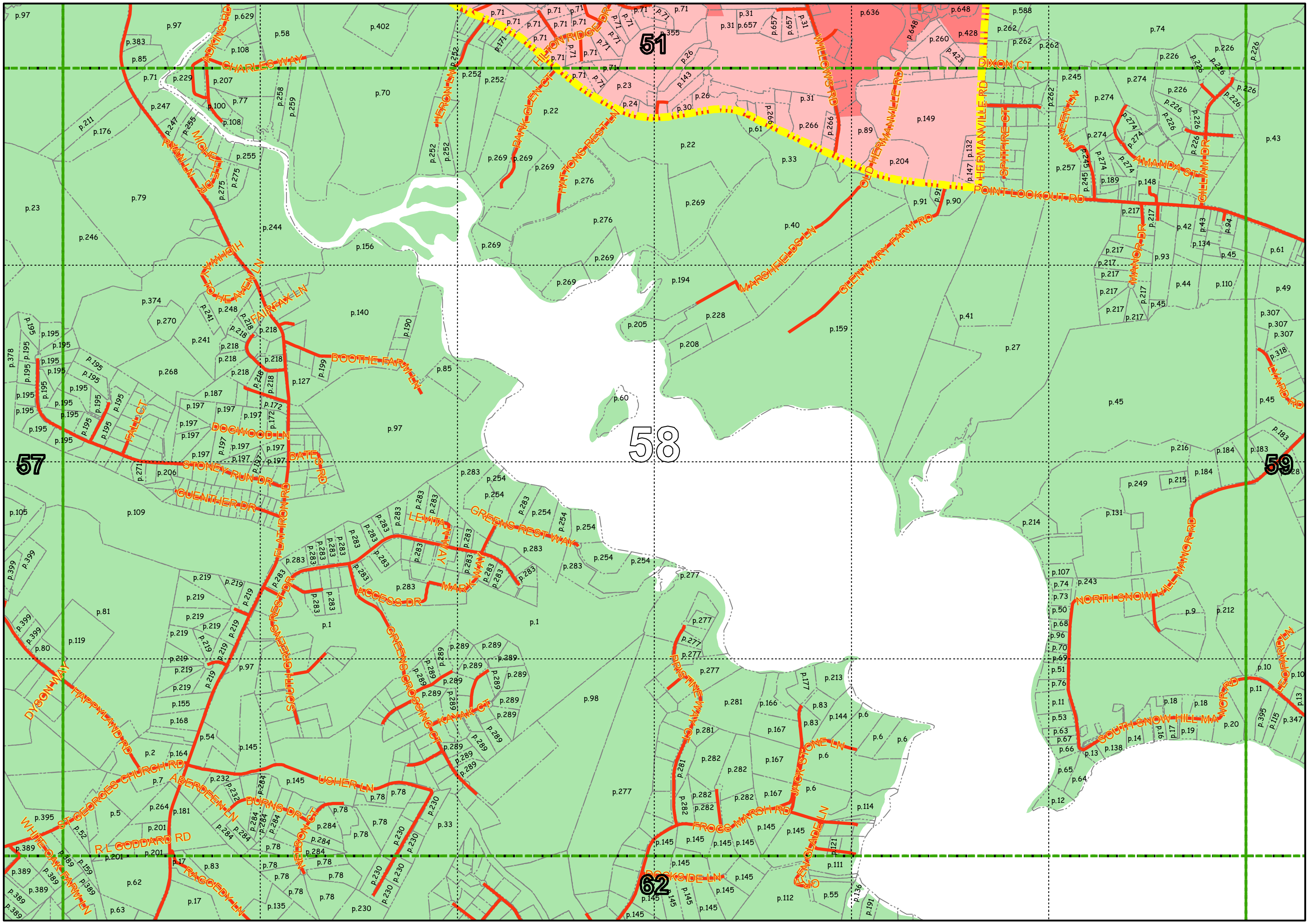
MAP 57

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



51
57
58
59
62
CHARLES WAY
DIXON CT
HERMANVILLE RD
POINT LOOKOUT RD
OLD HERMANVILLE RD
WILLOWS RD
HILTON RIDGE DR
HERON LN
PARK GLEN CT
HATTONS REST LN
MARSHFIELDS LN
GLEN MARY FARM RD
MANOR DR
AMANDA ST
GILLAM DR
FAIRFAX LN
BOOTHE FARM LN
DOGWOOD LN
STONEY RUN DR
GUENTHER DR
FLATIRON RD
LEVIN WAY
GREENS REST WAY
ACCESS DR
MARK WAY
GREENS CROSSING CT
DYSON WAY
HAPPYLAND RD
ST GEORGES CHURCH RD
ABERDEEN LN
USHER LN
BURNS DR
R L GODDARD RD
RAGGEDY LN
WHITE OAK FARM LN
FROGS MARSH RD
JACKSTONE LN
NORTH SNOW HILL MANOR RD
SOUTH SNOW HILL MANOR RD

Tax Map grid
Growth Areas
Property Lines
Roads

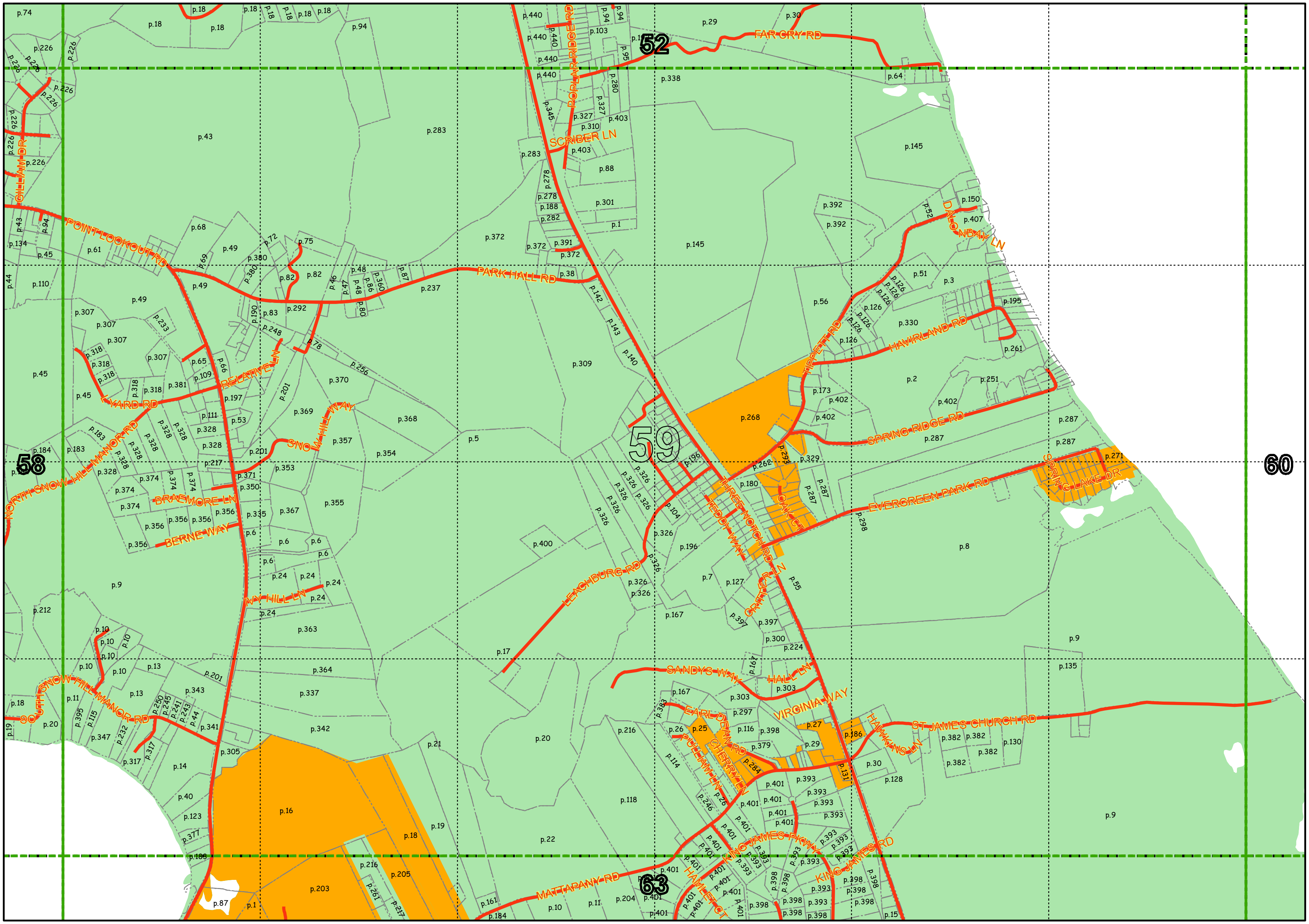
MAP 58

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



- Tax Map grid
- Growth Areas
- Property Lines
- Roads

MAP 59

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet

Tax Map grid
Growth Areas
Property Lines
Roads

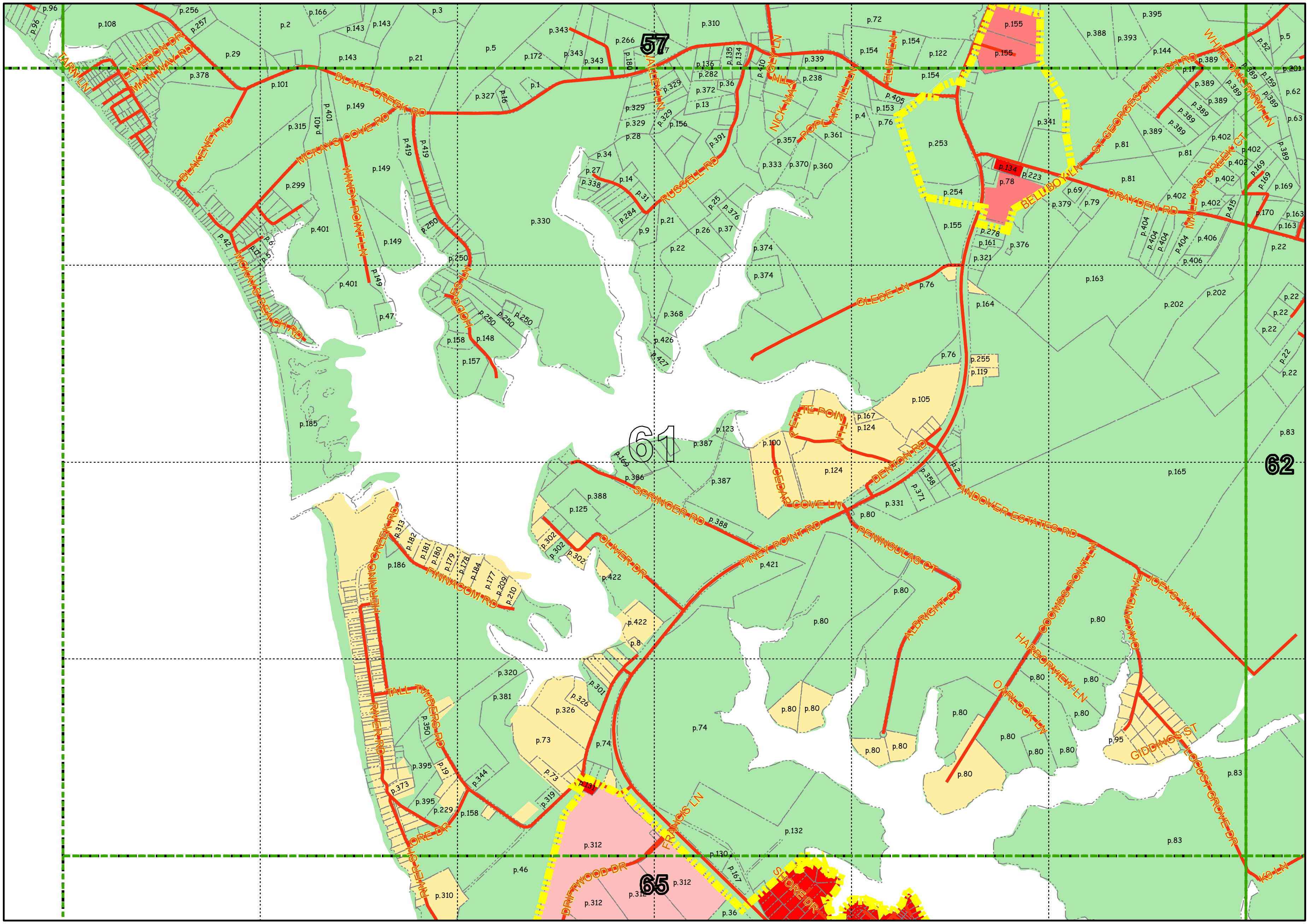
MAP 60

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



57
61
62
65
BLAKE CREEK RD
BLAKENEY RD
NICKS COVE RD
WINDY POINT LN
RUSSELL RD
POPLAR HILL LN
GLEBE LN
BELUBOY LN
DRAYDEN RD
ST GEORGES CHURCH RD
SPRINGER RD
OLIVER DR
PINEY POINT RD
PENINSULAS CT
ALDRIGHT CT
ANDOVER ESTATES RD
COOMBS POINT LN
HARBORVIEW LN
OAK LOCK LN
JOEYS WAY
GIDDINGS ST
LOCUST GROVE DR
HERRING CREEK RD
TALL TIMBERS RD
RIVER RD
DRIFTWOOD DR
FRANCIS LN
SHORE DR
CEDAR COVE LN
DENNISON RD

Tax Map grid

Growth Areas

Property Lines

Roads

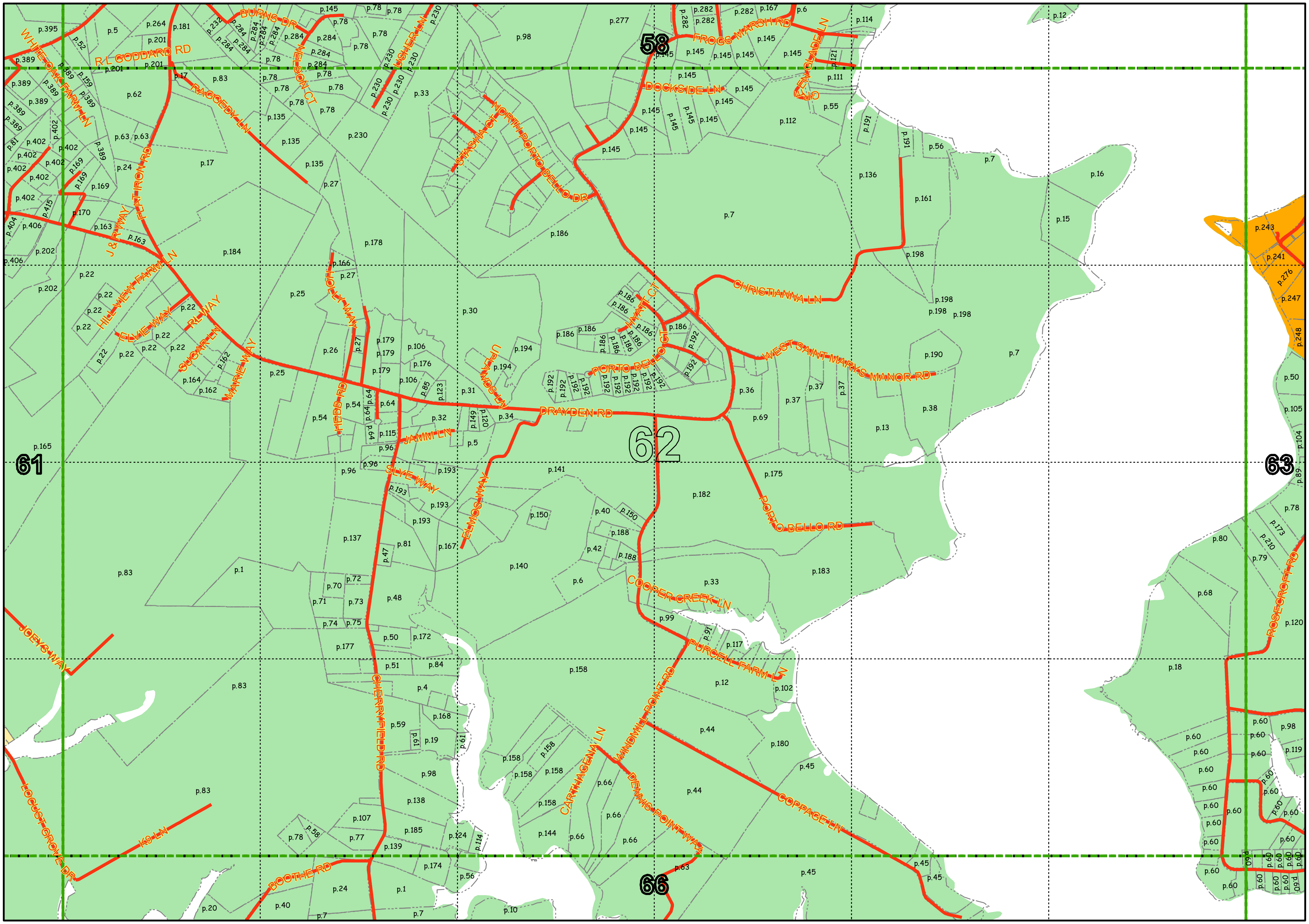
MAP 61

Sewer Category: S-1 S-3D S-6D RS-1 RS-D RS-E NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



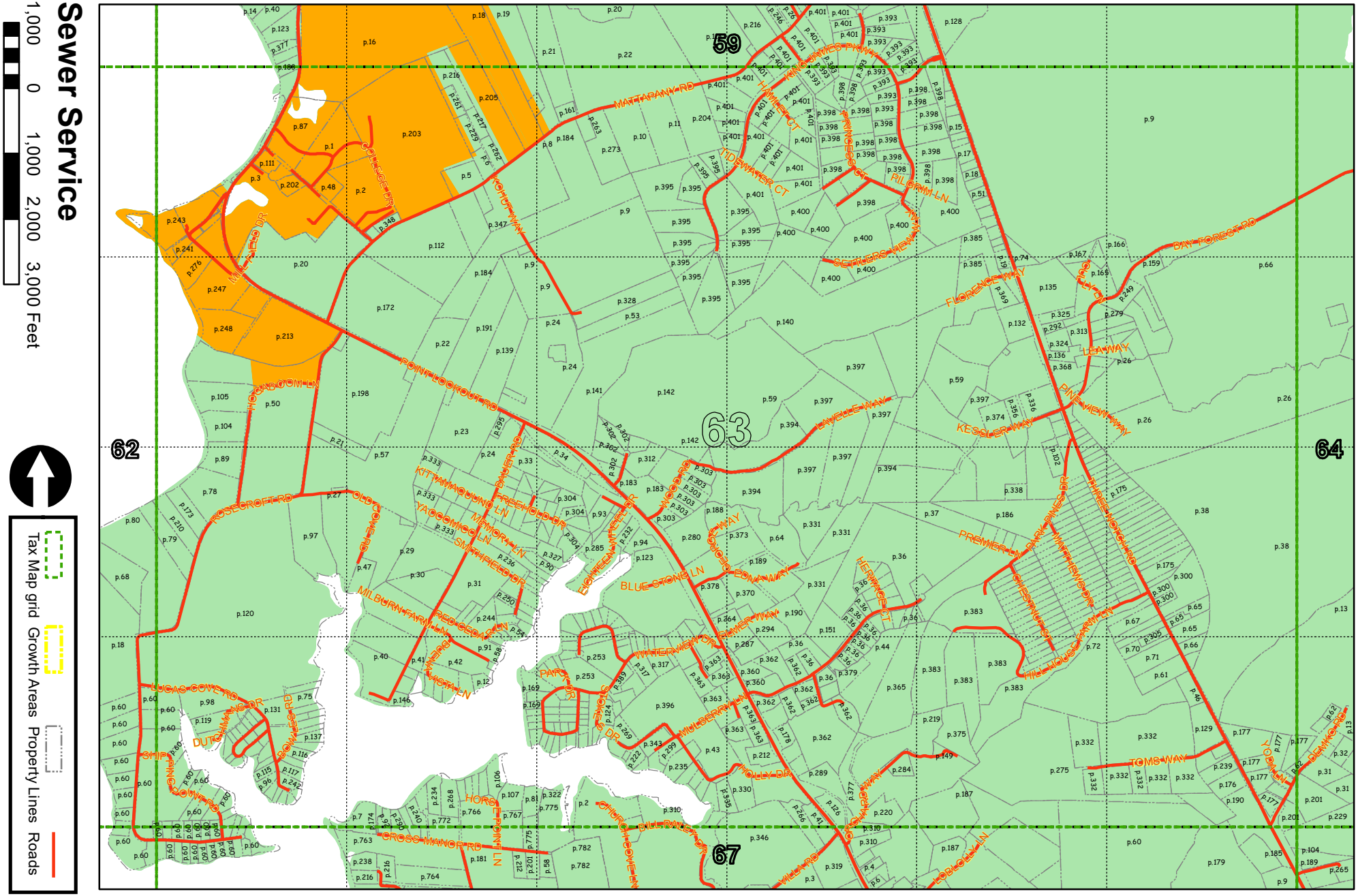
58
61
62
63
66
R L GODDARD RD
BURNS DR
NELSON CT
USHER LN
FROGS MARSH RD
DOCKSIDE LN
RAGGEDY LN
NORTH PORTO BELLO DR
CHRISTIANNA LN
WEST SAINT MARKS MANOR RD
DRAYDEN RD
PORTO BELLO RD
COOPER CREEK LN
PURCELL FARM LN
WINDMILL POINT RD
COPPAGE LN
CARTHAGENA LN
CHERRYFIELD RD
BOOTHE RD
KO LN
LOCUST GROVE DR
JOEYS WAY
HEBB RD
JAMM LN
SLYE WAY
ELMOS WAY
ROSECROFT RD
FLATIRON RD
HILLVIEW FARM LN
WHITE OAK FARM LN

Tax Map grid
Growth Areas
Property Lines
Roads

MAP 62

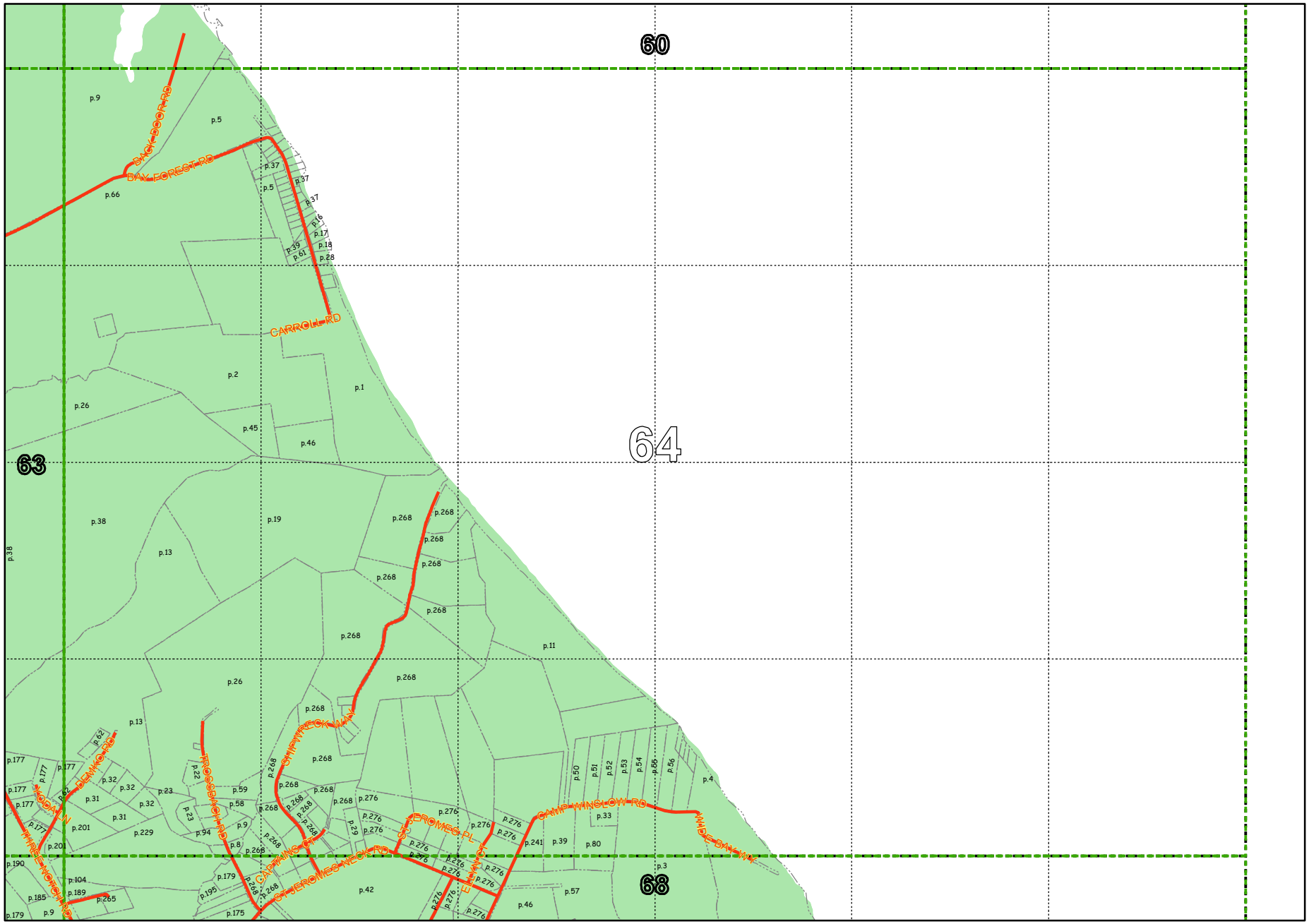
Sewer Category: S-1 S-3D S-6D RS-1 RS-D RS-E NPS

2017 Update


Sewer Service
1,000 0 1,000 2,000 3,000 Feet
Tax Map grid
Growth Areas
Property Lines
Roads
59
62
63
64
67
MAP 63
Sewer Category:
S-1
S-3D
S-6D
RS-1
RS-D
RS-E
NPS
2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet

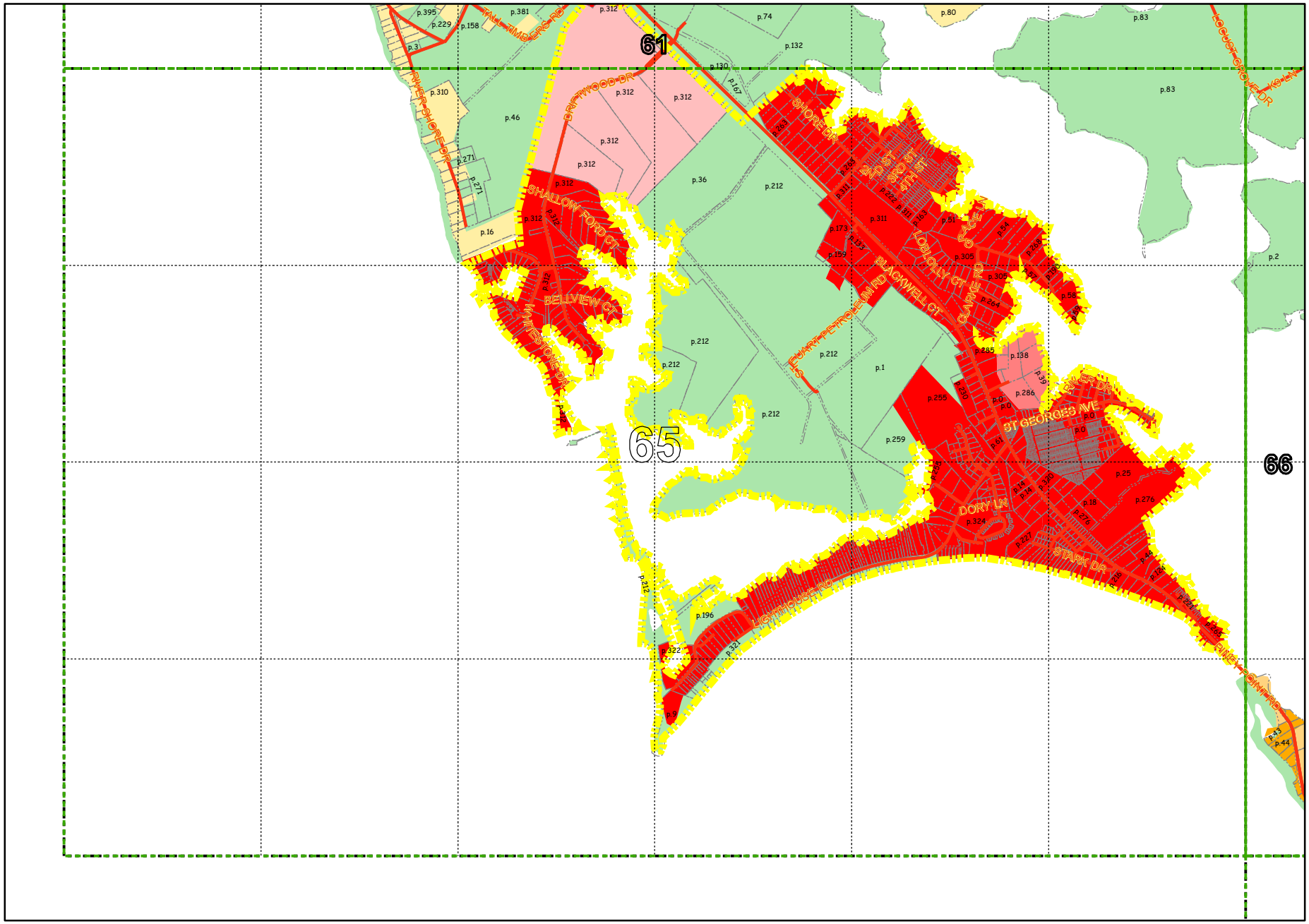


Tax Map grid
Growth Areas
Property Lines
Roads

MAP 64

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update



Sewer Service

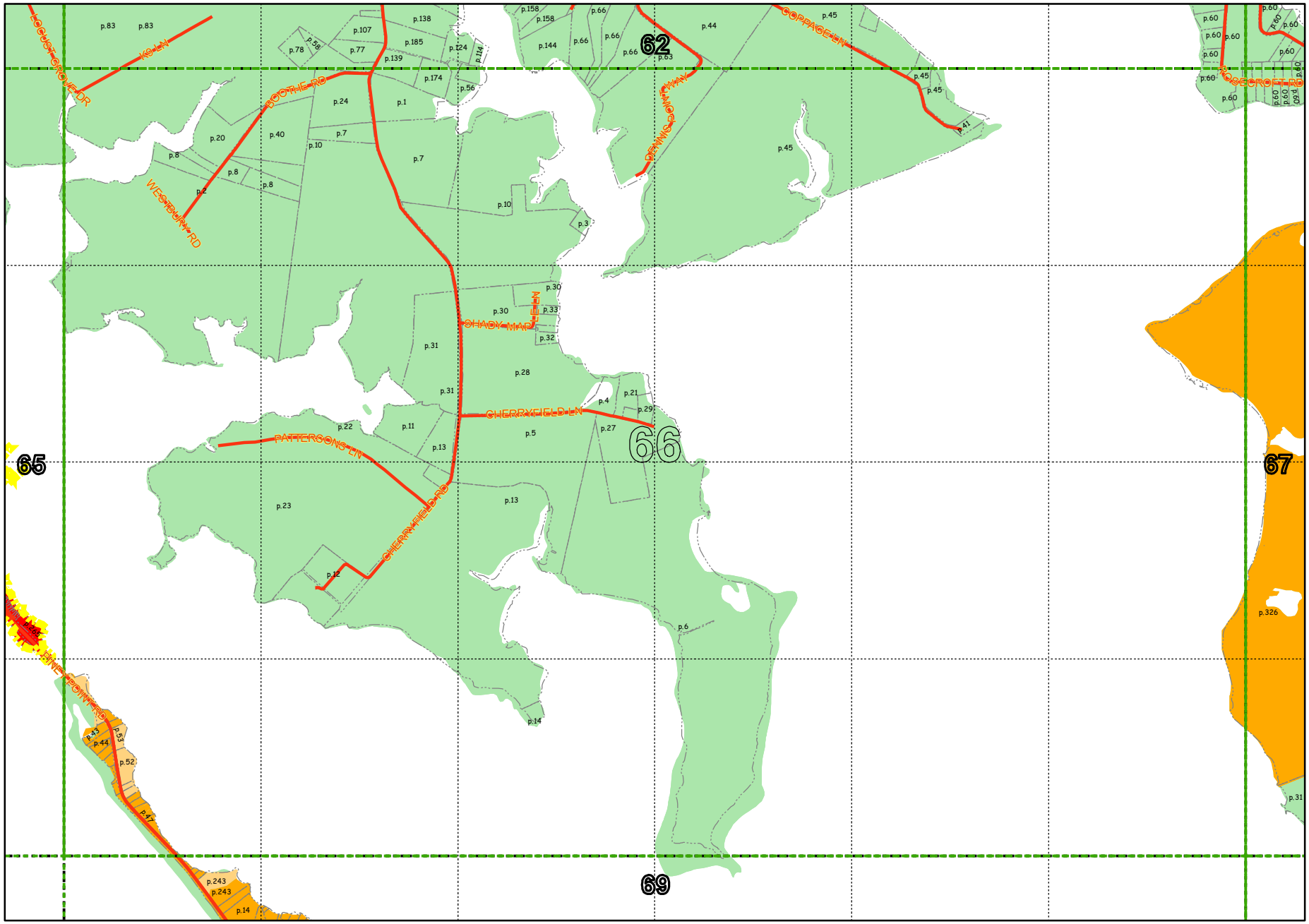
1,000 0 1,000 2,000 3,000 Feet

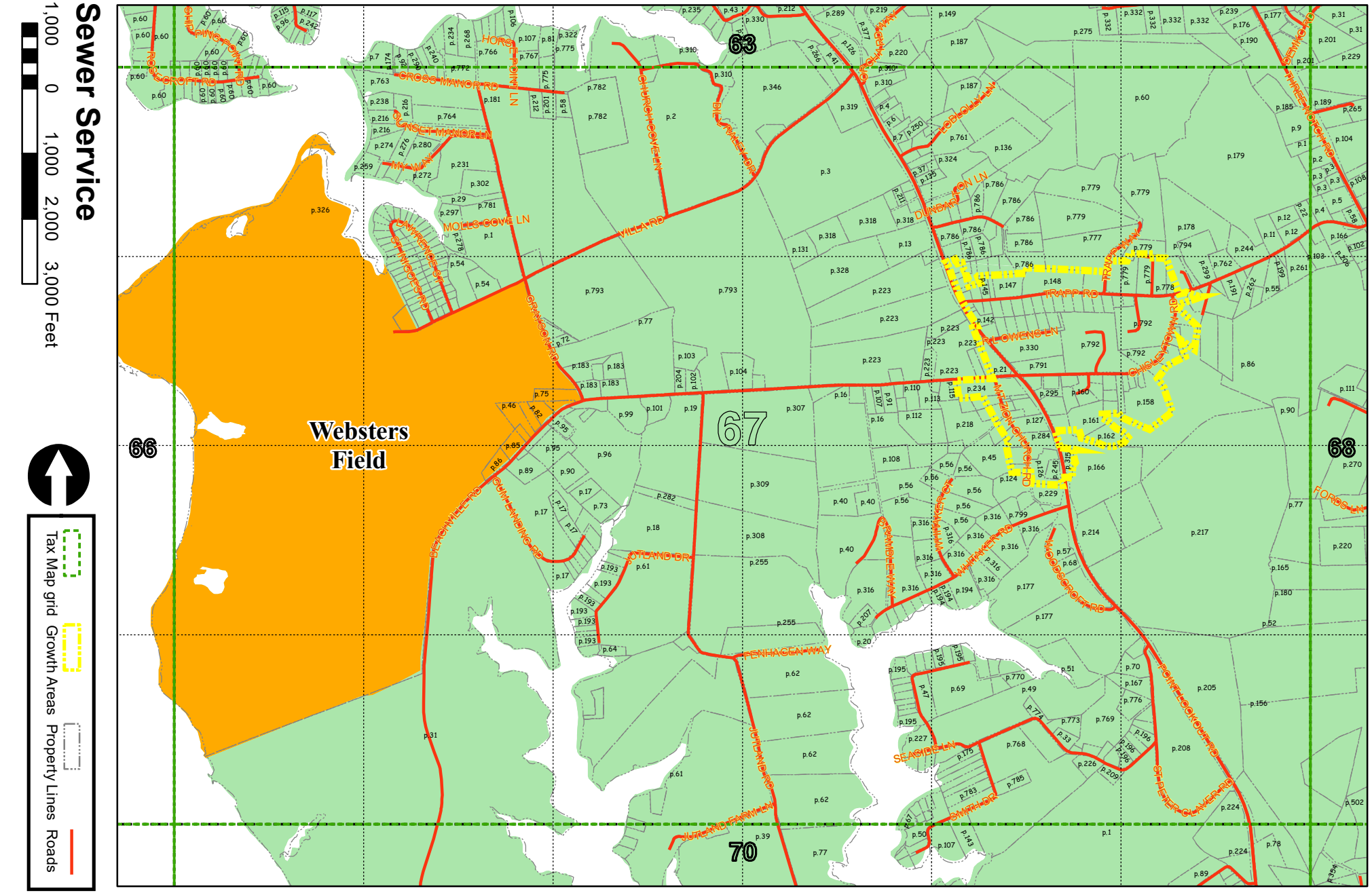
Tax Map grid
Growth Areas
Property Lines
Roads

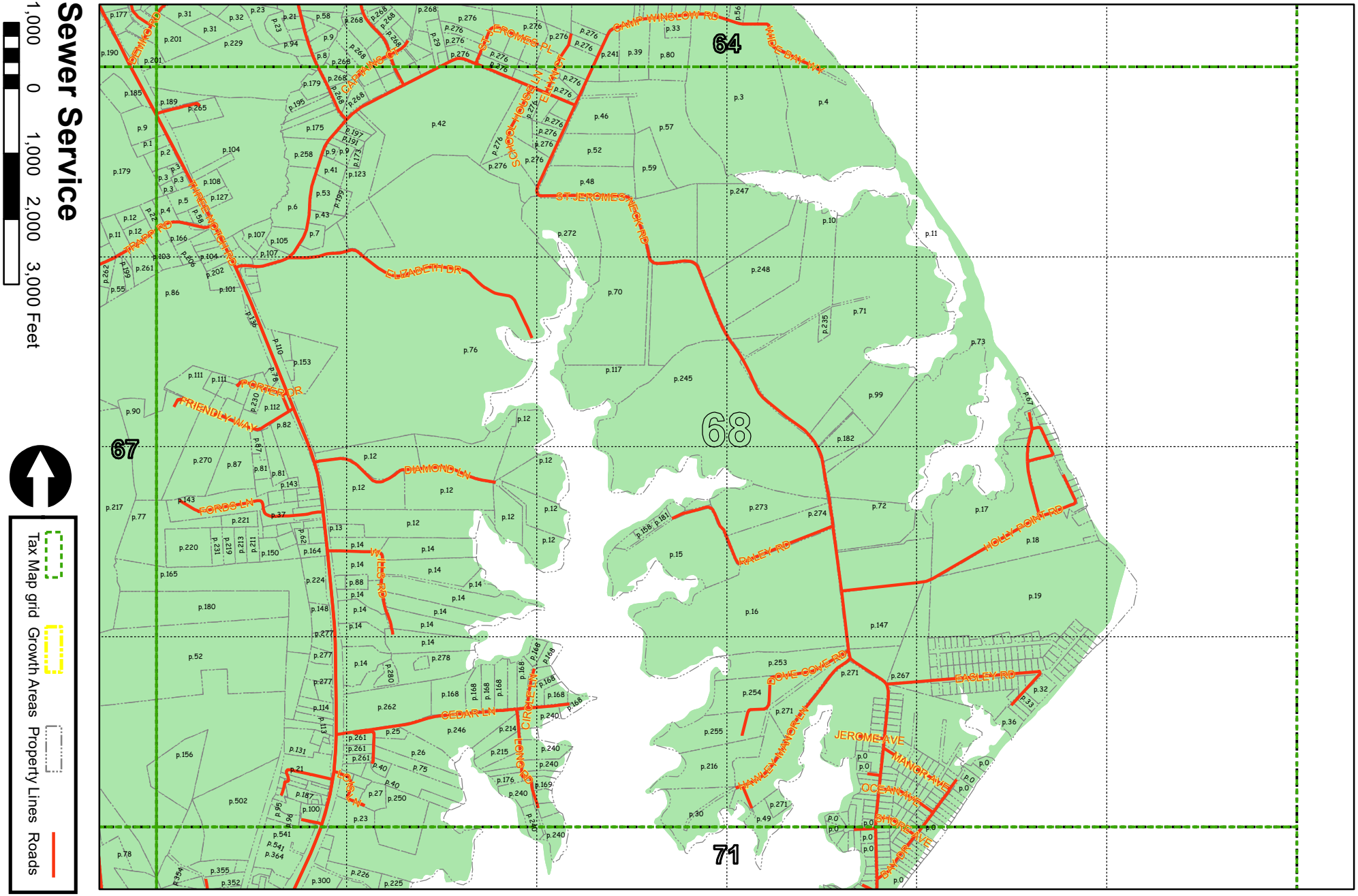
MAP 65

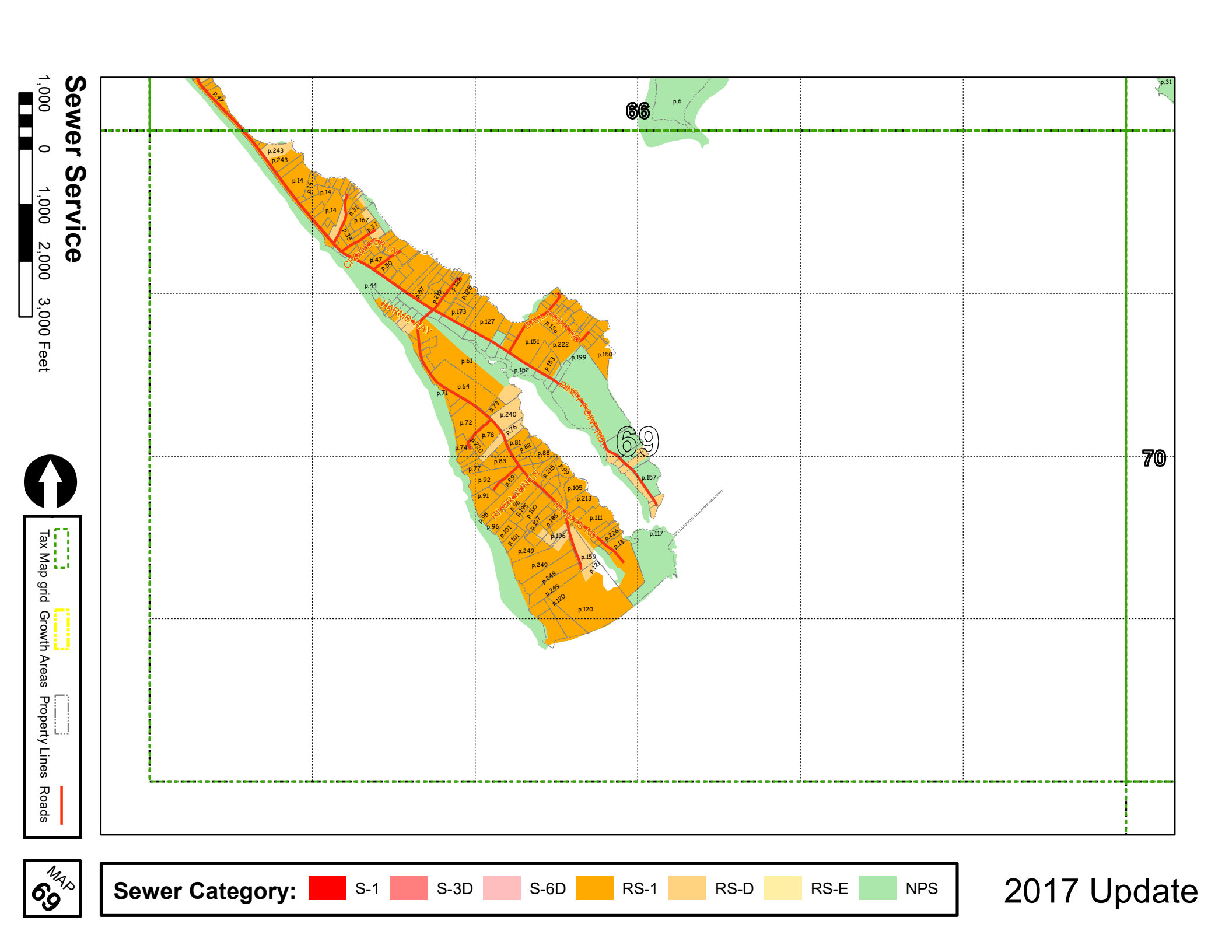
Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

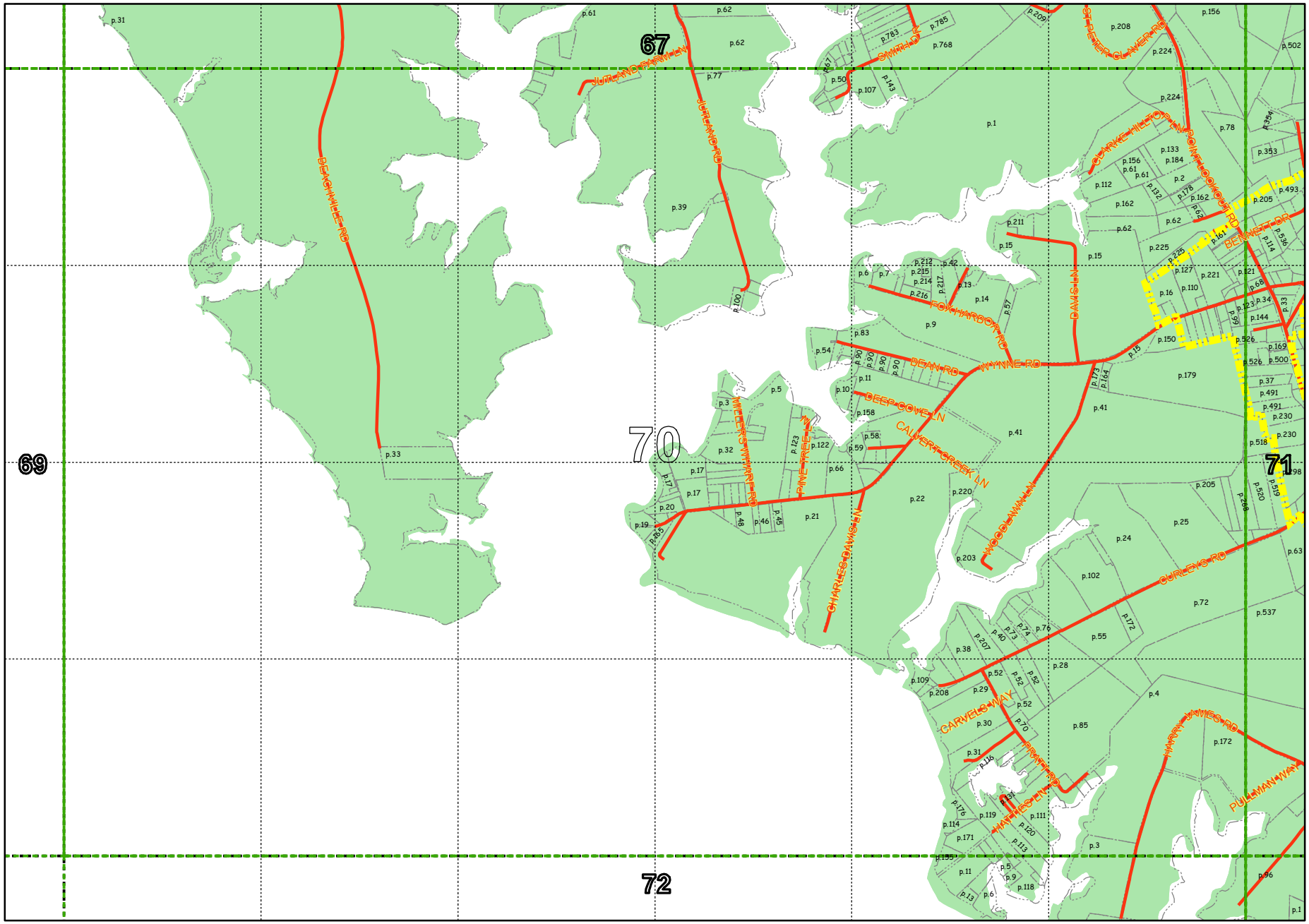
2017 Update


Sewer Service
1,000 0 1,000 2,000 3,000 Feet
Tax Map grid
Growth Areas
Property Lines
Roads
MAP 66
62
65
66
67
69
HOLLY GROVE DR
KOLN
BOOTHE RD
WESTBURY RD
COPPAGE LN
DENNIS CHAPEL WAY
FORGECROFT RD
SHADY MAPLE LN
CHERRYFIELD LN
PATTERSONS LN
CHERRYFIELD RD
PINE POINT RD
Sewer Category:
S-1
S-3D
S-6D
RS-1
RS-D
RS-E
NPS
2017 Update


Sewer Service
1,000 0 1,000 2,000 3,000 Feet
Websters Field
63
66
67
68
70
Tax Map grid
Growth Areas
Property Lines
Roads
MAP 67
Sewer Category:
S-1
S-3D
S-6D
RS-1
RS-D
RS-E
NPS
2017 Update


Sewer Service
1,000 0 1,000 2,000 3,000 Feet
Tax Map grid
Growth Areas
Property Lines
Roads
64
67
68
71
ST JEROMES NECK RD
CAMP WINSLOW RD
ELIZABETH DR
PORTER DR
FRIENDLY LN
DIAMOND LN
FORDS LN
WELLS RD
CEDAR LN
CIRCLE LN
LONG LN
RAILEY RD
HOLLY POINT RD
DOVE COVE RD
EASLEY RD
JEROME AVE
MANOR AVE
OCEAN AVE
SHORE AVE
MAP 68
Sewer Category:
S-1
S-3D
S-6D
RS-1
RS-D
RS-E
NPS
2017 Update


Sewer Service
1,000 0 1,000 2,000 3,000 Feet
Tax Map grid
Growth Areas
Property Lines
Roads
66
69
70
CROWDER LN
HARMS WAY
SAIL POINT RD
PINEY POINT RD
RIVER RUN LN
THOMAS RD
MAP 69
Sewer Category:
S-1
S-3D
S-6D
RS-1
RS-D
RS-E
NPS
2017 Update



Sewer Service

1,000 0 1,000 2,000 3,000 Feet

Tax Map grid
Growth Areas
Property Lines
Roads

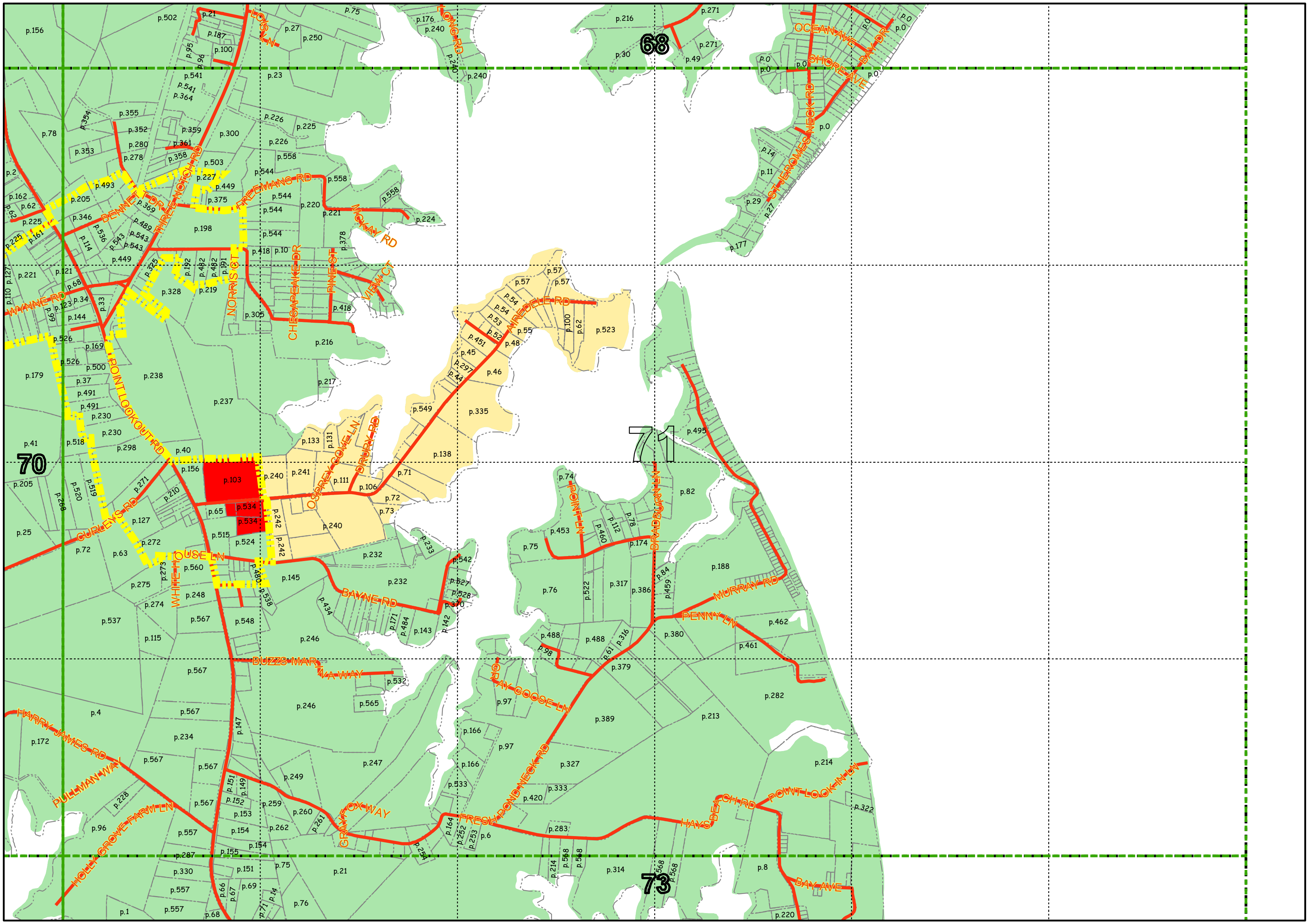
MAP 70

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



68
70
71
73
LOIS LN
LONG RD
OCEAN AVE
SHORE DR
BAY DR
NECK RD
THREE NOTCH RD
BENNETT DR
FREEMANS RD
MCKAY RD
NORRIS CT
CHESAPEAKE DR
PINE ST
VIEW CT
WAYNE RD
POINT LOOKOUT RD
CURLEYS RD
WHITE HOUSE LN
OSPREY COVE LN
DRURY RD
BAYNE RD
BUZZS MAR
BRADBURN LN
MURRAY RD
PENNY LN
GRAY GOOSE LN
HARRY JAMES RD
PULLMAN WAY
HOLLY GROVE FARM LN
PRESS POND NECK RD
HAYS BEACH RD
POINT LOOK IN LN
BAY AVE

Tax Map grid
Growth Areas
Property Lines
Roads

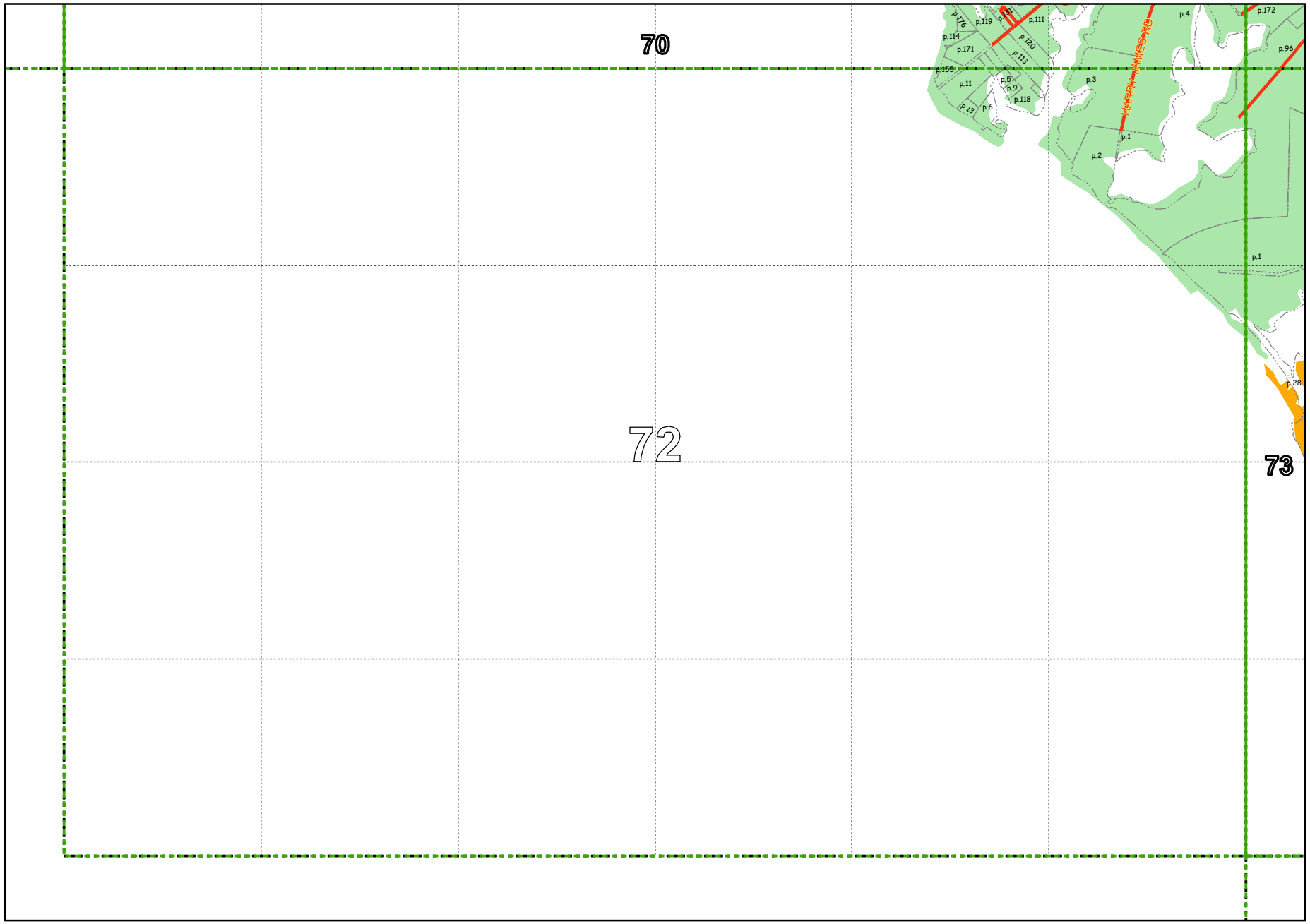
MAP 71

Sewer Category: S-1 S-3D S-6D RS-1 RS-D RS-E NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet

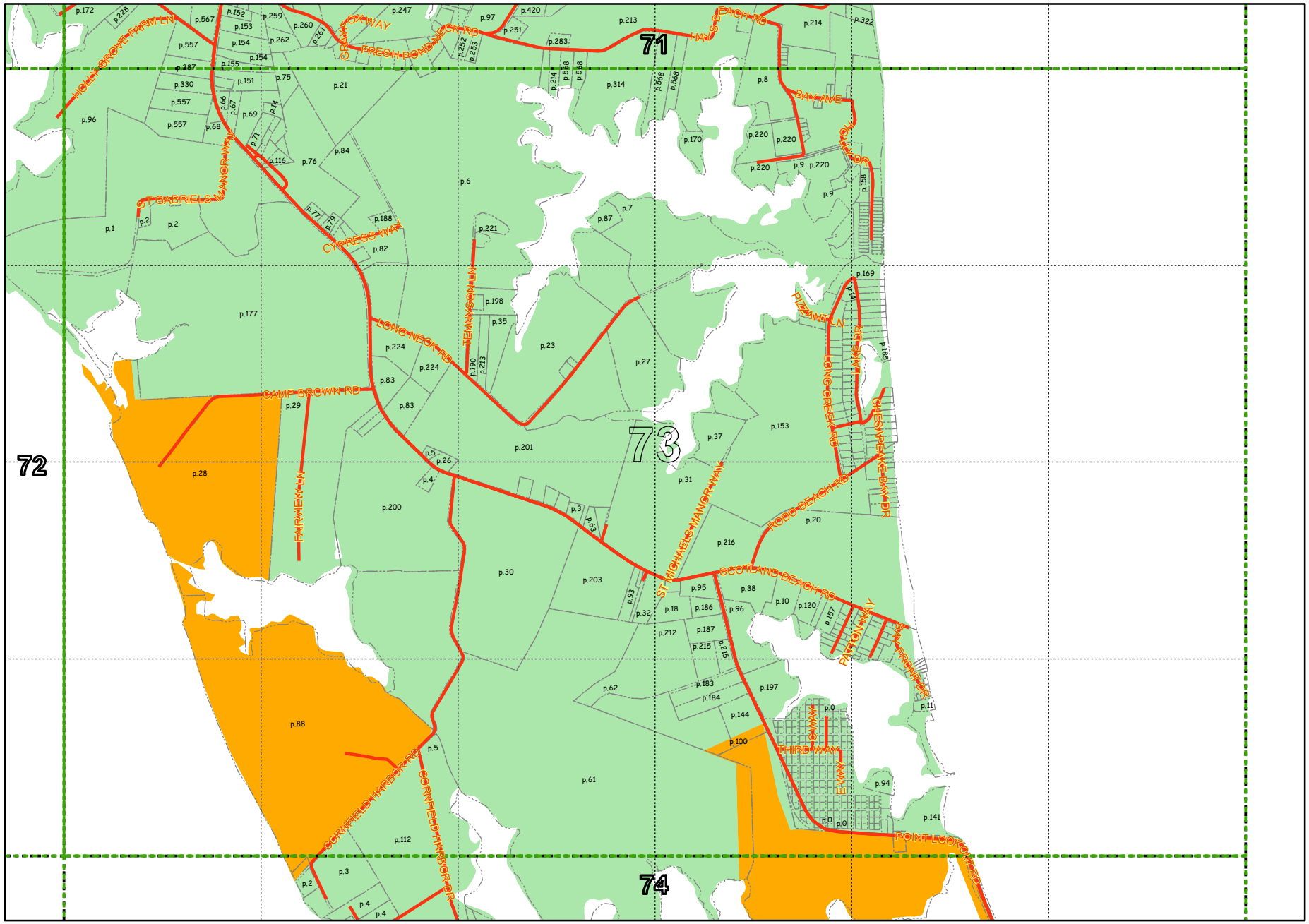


Tax Map grid
Growth Areas
Property Lines
Roads

MAP 12

Sewer Category: S-1 S-3D S-6D RS-1 RS-D RS-E NPS

2017 Update



Sewer Service

1,000 0 1,000 2,000 3,000 Feet

Tax Map grid
Growth Areas
Property Lines
Roads

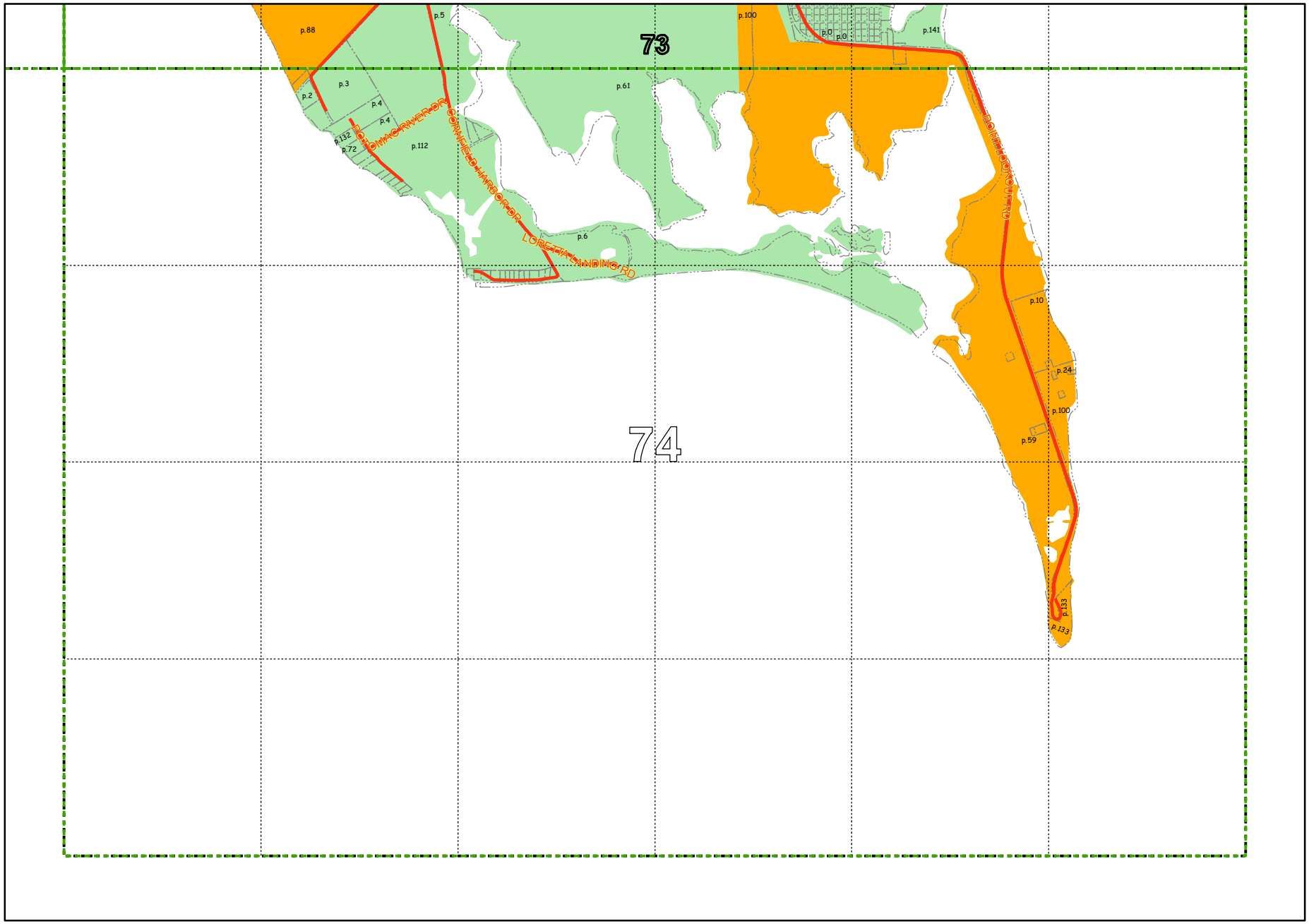
MAP 13

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update

Sewer Service

1,000 0 1,000 2,000 3,000 Feet



Tax Map grid
Growth Areas
Property Lines
Roads

MAP 74

Sewer Category: S-1 | S-3D | S-6D | RS-1 | RS-D | RS-E | NPS

2017 Update