

Draft Policy Guide Infrastructure and County Services

Emerging Themes

Goals

- Water quality protection and water conservation
- Water supply identifying new sources and interconnections
- Utility extension policies strengthening their relationship to development densities and targeted growth areas
- Siting and provision of public facilities –levels of service, collocated facilities, targeting growth areas, and avoiding current and future natural hazards
- Fiscally responsible growth
- Watershed based approach to stormwater management

Public Survey

The following survey questions are related to Infrastructure and county services. For detailed information and analysis by geographic area see the full survey results.

Q7, Q8, Q9, Q14, and Q16.

Focus Groups Meetings Weighted Priorities

The following consensus statements are related to Infrastructure and county services. For detailed information and analysis see the full <u>focus group meetings results</u>.

- Infrastructure improvements to accommodate growth.
- Expand and upgrade county water and sewer systems.
- Improvements to existing drainage infrastructure.
- Broadband access.
- More community buildings/senior centers.
- Vocational education for trade jobs.

Board of Commissioners Vision Statement

The following statement is extracted from the Board of Commissioners vision statement. For more information see the full vision statement.

"Development occurs in areas adequately served by county infrastructure, or occurs concurrently with planned infrastructure improvements."

Engineering and Utility Departments Policy Recommendations

- Do not subsidize developers of commercial areas with incentives using infrastructure cost reductions paid by the existing utility customers.
- Edit the UDO to state that all development regardless of location in the County will be connected to the water system and funded by the developer.
- Create a water line interconnection with Dare County between Duck and Pine Island.
- Update the water line interconnection contract with Camden County.
- Place funding for fire hydrants in each individual Fire Department Budget.
- Develop a water system growth plan and extension policy for the water systems.
- It is a challenge locating water sources for expansion of the SOBWS and keeping up with the demand requirements associated with new development and redevelopment.
- Create a paid County wide Fire Department and make them responsible for all fire hydrant maintenance and ISO ratings.
- Connect water and sewer infrastructure between the Mainland and Corolla across the Mid-County Bridge.
- Build a separate water treatment facility if dictated by growth south of Grandy. In lieu of a water treatment facility consider water storage reservoir south of Grandy fed by a water transmission main. A transmission water main is not connected to any other sources except the original water source and a water tank.
- Create a separate water transmission main north of the existing water treatment facility from Maple to Moyock. The transmission main will be design with fire flow capabilities for expanding commercial areas in Moyock.
- Create a separate Wastewater Department.
- Acquisition of privately owned sewer systems including VOH, Carolina Water systems on the Outer Banks, and Eagle Creek.

Committee and Planning Staff Policy Recommendations

- To adequately reflect the actual impact on public utilities (1) establish a tiered utility connection fee schedule based on the number of bedrooms for single family homes, and (2) increase the utility rate fee for single family homes that use more than 20,000 gallons per month.
- Address drainage and stormwater management issues more broadly from a watershed or drainage basin perspective. To be successful this requires the establishment of adequately funded service districts.
- The most efficient and cost-effective provision of county services happens when existing and proposed development occurs in areas already served.
- Establish mutually beneficial public/private partnerships to encourage the extension of county infrastructure.
- Policy to address wastewater systems and their relationship to increased development densities?
- Public utilities as a tool to control (limit) development or incentivize (encourage) development?
- Implement water conservation programs to reduce potable water consumption on the outer banks. This will delay the need for new water supplies and facilities.

2006 Land Use Plan Policies

Stormwater and Drainage

<u>POLICY WQ4</u>: RUNOFF AND DRAINAGE from development, forestry and agricultural activities shall be of a quality and quantity as near to natural conditions as possible. Post-development runoff shall not exceed pre-development volumes.

<u>POLICY WQ8</u>: Currituck County shall support the development and maintenance of a countywide COMPREHENSIVE DRAINAGE AND FLOOD MANAGEMENT PLAN, including public and private actions in support of plan implementation. Currituck County shall support County, NCDOT and property owner cooperation in preventing and resolving stormwater problems.

<u>POLICY ES1</u>: New development shall be permitted to locate only in areas with SUITABLE SOIL and where ADEQUATE INFRASTRUCTURE is available. For existing development located on poor soils, and where sewage treatment upgrades are necessary, engineering solutions may be supported, provided that environmental concerns are fully addressed.

Water and Sewer

<u>POLICY WS1</u>: Currituck County shall support a variety of means of obtaining potable water for the county, thereby keeping open MULTIPLE OPTIONS FOR FUTURE WATER SUPPLIES. These options may

include ground water from shallow and deep aquifers, surface water sources (if available), and cooperative arrangements with other public and private sources. Treatment may be conventional, reverse osmosis or other innovative methods.

<u>POLICY WS2</u>: Currituck County may support efforts to REGIONALIZE AND INTERCONNECT WATER SUPPLY SYSTEMS. The benefits may include (1) lower capital investment and operating costs per capita, (2) improved ability to meet stricter water quality standards, (3) rate structures which balance and equalize customer charges throughout the region, and (4) the flexibility to shift supplies, better control groundwater pumping and share capacity during periods of high demand or limited supply.

<u>POLICY WS3</u>: Currituck County endorses UTILITIES EXTENSION POLICIES that focus water and sewer services (1) within existing developed areas and in nearby targeted growth areas identified as Full Service and Limited Service areas, (2) where development densities would make the provision of all public services more efficient, (3) where the land is particularly well suited for development and (4) away from environmentally sensitive areas, such as areas with extensive wetlands or the northern beaches of the Outer Banks.

<u>POLICY WS4</u>: Currituck County endorses utilities extension policies that avoid those parts of the county best suited for agriculture and to PROTECT FARMLAND FROM DEVELOPMENT PRESSURES brought about by such utilities. Exceptions to this policy may include extensions for major economic development initiatives, and extensions to address imminent public health problems or related environmental hazards.

<u>POLICY WS5</u>: Currituck County may ASSIST IN THE EXPENSE OF EXTENDING WATER AND SEWER services when such assistance (1) will result in the development of desirable new or expanded industry and the creation of permanent jobs in numbers commensurate with the expenditure required, (2) will result in a positive payback to the county's taxpayers, in terms of the taxes generated by the new industry versus the costs incurred, (3) would not otherwise be provided, potentially playing a critical role in a location decision by the prospective industry, and would not result in a significant degradation of environmental quality.

<u>POLICY WS6</u>: Currituck County endorses the proper use and maintenance of APPROVED SEPTIC SYSTEMS in suitable soils as an environmentally acceptable means of treating and dispersing waste from low-density development.

<u>POLICY WS7</u>: Currituck County allows for the appropriate use of PACKAGE SEWAGE TREATMENT PLANTS as a means of achieving more efficient land use, while properly disposing of waste. Such systems shall have a permanent organizational ownership to guarantee their proper management, including operation, maintenance and replacement needs. Depending on their location in the county, such systems may be required to have a design that allows for assimilation into a centralized system at a future date.

<u>POLICY WS8</u>: CENTRAL AND PACKAGE TREATMENT PLANTS shall be designed using best available technology to eliminate or reduce odors. In addition, such plants shall be properly located so as not to adversely impact nearby land uses.

<u>POLICY WQ1</u>: Currituck County's GROUND WATER RESOURCES shall receive a level of protection commensurate with their enormous value. Efforts shall be made to monitor the quantity and quality of

groundwater resources, with an eye toward preventing pollution, saltwater intrusion, or excessive drawdowns. Particular attention shall be given to locations near water and sewer treatment plants and areas with concentrations of septic tanks.

<u>POLICY WQ10</u>: SEWAGE TREATMENT DISCHARGES shall not be permitted into the waters of Currituck County. WATER TREATMENT DISCHARGES may be allowed if such discharge would not cause significant degradation of water quality (e.g. negatively affecting the fisheries resource).

Facilities and Services (not including Parks and Recreation or Public Access)

<u>POLICY PP1</u>: The County shall support and actively engage in LONG RANGE PLANNING AND BUDGETING FOR CAPITAL FACILITIES, with particular emphasis on water supply, public schools, parkland, storm water management facilities, public safety buildings and equipment, and other necessary facilities.

<u>POLICY PP2</u>: Currituck County shall continue to implement a policy of ADEQUATE PUBLIC FACILITIES, sufficient to support associated growth and development. Such facilities may include but not be limited to water supply, school capacity, park and open space needs, fire fighting capability, and law enforcement.

<u>POLICY PP3</u>: The costs of infrastructure, facilities and services (e.g. schools, parks, water supply, etc.) related to the DEMAND CREATED BY NEW GROWTH AND DEVELOPMENT shall be borne, in equitable proportion, by those creating the additional demand. So as to lessen the burden on the general property tax payer, this approach may include a land transfer tax, impact fees on new development, upzoning fees, and user fees for new facilities.

<u>POLICY AG3</u>: County ACTIONS CONCERNING INFRASTRUCTURE (e.g. schools, parks, and utilities) and regulations shall serve to direct new development first to targeted growth areas near existing settlements identified as Full Service Areas on the Future Land Use Map, rather than "leapfrogging" to locations in the midst of farmland and greenspace identified as Rural and Conservation areas on the Future Land Use Map.

<u>POLICY PS1</u>: As the area grows, the County may establish strategically located SUBSTATIONS FOR PUBLIC SAFETY SERVICES (i.e. law enforcement, fire fighting and rescue), provided that sufficient resources can be made available to properly staff and equip them.

<u>POLICY PS2</u>: Currituck County shall support and encourage the development and improvement of FIRE FIGHTING SERVICES that enhance the security and safety of life and property, while resulting in the added benefit of lower property insurance rates. The need for additional fire stations or improvements to existing fire stations shall be examined annually to keep pace with the growth of the area.

<u>POLICY NH3</u>: New PUBLIC FACILITIES AND STRUCTURES, as well as improvements to existing public facilities and structures, shall be located and designed to mitigate natural hazards. When placement in a natural hazard area is unavoidable, compliance with the National Flood Insurance Program and County Flood Damage Prevention Ordinance shall be required.

Schools

<u>POLICY SF1</u>: Currituck County shall support and actively engage in ADVANCED PLANNING FOR THE LOCATION OF NEW SCHOOLS. Such locations shall serve to reinforce contiguous growth patterns near existing developments rather than promoting sprawl in more rural locations. New schools shall be viewed as a cornerstone of the communities in which they are located and shall serve to proactively influence growth.

<u>POLICY SF2</u>: Currituck County encourages OFFERS OF LAND FOR THE SITING OF NEW SCHOOLS, particularly in conjunction with related community development. Acceptance of such properties shall be based on approved location and design criteria.

<u>POLICY SF3</u>: Site planning for TRAFFIC MANAGEMENT AND SAFETY IN THE VICINITY OF PUBLIC SCHOOLS shall be a priority.

<u>POLICY SF4</u>: Currituck County shall continue to support a service level policy for schools that calls for the construction and maintenance of classroom space sufficient to AVOID THE USE OF MOBILE CLASSROOMS.

Solid Waste Policies

Emergency Management Policies

Geography Specific

<u>POLICY OB1</u>: Currituck County supports the provision of INFRASTRUCTURE (e.g. potable water) AND SERVICES (e.g. law enforcement officers) adequate to meet basic quality of life and public health and safety requirements of residents on the **Outer Banks**, while at the same not stimulating inappropriate intensive development in environmentally fragile, hazardous barrier island areas.

<u>POLICY OB4</u>: Currituck County supports policies and actions that require the square footage, number of bedrooms, and/or occupancy levels of RESIDENTIAL STRUCTURES to be determined in proportion to lot size, as well as public health and safety issues concerning water supply and sewage disposal, fire safety, emergency services, parking, traffic loads during evacuations, etc. (**Outer Banks**)

<u>POLICY OB6</u>: Concerning the **OFF-ROAD AREAS OF THE OUTER BANKS**, Currituck County shall not permit or encourage the provision of growth-inducing facilities and services to these areas, including for example, commercial services, centralized sewage treatment and hard surface roads.

<u>POLICY KI3</u>: Currituck County shall support efforts to improve community services in the **Knotts Island** area. Services which may warrant improvement include: (1) FIRE SERVICE, to address fire safety as well as reducing insurance costs and (2) COMMUNICATIONS following major storm events (3) access to LIBRARY SERVICES, and (4) access to INDOOR RECREATION facilities.

<u>POLICY KI4</u>: Currituck County shall not provide or encourage the provision of INFRASTRUCTURE OR UTILITIES that would foster greater development densities on **Knotts Island**, including particularly, centralized sewage treatment services.

Moyock Small Area Plan Policies

Stormwater and Drainage

Policy IS4: Ensure that stormwater runoff, soil erosion, and sedimentation is properly managed to reduce nuisance flooding and pollution of sensitive environmental areas.

Policy IS5: Encourage retrofitting of NCDOT drainage infrastructure to manage nuisance flooding.

Water and Sewer

Policy IS3: Recognize that water and sewer services have significant influence on growth and require that consideration be given to the placement of proposed utilities in perspective to desired growth patterns.

Facilities and Services

Policy IS 1: The costs of infrastructure, facilities, and services related to new growth and development should be borne primarily by those creating the demand.

Policy IS2: Meet the infrastructure and service needs of the community at appropriate levels as the community continues to focus growth and public investment in areas identified as activity centers.

Policy IS6: Encourage development of <u>shared (co located)</u> county facilities for public safety, senior services, recreation, and other community facility services.

Policy IS8: Provide adequate maintenance for existing community facilities/properties and plan for the future management operations/staffing appropriate for the needs as land is acquired or sites are developed.

Schools

Policy IS7: Encourage and actively engage in advanced planning for the location of new public schools. School locations should serve to reinforce desirable growth patterns and should be viewed as cornerstone of the community.

Economic Development Opportunity Assessment for Lower Currituck

Follow Currituck land use planning map in concentrating residential and commercial development in series of village sites separated by preserved natural, green space and agrarian segments. This necessarily requires attention to provision of water, sewer and Internet infrastructure to incent the clustering of residential and commercial development in the following potential vibrant villages:

Point Harbor

- Jarvisburg
- Grandy
- Mid-county bridge mainland (future)

Levels of Service/Technical Data

Water and Wastewater				
Utility System	Current Peak	Current Plant	Total Expansion	Projected Demand
	Demand gpd	Capacity gpd	Capacity gpd	(20 years) gpd
Mainland Water	1,352,000	2,900,000	4,400,000	2,012,000
Southern OBX Water	2,914,000	3,200,000	5,200,000	3,534,736
Moyock Regional Wastewater	38,088	139,000	640,000	
Maple Park Wastewater	10,290	40,000	160,000	
Grandy Wastewater	26,170	80,000	120,000	
Ocean Sands Wastewater	505,967	600,000	1,200,000	

^{*} See Currituck County Water/Wastewater/Stormwater Utilities PowerPoint dated 11/30/2016.

Stormwater Management				
Development	Development Storm Model	Development Discharge Rate		
Scenario				
Major	24-hour/10-year storm event on	24-hour/2-year storm event on wooded		
Subdivision	improved site (5.73" rain event)	site (3.73" rain event)		
Nonresidential	24-hour/10-year storm event on	24-hour/2-year storm event on wooded		
Development	improved site (4.82" rain event)	site (3.73" rain event)		
Single Family	Greater than 10,000 square feet of impervious coverage, or an increase in allowable			
Dwellings	lot coverage, requires detention of 4" rain event			

Senior Services				
Facility	Max Occupancy	Daily Average	2016 Total Visits	
Barco 10,472 sq. ft.	385	42	10,343	
Knotts Island 2,120 sq. ft.	59	11	2,304	
Powells Point 1,848 sq. ft.	54	9	2,095	
TOTAL	498	62	14,440	

School	Capacity*	ADM Jan 2017	
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MOYOCK ELEMENTARY SCHOOL	583	489	
SHAWBORO ELEMENTARY SCHOOL	683	539	
CENTRAL ELEMENTARY SCHOOL	282	204	
	1548	1232	
GRIGGS ELEMENTARY SCHOOL	480	270	
JARVISBURG ELEMENTARY SCHOOL	339	289	
	819	559	
KNOTTS ISLAND ELEMENTARY SCHOOL	258	73	
MOYOCK MIDDLE SCHOOL	671	546	
CURRITUCK MIDDLE SCHOOL	558	365	
	1229	911	
CURRITUCK HIGH SCHOOL	1216	1006	
JP KNAPP EARLY COLLEGE	300	289	
	1516	1295	
Current Student Generation Re	ates		
Elementary Schools	0.25		
Middle Schools	0.08		
High Schools	0.14		
Source 2004 Student Generation Rates Tischler	& Associates, Inc.		
Actual Generation Rates - Subdiv	visions		
Moyock Township	0.48		
Crawford Township	0.37		
Poplar Branch ML Township	0.38		
Fruitville ML Township	0.29		

Currituck County Library (EARL)

- Regarding facility access, the 2012 standards simply refer to the general standard regarding the
 geographic location of public libraries, stating that public library locations should require "no more
 than a 30 minute drive in rural areas, or establish other service targets based on unique
 community needs."
- Improving library service and access to Knotts Island residents are a current and ongoing focus.
- Public Library Foundation members have also mentioned improving service and access for those
 residing in the southern part of Currituck County, however, those residents are situated between
 the existing Barco Library and Dare County's Kill Devil Hills Public Library. Currituck residents are
 able to utilize Camden, Dare, Pasquotank, and Currituck County Public Libraries as the four counties
 (eight library locations) make up the East Albemarle Regional Library (EARL) System.
- Library of Virginia Planning for Library Excellence:

Quality		Total Gross Square Feet Per Capita		
	Population Level			
A.	Up to 25,000 .5 SF with .8 desired	25,001 - 100,000 .6 SF	100,001 - 500,000 .6 SF	Over 500,000 ,6 SF
AA	.9 SF	.8.SF	.7 SF	.65 SF
AAA	1.0 SP	1.0 SF	1.0 SP	.85 SF

Social Services

I think the way DSS will deliver eligibility services (Medicaid, food Stamps other financial aid) will change drastically over the next 20 years. I would not even be willing to predict if Medicaid and food stamp staff will be local DSS employees. With the proper technology and security, a lot of that could be done by remote employees. That delivery system is currently being transformed through NC Fast. I would think a great deal of the office space needed for (Social Services) could be used for other staff.

I believe the needs for Senior Services for the aging NC population may certainly require more staff and more services. Currituck needs something now that is in-between living at home and Currituck House. We'll still need support services to help those who want to live in the community.

We will need mobile technology to connect with state systems.

I think the DSS building will become "one stop shopping" for all related services.

Cooperative Extension

- Capitalizing on the OPAL population as volunteers for:
 - o 4-H clubs,
 - o Extension Master Gardener volunteers, and
 - Extension Master Foods volunteers.
- Increasing Extension Master Gardener volunteers to expand availability of educational resources for home horticulture and home food production as number of farms reduce.
- Working with large farms to establish preservation plans and best practices to coexist with increasing residential establishments.
- Increasing foods, nutrition and health programming to combat health trends outlined in community health study by utilizing Master Foods Volunteers and a variety of technologies (video, web conference, etc).

Aside from necessary budgetary resources the major implication for community infrastructure from my department's standpoint would be access to community meeting spaces. While the Extension center can service quite a few needs and is centrally located, I foresee a need to offer programs in local communities (specifically those that are volunteer and not staff driven). We are already seeing a trend in this direction with lack of public transportation resources and a working population that has already spent considerable time on the road. In fact - adequate transportation resources is really our biggest barrier to program right now, especially among the youth audience. Schools no longer bus after school

hours and have increased restrictions and requirements regarding the use of their transportation resources.

Emergency Management

Our level of service for communications will be dependent on many factors. If the population swells, the number of emergency responders rises then we'll need more dispatchers to answer the calls for service, whether its emergent or non-emergent. Our radio system will need to expand, also causing the need for more dispatchers to monitor radio traffic. We currently have a Communications staff of 14. We could easily double in staff in the next 20 years. While technology eliminates the need for staffing in some areas of business, it will likely create a need for more staffing for communications. 9-1-1 calls are no longer coming in just over the phone. You can now text your emergency; in some areas you can send pictures and videos. It will take more time to process these types of calls for assistance. If one of our townships decides to incorporate, that will also create the need for even more staff as that would likely mean there will be a police department being added to the responding agencies.

As for Emergency Management, the higher our population rises the more costly disasters will be. There will simply be more people to help. The growing population will need more emergency planning, community outreach, coordination at the local, state and federal level and the application and utilization of grant funding to effectively and responsibly grow the community. Doubling the current 2 person office would be a reasonable expectation over the next 20 years.

Existing Conditions Maps:







