

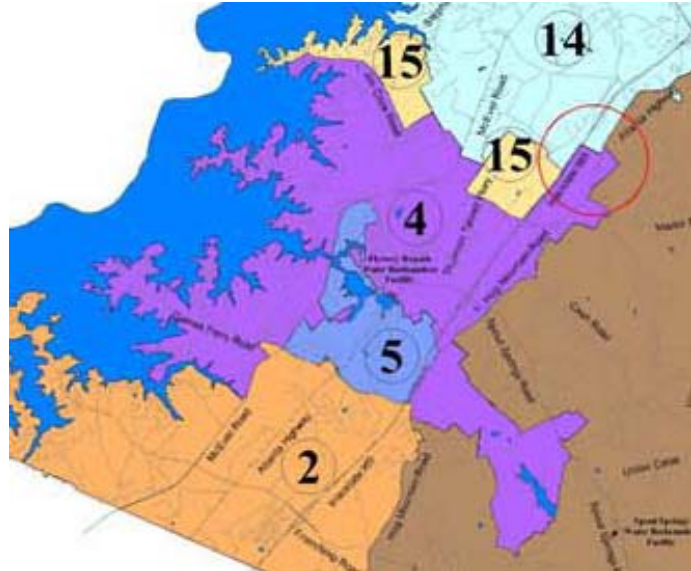
CHAPTER 4 COMMUNITY FACILITIES AND SERVICES

SUMMARY OF COMMUNITY ASSESSMENT

The City of Flowery Branch provides services in the following areas: administration, police, municipal court, water, reuse water, sanitary sewer, community development (planning and zoning), Better Hometown, historic preservation, and parks and recreation. The remainder of major public facilities and services, including fire protection, are provided by Hall County.

Flowery Branch is one of several water providers in Hall County, with the City of Gainesville being the largest water service provider. Flowery Branch's water service area is small and does not encompass the entire City Limits.

Flowery Branch provides sanitary sewer services through its Water and Sewer Department (with a staff of seven employees). Flowery Branch's Wastewater Treatment Plant is located on Atlanta Highway. Per the Hall County Service Delivery Strategy, Flowery Branch has its own small service district for wastewater, and in addition, Oakwood and Flowery Branch share a service district in two areas north of Flowery Branch and south of Oakwood.



Source: Hall County Service Delivery Strategy.

Sewer Service Areas

Legend: 4 = Flowery Branch Service District; 5 = Flowery Branch/Hall County Service District; 15 = Oakwood/Flowery Branch Service District

ADMINISTRATIVE SPACE NEEDS

The city's administrative offices are located in City Hall, which consists of 2,397 square feet. Considering employment (1,500 persons est.) plus the resident population of 2,633, the city has a functional population of 4,133. The service area is the entire city limits. The existing (2005) level of service for administrative space per functional population is 0.58 square feet per resident population. It is not considered to be an adequate level of service. A level of service standard of 0.7 is recommended and hereby adopted.

**Table 4.1
 Municipal Administration Space Needs, 2005-2025
 City of Flowery Branch**

	2005	2010	2015	2020	2025	2030
Functional Population (Residents + Employment)	4,133	12,884	16,955	20,807	24,528	28,264
Square footage of Administrative Space Needed @ 0.70 per functional population	2,893	9,019	11,869	14,565	17,170	19,185

PROPOSED IMPROVEMENT – CITY HALL

Through the visioning process it was recommended that Flowery Branch plan to construct a new administrative building (city hall). The City government will eventually need to move out of the existing building, thereby freeing up retail space on Main Street. The City will need to purchase land, design, and construct a new City Hall of, at minimum, approximately 10,000 square feet to serve a dramatic increase in needs by 2010. Ultimately, by 2030 Flowery Branch is expected to need approximately 20,000 square feet of administrative space to meet the adopted level of service standard of 0.7 square feet of administrative space per functional population. One option is to build to meet the city’s long-term needs and construct a 20,000 square foot facility by 2010. A second option is to build only 10,000 square feet but design the building for two stories and finish the second floor after 2010. A third option is to build single-story a 10,000 square foot city hall and then add to it on the ground floor another 10,000 after 2010. A fourth option is to build only the 10,000 square foot needed in 2010 by 2010, then reassess possibilities for adding administrative space at a new City Hall site (not selected at this time) or another location in the city.

**Table 4.2
 Schedule of Improvements for Administrative Facilities
 2006-2010**

Capital Improvement	2006	2007	2008	2009	2010	Total \$	Funding Sources
Construct New 10,000 square foot City Hall							
Purchase land (10 acres)			650,000			650,000	To be determined – no current funding source has been identified
Architecture and engineering site improvement and building construction plans (@ 15% of building construction costs)			225,000			225,000	
Land preparation and site Improvements				80,000		80,000	
Building Construction (10,000 square feet @ \$150 per square foot)				750,000	750,000	1,500,000	
Total			875,000	830,000	750,000	\$2,455,000	

The location of City Hall is extremely important. That public project is looked upon as a key revitalization stimulus for the downtown. While the location is not set firmly in this plan, the site at the top of the hill where Main Street terminates into Gainesville Street is believed to be an ideal (though not the only possible) location. Depending on market availability and pricing considerations, another location in Old Town would be suitable if observant of potential to stimulate redevelopment. It is also believed that a two-story City Hall building is preferred, to give it (through building height) a greater presence and visibility in Old Town. Although siting a new City Hall outside of Old Town may be considered, it is important to acknowledge and consider the benefits of keeping City Hall in Old Town, since government attracts activities and public improvements would have important spin-off benefits with regard to redevelopment of Old Town.

POLICE FACILITY SPACE NEEDS

The City's Police Department building is located on Main Street near City Hall and consists of 1,608 square feet. The service area is the entire city limits. The existing (2005) level of service for police facility space per functional population is 0.389 square feet per resident population. That is not considered to be an adequate level of service. A level of service standard of 0.5 square feet of police facility space per functional population is recommended and hereby adopted. Table 4.3 shows facility space needs from 2005 to 2030.

Table 4.3
Police Facility Space Needs, 2005-2030
City of Flowery Branch

	2005	2010	2015	2020	2025	2030
Functional Population (Residents + Employment)	4,133	12,884	16,955	20,807	24,528	28,264
Square footage of Police Facility Space Needed @ 0.50 per functional population	2,067	6,442	8,498	10,404	12,264	14,131

NEW POLICE HEADQUARTERS BUILDING AND EASTSIDE POLICE ANNEX

Through the visioning process it was determined that Flowery Branch needs to improve police facility space and also (ultimately, in the long term) consider an eastside police annex (east of Interstate 985). This plan calls for an 8,500 square foot police headquarters building adjacent to City Hall (location to be determined) by 2010 and a 5,500 square foot Police Annex on the eastside after 2010, in order to meet projected needs. Building an 8,500 square foot headquarters will serve the City's projected needs through 2015.

The city does not currently have capital funds for the police building or a new City Hall Building. At the level of service standard, the city will need to make up a current deficiency of 459 square feet of police facility space. By building a new facility, it would also be replacing existing space of 1,608 square feet. Furthermore, the City may decide to overbuild the headquarters building to serve 2015 rather than 2010 needs.

Table 4.4
Schedule of Improvements for Police Facilities
2006-2010

Capital Improvement	2006	2007	2008	2009	2010	Total \$	Funding Sources
Construct Police Headquarters Building							
Purchase land (1 acre)			65,000			65,000	To be determined – no current funding source has been identified
Architecture and engineering site improvement and building construction plans (@ 15% of building construction costs)			191,250			191,250	
Land preparation and site Improvements				40,000		40,000	
Building Construction (8,500 square feet @ \$150 per square foot)				637,500	637,500	1,275,000	
Total			256,250	677,500	637,500	\$1,571,250	

The location of the police headquarters could be integrated with the City Hall construction project. That is, the Police Department could be located in the same building and the headquarters project combined with City Hall. However, there are good reasons to keep the two projects separate but on the same site or close to one another. For security reasons (e.g., temporary incarceration of prisoners) and the need for 24-hour access, there are advantages to having police located in a separate building. Secondly, parking for patrol vehicles should be separate and distinct from parking at City Hall, and where not separate the two can conflict.

FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

Discussion during the visioning forums revealed satisfaction on the part of Flowery Branch’s residents with regard to the current levels of fire protection, rescue, and emergency medical services by Hall County. Since those services are provided by Hall County, they are not assessed further in this Community Agenda.

RECREATION AND PARKS

Through the visioning process, it was noted how the Hall County Parks and Recreation Department currently serves all of south Hall County, including Flowery Branch, with active public parks. Due to the expense associated with building and maintaining active recreational facilities, there is consensus in Flowery Branch to have Hall County continue providing active recreation facilities, and therefore, no parks acres per 1,000 population standard or ball field standard is established in this comprehensive plan. However, the visioning process also revealed a desire on the part of the Hall County Parks and Recreation Department to build two new community centers in south Hall. Hall County has selected the two South Hall locations for community centers. One is to be located on Black Jack Road between the Sterling development and Hog Mountain Road. The other is proposed to be located on J.M. Turk Road. Furthermore, the City is more interested in providing for multi-use recreational trails for its citizens than providing active recreation.

Community/Recreation Centers

Flowery Branch has the Historic Railroad Depot in Old Town which consists of 3,715 square feet. It also has the 1,032 square foot City Park Pavilion. Together, these two facilities provide 4,747 square feet which equates to a level of service (2005) of 1.8 square feet of recreation per resident.



Flowery Branch Depot

**Table 4.5
 Community/Recreation Center Building Space Needs, 2005-2025
 City of Flowery Branch**

	2005	2010	2015	2020	2025	2030
Population (Residents)	2,633	8,962	10,611	12,041	13,340	14,651
Square footage of Community/Recreation Center Space Needed @ 1.8 square feet per population	4,747	16,132	19,100	21,674	24,012	26,372

That existing level of service of 1.8 square feet per person (residential population) is adopted as the level of service standard. The service area is the entire city limits. Table 4.5 shows the building square footage needed to meet that level of service standard.

The Community Improvement Program includes construction of a 12,000 square foot new community/recreation center, sized to meet (and just exceed) the level of service standard for the year 2010.

Multi-use Recreational Trails

Flowery Branch does not currently provide any level of service for recreational trails. With regard to level of service standards, Flowery Branch hereby establishes level of service standards for recreational trails as follows:

A community improvement program has been prepared for the construction of greenways. Two greenway projects, totaling 8,894 square feet, are called for in the community improvement program. Those projects will connect important locations, and their benefit is citywide; therefore, the entire city limits is the service area for multi-use recreational trails. When constructed by 2010, these recreational trails would give the City of Flowery Branch a level of service of 0.69 linear foot of recreational trail per functional population.

Table 4.6
Recreational Trails Needs, 2005-2025
City of Flowery Branch

	2005	2010	2015	2020	2025	2030
Functional Population (Residents + Employment)	4,133	12,884	16,955	20,807	24,528	28,264
Linear Feet of Recreational Trail per functional population	2,852	8,890	11,699	14,357	16,924	19,502

After completion of the greenway trail and community center improvements (called for by 2010), the City will need to specify additional recreational trail projects and construct new system improvements. Between 2010 and 2030, Flowery Branch will need two miles (10,612 linear feet) of greenway recreational trail per functional population, to maintain the adopted level of service standard. Since these projects are beyond the immediate five-year period of the capital program, those future greenway recreational trail projects can be identified and included in the community improvement program at a later date.

Civic Park

The downtown redevelopment concept (prepared during the visioning process) proposes acquisition of a park block for Old Town. That project, for which no funding currently exists, is included in the community improvement program for recreation projects.

Table 4.7
Schedule of Improvements for Recreation Projects, 2006-2010

Capital Improvement	2006	2007	2008	2009	2010	Total \$	Funding Sources
1. Construct new 12,000 square foot new community/recreation center							
Purchase land (1 acre)			65,000			65,000	Funding Source to be Determined
Architecture and engineering site improvement and building construction plans (@ 15% of building construction costs)			225,000			225,000	
Land preparation and site Improvements			40,000			40,000	
Building Construction (12,000 square feet @ \$125 per square foot)				750,000	750,000	1,500,000	
Total			320,000	750,000	750,000	\$1,830,000	
2. Construct greenway connecting City Park and Albert Banks Park							
Purchase land						--	Funding Source to be Determined
Trail Construction (6,634 linear feet @ \$110 per linear foot				729,740		729,740	
Total	-		--	729,740	--	\$729,740	
3. Construct greenway from East Main Street to Flowery Way							
Purchase land			50,000			50,000	Funding Source to be Determined
Trail Construction (6,634 linear feet @ \$110 per linear foot				124,000	124,000	248,000	
Total			50,000	124,000	124,000	\$298,000	
4. Acquire and Improve Civic Park							
Purchase land				250,000		250,000	Funding Source to be Determined
Site improvements					125,000	125,000	
Total				250,000	125,000	\$375,000	

POTABLE WATER PRODUCTION, STORAGE, AND DISTRIBUTION SYSTEM

Existing water, reuse water, and sewer lines in Flowery Branch are shown in the Community Assessment. Flowery Branch proposes to make some significant improvements to the potable water system. The City is planning to add one well at a cost of approximately \$100,000 for additional water supply. With regard to storage, the City has two elevated tanks but proposes to add a new, 750,000 gallon prestressed concrete ground storage water tank and accessories at a cost of up to \$800,000. Additionally, new water lines will be needed to tie the new storage tank to the new well and connections to the existing water system. No other additional potable water line extensions are proposed at this time. The City will budget \$100,000 annually for maintenance and replacement of water lines (including fire hydrants) on an as-needed basis.

Forecasting Long-Term Future Water Needs

To meet future needs for water, estimates of future consumption are needed. Many factors influence the amount of water used, including the price, leaks in the system, wasteful practices versus conservation measures, the sizes and types of commercial and industrial establishments, and the amount of annexation (or changes to water service area boundaries) and rezoning. If the estimates are too low, the community risks not having enough water to meet its needs. If the estimates are too high, it risks spending substantial sums of money for capacity it will not use.

Domestic water use can vary between 40 and 120 gallons per person per day. Average per capita per day consumption of water for all uses (residential, commercial, institutional, and industrial) generally is in the range of 170 to 300 gallons per capita per day. Water use can be much higher than these averages, and there are substantial variations in water use from community to community. Water use by land use is illustrated in Table 4.8.

Table 4.8
Average Daily Water Use by Selected Land Use

Use	Average Use (Day)	Equivalent Residential Unit (ERU)
Detached, Single-Family (site built)	100 gallons per capita	1.0 per unit
Manufactured home	75 gallons per capita	0.75 per unit
Multi-family dwelling unit	75 gallons per capita	0.75 per unit
Office	93 gallons per 1,000 gross square feet	0.93 per 1,000 gross square feet
Retail Space	106 gallons per 1,000 gross square feet	1.06 per 1,000 gross square feet
Hotel or motel	168 gallons per room	1.68 per room
Restaurant	50 gallons per seat	0.5 per each seat at capacity
Day care center or school	16 per student	0.16 per student
Industry	150 gallons per employee	1.5 per employee
Assembly hall	2 gallons per seat in largest assembly room	0.02 per seat in largest assembly room
Self-service laundry	250 gallons per washing machine	2.5 per washing machine

Source: Compiled by Jerry Weitz & Associates, Inc., from the following sources: Robert Burchell et al. 1994. 1994. *Development Impact Assessment Handbook* (Washington, DC: Urban Land Institute). Listoken, David, and Carole Walker. 1989. *The Subdivision and Site Plan Handbook* (New Brunswick, NJ: Rutgers, the State University of New Jersey, Center for Urban Policy Research). Matusik, John, and Gary L. Nickerson. 2002. "Water Distribution." In *Land Development Handbook: Planning, Engineering, and Surveying*, Second Edition. The Dewberry Companies (New York: McGraw-Hill). Colley, B. C. 1986. *Practical Manual of Site Development* (New York: McGraw-Hill).

For planning purposes in the absence of a water master plan, a level of service of 300 gallons per day per functional population is adopted. However, with water conservation efforts and the city's reuse system, the Level of Service Standard may be reduced in the future to 200 gallons per day per functional population if warranted. Counting future population and employment, the city's total citywide needs would be as shown in Table 4.9.

**Table 4.9
 Projected Water Demand, 2010-2030
 City of Flowery Branch**

	2010	2015	2020	2025	2030
Population + Employment (Functional Population)	12,884	16,955	20,807	24,528	28,264
MGD needed at LOS of 200 GPD	2.58	3.39	4.16	4.91	5.65
MGD needed at LOS of 300 GPD	3.87	5.09	6.24	7.36	8.48

Notes: MGD = Millions of gallons per day. GPD = Gallons per day. LOS = Level of service standard: gallons per function population.

At first glance, this appears to outstrip current plans of the city. However, one should note that the Flowery Branch service area is small and does not encompass the entire City Limits. It also does not include much of the highest growth areas projected in the city limits. Much of the substantial future water supply needed will be purchased from the City of Gainesville.

Water Reuse System

With assistance from the city’s consulting water and sewer engineer, the city plans to expand its water reuse system. Anticipated projects include the following:

- Tie McEver Road to Atlanta Highway along Radford Road.
- Connect the Atlanta Falcons facility to the water reuse system.
- Extend a reuse water line along Spout Springs Road.
- Extend a reuse water line up Thurmond Tanner Road to Atlanta Highway.
- Extend the system north to the Tanner’s Creek development.

At an estimated cost of \$20 per linear foot of reuse water line, the estimated cost of these improvements is \$1,500,000. The City will budget for these improvements in the capital improvement program over a five-year period or longer if necessary.

Water Conservation

In addition to developing the Water Reuse System, Flowery Branch will need to develop and implement water conservation programs that will meet objectives of (and implement) the Metropolitan North Georgia Water Planning District. Possible conservation measures are reiterated in Table 4.10 from the Community Assessment.

**Table 4.10
 Conservation Efforts Selected by the
 Metropolitan North Georgia Water Planning District**

1	Distribute Retrofit Kits
2	Increase Public Education
3	Provide for or Require Sub-Metering Multi Family Units
4	Regulations for Rain Sensor/ Shut-offs on Automatic Irrigation Systems
5	Commercial Water Audits and Feasibility Reports
6	Require 0.5 gallon/flush Urinals
7	Use Price as a Tool for Water Conservation
8	Leakage Reduction Program Improvements
9	Residential Water Audits
10	District Oversight of Water Conservation
11	Deferral/Downsizing of Capital Improvement Projects

Source: Metropolitan North Georgia Water Planning District. Water Supply and Water Conservation Management Plan.

Policies Related to the Water System

1. Meet at a minimum the strict water quality standards established pursuant to the federal Safe Drinking Water Act of 1974, as amended.
2. Whenever possible, water supply lines should be laid out in a grid-like manner so that there are no dead ends (i.e., a practice called “looping”). The advantage of looping is that there are no dead ends where water can stagnate, and if repairs are required, smaller areas will have the water supply cut off.
3. It is important for the City to anticipate the need to replace obsolete water lines. Flowery Branch will spend money each year for replacements of water lines so as to avoid the costs of replacing a major portion of the water system at a later time.
4. Fire flows of 1,500 gallons per minute will be maintained in commercial areas and at least 1,000 gallons per minute be available in residential areas.
5. The optimum range for water system pressure is between 50 and 70 pounds per square inch (psi). A minimum pressure of 20 psi is needed during fires, and customer complaints can be expected when water pressure falls below 20 psi. Too much pressure can cause leakage and failure of older hot water heaters, so a maximum main pressure is 100 psi.
6. Flowery Branch will develop and implement a water conservation management plan that meets the objectives of the Metropolitan North Georgia Water Planning District in its Water Management Plan. (submitted)
7. Contingency plans should be prepared for dealing with major water line breaks, loss of water sources during drought, and other possible damages to the water system such as flooding. (submitted)

8. Water rates will be established based on forecasted needs. The revenue produced by the system should be sufficient to pay for all necessary capital expenditures, operation and maintenance costs, debt service, administrative costs, and provide a contingency fund for emergencies.
9. Developers of new subdivisions should be required to install the water mains and appurtenances through or along the tract and deed the facilities to the City.
10. The City should establish a policy for the “oversizing” of water mains so that when a larger water main is needed than would serve the subdivision or development, the City can contribute a prorated share of the cost to construct a water main that serves a larger population or area.

The short-term work program for water projects and programs is provided in Table 4.12 which appears later in this Section.

SEWER

The Georgia Environmental Protection Division previously studied the need to discharge wasteloads into Lake Lanier and allocated a maximum of 3.8 million gallons per day (mgd) for Hall County and Flowery Branch in the Lake Lanier Basin. The private system serving Sterling on the Lake is not within the Flowery Branch sewer service area (Hog Mountain Road is a watershed boundary). Connection of that system to Flowery Branch's system is therefore not contemplated in this plan.

Flowery Branch intends to expand the city's sewer plant (wastewater reclamation facility) to 3.0 mgd capacity in three years (2008) at an estimated cost of \$10 million. The city's sprayfield on the north side of the city limits has a capacity of 1.0 mgd. Significant parts of the city's treatment capacity are reserved for Hall County and Oakwood per separate intergovernmental agreements, which are currently not well worded relative to allocation of sewer capacities. The City added a laboratory building at the plant, which was completed at a cost of \$362,000 (bond) in February 2006.

No additional sewer lines are proposed in the city's work program, but Hall County has expressed interest in running sewer lines along McEver Road, Atlanta Highway, and Hog Mountain Road to spur additional economic development in South Hall County. Hall County is also planning to replace a short section (300-400 feet) of sewer line along Lights Ferry Road and upgrade the pump station in order to provide sewer west of the city limits. Developers are expected to finance any other extensions to the existing city sewer system.

With regard to maintenance, replacement, and upgrade of existing sewer lines, the city will budget \$100,000 annually for miscellaneous project needs. The city has already dealt effectively with Infiltration and Inflow (I & I) issues with the sanitary sewer line, the city's consulting water and sewer engineer reports.

Forecasting Long-term Sanitary Sewer Needs

As a general rule of thumb, approximately 70 to 80 percent of the potable water supplied by any given community's water system is returned to the sanitary sewer collection system. Sanitary sewer systems are usually sized to accommodate average wastewater flows of approximately one hundred gallons per capita per day (Somers et al 1986). Other sources note that in general

“about 60 to 80 percent of the per capita consumption of water will become sewage (Colley 1986), and that an estimated 65 percent of the water used for residential use returns to the sewage system (Brewer and Alter 1988).

Sewage flow rates vary during the day. Due to such fluctuations, the sewer pipe sizes are not designed for the average flow, but rather, peak flows. The peak flow is the highest instantaneous rate of flow occurring during the day. Peaking factors should be applied by a civil engineer in considering flow requirements prior to design and financing.

Table 4.11 provides projections of sewer capacity to meet long-term needs (buildout) of the future land use plan. Two level of service standards are shown – one at 150 gallons per day per functional population, and one at 80% (240 gallons per functional population per day) of the level-of-service standard adopted for potable water (300 gallons per functional population per day).

Table 4.11
Projected Sewer Demand, 2010-2030
City of Flowery Branch

	2010	2015	2020	2025	2030
Population + Employment (Functional Population)	12,884	16,955	20,807	24,528	28,264
MGD needed at LOS of 150 GPD	1.93	2.54	3.12	3.68	4.24
MGD needed at LOS of 240 GPD	3.09	4.06	4.99	5.89	6.78

Notes: MGD = Millions of gallons per day. GPD = Gallons per day. LOS = Level of service standard: gallons per function population.

The short-term work program for water projects and programs is provided in Table 4.12 which appears later in this Section.

Policies Regarding Sanitary Sewer

1. Convey all sanitary wastewater flows to the treatment plant (or spray irrigation) without bypassing flows into receiving waters and without causing waste backups that store sanitary sewage on private properties.
2. The sewer system will be gravity-flow sewer as much as possible. Only in rare instances, when existing sanitary sewer outfalls are too high for the design of a gravity-flow system, will a pumped system with forced mains (pressure systems) be permitted.
3. The City will anticipate the need to replace obsolete sewer lines. Flowery Branch will spend money each year for replacements of sewer lines so as to and avoid the costs of replacing a major portion of the sewer system at a later time.
4. Contingency plans should be prepared for dealing with major sewer line breaks and other possible damages to the sewer system such as flooding.
5. Sewer rates will be established based on forecasted needs. The revenue produced by the system should be sufficient to pay for all necessary capital expenditures, operation and maintenance costs, debt service, administrative costs, and provide a contingency fund for emergencies.

6. Developers of new subdivisions should be required to install the sewer mains and appurtenances through or along the tract and deed the facilities to the City.
7. The City should establish a policy for the “oversizing” of sewer mains so that when a larger water main is needed than would serve the subdivision or development, the City can contribute a prorated share of the cost to construct a water main that serves a larger population or area.

Table 4.12
Water and Sewer Short-term Work Program, 2006-2010
City of Flowery Branch

Description	Year(s) To Be Implemented	Estimated Cost (\$)	Responsible Party	Possible Funding Sources
Complete study and mapping of the city's water system	2006	unknown	City Water and Sewer	Water/sewer fund or annual operating budget
Add laboratory building at sewage treatment plant (completed)	2006	\$362,000	City Water and Sewer	Water/sewer fund
Amend intergovernmental agreements to resolve disputes and/or add clarity to allocations of sewer capacity among Oakwood, Flowery Branch, and Hall County	2006	unknown	City Attorney	Annual operating budget (city attorney fees)
Incorporate reuse water service area boundaries into existing intergovernmental agreements with Oakwood and Hall County	2006	unknown	City Attorney	Annual operating budget (city attorney fees)
Prepare maintenance and replacement program for water and sewer lines, conduct a review of the city's water and sewer rate schedules (tap-on fees), and adjust to match identified needs for replacement and upgrade of systems	2006	\$20,000	City Water and Sewer	Water/sewer fund or annual operating budget
Establish a policy for the "oversizing" of water mains (land development regulations)	2006	Include in regulations rewrite	City Water and Sewer; City Planner	Operating budget
Develop city water conservation program, implementing objectives of the Metropolitan North Georgia Water Planning District	2006 (annual implementation thereafter)	\$22,000	City Water and Sewer	Operating budget
Add new well for additional water supply	2006	\$100,000	City Water and Sewer	Bond; water/sewer fund
Develop contingency plans for dealing with major water and sewer line breaks, loss of water sources during drought, and other possible damages to the water and sewer systems such as flooding	2006-2007	Unknown	City Water and Sewer	Water/sewer fund or annual operating budget
Prepare and/or update technical specifications for connection to the potable water, reuse water, and sanitary sewer systems	2006-2007	\$20,000	City Water and Sewer	Water/sewer fund or annual operating budget
Erect new 750,000 gallon ground storage tank	2006-2007	\$800,000	City Water and Sewer	Bond; water/sewer fund
Connect new well and new tank with water lines	2006-2007	unknown	City Water and Sewer	Water/sewer fund
Maintain and replace water lines as needed (annual expenditure)	2006-2010	\$100,000 annually	City Water and Sewer	Water/sewer fund
Extend lines of water reuse system (multiple projects) (annual expenditure)	2006-2010	\$1,500,000	City Water and Sewer	Water/sewer fund
Expand the sewer plant (wastewater reclamation facility) to 3.0 mgd capacity	2008	\$10,000,000	City Water and Sewer	Water/sewer fund; revenue bonds
Extend sanitary sewer lines along McEver Road, Atlanta Highway (part), and Hog Mountain Road	2006-2010	\$5,000,000	Hall County Water/Sewer	Hall County Capital Improvement Program
Maintain and replace sewer lines as needed (annual expenditure)	2006-2010	\$100,000 annually	City Water and Sewer	Water/sewer fund
Replace water and sewer department vehicles as needed	2006-2010	unknown	City Water and Sewer	Water/sewer fund or annual operating budget

STORMWATER MANAGEMENT

The Watershed Management Plan adopted by the Metropolitan North Georgia Water Planning District sets forth strategies and recommendations for effective watershed management and control of stormwater runoff throughout the planning district. The plan's major focus is to meet and maintain water quality standards and designated uses of streams and other water bodies within and in those areas downstream from the District. With the inclusion of Flowery Branch and Hall County within the jurisdiction of the Metropolitan North Georgia Water Planning District, Flowery Branch faces a number of increased responsibilities during the next five years in responding to mandates to improve the quality of storm water. The City has already engaged in one of the first mandates, adoption of model ordinances for stormwater management, floodplain management, and elimination of illicit discharges to the city's utility systems. However, there is much more that Flowery Branch will need to do in upcoming years, especially in terms of meeting Total Maximum Daily Load (TMDL) limitations on streams.

**Table 4.13
 Stormwater Management Short-term Work Program, 2006-2010
 City of Flowery Branch**

Description	Year(s) To Be Implemented	Estimated Cost (\$)	Responsible Party	Possible Funding Sources
Consider the need to provide a stormwater collection system in Old Town to ensure redevelopment, at the time a Redevelopment Plan is prepared.	2006		City Planner; Director of Water and Sewer Dept.	Operating Budget
75 to 90 percent of the City's population will have achieved awareness of water resource protection issues	2006		To be assigned	Operating Budget
Respond to mandates of the Metropolitan North Georgia Water Planning District in terms of implementing its Districtwide Watershed Management Plan	2006-2010	\$22,000	City will need to assign these responsibilities	Operating Budget
Complete inventory of stormwater system	2007	\$25,000	To be assigned	
Adopt an ordinance that establishes septic system inspection and maintenance programs, including requirements for pumping septic tanks every five years.	2007		To be assigned; City Attorney	Technical Assistance from Metro N. Ga. Water Planning District
Provide training and certification programs for site designers and engineers to assure that the standards and criteria in the <i>Georgia Stormwater Management Manual</i> are met	2007-2010	\$1,500	To be assigned	Technical Assistance from Metro N. Ga. Water Planning District
Initiate water quality monitoring efforts as may be required to meet Water District mandates	2007	Unknown	To be assigned	Technical Assistance from Metro N. Ga. Water Planning District
Consider the feasibility of initiating a stormwater utility to help fund maintenance of stormwater facilities, either individually or in conjunction with Hall County	2007	Unknown	To be assigned; Consultant	Technical Assistance from Metro N. Ga. Water Planning District
Prepare a watershed improvement plan for substantially impacted watersheds (i.e., those that do not meet water quality standards and designated uses), as may be required	2007-2010	Unknown	To be assigned; Consultant	Technical Assistance from Metro N. Ga. Water Planning District