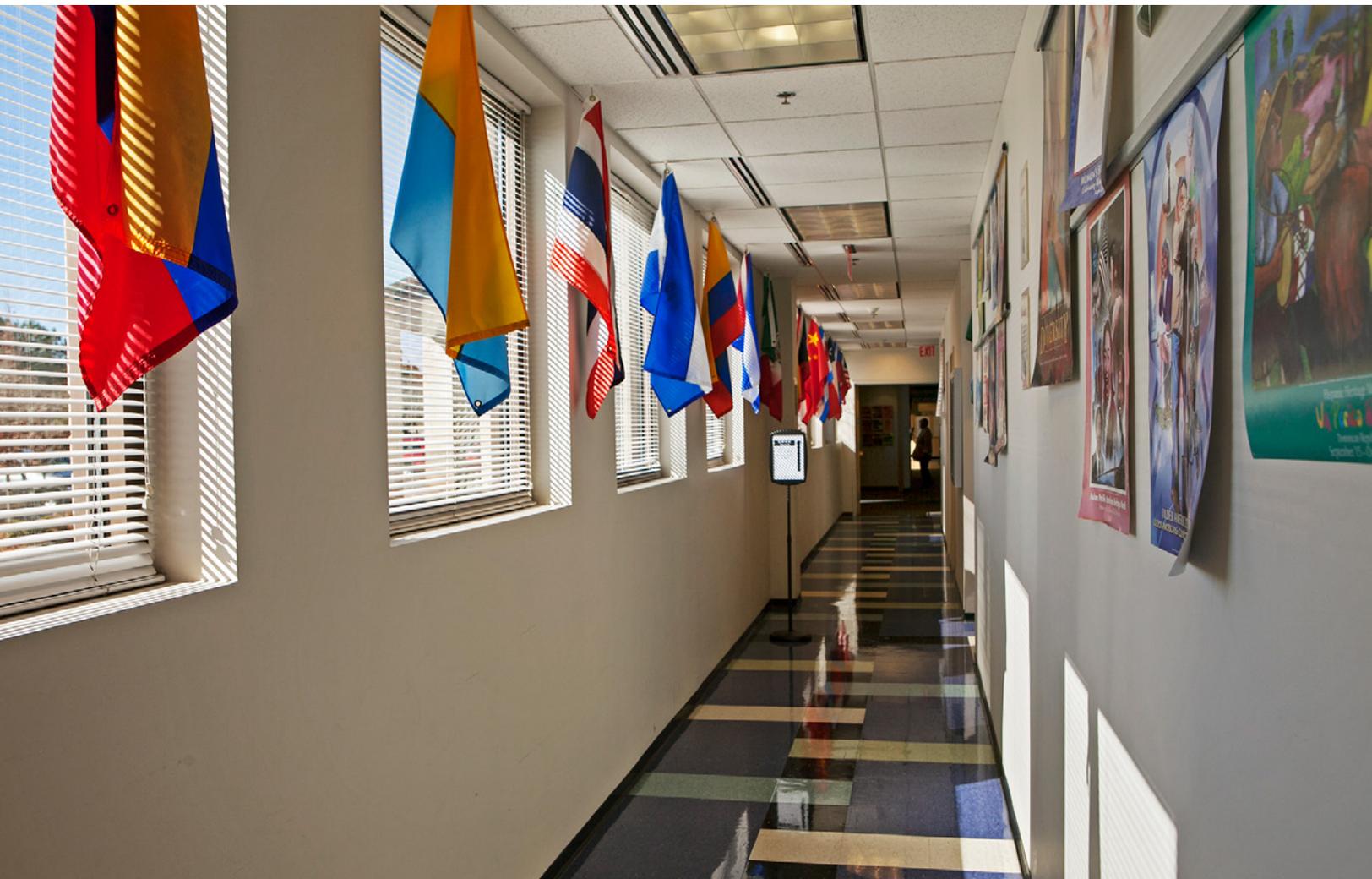




CAPITAL PROGRAM

This section includes a description of the major capital achievements of fiscal year 2015 and the programs that make up the 2016 – 2021 Capital Improvement Program. Included are program descriptions, the impact on County operations, and a listing of the budgeted appropriations by project category.





Capital Improvement Programs

Capital Improvement programs for the Department of Community Services are comprised of projects that help provide a comprehensive and coordinated system of facilities for the provision of high-quality recreational, educational, health and human services, and other services to Gwinnett County residents. Projects in these programs include the construction and/or renovation of senior centers, community centers, and parks and recreational facilities. Parks and recreation projects involve providing quality parks and recreational facilities such as passive and active park land, sports fields, tennis complexes, aquatic centers, multi-use trails, playgrounds, picnic pavilions, and other park amenities.

2015 Capital Achievements

The 2009 and 2014 SPLOST capital programs included the following parks and recreation projects in 2015:

- Gwinnett County acquired the 223-acre Simpsonwood property for an open space park in February 2015. Park safety improvements were made that allowed the public to continue to use the park for activities such as walking, biking, picnicking, special events, and rentals.
- An update to the Alexander Park Master Plan was completed with the assistance of a citizen steering committee and final recommendation by the Gwinnett County Recreation Authority.
- The Bethesda Park Football Field Conversion project was completed. This project included the installation of synthetic turf which accommodates football, soccer, and lacrosse youth sports.
- The Centerville Park Site Master Plan was completed and presented to the Gwinnett County Recreation Authority. The master plan includes the incorporation of a greenway connection to Yellow River Park.
- The Little Mulberry Park Woodland Trail Renovation and Improvement project was completed.
- The master plan update for Phase II of Club Drive Park was completed.
- A new energy-efficient water filtration system was installed at the Mountain Park Aquatic Center.

A number of renovation and improvement projects to existing parks and recreational facilities were also completed in 2015. Examples include playground replacements at Lucky Shoals and Pinckneyville Parks, various asphalt repaving projects such as the Bogan Park multi-purpose trail, concrete repair work, new park security systems, and others.

2016 – 2021 Capital Improvement Plan

The 2016 capital budget and 2017 – 2021 Capital Improvement Plan totals approximately \$29.6 million.

The 2013 Parks & Recreation CIP Update serves as the guide for parks and recreation capital projects. This plan was the basis for the projects recommended by the Recreation Authority in the 2014 SPLOST program. The funding amount for the three-year SPLOST for parks and recreation is approximately \$24 million, with all funds targeted for improving or renovating existing parks and recreational facilities. In addition, for the first time, funding was also allocated for Senior Services capital projects totaling approximately \$5 million.

Community Services will continue to implement the 2009 and 2014 SPLOST capital programs as approved. Major capital projects under design or construction for 2016 include: JB Williams Park (new park development), South Gwinnett Park (park renovation), Rock Springs Park soccer complex (park improvement), George Pierce Park gymnasium (park improvement), Ronald Reagan Park (renovation), and McDaniel Farm Park (park improvement). In Senior Services, the construction of the new Centerville Senior Center will be underway.

Community Services Capital Improvement Program

Project Category							Total
	2016	2017	2018	2019	2020	2021	2016 – 2021
Community Services Administration	361,024	-	-	-	-	-	361,024
Community Services							
Miscellaneous/Contingencies	50,000	94,448	107,572	176,826	-	10,000	438,846
Health and Human Services	111,000	-	-	-	-	-	111,000
Parks and Recreation	15,999,933	5,250,538	1,973,895	1,741,764	1,861,378	1,851,074	28,678,582
Total Community Services	16,521,957	5,344,986	2,081,467	1,918,590	1,861,378	1,861,074	29,589,452



Capital Improvement Programs

The General Government Capital Improvement Program is a diverse group of projects that will enhance and/or improve general government services such as information technology, courts, and tax collection. In other words, the general government program includes all projects other than those related to community services, public safety, public utilities, and transportation.

Computer and Computer Systems projects involve upgrading and enhancing the technology infrastructure to support the County's information needs. Projects in this category include acquisition of new and replacement personal computers, peripheral equipment, and software applications, as well as upgrades to the systems, storage, networking, and communications infrastructure. Also included are various business applications and systems.

Other project categories are:

- General Government Facilities, which consists of projects related to the construction of new and/or improvements to existing County facilities
- Miscellaneous Projects, including studies and budgeted capital contingencies

2015 Capital Achievements – Support Services

Major Construction Projects

Highlights for 2015 major projects in the design or construction phase include the following:

- Employee Wellness Center: The build-out of the County's Wellness Center at the Government Annex was completed in 2015. The Wellness Center opened to active benefit-eligible employees, pre-Medicare retirees, and adult dependents in May. The Wellness Center features five exam rooms, a multipurpose room for training and wellness activities, a laboratory, office space for medical and wellness staff, and a dispensary.
- Fire and Emergency Services
 - Fire Stations 10 and 31: Construction of Fire Station 10 at 1131 Rock Springs Road and Fire Station 31 at 1061 Collins Hill Road, both in Lawrenceville, began in April 2015. The facilities are expected to open in summer 2016.
 - Fire Training Academy: The education building associated with the expansion of the County's Fire Training Academy was completed in fall 2015. The project, funded through the voter-approved 2009 SPLOST, includes a two-story, 35,000 square-foot education building, a three-bay storage building for fire apparatus, and a training pavilion. The fire apparatus and training pavilion are still under construction. The academy is used to provide quality training for new recruits in addition to expanded and ongoing training for all firefighters to comply with the National Standards for Fire Services.
- Gwinnett County Public Library System Branch Relocations
 - Lilburn Branch Library: The Lilburn Branch Library and City Hall is a unique joint venture between the County and the city of Lilburn. The Lilburn Branch Library and Lilburn City Hall will be relocated to a new shared building with a strong civic presence and modern efficiencies. An intergovernmental agreement between the city and County was approved in 2014, and the construction contract was awarded in June 2015. The project is jointly funded by the County's 2005 and 2009 SPLOST programs and the city of Lilburn. It is expected to open in the fourth quarter of 2016.
 - Norcross and Duluth Branch Libraries: The Norcross Branch and the Duluth Branch will be replaced with new and larger facilities in the downtowns of their respective cities. The existing facilities, more than 34 years in age, will be replaced with upgraded and freshly conceived 20,000 – 22,000 square foot buildings. The Norcross project is in the early stages of design; the Duluth project is still in the planning stage.
- Juvenile Court and District Attorney Office Space Improvements: This project includes the partial build-out of the fourth floor and the reconfiguration of the third floor in the Courthouse Annex to provide a new and expanded office area for the Juvenile Court's Guardian Ad Litem Division and the District Attorney. This general fund project will also provide an expanded waiting area for the third floor courtrooms. Construction began in June 2015 and is expected to be completed by year end.

General Government

Capital Improvement Programs

- **Morgue and Medical Examiner's Office:** The construction of a new combined facility for the County's Morgue and Medical Examiner's Office is one of the major building projects from the 2014 SPLOST referendum. The facility will replace the County's morgue and provide operational efficiencies by combining the morgue with the Medical Examiner's Office in a single building. The new facility will have 15,602 square feet of space and will be located on an existing County-owned site on Hurricane Shoals Road. The construction contract was awarded in December 2015.
- **Senior Service Centers**
 - **Centerville Senior Services Center:** This new center, funded from the 2014 SPLOST, will be an 8,000-square foot facility located on Bethany Church Road adjacent to the Centerville Branch Library and Community Center. Design is complete, and construction will start in early 2016.
 - **Lawrenceville Senior Services Center:** This project includes the renovation and expansion of the 12,000 square-foot Lawrenceville Senior Center facility at 225 Benson Street. The construction contract was awarded in August 2015. The project is funded from a combination of Community Development Block Grants, SPLOST revenues, and Atlanta Regional Commission grants.

Capital Maintenance Projects

In 2015, the Capital Maintenance budget included more than \$10.8 million in funding associated with more than 60 specific projects. Projects completed in 2015 included the following:

- **Briscoe Field**
 - Replacement of HVAC equipment at airport administrative offices
- **Comprehensive Corrections Complex**
 - Replacement of defective or substandard fire sprinkler heads
 - Replacement of carpet in administrative and program areas
- **Courthouse Annex**
 - Implementation of landscaping improvements
- **Fire and Emergency Services**
 - Comprehensive replacement of HVAC system equipment at Fire Stations 13, 20, and 21
- **Government Annex**
 - Replacement of HVAC distribution system, ceilings, and lighting on fourth floor
- **Gwinnett County Historic Courthouse**
 - Restoration and tuck pointing of exterior brick walls
- **Gwinnett County Library System Projects**
 - Replacement of carpet in library headquarters
 - Replacement of HVAC equipment at Snellville, Mountain Park, and Centerville branches





- Gwinnett Justice and Administration Center
 - Conversion of former IT Data Center to office space on the third floor and space reconfigurations in the lower level
 - Replacement of fire alarm system
 - Roof replacement
 - Implementation of Phase 3 and engineering of Phase 4 in a multi-year plan to replace all air distribution boxes on HVAC system
 - Replacement of facility's trash compactor
 - Replacement of audio-visual equipment in conference center
 - Implementation of pilot project to replace audio systems in courtrooms
 - Replacement of pump on cooling tower
 - Replacement of miscellaneous cafeteria kitchen equipment
- Human Services Centers
 - Replacement of kitchen equipment at Norcross Human Services Center
 - Replacement of room divider at Centerville Community Center
 - Installation of HVAC controls at Lawrenceville Senior Center
- One Justice Square
 - Implementation of landscaping improvements
- Park Facilities
 - Replacement of HVAC equipment at Bethesda Senior Center
 - Replacement of fire alarm systems at Collins Hill Aquatic Center and Rhodes Jordan Community Center
 - Replacement of corroded fire sprinkler heads at aquatic centers
 - Replacement of smaller HVAC units at older concession and restroom buildings
 - Replacement of electric heaters as needed at various comfort stations and maintenance buildings
 - Replacement of HVAC equipment of chapel at Simpsonwood
- Police Facilities
 - Replacement of fire alarm system at South Precinct
 - Replacement of HVAC equipment at South Precinct
 - Replacement of three roof top HVAC units at Police Headquarters

2015 Capital Achievements – Information Technology

The following are the Department of Information Technology Services' activities and accomplishments in 2015:

- Completed a phase of the network and server infrastructure expansion through the acquirement of updated network equipment, server hardware, storage, software, and diagnostic tools necessary to better incorporate new technologies and support Gwinnett County's continued growth and expansion
- Completed implementation of Voice over Internet Protocol (VoIP) telephone systems at Department of Water Resources (including water and sewer), Community Services, and Fire and Emergency Services locations, in alignment with the phased approach to replace existing older PBX systems with a long-term standardized solution for voice technology services
- Upgraded Supplier Relationship Management System (SRM) to version 7.0 to provide more functionality and enhancements to internal and external customers doing business with the County and to ensure continued support from the system provider

General Government

Capital Improvement Programs

- Migrated web content management system from Alfresco to JBoss portal to improve performance and save upgrade costs and annual subscription fee
- Developed backflow testers online reporting application for the Department of Water Resources (DWR) to help testers and staff to automate the reporting process to save time and money
- Migrated web production servers' network to nexus network for improved security and to meet latest Payment Card Industry (PCI) compliance requirements
- Launched emergency alerts on the County's public website and mobile site to help publishers post alerts easily for residents to view during emergency situations
- Made an elections online absentee ballot application available for voters to request absentee ballot by completing an online form and downloading the completed application to send by mail
- Upgraded the accounting system to include payment processing for DWR, Solid Waste, and Fleet; payroll tax processing; general ledger interface, and others
- Updated training applications to enhance the ability of Gwinnett County to provide a more robust online training platform
- Implemented Symantec endpoint management suite to enhance and streamline the support, security, and management functions of client endpoint devices located strategically throughout County offices
- Upgraded the 800 MHz radio system to version 7.15 to maintain support and incorporate enhancements to our alerting systems, which provides communication to all Gwinnett County radio system subscribers and municipalities

2016 – 2021 Capital Improvement Plan

The 2016 capital budget and 2017 – 2021 plan for the General Government Capital Improvement Program totals approximately \$166.5 million.

2016 – 2021 Capital Improvement Plan – Support Services

Major Construction Projects

The following projects are scheduled for 2016:

- Bay Creek Police Precinct and Alternate 911 Center: A new project to be undertaken in 2016 is the development of the Bay Creek Police Precinct and the Alternate 911 Center on a shared site on Ozora Road at the entrance to Bay Creek Park. The precinct, which was first envisioned with the 2009 SPLOST and which is largely designed, will be a 12,100 square-foot facility that will enable the Police Department to improve coverage and response times in this area of the county. The Alternate 911 Center, at approximately 4,500 square feet, will provide critical backup to the principal 911 Center in Lawrenceville in any situation that makes that center unusable. Design of both facilities, as well as procurement of construction, are expected to be completed in 2016.
- Department of Transportation District One Maintenance Barn: This project is the replacement of the existing District One Maintenance Barn with a newly constructed 5,000 square-foot storage building and is the last DOT facility of this type to be upgraded. Design will begin in January 2016 and construction should start in the third quarter of the year.
- Fire and Emergency Services
 - Fire Training Academy: Completion of the training pavilion and apparatus storage building is scheduled for third quarter of 2016.
 - Fire Stations 10 and 31: Construction of these two fire stations is expected to be completed in the second quarter of 2016.
- Gwinnett County Courthouse Addition: This expansion of the Gwinnett Justice and Administration Center was funded in the 2009 SPLOST to provide additional space for the County's judicial functions. The project will include a new building of approximately 180,000 square feet and a new parking garage for 1,500 vehicles. The building will house a jury assembly space, as many as six court units, a prisoner holding area, and shell space for future growth. Some schematic design work has been completed, and a more detailed design will begin in early 2016.

General Government

Capital Improvement Programs

- Gwinnett Library System Branch Relocation
 - Lilburn Branch Library and City Hall: Construction is scheduled to be complete in the fourth quarter of 2016, and the facility should open by the end of the year.
 - Norcross Branch Library Relocation: Design and procurement of this facility will be completed in 2016.
 - Duluth Branch Library Relocation: Site analysis and selection are underway and design is scheduled for 2016.
- Morgue and Medical Examiner's Office: Construction will start in 2016 and is scheduled to be completed in December.
- Senior Services Centers
 - Centerville Senior Services Center: Construction will begin by the end of the first quarter, and construction will be nearing completion early in the first quarter of 2017.
 - Lawrenceville Senior Center Renovation: Construction will be completed late in the first quarter of 2016.
 - Buford Senior Center Renovation: Programming and schematic design work for this renovation, funded from the 2014 SPLOST, is now underway. Preparation of construction documents will begin in the first quarter of 2016. The construction contract is expected to be awarded by the third quarter of 2016.
 - Norcross Senior Center Renovation: This project is the renovation of the Norcross Senior Center located in the Norcross Human Services Center. This project is funded from the 2014 SPLOST and design will begin in the fourth quarter of 2016.

Capital Maintenance Projects

A focus on general capital maintenance projects will continue in 2016. Some projects began in 2015 while others are newly programmed for 2016. The projects to be completed or newly implemented in 2016 include the following:

- Comprehensive Corrections Complex
 - Complete installation of new dining room serving equipment
 - Replace fire alarm system
 - Refurbish detention grade electronic locks
 - Replace central control station for electronic locking and other building security systems
 - Replace restroom/shower exhaust fans
- Courthouse Annex
 - Replace building security controls touchscreen
 - Implement additional landscaping improvements
 - Implement selective repainting of building interior
 - Implement selective carpet replacement
- Fire and Emergency Services Facilities
 - Replace HVAC system components at three fire stations
 - Replace roofs on Fire Stations 20 and 21
 - Renovate bathroom facilities at Fire Station 3
 - Upgrade HVAC system with dehumidification equipment at Fire Station 12





- Fleet Management Facility
 - Replace fire alarm system
 - Enhance HVAC system to improve ventilation on the light vehicle side
- Government Annex (750 South Perry Street)
 - Complete replacement of main HVAC supply units mounted on roof (final phase of HVAC system replacement)
 - Replace roof
 - Patch, seal, and restripe parking lot
 - Clean and seal exterior precast
 - Implement selective carpet replacement
- Gwinnett County Historic Courthouse
 - Complete replacement of two HVAC system air handling units initiated in 2015
 - Replace two remaining older HVAC air handling units
 - Expand and upgrade HVAC controls in association with air handling unit replacements
 - Complete replacement of low-sloped built-up roof
- Gwinnett County Library System Projects
 - Patch, seal and restripe parking lots at several branches
 - Continue landscaping improvements at various branches
 - Replace carpet at Peachtree Corners Branch
- Gwinnett Justice and Administration Center
 - Implement various plumbing system and restroom repairs and upgrades
 - Convert video surveillance system to a Video over Internet Protocol (VoIP) system
 - Rework front entrance drive (Langley Drive) and resurface front walkway system
 - Implement Phases 4 and 5 of a multi-year plan to replace all air distribution boxes on the HVAC system
 - Install surge protection on the building electrical service
 - Replace three UPS systems
 - Patch, seal and restripe public parking lot and Nash Street parking lot
 - Implement selective repainting of public area interiors
 - Replace audio systems in courtrooms
 - Begin comprehensive replacement of can light fixtures in public areas
 - Replace seating and carpet in auditorium
 - Replace lighting and lighting controls in auditorium
 - Replace lower level security station
- Human Services Centers
 - Replace restroom exhaust fans at Norcross Human Services Center
 - Rehabilitate playground surface at Norcross Human Services Center
 - Improve pedestrian and vehicle traffic flow for Head Start entrance at Norcross Human Services Center
 - Replace roof on Buford Human Services Center
 - Replace all elements of HVAC system, ceilings, and lighting at Buford Human Services Center
 - Address site drainage problem at Buford Human Services Center

General Government

Capital Improvement Programs

- Multiple County Facilities
 - Implement comprehensive battery replacement program
 - Conduct electrical panel load analyses on multiple buildings
 - Replace UPS batteries as needed at DOT Central Facility and Gwinnett Justice and Administration Center
- One Justice Square
 - Clean and seal exterior precast
 - Implement space reconfiguration for Planning and Development
 - Renovate public restrooms on first and second floors
- Park Facilities
 - Replace several HVAC units at older concession and restroom buildings, Best Friend Park Tennis Center, and Rhodes Jordan Park Recreation Center
- Police Facilities
 - Upgrade HVAC system controls at Police Training Shooting Range
 - Install HVAC system controls on East Precinct

2016 – 2021 Capital Improvement Plan – Information Technology

- Continue upgrades to the DWR information system. Upgrades include enhancements that strengthen cellular signals and reduce communications faults and increases cellular connectivity. Addition of Wi-Fi and mobile equipment at plant facilities. This will assist with alarm notification and augment communications for the Ostara nutrient recovery process at F. Wayne Hill. It will also allow the staff to be more mobile and respond to alerts in a timely manner.
- Purchase SCADA Wonderware software including the purchase of laptops. This purchase is to accommodate the addition of 19 employees.
- Purchase network equipment, software, tools, and professional services on an enterprise agreement. This project focuses on the cost savings generated by entering into an enterprise agreement with the vendor. In addition to the cost savings, it provides additional functionality like audio/video conferencing, electronic classroom training, and presentations.
- Enhance the Criminal Justice Information System (CJIS) to create the ability for agencies to access the Sheriff Department's eWarrant system.
- Replace the Department of Transportation's hardware and software. The existing equipment is more than six years old and the new equipment will provide them more flexibility in the completion of their duties. The new equipment will allow traffic signal engineers and technicians in the field to troubleshoot and repair traffic signal equipment. These engineers are often working on the side of the road in vehicles which utilize these hardware and software systems. The department is estimating a need for additional CPU speed and memory with the new client software. Currently there are no estimates when the application will be updated.
- Replace ProQA system. The current product version is unsupported and in the event the County has any issues with it, no assistance from the vendor is provided. In order to get certified, an employee of the Fire and Emergency Services Department will have to go to Utah and complete three days of training at the vendor's location.
- Replace scan guns used by public safety employees. This will ensure compatibility to the SAP System, and the change will allow network security to enable WPA2 wireless encryption standards.
- Purchase body cameras with storage capacity sufficient to sustain the video recorded for the Police and Sheriff's Departments. Due to the sensitive nature of this material, the recorded video and other associated data will need to be retained for a period of time yet to be determined. This data will be stored utilizing hardware and software systems based on the requirements identified.
- Purchase software, monitoring tools, peripheral devices, and other hardware for the Clerk of Courts office. This project will provide for the updating of hardware and software in the Clerk of Courts office and allow them to operate more effectively and efficiently.

General Government Capital Improvement Program

Project Category	2016	2017	2018	2019	2020	2021	Total 2016 – 2021
Cities Share of 2014 SPLOST	30,439,801	8,293,476	-	-	-	-	38,733,277
Computers and Computer Systems	5,871,911	9,430,837	8,213,808	6,597,559	5,474,558	4,513,525	40,102,198
Contingencies and Miscellaneous Projects	(158,283)	180,892	128,890	157,661	711,594	2,046,000	3,066,754
Fleet Equipment	573,926	364,120	780,174	894,073	411,927	931,401	3,955,621
General Government Facilities	41,353,364	13,846,160	4,928,150	2,647,316	2,190,620	1,340,553	66,306,163
Health and Human Services Facilities	1,716,086	418,663	-	-	-	-	2,134,749
Libraries	6,964,681	5,032,770	-	-	-	-	11,997,451
Support Services Administration	184,000	-	-	-	-	-	184,000
Underground Storage Tank Improvements	50,000	-	-	-	-	-	50,000
Total General Government	86,995,486	37,566,918	14,051,022	10,296,609	8,788,699	8,831,479	166,530,213



Capital Improvement Programs

Gwinnett County's Public Safety program consists of projects that preserve and protect the lives and property of Gwinnett County residents.

2015 Capital Achievements

Achievements in 2015 pertaining to the Gwinnett County Police Department include the following:

- Police headquarters renovation: During 2015, Police Services completed the final phases of the renovations to the Police headquarters facility. This project also included the replacement of several roof top HVAC units, an upgrade to the HVAC controls, as well as replacing the roof on two-thirds of the facility.
- Animal Welfare and Enforcement Center: During 2015, Police Services completed the final phase of repair to the kennels within the Animal Welfare facility. This project included the removal and repair of the coatings on the kennel floors and walls and the installation of a new coating system on all kennels. This refurbishment corrected a deteriorating condition within the kennels creating a more clean and healthy environment for the animals while greatly enhancing the longevity and ease of maintaining the kennels.
- Training academy driving track resurfacing: During 2015, Police Services began the resurfacing of the training academy driving track and was completed in November 2015. This project has had several delays due to weather.
- Major repairs and renovations: During 2015, Police Services began the resurfacing of the police headquarters parking lot, but the project will not be completed until 2016.
- Helicopter replacements: During 2015, Police Services began the three main parts to the project; The MD factory conversion, the Avionics upgrade, and the Forward Looking Infra-Red (FLIR) camera replacement. The MD factory conversion and avionics upgrade were made to both helicopters in 2015. FAA approval to install the FLIR was received mid December 2015. Installation of the FLIR in the first helicopter will be completed in January 2016 and installation in the second helicopter is scheduled for February 2016.
- Firearms replacement: During 2015, Police Services purchased 57 Glock17s, five Glock19s, and 62 Night Sites. The portion of the project for 2015 is complete. In 2016, Police Services will continue the firearms replacement project.
- E-911 logging recorder: During 2015, Police Services began the process of purchasing and installing a new E-911 logging recorder for the E-911 center. The acceptance payment of the project has been processed. Due to technical complications, installation did not occur in 2015. This project will continue into 2016.
- Public Safety Notification and Response System project: During 2015, the Public Safety Notification and Response System is live and connected to the Gwinnett County 911 center at 52 percent of elementary schools, 17 percent of middle schools, and 4 percent of high schools. The four Buford schools have not begun. Installation of the entire infrastructure at the 911 center was completed this year. The project continues to be ahead of schedule for cabling and equipment installations. The project schedule continues to track well for meeting or exceeding the go live goals.

Other statistics for work completed through December 31, 2015:

1. Completed designs – 70
2. Schools cabled – 66
3. Emergency notification and visitor management systems programmed – 67
4. Equipment installations completed – 64
5. System configurations completed – 61
6. Public address connections completed – 57
7. Schools trained – 55

Capital Improvement Programs

Achievements in 2015 pertaining to the Department of Fire and Emergency Services include the following:

- Purchased six new medic units (ambulances) to replace older units
- Purchased five new medic units (ambulances) to allow for the med unit remount program to begin in 2016
- Purchased one additional new medic unit (ambulance) for a current station without a medic unit
- Replaced two operational command vehicles
- Replaced 22 various light-duty vehicles
- Opened the fire maintenance and repair facility
- Replaced carpet at stations 11, 14, 20, and partial replacement at fire headquarters
- Upgraded kitchen cabinets at Stations 1, 4, 5, 6, 7, 13, 14, 16, and 24
- Upgraded security at fire apparatus management
- Maintenance and upgrades at the fire burn building
- Conducted burn building structural engineering inspection
- Re-roofing the training tower
- Painted the training tower stairs
- Enhanced landscaping at Station 11 and Fire Headquarters
- Replaced HVAC systems at Stations 13 and 21

2016 – 2021 Capital Improvement Plan

The 2016 capital program and 2017 – 2021 plan for the Public Safety Capital Improvement Program totals approximately \$84.7 million. Some of the highlights of planned improvements are listed below.

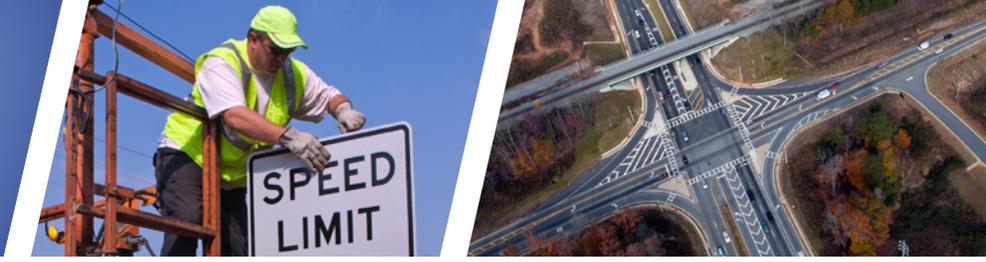
Police Services' capital improvement plans for 2016 – 2021 include existing capital projects: improvements to the Animal Welfare and Enforcement Center; major repairs and renovations to include security fencing at the North precinct and East precinct; renovations to the police headquarters fitness room; and carpet replacement at the South precinct. Police Services will continue the public safety notification response system and the five-year replacement program for police firearms.

The 2016 – 2021 Capital Improvement Plan for the department of Fire and Emergency Services includes the continued replacement of older fire apparatus and medic units (ambulances) within the department along with the various support vehicles used. Future plans call for the completion of Fire Stations 10 and 31 (both are 14,300 square foot facilities); the completion of phase II at the Fire Academy to include the open-air pavilion and the three-bay apparatus building; the rebuilding and or relocation of Fire Stations 13, 14, and 15 using the new two-story station design; the building of new fire station 32 (two-story design) as well as the Community Risk Reduction educational training facility; the replacement of all department portable radios; and the replacement of older HVAC systems within various fire facilities depending on system evaluations and age. Additionally, the department will continue to add a medic unit (ambulance) to those fire stations that currently do not house one.



Public Safety Capital Improvement Program

Project Category	2016	2017	2018	2019	2020	2021	Total 2016 – 2021
Ambulances	1,601,380	789,200	-	-	-	-	2,390,580
Detention Center Renovations	1,000,000	569,981	-	-	-	-	1,569,981
Fire Apparatus and Equipment	5,740,000	1,588,641	100,000	100,000	100,000	100,000	7,728,641
Fire Facilities	122,000	38,000	177,000	128,000	168,000	121,500	754,500
Police Facilities Renovations and Improvements	223,200	105,000	80,000	-	-	-	408,200
Police Firearms Replacement	116,715	114,855	106,020	-	-	-	337,590
Public Safety Administration	291,200	-	-	-	-	-	291,200
Public Safety Vehicles and Fleet Equipment	12,784,129	12,254,991	10,840,387	15,233,796	11,325,482	6,330,403	68,769,188
Technology Needs	1,683,932	177,992	184,992	189,000	193,500	-	2,429,416
Total Public Safety	23,562,556	15,638,660	11,488,399	15,650,796	11,786,982	6,551,903	84,679,296



Capital Improvement Programs

The Transportation Capital Improvement Program consists of projects to improve the County's transportation infrastructure. Projects in this program fall into three categories: Road Improvements (of which there are several sub-categories), Airport Improvement, and Transit.

The County's Road Improvement Program consists of the following:

- Major Roadway Improvements include new road construction, new alignments, and increasing the capacity of existing roads.
- Intersections/Traffic Operation Improvements include the addition of turn lanes, improvements of alignments of cross streets, improving sight distances, and signalizations, as well as Advanced Traffic Management System (ATMS) improvements.
- Bridges/Roadway Drainage Improvements consist of new construction or reconstruction of existing bridges and culverts up to sufficiency standards.
- Road Safety and Alignment projects correct safety deficiencies such as sight distances, horizontal and vertical alignments, and at-grade railroad crossings.
- School Safety projects improve traffic safety near schools with the installation of turn lanes at school entrances, installation of sidewalks, and signalization improvements.
- Sidewalks and Multi-Use Trails include projects to link existing sidewalk segments or link residential areas to nearby pedestrian destinations.
- The Unpaved Road category funds the paving of gravel and dirt roads throughout the county.
- The Rehabilitation and Resurfacing category renovates, rehabilitates, and resurfaces existing county roads to prolong the life of the road.

The County Airport Improvement category consists of various improvements to Gwinnett County's Briscoe Field, the fourth busiest airport in the state. Projects in the Transit category consist of the acquisition/replacement of buses and equipment and the construction of various transit facilities.

2015 Capital Achievements

- Completed the procurement of the new transportation program management contract
- Began right-of-way acquisitions for approximately 45 2014 SPLOST program projects
- Began construction on 17 projects in the 2009 SPLOST program, including intersection, pedestrian safety, school safety, and safety and alignment improvements
- Began construction on nine projects in the 2014 SPLOST program, including intersection, pedestrian safety, school safety, and safety and alignment improvements
- Opened the Lilburn Main Street widening and realignment to traffic in partnership with the city of Lilburn and the Lilburn Community Improvement District
- Opened 17 projects to traffic (including four ATMS projects), including intersection, pedestrian safety, school safety, and safety and alignment improvements
- Completed approximately 50 percent of the construction of the SR 20 widening from Peachtree Industrial Boulevard to the Chattahoochee River
- Completed right-of-way acquisition on Walther Boulevard bridge over SR 316 in coordination with the Georgia Department of Transportation. GDOT began the construction portion of the design/build contract for the new bridge.
- Resurfaced 135 miles of county maintained roadways
- Completed 11 quick fix projects
- Rehabilitated seven bridges to extend their life
- Rehabilitated 5.2 miles of unpaved roads using compacted asphalt millings
- Activated four new traffic signals and nine traffic signal rebuilds/modifications in road improvement or development projects

Capital Improvement Programs

- Installed a vehicle entering flashing beacon on Old Loganville Road at Lake Carlton Road, school flashers for Discovery High School, Baggett Elementary School, and Graves Elementary School, and upgraded nine intersections to “flashing yellow arrows” left turn phasing
- Completed four Advanced Traffic Management System/Intelligent Transportation System (ATMS/ITS) projects (Suwanee Dam Road from SR 13/Buford Highway to Cumming Highway, Indian-Trail Road from SR 378/Beaver Run Road to US 29/SR 8/Lawrenceville Highway, Pleasant Hill Road from SR 13/Buford Hwy to Fulton County, US 78/SR 10/Athens Highway from SR 124/Scenic Highway to Logan Road) that added an additional 17.1 miles of fiber optic cable, installed 31 closed circuit television (CCTV) cameras, and connected 26 traffic signals to the Traffic Control Center (TCC)
- Began designs on four ATMS/ITS projects (Five Forks Trickum Road from Sugarloaf Parkway to Rockbridge Road, SR 316/University Parkway from SR 20/Buford Drive to Barrow County, Ronald Reagan Parkway from Pleasant Hill Road to SR 124/Scenic Highway, and Old Peachtree Road from Dean Road to Sugarloaf Parkway)
- Completed upgrades to the *GCSmartCommute* website that includes providing users with roadway traffic data and road work/construction data for Gwinnett County
- Began replacement of 28 local buses for transit
- Implemented the restoration of local Saturday service and two express trips
- Finished construction of an airfield re-marking project to rehabilitate faded/worn airfield markings to improve safety
- Continued implementation of recommendations made by the Airport Privatization Citizens Review Committee (APCRC) to enhance the general aviation facilities at the airport including installation of a glider monument, and in cooperation with the city of Lawrenceville, installation of landscaping at the airport entranceway

2016 – 2021 Capital Improvement Plan

The 2016 capital budget and 2017 – 2021 plan for the Transportation Capital Improvement Program totals approximately \$258.2 million. Some of the major projects are as follows:

- Complete delivery of the 2009 SPLOST program
- Continue implementation and delivery of the 2014 SPLOST program
- Begin construction of the Five Forks Trickum Road widening project from Oak Road to Killian Hill Road in 2016
- Begin design of the Sugarloaf Parkway Extension Phase II from SR 316 to I-85
- Complete the SR 20 widening from Peachtree Industrial Boulevard to Burnette Trail and widening/bridge project over Chattahoochee River in 2016
- Complete an update to the Comprehensive Transportation Plan (CTP)
- Complete engineering and right of way acquisition on two new I-85 interchanges
- Improve southbound Peachtree Industrial Boulevard/SR 141 from Holcomb Bridge Road to south of Jimmy Carter Boulevard
- Initiate various improvements in the SR 316 corridor
- Continue the expansion of the ATMS/ITS Traffic Network for real time monitoring of major corridors and arterials via connectivity to the Traffic Control Center using available SPLOST and Congestion Mitigation and Air Quality (CMAQ) Funds
- Continue to increase the percentage of traffic signals connected to the Traffic Control Center with the installation of cellular modems or short runs of fiber cable for locations off main corridors and arterial.
- Continue to upgrade and enhance the *GCSmartCommute* website for increased use by providing additional traveler information
- Initiate the process of upgrading the school zone flasher system from a pager based system to one that provides two-way communications for real-time monitoring capabilities from the Traffic Control Center
- Complete construction of Sugarloaf park-ride lot/transit center improvements
- Complete the app rollout (Android/iPhone) for the Computer Aided Dispatch/Automated Vehicle Location
- Restore and expand express and local service in unserved areas in Gwinnett County
- Design Taxiway ‘Y’ a parallel taxiway on the north side of the airport to increase safety by decreasing runway crossings and thereby decreasing the possibility of having a runway incursion at the airport

Transportation Capital Improvement Program

Project Category	2016	2017	2018	2019	2020	2021	Total 2016 – 2021
Airport Capital Improvements	16,250	26,275	58,125	86,875	374,950	-	562,475
Bridge and Roadway Drainage Improvements	8,762,421	8,400,000	5,675,000	-	-	-	22,837,421
Cities Allocation-Roads	6,630,662	6,848,586	-	-	-	-	13,479,248
Intersection/Traffic Operations Improvements	10,970,000	13,580,000	5,422,500	1,380,000	330,000	630,000	32,312,500
Major Road Improvements	36,039,619	18,500,000	8,291,000	-	-	-	62,830,619
Miscellaneous	1,351,808	-	-	-	-	-	1,351,808
Neighborhood Speed Control	50,000	386,250	250,000	-	-	-	686,250
Pedestrian Safety/Sidewalks	11,785,784	7,800,000	1,257,500	300,000	-	300,000	21,443,284
Resurfacing/Rehabilitation	9,725,000	9,725,000	8,190,000	8,190,000	8,190,000	8,190,000	52,210,000
Road Program Management	3,400,000	6,500,000	3,004,750	-	-	-	12,904,750
Road Safety and Alignments	5,920,000	4,120,000	1,582,500	545,000	275,000	575,000	13,017,500
School Safety Program	6,522,500	4,144,560	1,837,500	-	750,000	-	13,254,560
Transit Program Miscellaneous/Contingencies	-	28,000	27,377	-	-	-	55,377
Transportation Planning	2,882,362	3,350,778	1,819,968	1,048,770	1,037,819	893,094	11,032,791
Unpaved Roads	100,000	80,750	-	-	-	-	180,750
Total Transportation	104,156,406	83,490,199	37,416,220	11,550,645	10,957,769	10,588,094	258,159,333



Capital Improvement Programs

The mission of the Gwinnett County Department of Water Resources is to provide superior water services at an excellent value.

The Water Resources' Capital Improvement program consists of projects that provide clean, potable water for Gwinnett residents and businesses; collect and reclaim wastewater to protect the environment and promote and protect the health, safety, and welfare of the public; and projects that help manage stormwater. These projects include construction of new facilities, improvements to existing water facilities, and projects that improve the efficiency of operations. The need for improvements or new facilities may be driven by increased demand, changes in regulatory requirements, required service level improvements, asset failure due to age, or a combination of these and other factors. The focus of the Department of Water Resources' current Capital Improvements Program is rehabilitation and replacement of aging infrastructure.

DWR operates and maintains two water treatment facilities with 225 million gallons per day (MGD) of treatment capacity and three water reclamation facilities (WRFs) with over 101 MGD of treatment capacity. DWR also operates and maintains more than 220 raw sewage stations, 16 water booster pump stations and storage tanks, 270 miles of pressurized sewer pipe, 2,700 miles of gravity sewer pipe, 1,451 miles of stormwater drainage pipe, and 3,700 miles of water main serving more than 160,000 sewer customers and 228,000 retail water customers. This infrastructure has a replacement value of more than \$9 billion dollars. Projects in the Capital Improvement Program are funded either by water and sewer revenue or stormwater fees.

2015 Capital Achievements

The Water and Sewer Capital Improvement Program is divided into six subprograms:

- Water Reclamation Facilities
- Collection System
- Distribution System
- Water Production Facilities
- System Development
- Miscellaneous

The Water Reclamation Facilities program includes projects for expansions of and improvements to the County's three water reclamation facilities and also projects to support watershed protection required by the water reclamation facility's National Pollen Discharge Elimination System (NPDES) permits. In 2015, completed projects include:

Primary 2015 Capital Project Achievement:

- FWH Nutrient Recovery Project (Ostara): Continuing Gwinnett County's resource recovery program, Ostara's Pearl® nutrient recovery process at F. Wayne Hill Water Reclamation Center (WRC) will help protect freshwater lakes such as Lake Lanier by recovering phosphorus and other nutrients from the wastewater streams and transforming them into an environmentally responsible fertilizer, marketed as Crystal Green®. Ostara's nutrient recovery process will help the County maintain phosphorus levels below nutrient loading limits and protect local waterways, mitigating one of the planet's most critical environmental challenges: the proliferation of algae blooms that debilitate waterways and destroy aquatic life.

The Other Major Capital Project Completions:

- F. Wayne Hill Primary Clarifier Rehabilitation evaluation
- Crooked Creek WRF W3 repairs
- Crooked Creek WRF Filter rehabilitation
- F. Wayne Hill and Crooked Creek Centrifuge rehabilitation
- F. Wayne Hill Siemens Turblex Blowers – PLC upgrades only

Capital Improvement Programs

The Other Major Capital Project Completions (*continued*):

- Gwinnett Environmental Heritage Center Water Feature upgrade
- Crooked Creek WRF CP-3 Diffused Air conversion
- Cedar Creek Pump Station
- Wolfcreek Pump Station
- Suwanee Creek Pump Station rehabilitation

The Collection System program includes projects for expansion, replacement, and assessment of gravity sewer pipe, force mains, and wastewater pump stations. It also includes projects that improve cost effectiveness by installing gravity sewers to decommission pump stations. Projects completed in 2015 include:

- Wolf Creek Force Main
- Lilburn Sanitary Sewer Extension – Main Street rehab
- South Berkeley Lake Gravity Sewer extension
- Meadow Rue Drive Sewer Aerial Crossing
- Emergency repair at Industrial Park Drive

The Distribution System program has projects associated with water meters and water distribution pipe extensions and replacement. The water distribution projects completed in 2015 include:

- 48 in Pre-Stressed Concrete Cylinder Pipe replacement (Skyland Drive – Lenora Church)
- 48 in PCCP replacement (Athens Highway – Temple Johnson Road)
- 48 in PCCP replacement (New Hope Road – Barrett Bluff Drive)
- Hanarry Estates Main Street (Lilburn) Water Main replacement and Sanitary Sewer improvements
- Mill Creek and Kirkstone interconnect
- Hill Street Water Mains replacement

The water production facilities program includes projects for expansion and improvements to the two water production facilities and the booster stations and tanks. The following water facility rehabilitation projects were completed in 2015:

- Lanier Filter Plant Ozone System Safety and Instrumentation improvements
- Lanier Filter Plant High Flow Pump Station upgrades
- Lanier Filter Plant Filter Effluent Meter replacement

The system development program is a new program and includes water and sewer planning studies and projects that promote economic development. The following projects were completed in 2015:

- Planning and Development – Staff Augmentation for restructuring
- George Pierce Park Sewer

The Miscellaneous program has a wide variety of projects that include IT projects, new and replacement vehicles, administration building improvements, relocations of utilities necessary during road projects, and other projects that support the mission of the department. The Miscellaneous program also includes funds for reserves and contingencies.

The Stormwater Capital Improvement Program contained projects related to stormwater pipe replacement, pipe lining, flood studies, and dam rehabilitation. In 2015, the following stormwater projects have been completed:

- 216 Pipe lining projects completed
- 37 Drainage improvement projects completed
- 124 Stormwater pipe replacements and rehabilitation projects completed

Capital Improvement Programs

2016 – 2021 Capital Improvement Plan

The 2016 capital budget and 2017 – 2021 plan for the Water Resources Capital Improvement Program totals approximately \$845.5 million. Some of the major projects are described in the following paragraphs.

The largest project in the 2016 – 2021 Capital Improvement Plan is in the Water Reclamation Facility program. With design that began in 2014, the aging Crooked Creek Water Reclamation Facility will undergo a major renovation through 2019. In addition, there are rehabilitation and replacement projects necessary at the F. Wayne Hill Water Resources Center including Waste Receiving Station and fats, oil, and grease (FOG) improvements as well as Arc Flash & Grounding Electrical Improvements. In water production, the Lake Lanier Water Intake will be rehabilitated and on-site hypochlorite generation will be installed at the two production facilities to improve safety. In the Collection System program, the largest pump station, the Beaver Run Pump Station, will undergo a major rehabilitation. For all water and wastewater facilities, the CIP includes funds for replacement of aging equipment and continued implementation of the Supervisory Control and Data Acquisition (SCADA) program and a comprehensive metal coatings program.

The PCCP water transmission main replacement program will be continuing with funding of approximately \$5 million per year.

Condition assessment programs will be ongoing in water reclamation, water production, collection, distribution, and stormwater systems and will result in additional capital projects based on condition and asset criticality.

The new System Development program includes projects that will promote economic development in Gwinnett County. The department will be developing, prioritizing, and implementing projects for this program over the next five years. This will also include a water education building which will provide a public center for water education, training, and a forum for local water, sewer, and stormwater agencies. This project is set to begin design in 2016.

These activities bring a more business-like approach to the department, incorporating business case decision making, unified strategies, cost effectiveness, a more proactive approach, and improved customer service. Business case evaluations are ongoing in the department, and it is expected that solutions to identified problems will be increasingly determined by the use of these analyses. The department has performed a business case evaluation that resulted in the future implementation of UV disinfection and onsite generation of sodium hypochlorite, an inherently safer process for chlorination.

As the emphasis of the CIP shifts from growth to rehabilitation during this planning period, the development of a reliability centered maintenance program will be implemented.

The department will continue the Sewer Assessment program throughout the planning period. The objective of this program is to reduce the amount of non-sewer water entering the gravity sewer system. This objective is being achieved by improving the overall integrity of the system through monitoring, locating, quantifying, and eliminating sources of inflow/infiltration (I/I). This reduction in I/I should manifest itself in increased usable capacity in the system, decreased surcharging, reduced risk of sewer overflows, and decreased transport/treatment costs.

The department has initiated a pump station phase-out program to decommission pump stations and reduce associated long-term operational costs. Nine pump stations have been decommissioned and several more candidates have been identified and are in the process of design.

Revitalization, infill, and higher density rezoning have rendered some sanitary sewer collection systems out of capacity and susceptible to blockage. The Sanitary Sewer Collection System Renewal program continues in 2016. Costs of this program, which replaces outdated systems and increases capacity, are estimated to be \$48.6 million. The program began in 2014 and has an estimated end date of 2020.

The department has initiated a replacement program for PCCP, which has proven to be a problematic material in the transmission system. The program plans to replace 15 miles of this pipe, which began in 2014. This program is currently scheduled to run through 2021.

The 2016 – 2021 capital budget program for the Stormwater Renewal and Extension Fund totals approximately \$166.8 million. The scope of this budget encompasses maintenance to the drainage system, stream bank restoration projects, stormwater management facility upgrades, and expanded efforts to protect water quality and aquatic ecosystems through the Watershed Improvement Program (WIP). Efforts continue to upgrade watershed dams to meet federal standards and to inventory and analyze the current storm drain system. The stormwater capital budget also supports watershed protection efforts required by the NPDES permits. As a result of a countywide assessment, stormwater will continue drainage improvements through its infrastructure improvement program. This ongoing project has a five-year budget of \$124.4 million from 2016 – 2021. This will help replace the infrastructure that has reached its useful life and is beginning to or has failed.

Water Resources Capital Improvement Program

Project Category	2016	2017	2018	2019	2020	2021	Total 2016 – 2021
Collection System Rehabilitation/ Replacement	1,750,000	1,500,000	1,500,000	1,500,000	1,600,000	1,600,000	9,450,000
Interceptors and Sewers	50,000	50,000	50,000	50,000	50,000	50,000	300,000
ITS Applications	1,208,781	725,000	725,000	725,000	725,000	725,000	4,833,781
Miscellaneous Projects and Contingencies	23,036,000	22,350,000	15,150,000	15,850,000	22,050,000	24,000,000	122,436,000
Stormwater Management	31,211,000	31,117,000	31,064,000	31,004,000	30,943,000	31,038,000	186,377,000
Utility Relocations	-	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
Water and Sewer Plans and Studies	950,000	2,850,000	8,790,000	31,190,000	9,690,000	790,000	54,260,000
Water Production Facilities	1,000,000	-	-	-	-	-	1,000,000
Water Reclamation Facilities	30,609,000	52,000,000	59,500,000	57,000,000	23,500,000	23,500,000	246,109,000
Water Transmission/Distribution	42,125,000	35,045,000	29,520,000	29,995,000	35,125,000	43,875,000	215,685,000
Total Water Resources	131,939,781	146,637,000	147,299,000	168,314,000	124,683,000	126,578,000	845,450,781

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