As development continues in Frederick County, there is a need to carefully plan for the facilities and services that will be required. Planned development will affect the expenditures and facilities that will be needed. It will also effect the location and types of facilities that must be provided.

There is a need to carefully monitor growth and to plan land use and facilities in a coordinated fashion. This can be accomplished through annual comprehensive planning and capital improvements planning.



Schools

The Frederick County Public School system is composed of ten elementary schools serving students in grades kindergarten through fifth grade; three middle schools serving grades six through eight; and, two high schools serving grades nine through twelve. The NREP is a regional program that provides special education services to students from Frederick and Clarke Counties and the City of Winchester. In addition to the main school facilities, nineteen modular classrooms are used at six school sites to reduce overcrowding due to increased enrollment and changes in educational programs.

During the past several decades, the student enrollment in the school division has increased steadily. The most significant increase has occurred throughout the 1990s with school enrollment growing by 2,318 students. This increase, from 8,223 students in 1990 to 10,408 students in 1999, represents a 28% growth in student enrollment in the school division. Student enrollment in Frederick County has notable exceeded the state average, which was 11.3% for the same period of time.

In order to meet the need for additional space, a number of school construction and renovation projects have occurred. Despite the completion of these capital facilities projects, throughout the 1990s four of the ten elementary schools will exceed 90% of their capacity of the opening of school in the fall of 2000. These schools are Bass-Hoover (96%), Indian Hollow (91%), Senseny Road (105%) and Stonewall (95%). Construction of classroom additions to Armel and Middletown Elementary Schools, which were completed in the fall of 1998, resulted in an increase in student capacity and a reduction in the percent of practical capacity utilized at each of these sites. Orchard View Elementary School in the Back Creek Magisterial District will open for students in the fall of 2000 and Robinson Elementary will be closed.

As students matriculate from elementary to the middle and high school levels, the need to provide additional space for the increase in student population and to meet changing educational requirements will necessitate the development of new facilities and the renovation of existing facilities. The Capital Improvements Plan reflects the need to address space requirements for middle and high school enrollment that has exceeded 90% of capacity in three of five schools despite the use of nineteen modular classrooms at five different locations, and the increased use of the Dowell J Howard Center for secondary programs. A major renovation

project at James Wood Middle School and the construction of a third county high school on Berryville Pike are two projects planned to address the increase in middle and high school student populations.

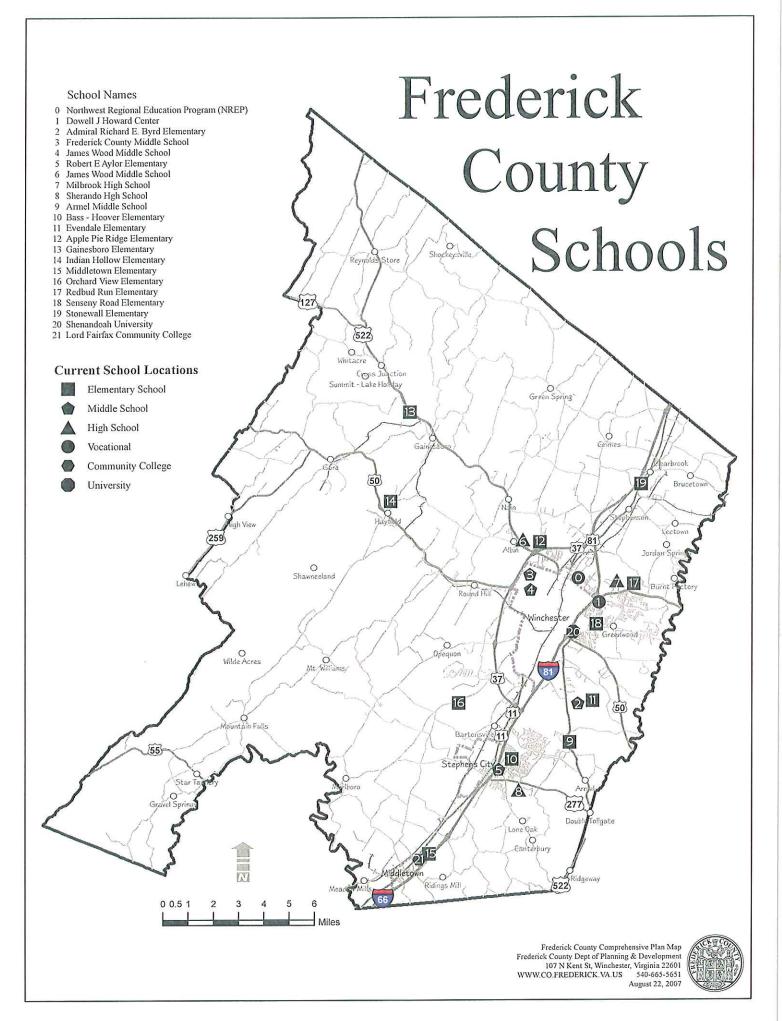
During the 1990s, the need to renovate or replace older facilities and provide facilities to accommodate residential growth in the county has resulted in significant allocations for capital facilities costs in the school division. The rate of residential growth continues to impact the school system, particularly in southern and eastern Frederick County as subdivisions are developed in the Urban Development Area (UDA). In addition, careful monitoring of residential growth outside of the UDA, which has accounted for approximately one third of new residential building permits issued throughout the 1990s, is necessary to accurately predict enrollment trends.

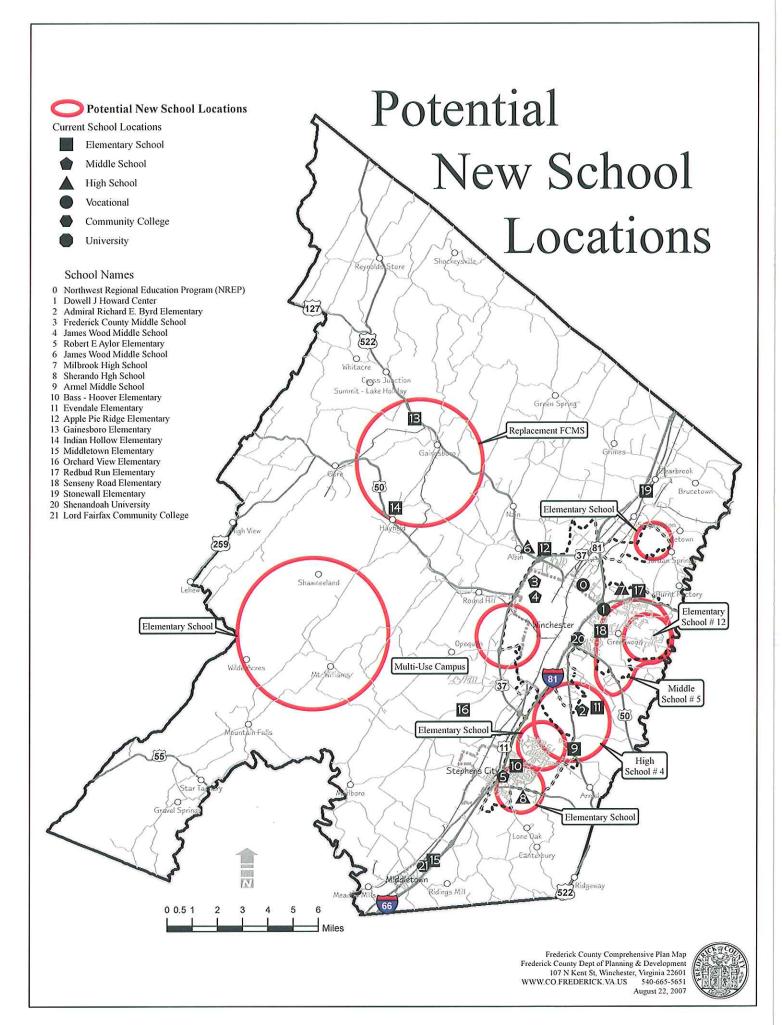
Along with growth in student enrollment, the school is faced with the responsibility of providing instruction in order to prepare students to work and live in the 21st century. The use of technology as a tool in nearly every facet of education has dramatically changed the way in which instructional services are provided to students. Required technology-related instruction at all levels will continue to necessitate increased expenditures for computer and computer related hardware and software. Mandates from the federal and stated governments, particularly in special education services, will require localities to expend additional financial resources to meet educational requirements. The requirements associated with technology-related instruction and the provision of appropriate special education services to students will create the need for investment in future capital projects within the school division.

Major efforts have been made by the school division and the Board of Supervisors to consolidate services in order to serve the residents of Frederick County more effectively and efficiently. Cooperative agreements have been developed relative to sharing school facilities for recreational use by a wide variety of community organizations; maintenance of school grounds provided by the Department of Parks and Recreation, resulting in a greater utilization of space; and maintenance of the County Office Complex provided by the school division's Building and Grounds Department.

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Community Facilities and Services	
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Parks and Recreation

The purpose of this section of the chapter is to outline the County's recreational policies and identify implementation methods to accomplish the stated goals for recreational facilities, programs, studies, and plans. This narrative is a broad overview of parks and recreation goals, needs and standards, and serves as a guide to decision making. This overview is a part of the County's continuing planning process.

Facilities

The County currently owns and operates two district parks. Clearbrook Park, located five miles north of Winchester on Route 11, consisting of approximately 55 acres (44 which are owned by the County) and Sherando Park, located two miles east of Stephens City on Route 277, consisting of approximately 334 acres. Both district parks currently serve the County's population with active and passive recreational programs and facilities.

The four County neighborhood parks are located at: the Reynolds Store Fire Company and Gainesboro Fire Company in the Gainesboro District, Round Hill Fire Company in the Back Creek District, and the Frederick Heights subdivision in the Red Bud District. These neighborhood parks consist primarily of playground equipment for young children.

In 1987, master development plans were adopted for both Clearbrook and Sherando Parks. These master plans established development goals for each park, identified unmet recreational needs, provided unified facility plans, and proposed a development program for each park. The Master Plans for both Clearbrook and Sherando Parks reflect the recommendations of the County residents and national standards as outlined in the Virginia Outdoor Plan. These plans emphasize the development of a swimming pool complex, and additional sports venues, picnic areas, and maintenance support facilities. In 2001, the Sherando Park Master Plan was revised and adopted.

Since the adoption of the Master Plans, the County has completed the construction of: two outdoor swimming pool complexes, four irrigated soccer fields, a maintenance building, three shelters, a gazebo, two playground areas, two sand volleyball courts and two fields of a four field softball complex. The County

has also purchased an area to house the maintenance operation for Clearbrook Park. Additional recreational facilities currently provided are athletic fields, playground, and picnic areas with a variety of recreational opportunities such as horseshoes, fishing, paddleboats, volleyball, open space areas, and support facilities. Clearbrook Park, Sherando Park, neighborhood parks and all public schools are maintained by the Parks Division of the County Parks and Recreation Department.

To date, the County has constructed a 2.4 mile bicycle/pedestrian trail to serve several residential areas east of Stephens City. The County has also committed to the construction of a .6 mile trail to serve residential areas on the northern perimeter of Sherando Park. These bicycle facilities will link those residential areas with Sherando Park and Sherando High School. Additional trails would provide residents the ability to travel safely from their homes to schools, stores, work or recreation areas without having to share the overcrowded arterial and collector roads with automobiles.

Programs

The Recreation Division of the Frederick County Parks and Recreation Department was created to provide a comprehensive and accessible program of recreational services and activities for the residents of Frederick County. A diverse range of recreational and enrichment programs is provided for all age groups. This broad base of activities includes, but is not limited to, instructional classes, outdoor adventure programs, sports and athletics, lifetime leisure and fitness programs, cultural and community events, as well as, trips and excursions.

Programming responsibilities are assigned within the Division's four interest sections:

1. Community Events

- 3. Sports & Athletics
- 2. Before & After School Programs
- 4. Lifetime Leisure and Fitness

Staff members work together to identify, develop, and implement those activities which most closely meet the interests and desires of the community. The Division typically implements programs within age categories such as preschool, youth, teen, adult and senior adult.

The majority of recreation programs offered by the Parks and Recreation Department are held within the 18 public schools in Frederick County and the Parks and Recreation Department's Community Centers. Consequently, this wide variety of recreation offerings has maximized the use of county school buildings.

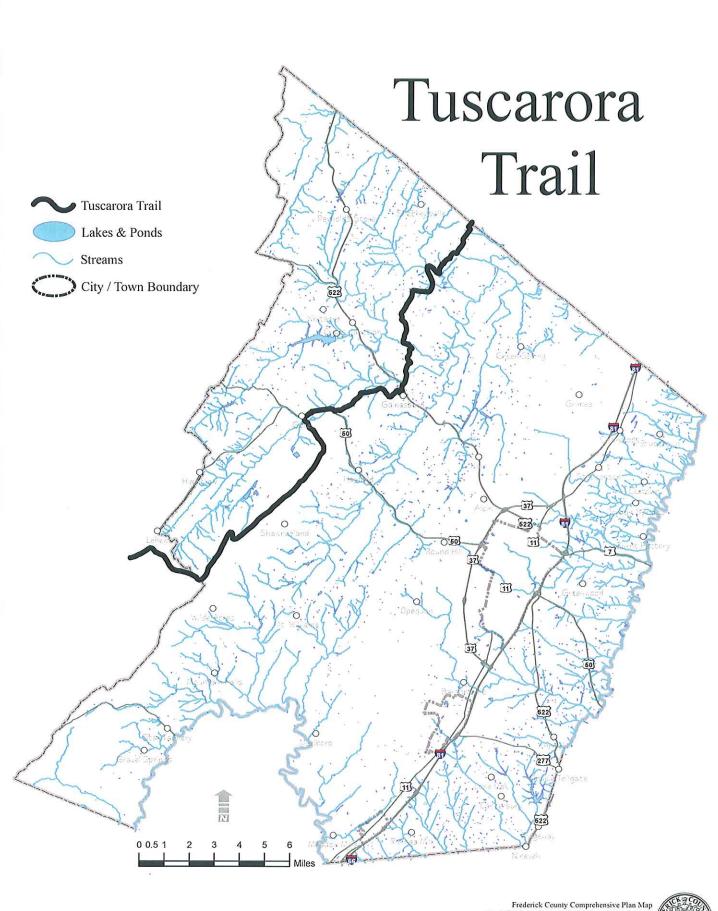
The joint efforts of the Frederick County Public Schools and the Parks and Recreation Commission/Department resulted in the inclusion of recreational facilities within Sherando High School. The Parks and Recreation Department's Community Center, which adjoins Sherando High School, opened in September of 1993 and contains two racquetball courts, a weight room and a multipurpose room with kitchen. Building upon the Sherando concept, the Orchard View Community Center, which is attached to Orchard View Elementary School was opened in August 2000. This facility features a full-size gymnasium available for recreational activities during non-school hours. The Evendale Community Center, our third center, opened in 2006 includes two multi-purpose rooms and a full size gymnasium.

The Tuscarora Trail

The Tuscarora Trail is a 249 mile hiking trail situated generally along the mountain ranges to the west of the Shenandoah and Cumberland Valley. It connects to the Appalachian Trail in Shenandoah National Park and in Pennsylvania northeast of Carlisle.

Approximately 26 miles of the Tuscarora Trail is in Frederick County (see map). Of this total, approximately 11.25 trail miles are protected by easements on private property, 3.75 trail miles are on unprotected private property and 11 trail miles are on public roads.

This trail is an important feature in the county for recreation and for the promotion of tourism. For safety reasons, the county supports the relocation of the trail off of the public roads wherever possible. The county also supports voluntary trail easements for sections of the trail on private property to insure the long-term viability of the Tuscarora Trail.





Current Needs and Future Demands

To meet present requests and plan for future leisure service demands, the Parks and Recreation Department has completed Master Plans for the County's two District Parks through community involvement; studies of national standards provided in the Virginia Outdoor Plan; and surveyed information relating to the provision of leisure services.

Through utilization of these and any other available resources, it is projected that the following areas must be addressed if we are to meet leisure demands:

- 1. Land acquisition to meet minimum standards.
- 2. Facility development to meet minimum standards.
- 3. Development of recreation centers.
- 4. Increased programming for special populations.
- 5. Increased programming for teens.
- 6. Greater diversity of programming to better meet the needs of the entire community.
- 7. Expansion of trail systems and bikeways.

To serve our current population and ensure adequate public park land and recreational facilities are available for future generations of Frederick County residents, the Parks and Recreation Commission supports an approach which would require developers to set aside open space for use by the Home Owners Association and encourage a proffer which would enable the county to accomplish a master planned urban park system. With the required open space set aside provided by the developer, the Home Owners Association would have the option of developing recreational amenities of their choosing. The developer would also have the opportunity to include features which may help market their property. The county would then encourage a proffer, based on the approved urban park master plan, of land if determined suitable. If land within a certain development does not conform to the urban park master plan, a monetary proffer to help offset the cost of completing the plan could be considered. The Parks and Recreation Commission would also advocate developers being required to offer easements and construct pedestrian/bicycle trails through their developments. Maintenance and upkeep of these public trails would then become the responsibility of the Home Owners Associations. The acquisition of these public trail easements would be necessary to provide an array of non vehicular access to the public parks, schools, libraries and commercial establishments.

The Parks and Recreation Commission also recommend the county actively pursue land acquisition and facility development through appropriations, bond referendums, donations, partnerships and bequest. Additionally, the Parks and Recreation Commission would support the monetary proffers for parks and recreation being put into an interest barring account with all interest earned being added to the proffer intended for parks and recreation capital development.

Area Standard

As suggested by the 2002 Virginia Outdoor Plan, the area standard for local recreation and park sites in Virginia is ten acres of developed park land per thousand populations. Frederick County has a population of approximately 70,575 (based on 2006 estimates provided by the Planning Department) and currently maintains 400 acres of park land. Of the 400 acres assigned to the parks, about 220 acres would be considered developed.

Using the population projections provided by the Frederick County Planning Department, an additional 286 acres are needed to meet the current demand; another 37 acres by 2010 and 60 acres by 2015 will be required if we are to keep pace with the recommended standard of the ten acres per thousand population. It is estimated by the Parks and Recreation Department that by the year 2020, Frederick County will need approximately 843 acres of developed park land to adequately serve the County's population.

The following are different park types for development:

Mini Park

Size: 0-4 acres

Service Area: 1/4 mile

Administrative Responsibility: Local Unit of Government

Purpose:

The Mini parks offer close to home open space and limited recreational amenities which are typically accessible by bicycle/pedestrian trails.

Mini Parks have a service area of approximately ¼ mile and are less than five acres. It is important for these parks to be accessible by bike/pedestrian trails. In most cases, it is not practical to include athletic fields or major facility development in a mini park. As a result, these areas offer very little in terms of design elements which create a self policing environment. These areas can become attractive to the occasional/drop—in visitor and supervision is often necessary to ensure the park remains an asset to the community. Mini parks are the least desirable type of park for

inclusion into a public park system because they are small, inefficient to maintain and difficult to police. Typically, the amenities found in the Mini Park are the same as found in home owner association open space areas. However, if strategically located and offering a unique value not available as a Home Owners Association recreational unit, the Mini Park may be considered.

Neighborhood Park

Size: 5-24 acres, Plan at 3 acres/1000 Population

Service Area:

Approximately 5 - 15 minutes walking distance or $\frac{1}{2}$ mile to $\frac{1}{2}$ miles

Administrative Responsibility: Local Unit of Government

Purpose:

The primary function of the neighborhood park is to provide limited types of recreation for the entire family within easy walking distance. Facilities should be provided for all age groups.

Character:

Intensive use and easy access are characteristics of this classification. Ideally, the site would have areas that are level to gently rolling to accommodate the intensive use facilities, with shaded areas for passive recreation.

Location:

If possible, the neighborhood park should be located near a school and/or the neighborhood center and away from railroads, major streets and other hazardous barriers.

Potential Facilities:

- Playground
- Volleyball Courts
- Picnic facilities
- Badminton Courts
- Tennis Courts
- Trails
- Ball Diamonds
- Fishing Pond

- Horseshoe Pits
- Swimming Pool
- Shuffleboard Courts
- Bikeway
- Basketball Courts
- Recreation Center
- Football/Soccer Field

Play fields usually serve a dual purpose in this type of facility. They provide an area for sports and running games and also serve as open space. Intensive use areas (the playground area and hard surfaced courts) are buffered from other activities by passive natural areas and pedestrian access corridors. Programmed activities such as organized athletics are often suitable in neighborhood parks. Although limited parking facilities are provided, site design should encourage pedestrian access to the greatest extent possible.

Rural communities may want to consider deleting neighborhood parks and include their function in larger community parks which could better serve the needs of widely dispersed local population. From an economic standpoint, well designed, larger facilities are likely to be less expensive to maintain than several small sites.

Community Park

Size: 25-99 acres, Plan at 3 acres/1000 population

Service Area: Approximately 15 minutes driving time

Administrative Responsibility: Local Unit of Government

Purpose:

Community parks should primarily support active recreation activities and be capable of withstanding intensive use, while still containing a fair amount of open space.

Character:

The site usually varies from relatively flat open space to moderately sloping wooded area. Such a park should be adaptable to a wide variety of recreational activities. Access is gained by auto, bicycles, or walking.

Location:

Locate when possible near the center of the community with good access and serviced by a public transportation system.

Potential Facilities:

- Playground
- Volleyball Courts
- Picnic facilities
- Badminton Courts
- Tennis Courts
- Trails
- Ball Diamonds
- Fishing Pond
- Horseshoe Pits
- Swimming Pool
- Shuffleboard Court
- Bikeway

- Basketball Courts
- Recreation Center
- Football/Soccer Field
- Natural Areas
- Lake or Stream
- Boating/Fishing
- Parking Areas
- Golf
- Beach Area

District Park

Size: 100-999 acres, Plan at 4 acres/1000 population

Service Area: 15-25 minutes driving time, 5-15 miles service radius

Administrative Responsibility: Local Unit of Government

Purpose:

District Parks should serve the recreational needs of large portions of the local population. They should contain a wide variety of intensively developed areas for day use recreation, while providing ample open space with generous buffers between activity areas.

Character:

The site could vary from flat open space to moderately to steeply sloping topography. It should be capable of hosting a diversity of activities, effectively buffering natural areas and open space from active recreation areas. A site location along a stream or lake is highly desirable. The regional park needs to be accessible by auto, as well as, pedestrians and bicycles.

Location:

Where possible, district parks should be located near the center of the service area, and on or close by an arterial or major road providing good access to the facility. In urban or suburban situations, easy access to mass transit is highly desirable. The site should also be accessible by pedestrians and bicyclists.

Potential Facilities:

- Playground
- Volleyball Courts
- Picnic facilities
- Badminton Courts
- Tennis Courts
- Trails
- Ball Diamonds
- Fishing Pond
- Horseshoe Pits
- Swimming Pool
- Shuffleboard Courts
- Bikeway

- Basketball Courts
- Recreation Center
- Football/Soccer Field
- Natural Areas
- Lake or Stream
- Boating/Fishing
- Parking Areas
- Golf
- Beach Area

Greenway

Size:

Any length, preferably longer than one mile, typically 75-100 feet or wider

Service area:

Dependant upon the location, size and significance of the corridor

Administrative Responsibility:

Federal, state, local or public/private partnership

Purpose:

Greenways are established to protect, preserve, and maintain existing natural and cultural corridors; to link population centers with recreational, educational and business areas and other population centers; and to provide recreational and non-motorized transportation opportunities along these corridors by using natural features (ridge-lines, steep slopes), utility rights-of-way, and watercourses (streams, rivers, canals, etc.).

Character:

Depending on the location, it can range from rugged terrain with scenic views and extensive vegetation to open level meadows. The greenway can be a separate entity or a portion of any of the other park categories.

Potential facilities:

- Access Points
- Canoeing
- Historic Sites
- Camping
- Fishing
- Boating

- Picnic Facilities
- Trails
- Natural Area
- Parking Areas
- Winter Sports

Community Centers

Community Centers are facilities which provide a multi-purpose room, kitchen area, and a fitness or gymnasium element. These facilities are usually constructed between 15,000 and 20,000 square feet. These facilities may be reserved for the general public. Community Centers may be a stand alone facility within a Neighborhood or Community Park, or may be co-located with other County Agency Buildings.

Recreation Centers

Recreation Centers are typically found in District or Regional Parks. These 100,000- 150,000 sq feet facilities provide an indoor aquatic venue, gymnasium, fitness, multi-purpose rooms, a kitchen, lobby area, and significant locker room space. In providing Recreation Centers, one should consider adequate storage. These facilities are open to the general public for drop-in use.

Table 15: Facility Needs Based on Minimum Standards Established in the 1996 Virginia Outdoor Plan

Frederick County Parks & Recreation Department Comprehensive Plan Facility Standards

Facility	Existing	2006 Needs Gap	2020 Needs Gap
Park Land	400	286	443
¼ Mile Track	1	3	4
Baseball Fields	8	6	9
Basketball Courts	5	9	12
Bike Trails/ Roadways	2.4	66	82
Greenway			
Fishing (bank)		69	84
Amphitheatre	0	2	2
Horseshoes	8	-1	0
Outdoor Swimming	2	1	2
Volleyball	3	11	14
Football	1	6	8
Picnicking	400	286	443
Community Centers	6	1	3
Recreation Center	0	1	1
Skateboard Park	0	1	3
Soccer Fields	4	10	13
Softball Fields	5	9	12
Tennis Courts	6 23	11	36
Special Use Facility		As needed	As needed
Ice Skating/Hockey	0	1	1

Summary

As the population of the Winchester-Frederick County area continues to increase, there will undoubtedly be greater emphasis placed on the County's Parks and Recreation Department. As indicated by the standards provided in the 2002 Virginia Outdoor Plan, referred to in this chapter, there exists a need to concentrate on developing facilities to meet present minimum standards, and an even greater need to establish a long range capital improvement program to ensure the provision of the physical amenities required to meet future leisure demands.

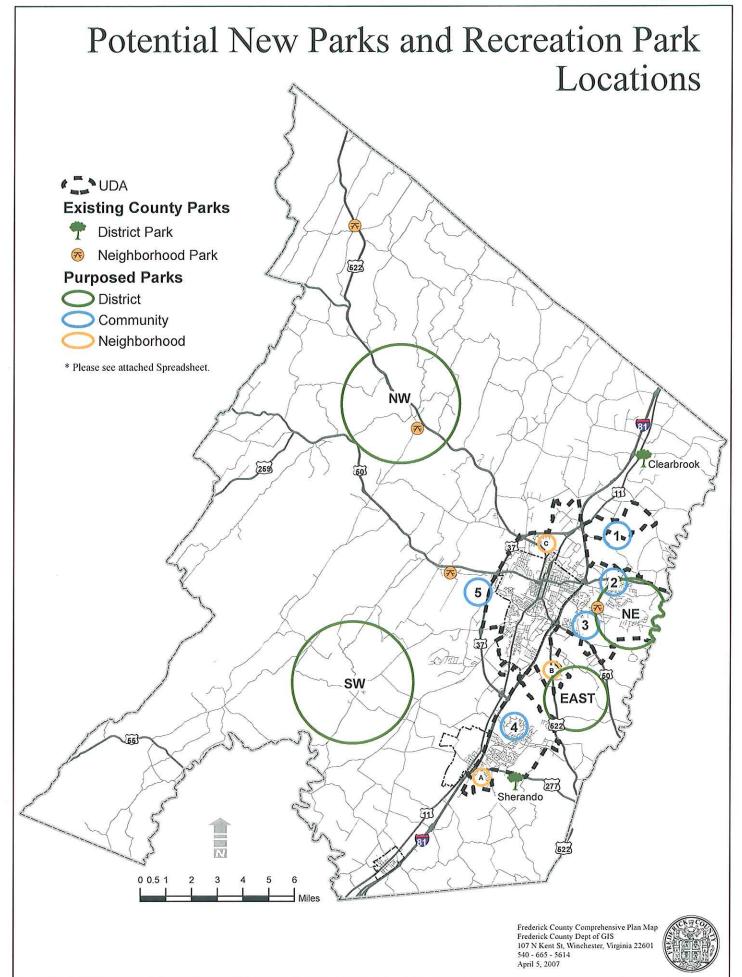
The County has already begun to address long term multi-use trail needs as discussed in this chapter with a strategy which involves the creation of a complete network of transportation modes, including non-motorized and pedestrian use. In addition, the UDA study of April 2005 sets as one of its goals to examine "providing adequate area for district, community, and neighborhood parks and ensure broad access to a variety of recreational opportunities." It is increasingly important to integrate development of parks and recreation facilities and programs into the overall County plan to make Frederick County an attractive place to live and work.

Since the existing parks and recreation facilities are below the recommended minimum standards for a locality of our size, priority should be given to bringing our system up to standard. Strong consideration should also be given to the acquisition of park land to meet future needs while desirable open space is still available. To complement the strategies and standards identified, the Parks and Recreation Department staff is creating a blue print which will strategically locate areas for park land acquisition to meet existing and future demands. It is anticipated a draft of this plan will be completed by July 1, 2007.

In addition to the facilities that are needed to meet current and future demands, the Parks and Recreation Department will also need additional professional staff to accommodate an already increasing demand for recreational programs.

Parks and Recreation Appendices

The following pages described as Appendix A, Appendix B, and Appendix C provide additional guidance regarding parks and recreation. Appendix A illustrates recommended general park locations in Frederick County. Appendix B illustrates the recommended general park locations already depicted in Appendix A that are within the Urban Development Area. These potential park locations are general in nature to provide guidance and flexibility in the future development of park facilities. The park locations and recommended acreage in Appendix A and Appendix C will enable Frederick County to meet the recommended acreage standards of the Virginia Outdoor Plan for park land considering the potential population of Frederick County as envisioned by the 2007 Comprehensive Plan. These standards for acreage are described in the Parks and Recreation section of the 2007 Frederick County Comprehensive Plan. Population estimates were based on the 2007 Planning Area Analysis conducted by the Planning Department and projections from the Geographic Information System (GIS) Department.



Appendix B Potential New Parks and Recreation Park Locations with in the Urban Development Area Clearbrook 81 11 522 50 NE [37] 50 Existing County Parks 522 **EAST** TDistrict Park Neighborhood Park Purposed Parks ODistrict Control Community Neighborhood * Please see attached Spreadsheet. Frederick County Comprehensive Plan Map Frederick County Dept of GIS 107 N Kent St, Winchester, Virginia 22601 540 - 665 - 5614 May 7, 2007 Sherando

Appendix C Comprehensive Plan: Park Land Needs for Potential Population

Location	Acreage
Neighborhood Parks	
A	13
В	23
C	13
Community Parks	
#1	51
#2	40
#3	45
#4	69
#5	31
Distribution 1	
District Parks	256
East	356
Sherando	350
Clearbrook	50 117
NE	
NW	148 212
SW	212
New Acreage Identified	1118
Current Acreage	400
Total Acreage	1518
Potential Population	155053
Recommended Acreage	1551

Emergency Services

The Frederick County Fire and Rescue Department was established in 1990 to provide support and guidance for the eleven volunteer fire and rescue companies that provide fire suppression and emergency medical services to the citizens of Frederick County. Each volunteer fire and rescue company provides fire suppression service, ten provide EMS transport services, eight provide advanced life support emergency medical service, one provides basic life support emergency medical service and one provides first responder level medical care.

The County fire and rescue companies are as follows:

Company 11 - Stephens City Fire and Rescue Company

Company 12 - Middletown Fire and Rescue Company

Company 13 - Clearbrook Fire and Rescue Company

Company 14 - Gore Fire Company

Company 15 - Round Hill Community Fire and Rescue Company

Company 16 - Gainesboro Fire and Rescue Company

Company 17 - Star Tannery Fire Company

Company 18 - Greenwood Fire and Rescue Company

Company 19 - North Mountain Fire and Rescue Company

Company 20 - Reynolds Store Fire and Rescue Company

Company 21 – Millwood Station Volunteer Fire and Rescue Company

Most of the apparatus operated by the companies are owned by and have been purchased through the fund raising efforts of each company. The County has purchased a ladder truck which provides truck service throughout the county. This vehicle is housed at Company 13, Clearbrook Volunteer Fire & Rescue Company and is staffed by a combination of career and volunteer personnel. In addition, the county owns and operates two ALS first response vehicles, which are stationed at Company 18, Greenwood Fire and Rescue Company, and Company 16, Gainesboro Fire and Rescue Company. Company 12, Middletown Volunteer Fire & Rescue Company owns an ALS vehicle, which is operated most of the time by the county.

Staffing of the fire and rescue stations is accomplished by a combination of volunteers from each community and is supplemented by twenty-four career fire and rescue personnel employed by Frederick County. The volunteers provide 24 hour a day, seven day a-week coverage in all of the fire and rescue stations. The career fire and rescue personnel staff nine of the eleven stations, ten hours a day,

five days a week as well as providing 24 hour coverage on two advanced life support response vehicles. These vehicles operate from Company 16 and 18.

The Fire and Rescue Department office is divided into three divisions. These divisions are Operations, Training, and Life Safety. The office is headed by a full-time Director who is employed by the County. The Director is responsible for supervision of all of the Departments operations. This includes the supervision of all career personnel, coordinating the service delivery of the volunteer companies, overseeing emergency services planning, providing volunteer and career training programs, disaster and hazardous material coordination, and managing Department resources.

The Operations Division is divided into three battalions, have a Fire/Rescue Lieutenant – Field Supervisor to oversee the career fire and rescue personnel. These Field Supervisors also work with the volunteer chiefs to coordinate daily activities within each company.

The Life Safety Division is responsible for fire prevention, life safety education programs, fire code enforcement and fire investigations. The Life Safety Division is headed by a full time Fire/Rescue Battalion Chief- Fire Marshal employed by the County. The division is support by a full time Fire/Rescue Lieutenant-Assistant Fire Marshal. The Fire Marshals are on call on a 24-hour basis to provide fire investigations, technical support to volunteer companies, and to respond to emergencies.

The Training Division is responsible for developing, providing, and overseeing training programs for the volunteer and career fire and rescue personnel. This Division is headed by a full-time Fire/Rescue Battalion Chief – Training Officer employed by the county. The training officer is also the Career Development Advisor, responsible for overseeing the administration of the Career Development Program.

Future challenges for the Fire and Rescue Department include meeting fire and rescue equipment needs, maintenance and expansion of fire and rescue stations, developing water systems for fire protection, meeting training and certification requirements, increasing emergency medical service, improving radio communications, providing service for the regional airport as required by the Federal Aviation Authority regulations, and developing additional fire and rescue stations to meet future growth within the county.

Planning for future fire station locations and equipment needs has been accomplished by developing a five-year strategic plan. This plan identifies future

station sites and equipment needs based on projected service demands and response times. The plan encourages the dedication of sites for new fire and rescue stations within the identified areas during the rezoning process.

A recent response study was conducted and concluded the need for five additional fire and rescue stations in the next five years. These stations are to cover the areas of:

- Green Springs/White Hall
- Rt. 522 South/Rt. 277 East
- Middle Road/Cedar Creek Grade
- Apple Pie Ridge/Rt. 522
- Route 7/ Redbud Road

The response study justifies the need for new fire and rescue stations. The study indicates that in many areas a ten minute total response time is not being met. The increased calls to each fire station create a situation where the 2nd due station has to cover additional areas while the 1st due station is still out. Non-residential areas such as retail, office, and industrial areas require increased fire protection because specialized equipment is necessary to insure safety for these land uses. Other land uses identified as target hazards continue to grow. These include land uses such as schools, nursing homes, daycare centers, and industrial facilities. These land uses have a higher risk of injury due to the specific demographics of person utilizing these facilities.

Existing road conditions, primarily those with gravel or dirt surfaces and horizontal and vertical curvatures, located outside of the county's Urban Development Area (UDA) create longer response times. The greatest factor contributing to the need for new fire and rescue stations is the rapid population growth and increases in dwelling units within the County.

The development of new fire and rescue stations could provide an opportunity to extend satellite services provided by other county departments and agencies. Allocation of space could be created within new fire and rescue stations for community services provided by the Sheriff's Office, the Treasurer's Office, the Voter Registrar's Office, and the Commission of the Revenue's Office.

Airport

The Winchester Regional Airport is a 375-acre, all weather, 24-hour general aviation airport with a 5,500 foot runway located southeast of Interstate 81, Exit 313A. The facility currently has 75 tie down spaces, two 12,000 square foot public common hangar, 52 T-hangars, and three private corporate hangars. Based aircraft total 80, and range in size from single engine to large cabin class business aircraft. Services available include 24-hour U.S. Customs and Immigration, 24-hour on call line service, automated weather observation system, computerized weather and flight planning equipment, full instrument landing system, and rental car service.

The Winchester Regional Airport Authority (WRAA) was formed by the Virginia General Assembly on July 1, 1987. The Authority consists of representatives from the City of Winchester and Frederick, Clarke, Shenandoah, and Warren Counties. Since its formation, the WRAA has embarked on an extensive airport improvement program. Major capital improvements have been accomplished in order to comply with Federal safety and design standards. Completed construction projects include: a 1,100 foot runway extension, pavement resurfacing of the entire runway, relocation of the taxiway, the creation of safety areas at each end of the runway, and the remarking of the runway and taxiway. New buildings constructed under this program include a modern general aviation terminal, a 12,000 square foot clear span hangar, a maintenance hangar with Fixed Base Operator offices, and 62 T-hangar units. Other completed projects include the airfield lighting upgrade, installation of a 60,000 gallon above ground fuel storage facility, a security fence around the Airport's perimeter, and the installation of a precision instrument approach to provide better all weather access to the Airport.

Collaborating with Frederick County and the Virginia Department of Transportation (VDOT), the Authority has also made improvements to primary access roads for the Airport. Also completed was the relocation of Airport Road to remove a portion of the road which infringed on controlled airspace. Sewer and Water service is also established for the Airport. To date, more than \$19 million dollars has been invested in the Winchester Regional Airport's capital improvements, equipment, and promotions through funding received from the Federal Aviation Administration, Virginia Department of Aviation, and the local jurisdictions.

Remaining capital projects include the acquisition of land along Bufflick Road for noise abatement, development of the northern side of the runway, renovation of the 17 year old terminal building and construction of an aircraft wash rack.

Through the support of the member jurisdictions, the Airport will continue to evolve into a modern, first class air transportation facility which will assist economic development endeavors in the attraction of new industrial and commercial businesses to the region.

Handley Library

Library service is provided to Frederick County through the Handley Regional Library, which also serves Clarke County and the City of Winchester. Currently, there are 21,107 active registered library card holders in Frederick County.

The regional system supports education, preschool through post-secondary, by providing assistance and research materials for projects and papers, and by being open weeknights, Saturdays and some Sundays. The library is also open during the summer when schools are closed. It is also an important resource for adults seeking to improve their skills and for introducing preschoolers to books and reading. The library also provides the business community and the general public within information for their research needs as well as recreations reading.

The regional library system continues to be below per capita state standards in the areas of books, square footage, seating, and periodical holdings; however, important steps have been taken to remedy this. The predominant project, through the County's CIP, is the construction of a Northern Frederick County Branch. This project entails the acquisition of 3 to 4 acres and the construction of a 7,000 square foot library branch with expansion possible to 10,000 square feet along Route 522 N near Cross Junction. Initial parking would accommodate 35 vehicles. There is no library in this area of the county to serve residents. The residents of the Gainesboro District comprise the largest population group the greatest distance away from a library. The library would serve members of the population from toddlers to senior citizens.

Also included in the CIP is the need for library branches in the Senseny Road/Greenwood Road area and on Front Royal Pike (Route 522 South). These projects entail the acquisition of 3 to 4 acres each and the construction of a 7,000 square foot library branch at each location with expansion possible to 10,000 square feet. This branch would serve citizens living in this rapidly growing area. A library in these locations will reduce traffic into the Winchester Library(s). These branches would also help fulfill a community center need within this area, by providing a meeting room.

Another important capital project for the Library will be the expansion of the parking lot and sidewalks at the Bowman Library Branch. This proposal would expand the parking lot on the Lakeside Drive side of the library from 101 to 221 parking spaces, and to provide a sidewalk that will extend approximately 400 to

500 feet beyond the sidewalk that now borders the parking lot to connect to the sidewalk on Lakeside Drive. The parking lot expansion is needed to relieve overcrowding and to accommodate library patrons. The sidewalk is necessary to provide safe access for pedestrians to the library. Planning consideration for alternative modes of transportation such as bicycle connectivity should also be considered.

County Offices

In addition to the County's main 100,000 square foot administrative office complex in downtown Winchester, construction began on a 68,000 square foot for Public Safety Building was in the summer of 2006. The new facility, which is scheduled to open in spring of 2007, is located south of Route 50, adjacent the regional airport, and will house the Fire and Rescue and Sheriff's departments. This facility is anticipated to accommodate the space needs of these two departments for 15-20 years. The building and site were also designed to allow for future expansion of an additional 30,000 square feet.

Refuse Collection, Landfill, and Recycling

Eleven refuse collection stations are located throughout Frederick County. Nine refuse collection stations consist of hydraulic compactors with separable roll-off containers and collection facilities for recyclables. Two sites consist of front end dumpsters and collection containers for recyclables. The County converts dumpster sites to compactor stations when warranted by tonnage levels. When practical, the consolidation of sites during the conversion process is also desirable. For residents who prefer curbside refuse collection, service is provided by a number of private haulers.

The Frederick County Landfill is a regional facility which receives refuse from Frederick and Clarke Counties, as well as the City of Winchester. The landfill is operated by Frederick County as an enterprise fund and the landfill operation is fee sustaining. The management and planning of landfill operations are solely the responsibility of Frederick County, with input from an oversight committee comprised of representatives from Frederick and Clarke Counties and the City of Winchester.

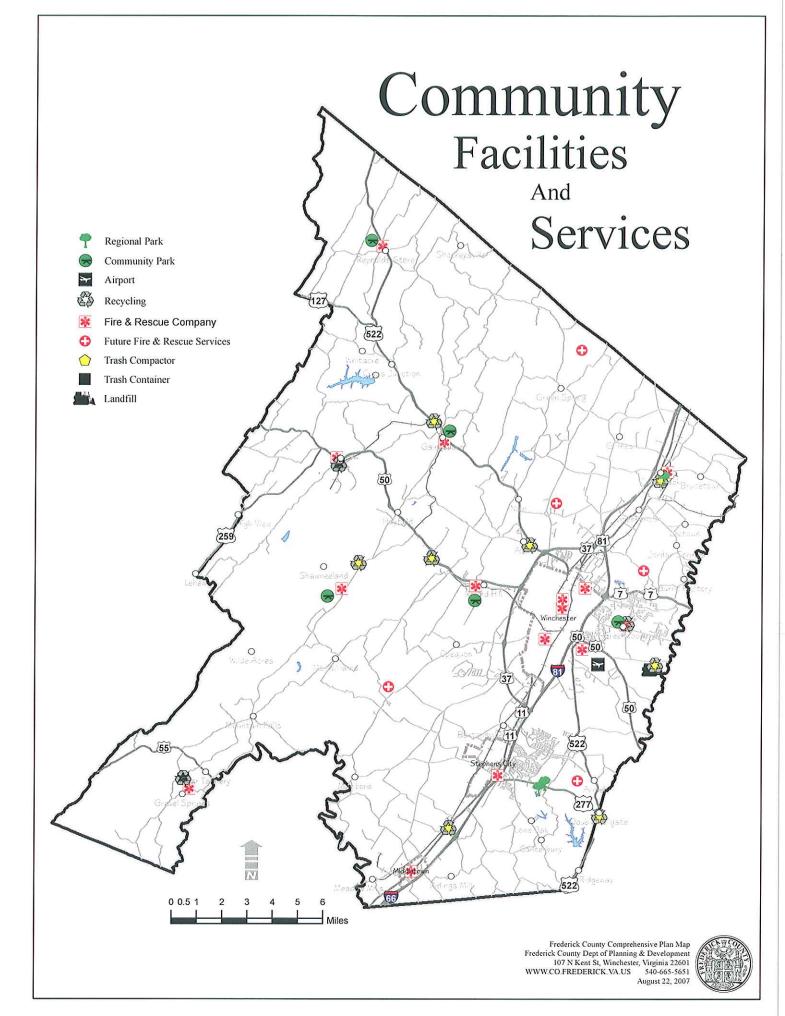
Closure of the older section of the landfill, which opened in 1976, was completed in 1994. A new 160-acre tract of adjacent land, purchased in 1986, was opened for landfilling in 1993. Approximately 90 acres of this tract have been permitted for landfilling under the current Subtitle "D" Solid Waste Regulations. Both the closure of the old section and the construction of the section were carried out in accordance with state regulations that require sophisticated environmental protection measures, including: composite impermeable liners, a complete leachate collection system, leachate treatment facility, groundwater monitoring, and gas monitoring.

In an effort to extend the useful life of the municipal solid waste landfill, a 109 acre wooded tract was purchased from Ryland Carper for the future development of a construction debris landfill. The permitting, design, and construction of this new CDD landfill were completed in 1998. Through diversion of bulky, construction debris to a separate landfill; an amendment to the state permit allowing vertical expansion, and improved compaction technologies, the life of the landfill has been extended to approximately 40 years. A new program to recirculate leachate or liquids through the landfill will also increase decomposition and extend the life of the municipal solid waste landfill. The County should continue to evaluate new methods for waste reduction and support

recycling programs, both of which will extend the life of the landfill.

During the 1990s, the County placed collection boxes for recyclable materials at each of the citizens' convenience areas located throughout the County. In 2004, containers were also added at dumpster sites. Through this voluntary collection effort, the County was able to meet the 1995 state recycling mandate of 25 percent mandated by the Commonwealth of Virginia. Due to the rapid growth in Frederick County, additional programs have been implemented to enable the County to exceed the State's 25 percent recycling goal. These programs include: brush and yard waste mulching, composting, waste oil recycling, oil filter recycling, cardboard and phone book recycling, tire shredding, household hazardous waste collection, and electronics recycling.

It is essential that new residential developments are provided with an appropriate means of solid waste collection. Either private collection or new collection stations, including land, should be provided by developers.



Sewer and Water Facilities

The location of public sewer and water lines determines where urban development will occur. The Urban Development Area defines the general area in which more intensive forms of residential development will occur. Commercial, industrial, and institutional land uses are also encouraged within the Urban Development Area. The Sewer and Water Service Area is consistent with the Urban Development Area in many locations. However, the Sewer and Water Service Area may extend beyond the Urban Development Area to promote commercial, industrial, and institutional land uses in areas where residential land uses are not desirable.

The Frederick County Sanitation Authority has the responsibility for the treatment, transmission, and distribution of potable water and the collection and transmission of wastewater. Most of the sewer and water mains and laterals in the County are owned, operated, and maintained by the Sanitation Authority.

Frederick County and the Frederick County Sanitation Authority (FCSA) have executed a Facilities Planning Agreement which sets forth procedures for the planning of sewer and water mains in the County. The agreement includes provisions for adopting a water and sewer facilities plan as a part of the Comprehensive Plan, specifying the location of mains over eight inches in size, and includes provisions for review and update of the plan and for including sewer and water facilities projects in the Frederick County Capital Improvements Plan.

The City of Winchester owns and maintains sewer and water lines in portions of the County adjacent to the City corporate limits. Such lines have been extended into the County following a previous agreement between the City and the County.

The Frederick-Winchester Service Authority (FWSA) has the sole responsibility of providing wastewater facilities to serve the FCSA and the City of Winchester's treatment needs. The FWSA currently owns the Opequon Water Reclamation Facility, the Parkins Mills Wastewater Treatment Plant and the Crooked Run Wastewater Treatment Plant and has operational agreements with the City and the FCSA for their operation. The City operates and maintains the Opequon Facility while the Sanitation Authority is responsible for operation and maintenance of Parkins Mills and Crooked Run Facilities.

Treatment of wastewater generated from within the County's Sewer and Water Service Area (SWSA) is undertaken at all plants. The Opequon Service Area is comprised of the Abrams Creek drainage area which includes the City of Winchester and adjacent drainage areas located east, west and north of the City of Winchester. All wastewater coming from the City of Winchester is transported to and treated at the Opequon Water Reclamation Facility. The Parkins Mills Wastewater Treatment Plant serves Sanitation Authority customers located in the upper Opequon Creek, Wrights Run, and Stephens Run drainage areas along with the Town of Stephens City. The Crooked Run Service Area services the Shenandoah Community in southeastern Frederick County.

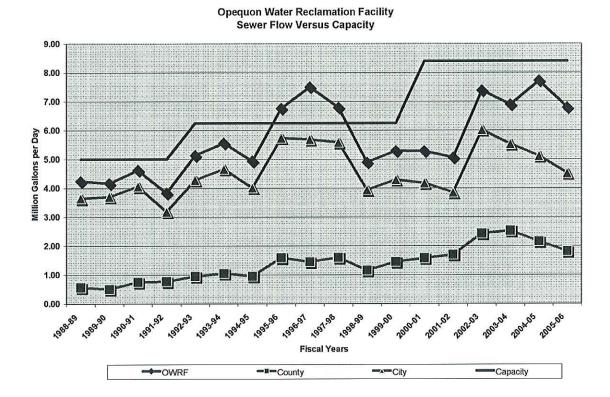
The Opequon Water Reclamation Facility presently has a seasonal hydraulic capacity of 8.4 millions gallons per day during summer months and 16.0 million gallons per day during the winter months. The facility has 18,000 pounds per day of biological capacity and also provides for biological nutrient removal of nitrogen and phosphorus. Based on the projections contained in the 1997 Opequon Water Reclamation Facility Capacity Needs Evaluation Report the present treatment configuration will meet both hydraulic and biological demands through 2007 - 2008.

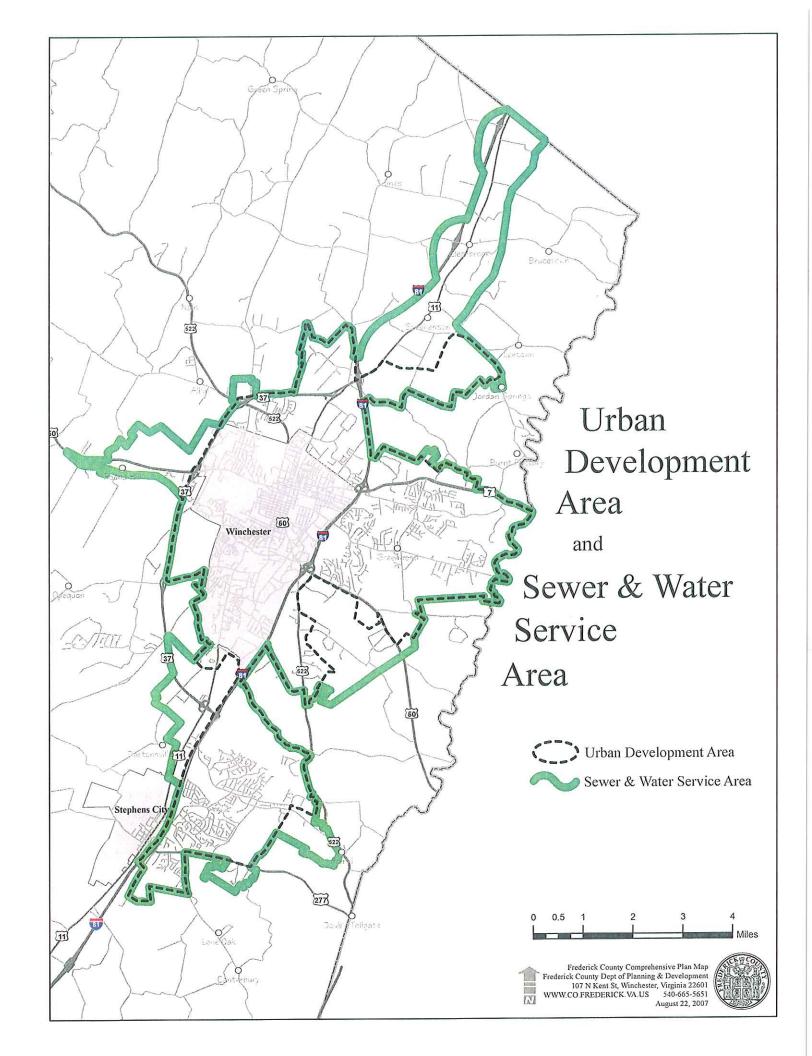
The Frederick Winchester Service Authority has already begun design for an expansion and upgrade of the Opequon Water Reclamation Facility to meet future growth needs and regulatory requirements requiring dramatic reductions of nutrient discharges from treatment facilities located in the Chesapeake Bay Watershed. The initial expansion and upgrade will increase the hydraulic capacity of the facility to a maximum of 12.6 million gallons per day. Obtaining this capacity will depend on the final wasteload allocation for nutrients assigned to the Opequon Facility under the Water Quality Management Plan Regulations adopted by the Commonwealth of Virginia. Present planning would anticipate the expanded facility would be operational by 2010-2011.

The Parkins Mills Wastewater Treatment Plant which serves the upper Stephens Run, Wrights Run, and Opequon drainage areas has a present rated capacity of 2.0 million gallons per day. The current average daily flow of this plant is about 75% of the design capacity. This facility also will be limited in it ultimate capacity by nutrients. Design of an expanded and upgraded facility is complete and construction of that facility began in early 2007. When construction is complete in 2009, the Parkins Mills Wastewater Treatment Plant will have a capacity of 5.0 million gallons per day.

The intention is that additional extensions of sewer and water service will reflect the boundaries of the UDA. The extension of mains into areas not included in the sewer and water service areas described by the facilities plan will require an amendment to the comprehensive plan. In this way, the County will maintain an orderly process of development. All sewer and water mains extended should be publicly owned mains.

Figure 18: Opequon Treatment Plant; Sewer Flow versus Capacity







Capital Improvements Plan

The Capital Improvements Plan (CIP) is the community's plan for public facilities. It provides a list of projects planned for five years and is updated each year as projects are completed and new projects added. In general, projects on the Capital Improvements Plan are relatively expensive, fixed assets that require expenditures that do not recur annually and last for a relatively long time.

The first year in the Capital Improvements Plan should provide a capital budget for the upcoming fiscal year. The scheduling of projects needs to be coordinated with plans for development contained in the Comprehensive Plan. The Comprehensive Plan should be used as a tool to aid in determining priorities among projects, for estimating required funding, and for scheduling projects. The Capital Improvements Plan helps to guide development, to achieve the most efficient use of funds, and to maintain a stable financial program.

The County's procedures for reviewing and adopting the CIP need to be improved. The CIP needs to have a direct link to available or projected funds. Projects need to be systematically reviewed against established standards in order to determine priorities. These standards need to be developed and reviewed on a regular basis. The County Finance Department should play an active role in the CIP development process.

Facility Cost Impacts

Rezoning requests should be evaluated to determine their potential impacts on the community facilities. Costs to the County should be estimated in terms of what impact the development, which could result from the proposed rezoning, would have on facilities and infrastructure. These costs are estimated in terms of facility use per unit of development. The estimated facility use is determined through the use of established multipliers which use averages derived from existing development. These multipliers set out such factors as: expected numbers of vehicle trips, school children, gallons of sewer and water usage per dwelling unit, square footage of commercial use, or person. The demand on various facilities resulting from a proposed rezoning can then be estimated based on the costs of facilities listed in the Capital Improvements Plan. Initially, costs are estimated in terms of the actual costs of providing facilities to support the potential development.

In 1991, Frederick County's first impact model was developed. The fiscal impact model was utilized to project the fiscal impacts of rezonings on public schools, parks and recreation, and fire and rescue services for capital facilities costs. In 1998, a revised version of the impact model was adopted by the Board of This new model was designed to project the fiscal impacts of Supervisors. miscellaneous public facilities, as well as the public agencies that were accounted for in the previous impact model. The impact model projects the gross potential costs of the facilities that would be needed to support a new development using the basic formula described above. In 2005, the Board of Supervisors endorsed for use a new Development Impact Model (DIM) designed specifically for Frederick County. This model projects the capital fiscal impacts that would be associated with specific development projects on the budget of Frederick County Government and the Frederick County School Board. The DIM was developed to represent the budgetary structure of the County and could be used to evaluate future land use planning scenarios.

No rezoning should be approved unless the net impacts on community facilities are positive, or if the negative impacts can be adequately addressed through proffers or some other means. A request for rezoning may be turned down even though all fiscal impacts appear to be addressed. If there are other impacts which are not addressed by the rezoning application, or if the request does not conform to this plan, a similar method should be developed for determining the impacts of proposed developments on transportation systems and other public facilities.

Issues:

- There is a need to carefully monitor school enrollments and to plan for school capacity to deal with overcrowding, replacement of outdated facilities, and population growth in the County.
- There is a need to continue supporting fire and rescue squads and to develop policies to deal with growing emergency service demands.
- The County should support improvements at the Winchester Regional Airport as a part of the overall economic development efforts.
- The County should continue to monitor refuse collection sites and should make improvements or add sites as needed.
- The County should continue to monitor landfill recycling efforts.
- The County should maintain a process of careful Capital Improvements Planning coordinated with Comprehensive Planning.
- Frederick County and the Frederick County Sanitation Authority should continue coordinated planning of sewer and water facilities following the procedures described by the Facilities Planning Agreement.
- Additional information is needed on the impacts of new development on community facilities.
- Frederick County and the City of Winchester need to maintain coordinated planning of sewer and water facilities in the County through the Sewer Agreements.
- Together with the County and the City, the Frederick-Winchester Service Authority should carefully plan needed sewage treatment capacity based on trends in usage. The Service Authority needs to develop a capital improvements plan that is coordinated with City and County plans.

Community Facilities and Services

• Water and sewer service should be provided to service areas in the urban development areas through an orderly process following the Facilities Planning Agreement and using the Capital Improvements Plan.

Community Facility and Service Policy

<u>GOAL:</u> Appropriate services and facilities shall be provided to serve planned land uses and development.

<u>GOAL</u>: Facilities and services should be carefully planned to meet projected needs.

Strategies:

- 1. Plan sufficient school capacity to meet projected enrollment trends and to meet appropriate facility standards
- 2. Recognize the changes occurring in demand for emergency services and develop policies for dealing with those changes
- 3. Support expansion plans for the Winchester Regional Airport.
- 4. Monitor refuse collection and landfill use and continue to develop plans for future improvements. Pursue recycling methods and other methods to extend the life of the landfill.
- 5. Carefully monitor sewer and water use and develop up-to-date improvement plans for sewer and water facilities.
- 6. Develop and maintain formal and regular relationships and procedures between the County and providers of facilities and services, including the Sanitation Authority, the City of Winchester, the Service Authority, the School Board, the Regional Airport Authority, and the Fire and Rescue Squads.
- 7. Use the Capital Improvements Plan to carefully plan community facilities and to coordinate facilities planning with land use plans.
- 8. Require that the impacts of new developments on facilities be described and require that the impacts are addressed through proffers and other means.

- 1. Carefully monitor school enrollments and plan facilities according to enrollment and development trends. Update the Capital Improvements Plan each year based on trends.
- 2. Continue to support fire and rescue squads and plan to increase support according to development in the various service areas.
- 3. Develop plans for new emergency facilities.
- 4. Continue to convert dumpster sites to compactor sites. Monitor usage. Plan for new refuse collection sites according to use and planned development patterns.
- 5. Monitor landfill use. Plan for additional landfill capacity on adjacent land. Explore alternative disposal methods and new technologies.
- Continue to plan for sewer and water main extensions according to the agreements established with the Sanitation Authority and the City of Winchester. Include planned extensions in the Capital Improvements Plan.
- 7. Provide for recycling at collection stations and support a regional recycling center. Encourage private haulers to offer recycling services to their customers.
- 8. Carefully monitor sewer and water use and develop a Capital Improvements Plan to accommodate projected development.
- 9. Consider means to provide water service to Brucetown.
- 10. Consider alternative sources of water supply.
- 11. Minor extensions of sewer and water service to business and industrial uses beyond the service area may be considered if such uses conform to other County standards. Such extensions should be reviewed by the Planning Commission for conformance with the Plan.

- 12. Require that information be provided with rezoning proposals on the impacts of development on community facilities. Impacts should be addressed through proffers and other means. No rezoning should be approved unless all impacts are adequately addressed.
- 13. Any sewer or water main six inches in diameter or larger, extended or existing within an area proposed for inclusion within the County's Sewer and water Service Are or Urban Development Area, should be dedicated as a public line to be owned and maintained by the County Sanitation Authority or City of Winchester when appropriate.
- 14. Plans for new facilities should be based on demand projections as derived from population projections in the Comprehensive Plan.

Recreation Policy

<u>GOAL:</u> Contribute to the physical, mental, and cultural needs of the community, it's economic and social well-being, and its sense of civic pride and social responsibility through the implementation of an integrated plan for recreation programs and park facilities.

Strategies:

- 1. Identify the recreational, parks, and open space needs of the County.
- 2. Make available a wide range of year-round recreational opportunities.
- 3. Seek alternative funding methods for the provision of existing and identified recreational needs.
- 4. Encourage cooperative efforts with private, semi-public, and public providers of recreational opportunities.

- 1. Promote the completion of a County-wide recreation plan which identifies recreational, park, and open space needs.
- 2. Continue to solicit public opinion in planning parks and recreation.
- Continue to encourage the participation and financial support of civic groups businesses, and other organizations and individuals for recreational needs.
- 4. Continue to utilize State and Federal grants and loans for financing and programming County recreational needs and especially for major capital projects.
- Continue to expand our cooperative relationship with the Frederick County School Board in jointly meeting identified County recreational needs.

6. Continue to cooperate with the private sector, the semi-public sector and other public providers of recreation in meeting identified recreational needs.

<u>GOAL</u>: Continue to develop the County's district parks as the major source of recreational facilities and activities.

Strategies:

 As finances are available, improvements to the Sherando and Clearbrook Parks should take place according to the adopted master plans.

Implementation Methods:

- 1. Use the capital improvements planning process to provide improvements to the district parks.
- 2. Seek alternative sources of funding for park improvements.

GOAL: Ensure that appropriate recreational facilities are provided in urban and rural areas.

Strategies:

- 1. Promote the completion of a County-wide plan to ensure that appropriate open space and recreational facilities are provided in association with new urban development.
- 2. Provide for suitable recreational opportunities for all portions of the County.
- 3. Promote the development of a comprehensive trail system and bikeway plan.

- 1. Use a County-wide recreation plan to develop standards for open space and recreational facilities in new urban development.
- 2. Use a County-wide recreation plan to identify the recreation needs of residents in all portions of the County.

Community Facilities and Services

- 3. Identify recreation needs associated with the Rural Community Centers.
- 4. Review land development regulations to ensure that appropriate standards are provided for open space recreational facilities in new developments.

<u>GOAL</u>: Provide recreational programs and activities based on identified needs and available funding.

Strategies:

- 1. Identify recreational program needs.
- 2. Solicit public opinion on recreational programs to be provided.
- 3. Coordinate with the Frederick County School Board, the public sector, the semi-public sector, and private organizations for the provision of recreational program funds, services, and facilities.

- 1. Prepare a County-wide recreation plan identifying program needs.
- 2. Develop and maintain citizen participation in the identification of recreational program and program facility needs.
- 3. Actively solicit contributions for the provision of recreational programs and program facility needs, from all segments of the community, both private and public.
- 4. Structure the provision of all program facilities, such as indoor community centers, to recognize land use decisions and policies.
- 5. Actively utilize public, semi-public, and private facilities for the provision of recreational programs.