

**Standard:**

The agency shall have a recreation programming plan covering three to five years that is updated periodically and a current-year implementation plan. The plan shall address all programs and services of the agency's programming functions, including activity selection, type and scope of programs and outreach initiatives.

**Evidence of Compliance:**

Gwinnett Parks and Recreation provide a broad range of recreation and leisure programming including aquatics, athletics, health and wellness, natural and cultural resources, recreation programs, and special events. The recreation system is supported by multipurpose sports fields, aquatic facilities, community and senior recreation centers, gymnasiums and activity buildings, playgrounds, sport courts, skate parks, historical and natural sites, and over 135 miles of trails.

The department is guided by its **Mission, Vision, and Value Statements**:

**Mission**

Gwinnett County Parks and Recreation provide high quality, broad-based parks, facilities, programs, and services creating a sense of community, enabling a safe and secure environment, and enhancing Gwinnett's quality of life.

**Vision**

Gwinnett County Parks and Recreation pledges to sustain the delivery of the highest standard of excellence of parks, facilities, programs and services by:

- Being responsive to the changing recreational needs of a diverse and growing community
- Continue a citizen-driven and professional approach to provide safe, well designed and maintained facilities and programs
- Providing responsible stewardship of human, fiscal, natural and historic resources
- Maximizing community resources

**Value Statements**

- We believe in honesty, integrity and ethical conduct
- We are customer-oriented and both accountable and responsive to our citizens
- We believe in teamwork and collaboration with our community partners
- We promote safety, cost efficiency, innovation, and service excellence

In 2019, the Parks and Recreation Division began its [2020 Parks and Recreation Comprehensive Master Plan](#). The plan was approved by the Board of Commissioners on [July 20, 2021](#). As part of the plan, a Recreation Program Assessment and Plan was included with subsequent recommendations for planning forward.

The 2020 Parks and Recreation Comprehensive Master Plan and Appendix Recreation Plan include but are not limited to:

- A Resolution Adopting the 2022 Gwinnett Comprehensive Parks and Recreation Master Plan
- Table of contents
- The Current System and Core Program Areas

- Appendix E: Organizational Charts
- Program Framework Recommendations
- Program Goals 1, 2, 3, 4
- Program Standard and Performance Measures
- Recreation and Leisure Trends Analysis
- Park and Recreation Providers in Gwinnett County
- Fees and Charges Policy and Schedules – InGwinnett
- Programs and Services Management Matrix
- Health and Wellness Promotion



# Recreation Program Assessment and Plan

Reviewed August 30,2023







# Recreation Program Assessment

## The Current System

Gwinnett County Parks and Recreation provides a broad range of recreation and leisure programming including Aquatics, Athletics, Health & Wellness, Natural & Cultural Resources, Recreation Programs, and Special Events. The recreation system is supported by multi-purpose sports fields, aquatic facilities, community and senior recreation centers, gymnasiums and activity buildings, playgrounds, sport courts, skate parks, historical and natural sites, and over 120 miles of trails.

The Department is guided by its Mission, Vision, and Value Statements.

### Mission

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### Vision

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## Core Program Areas

To help achieve the mission, it is important to identify core program areas based on current and future needs to create a sense of focus around specific program areas of greatest importance to the community. Public recreation is challenged by the premise of being all things to all people. The philosophy of the core program is to assist staff, policy makers, and the public to focus on what is most important. Program areas are considered as Core if they meet a majority of the following categories:

- The program area has been provided for a long period of time (over 4-5 years) and/or is expected by the community.
- The program area consumes a relatively large portion (5% or more) of the agency's overall budget.
- The program area is offered 3-4 seasons per year.
- The program area has wide demographic appeal.
- There is a tiered level of skill development available within the program area's offerings.
- There is full-time staff responsible for the program area.
- There are facilities designed specifically to support the program area.
- The agency controls a significant percentage (20% or more) of the local market.

In consultation with the Department staff, the planning team identified the following Core Program Areas currently being offered:

- Aquatics
- Athletics
- Health & Wellness
- Natural & Cultural Resources
- Recreation Programs
- Special Events

## Aquatics

As a leader in Aquatics with state-of-the-art aquatics facilities and five-time champions of Georgia Recreation and Parks Association's State Lifeguard competition, the Department focuses the Aquatics programs on teaching participants to be safe and competent in and around the water while instructing swim lessons, training and certification classes, and other aquatic activities. Aquatics classes are held across nine facilities within the county.

## Athletics

The Department offers Adult Athletic Leagues, Youth Athletic Leagues, Aquatic Leagues, and Athletics Recreation. Adult leagues register by team only, while the Youth Sports leagues work with local volunteer athletic associations where participants register directly with local associations. Youth Sports leagues are divided across north, south, east and west facilitators. Athletic Recreation are offerings for non-league recreation which include disc golf, tennis, pickleball, table tennis, horseshoes, and open gym times.

## Health & Wellness

In partnership with Gwinnett Parks and Recreation, Live Healthy Gwinnett takes a proactive wellness approach to address the preventable chronic illnesses that impact individuals of Gwinnett County. Through community education, people can significantly reduce their risk of developing chronic diseases by making simple lifestyle changes: eating healthy, increasing physical activity and reducing stress. Through community partnerships, Live Healthy Gwinnett engages residents to invest in their personal health by focusing programs and events around four major areas of wellness areas. The goal of the program areas is to promote positive change in the Gwinnett community that encourages people to: Be Active, Eat Healthy, Get Checked, and Be Positive. Programming goals include promotion of healthy living principals, opportunities for regular physical activity, development of effective community partnerships, and bringing together diverse cultures and generations. A desired outcome is to be Gwinnett's inspiration to enjoy, explore, and discover healthy lifestyles for all generations.

## Natural and Cultural Resources

The Department develops programs that protect ecosystems on nearly 10,000 acres of park lands including its forest, lakes, ponds, streams, and meadows. These programs are developed to educate the community on both natural resources, culture and history through various camps, clinics, birthday parties, field trips, and classes for all age groups.

## Recreation Programs

Gwinnett County Parks and Recreation designs general recreation programs to offer high quality, broad-based programming and services that create a sense of community, enable a safe and secure environment, and enhance Gwinnett's quality of life. Recreation promotes opportunities to improve the quality of life for all citizens. These programs also include out-of-school time activities which are designed for Gwinnett County to offer a positive and enriching afterschool program for elementary children within the county, including the opportunity to offer a food service program to children ages 18 and under during summer months.

## Special Events

Every event is held for a purpose whether it is celebration, commercial, commemorative, or for entertainment. Revenue (and tourism) from special events has positioned itself as an economic engine that is based on a community's attraction(s). Today, most attractions are sports tournaments, festivals, and major recreation facilities/parks. Special Event goals include identifying and providing events that can deliver a unique event experience to local residents and tourists (typically provided free or at a nominal rate), creating yearly hallmark events, and assessing how current resources can be reallocated to provide a greater special event calendar by creating events within events to maximize attendee experiences and revenue.

## Program Strategy Analysis

### Age Segment Analysis

The following tables depict each Core Program Area and the most prominent age segments they serve. Recognizing that many core program areas serve multiple age segments, "Primary" and "Secondary" markets are identified.

A Primary age segment is the main target of programs within a core program area; namely, the age segment that benefits the most. A Secondary age segment is not the target of services, but is instead enticed to participate from either interest or specific marketing.

### Aquatics

The table identifies ages 13 to 17 as having the most aquatic programming opportunities geared toward this demographic. This is a strong best practice since many departments struggle to find activities that entice participation for this specific age segment. As the population continues to age, increasing water exercise classes for seniors could attract more participation. These classes are usually easy on the joints and increasing mobility for the aging population.

Aquatics	Child (5 and Under)	Youth (6-12)	Teens (13-17)	Adult (18+)	Senior (50+)	All Ages Programs
<i>Primary</i>	41	77	58	52	18	41
<i>Secondary</i>	12	8	59	42	39	0
<b>Total Programs</b>	<b>53</b>	<b>85</b>	<b>117</b>	<b>94</b>	<b>57</b>	<b>41</b>

### Athletics

There is a strong focus on youth athletics within the county. Programmatic offerings demonstrate a strong target for the under 18 demographics; however, adult athletics are largely self-directed recreation offerings. These offerings are typically non-league recreational sports that are offered within the parks.

Athletics	Child (5 and Under)	Youth (6-12)	Teens (13-17)	Adult (18+)	Senior (50+)	All Ages Programs
<i>Primary</i>	10	11	11	3	2	0
<i>Secondary</i>	0	0	0	8	1	0
<b>Total Programs</b>	<b>10</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>3</b>	<b>0</b>

### Health & Wellness

There are approximately 30 different Health & Wellness type programs offered by the Department. When looking at the age demographics targeted, every age group has targeted programming. The age segments with the least primary targeted programs are all under 18 years of age. Although there are many programs offered as “All Ages” programming, this demographic usually depends upon the school/education system to fulfill a lot of health and wellness recreation needs; therefore, this could be an area for expanded partnerships between the Parks and Recreation Department and school districts.

Health & Wellness	Child (5 and Under)	Youth (6-12)	Teens (13-17)	Adult (18+)	Senior (50+)	All Ages Programs
<i>Primary</i>	3	5	4	6	7	18
<i>Secondary</i>	1	1	1	3	3	0
<b>Total Programs</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>9</b>	<b>10</b>	<b>18</b>

### Natural and Cultural Resources

Natural and Cultural Resources has a primary focus mainly on Child and Youth. This is most likely attributed to the number of summer camp options, fields trips, and scouting programs offered by the Department. On the other end of the spectrum, increased adult-targeted programming could increase volunteers and advocacy when the Department needs help with land management or sponsorships for future programs. Having a robust natural and cultural resources demographic offering will help facilitate lifelong support for the Department’s resources.

Natural & Cultural Resources	Child (5 and Under)	Youth (6-12)	Teens (13-17)	Adult (18+)	Senior (50+)	All Ages Programs
<i>Primary</i>	122	203	58	58	54	67
<i>Secondary</i>	10	6	5	248	76	1
<b>Total Programs</b>	<b>132</b>	<b>209</b>	<b>63</b>	<b>306</b>	<b>130</b>	<b>68</b>

## Recreation Programs

There are over 300 different general recreation programs offered by the Department. There truly is “something for everyone” in terms of age segmentation. “Out of School Time” programming targets children, youth, and teens via afterschool activities and a robust summer feeding program. The remaining programming includes camps, fitness, arts, dance, gymnastics, trips, theater, and much more. Knowing that there is something available for every age demographic, it will be imperative to ensure general recreation programming includes activities and topics of most interest to the community as a whole.

Recreation	Child (5 and Under)	Youth (6-12)	Teens (13-17)	Adult (18+)	Senior (50+)	All Ages Programs
<i>Primary</i>	78	104	60	60	91	39
<i>Secondary</i>	9	8	14	34	30	0
<b>Total Programs</b>	<b>87</b>	<b>112</b>	<b>74</b>	<b>94</b>	<b>121</b>	<b>39</b>

## Special Events

Special Events age segment focus is very balanced among the age groups. Therefore, much like general recreation programming, it will be imperative to continue monitoring interests and topics most desired by the community as a whole to ensure special events continue to have a wide age segment appeal.

Special Events	Child (5 and Under)	Youth (6-12)	Teens (13-17)	Adult (18+)	Senior (50+)	All Ages Programs
<i>Primary</i>	10	10	10	9	9	6
<i>Secondary</i>	3	3	3	4	4	0
<b>Total Programs</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>6</b>

## Program Lifecycle Analysis

A Program Lifecycle Analysis involves reviewing each program offered by the Department to determine the stage of growth, maturation, or decline for each. This provides a key performance indicator (KPI) which aids in making informed decisions about the overall mix of programs managed by the agency. This will ensure that an appropriate number of programs are “fresh” and that relatively few programs, if any, need to be discontinued. This analysis is not based on strict quantitative data but, rather, is based on staff members’ knowledge of their program areas and participation history.

The following sections represent the percentage distribution of the various lifecycle categories for the Department’s programs broken down by Core Program Area. These percentages were obtained by comparing the number of programs in each individual stage with the total number of programs listed by staff members. It is useful to have a higher percentage in the Introduction stage and take -off stage to ensure the Department continues to stay true to its core value of innovation and service excellence and ensures a pipeline for new programs. If programs reach saturated and decline stages rapidly, this could indicate that there is not as much of a demand for the programs. As programs enter into the decline stage, the programs must be reviewed and evaluated for repositioning or elimination.

## Aquatics

Aquatics has around 19% of programs in the saturated or decline stages, these programs need to be reviewed and identified to be revamped or removed from offerings to continue the participation and growth for new programs. The majority of these programs are offered at the Bethesda Park Aquatic Center and West Gwinnett Park Aquatic Center. If these programs are examined for relevancy, the remaining aquatic portfolio can continue to align closely with best practice distribution ranges.

Lifecycle Stages Aquatics	Description	Actual Program Distribution		Recommendation Distribution
<b>Introduction</b>	New program; modest participations	10%	44%	50-60% total
<b>Take-Off</b>	Rapid participation growth	11%		
<b>Growth</b>	Moderate, but consistent population growth	23%		
<b>Mature</b>	Slow participation growth	38%	38%	40% total
<b>Saturated</b>	Minimal to no participation growth, extreme competition	12%	19%	0-10% total
<b>Decline</b>	Decline participation	7%		

### Athletics

Athletics has a total of 53 programs that ran with four programs that were cancelled. Of the 53 programs, 27% are in the declining stages of the lifecycle. The North and South facilitator locations represent the most programs either listed as “Saturated” or “Decline.” These programs need to either be revamped or retired to make room for popular and growing programs. If these programs can be revamped or retired, it will allow a more focused concentration of moving programming into the “Mature” stage while also allowing for more room to introduce new programming.

Lifecycle Stages Athletics	Description	Actual Program Distribution		Recommendation Distribution
<b>Introduction</b>	New program; modest participations	8%	51%	50-60% total
<b>Take-Off</b>	Rapid participation growth	11%		
<b>Growth</b>	Moderate, but consistent population growth	32%		
<b>Mature</b>	Slow participation growth	23%	23%	40% total
<b>Saturated</b>	Minimal to no participation growth, extreme competition	21%	27%	0-10% total
<b>Decline</b>	Decline participation	6%		

### Health & Wellness

The Health & Wellness Core Program Area appears to be a “newer” programmatic focus for the Department. As the programs is Health & Wellness continue, the Department should work towards the best practices distribution ranges by focusing on moving programs across the lifecycle. Focusing energy on introducing new programming does keep things “fresh” and “energized” but will also create an increased demand on staffing. Therefore, it is encouraged that the Department works toward establishing at least some programs in the mature stage which identifies loved programs by the community.

Lifecycle Stages Health & Wellness	Description	Actual Program Distribution		Recommendation Distribution
<b>Introduction</b>	New program; modest participations	41%	100%	50-60% total
<b>Take-Off</b>	Rapid participation growth	14%		
<b>Growth</b>	Moderate, but consistent population growth	45%		
<b>Mature</b>	Slow participation growth	0%	0%	40% total
<b>Saturated</b>	Minimal to no participation growth, extreme competition	0%	0%	0-10% total
<b>Decline</b>	Decline participation	0%		

## Natural and Cultural Resources

Natural and Cultural Resources has 315 program opportunities with an additional 78 classes that were cancelled in the most recent fiscal year. The cancelled classes are not included in the percentage totals. The Department should keep an eye on the programs in the saturated and decline stages, there may be some opportunity to retire a few programs to focus on the healthier program offerings. Additionally, a focus on programmatic space should be examined to identify the true cause of “saturated” programs. It could be that a lot of summer camps are saturated due to physical program space.

Lifecycle Stages Natural & Cultural Resources	Description	Actual Program Distribution		Recommendation Distribution
<b>Introduction</b>	New program; modest participations	23%	44%	50-60% total
<b>Take-Off</b>	Rapid participation growth	8%		
<b>Growth</b>	Moderate, but consistent population growth	13%		
<b>Mature</b>	Slow participation growth	38%	38%	40% total
<b>Saturated</b>	Minimal to no participation growth, extreme competition	6%	18%	0-10% total
<b>Decline</b>	Decline participation	12%		

## Recreation Programs

Recreation has 90% of programs within the growing lifecycle stages out of 296 programs. Therefore, the Department should identify programs in the growing stages to become the staple of offerings for the community. These staples, or mature programs, will assist with sustainability in cost recovery when introducing new programs which often times have unknow participation rates.

Lifecycle Stages Recreation	Description	Actual Program Distribution		Recommendation Distribution
<b>Introduction</b>	New program; modest participations	23%	90%	50-60% total
<b>Take-Off</b>	Rapid participation growth	3%		
<b>Growth</b>	Moderate, but consistent population growth	64%		
<b>Mature</b>	Slow participation growth	7%	7%	40% total
<b>Saturated</b>	Minimal to no participation growth, extreme competition	2%	4%	0-10% total
<b>Decline</b>	Decline participation	2%		

## Special Events

Special Events has over 46% of the programs identified in the last two lifecycle stages. It should be noted, however, this represents 6 out of 13 total special event programs. These programs should be re-evaluated, revamped, or removed from offerings. Removing declined programs will free up resources, sponsorships, weekends, and staff for the introduction of new events.

Lifecycle Stages Special Events	Description	Actual Program Distribution		Recommendation Distribution
<b>Introduction</b>	New program; modest participations	8%	46%	50-60% total
<b>Take-Off</b>	Rapid participation growth	0%		
<b>Growth</b>	Moderate, but consistent population growth	38%		
<b>Mature</b>	Slow participation growth	8%	8%	40% total
<b>Saturated</b>	Minimal to no participation growth, extreme competition	23%	46%	0-10% total
<b>Decline</b>	Decline participation	23%		

## Program Classification

Conducting a classification of services informs how each program serves the overall organization mission, the goals and objectives of each core program area, and how the program should be funded with regard to tax dollars and/or user fees and charges. How a program is classified can help to determine the most appropriate management, funding, and marketing strategies. Classification also ensures that programs and services essential to the public that fill an identified need are continued.

Program classifications are based on the degree to which the program provides a public benefit versus a private benefit. Public benefit can be described as everyone receiving the same level of benefit with equal access, whereas private benefit can be described as the user receiving exclusive benefit above what a general taxpayer receives for their personal benefit.

The Department used a classification method based on three indicators: Essential Services, Important Services, and Enhancement Services. Where a program or service is classified depends upon alignment with the organizational mission, how the public perceives a program, legal mandates, financial sustainability, personal benefit, competition in the marketplace, and access by participants.

As identified in the figure below, all Core Program Areas largely have a mix of services provided (with the exception of Special Events). The classification distribution indicates aquatic, health & wellness, recreation, and special event programming should be large revenue drivers for the Department. There is more flexibility associated with athletics and natural & cultural resources in terms of revenue generation. However, these two program areas will still produce revenue to offset some (or most) of programming costs.

Core Program Area	Essential	Important	Enhancement	Total Programs
Aquatic	47%	19%	33%	205
Athletics	57%	29%	8%	57
Health & Wellness	10%	28%	62%	29
Natural & Cultural Resources	35%	58%	7%	393
Recreation	<1%	12%	88%	319
Special Events	0%	0%	100%	13

## Understanding the Full Cost of Service

To develop specific cost recovery targets, it is recommended to ensure a full cost of accounting is created for each class or program that accurately calculates direct and indirect costs. This process helps ensure cost recovery goals are established based on a comprehensive data analysis. All Department program staff should be trained on this process.

A Cost of Service Analysis should be conducted on each program, or program type, that accurately calculates direct (i.e., program-specific) and indirect (i.e., comprehensive, including administrative overhead) costs.

Completing a Cost of Service Analysis not only helps determine the true and full cost of offering a program, but it also provides information that can be used to price programs based upon accurate delivery costs. The following figure illustrates the common types of costs that must be accounted for in a Cost of Service Analysis.



### Cost Recovery

Cost recovery targets should be identified for each core program area, at least, and for specific programs or events where realistic. The previously identified core program areas would serve as an effective breakdown for tracking cost recovery metrics including administrative costs. Staff should review how programs are grouped for similar cost recovery and subsidy goals to determine if current practices still meet management outcomes.

Determining cost recovery performance and using it to make informed pricing decisions involves a three-step process:

1. Classify all programs and services based on the public or private benefit they provide (as completed in the previous section).
2. Conduct a Cost of Service Analysis to calculate the full cost of each program.
3. Establish a cost recovery percentage, through Department policy, for each program or program type based on the outcomes of the previous two steps and adjust program prices accordingly.

### Current Cost Recovery

With regard to the Department's cost recovery, an overall goal of for the Recreation drives the efforts of staff. Department prices programs considering cost recovery goals for core program areas. The table shows current cost recovery goals for those core program areas that have a goal in place.

Cost recovery targets can vary based on the core program area, and even at the program level within a core program area. Several variables can influence the cost recovery target, including lifecycle stage, demographic served, and perhaps most important, program classification.

Core Program Areas	Average Cost Recovery Goal	Average Actual Cost Recovery
Aquatic	100%	218%
Athletics	34%	29%
Health & Wellness	40%	30%
Natural & Cultural Resources	0% or 100%*	156%**
Recreation	43%	34%
Special Events	0% or 50%***	99%****

\*Programs have a goal of either 0% or 100% cost recovery

\*\*For programs that had a 100% cost recovery goal identified

\*\*\*Events have a goal of either 0% or 50% cost recovery

\*\*\*\*For events that had a 50% cost recovery goal identified

*Cost Recovery Best Practices*

Cost recovery targets should reflect the degree to which a program provides a public versus individual good. Programs providing public benefits (i.e., Essential programs) should be subsidized more by the Department; programs providing individual benefits (i.e., Enhancement programs) should seek to recover costs and/or generate revenue for other services.

*Pricing*

The Department’s current pricing tactics focus largely on cost recovery goals, a customer’s ability to pay, age segmentation, residency, and by location. It should be noted, however, that all Health & Wellness programming is funded through grants and donations and therefore does not demonstrate any associated pricing tactics.

The current pricing model is stable for the Department to reach cost recovery goals; however, considering prime/non-prime time and market rate is also valuable when setting prices if program goals are not reached. These untapped pricing strategies could also be useful to help stabilize usage patterns.

Pricing Strategies	Age Segments	Family/ Household Status	Residency	Weekday/Weekend	Prime/ Non-Prime Time	Group Discounts	By Location	By Competition (Market Rate)	By Cost Recovery Goals	By Customer's Ability to Pay
	Aquatic	X		X				X		X
Athletics	X	X	X			X	X		X	X
Health & Wellness										
Natural & Cultural Resources	X		X				X		X	
Recreation						X	X	X	X	X
Special Events							X	X	X	X

The planning team recommends that all core program areas continue to use cost recovery goals as a major factor in determining pricing. Using dynamic pricing to entice participation during low volume times and manage excessive demand for programs is encouraged as well. Pricing by residency and competition can also contribute to overall service demand management. Staff should continue to monitor the effectiveness of the various pricing strategies they employ and make adjustments as necessary. It is also important to continue monitoring for yearly market competitors and other service providers.

*Volunteer Management*

Today’s realities require most public parks and recreation departments to seek productive and meaningful partnerships with both community organizations and individuals to deliver quality and seamless services to their residents. These relationships should be mutually beneficial to each party to better meet overall community needs and expand the positive impact of the Department’s mission. Effective partnerships and meaningful volunteerism are key strategy areas for the Department to focus on in order to meet community needs in the years to come.

Volunteer Gwinnett has a strong following. In fact, over \$28 million has been saved by the Department through documented volunteerism efforts. The volunteer website is inviting to new participants with “About Us” information, volunteer events, projects, the process to volunteer, a volunteer newsletter, appreciation opportunities, employee opportunities, background checks, and even information for court-ordered community service opportunities.

**Volunteer Gwinnett**

Thank you for your interest in volunteering with Gwinnett County Government, people like you help us reach our goal of 1 million volunteer hours every year!

This countywide volunteer program is designed to involve residents in volunteer activities. Gwinnett County depends on volunteers to help provide residents with the best services and programs possible. Our volunteers directly contribute to the excellent quality of life residents enjoy in our community.

Volunteer for a one-time event, and/or serve long-term on an ongoing project. There are many volunteer opportunities to fit your skill set and schedule.



**2019**

**1.1 million**  
*hours of volunteer service*

**91 thousand**  
*committed volunteers*

**\$28 million**  
*dollar value of volunteer hours*

### *Recreation Program Partners*

The Department's Core Program Areas all work with partnerships or sponsorships in some capacity. These partnership relationships are different across each Core Program Area and even vary within a Core Program Area such as Aquatics or Athletics. Therefore, in order to work towards consistency, the following five areas should be used as focus areas to increase new programmatic partnerships for all Core Program Areas:

1. **Operational Partners:** Other entities and organizations that can support the efforts of the Department to maintain facilities and assets, promote amenities and park usage, support site needs, provide programs and events, and/or maintain the integrity of natural/cultural resources through in-kind labor, equipment, or materials.
2. **Vendor Partners:** Service providers and/or contractors that can gain brand association and notoriety as a preferred vendor or supporter of the Department in exchange for reduced rates, services, or some other agreed upon benefit.
3. **Service Partners:** Nonprofit organizations and/or Friends' Groups that support the efforts of the agency to provide programs and events, and/or serve specific constituents in the county collaboratively.
4. **Co-Branding Partners:** Private, for-profit organizations that can gain brand association and notoriety as a supporter of the Department in exchange for sponsorship or co-branded programs, events, marketing and promotional campaigns, and/or advertising opportunities.
5. **Resource Development Partners:** A private, nonprofit organization with the primary purpose to leverage private sector resources, grants, other public funding opportunities, and resources from individuals and groups within the county to support the Department's goals and objectives based on mutually agreed upon strategic initiatives.

### **Program Standard and Performance Measures**

A sophisticated program delivery model should be based on a set of program standards and corresponding performance measures. Typically, a program delivery model should incorporate the following seven categories (among others if desired):

- Performance measures
- HR practices
- Marketing and promotion
- Public input
- Volunteerism
- Partnerships
- Competitors and similar providers

The following figures represent the degree to which the Department incorporates facets of each category across all Core Program Areas. As denoted by the figures, program performance standards are used inconsistently across (and sometimes within) all Core Program Areas.

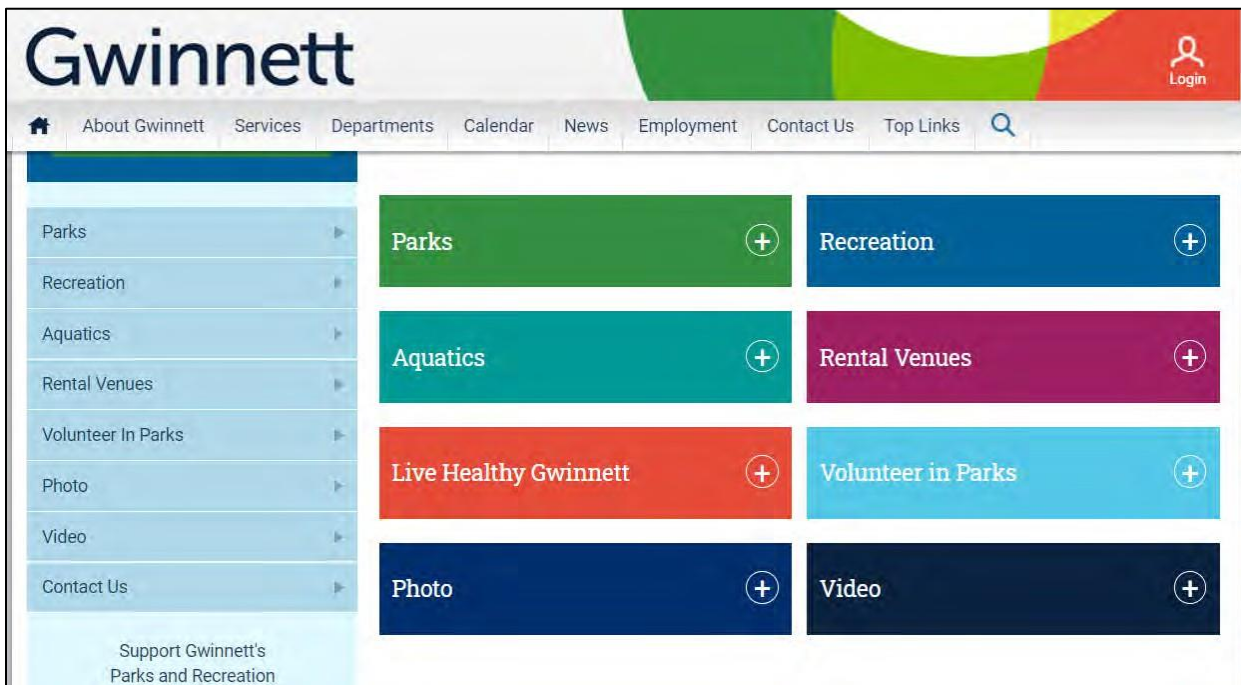
AQUATICS										
	Best Practice	BFP	BPAC	BTAC	CHAC	DPP	LPP	MPAC	RJP	WGPAC
Performance Measures	Total participants	X	X	X	X	X	X	X	X	X
	Participant to staff ratio	X								X
	Program cancellation rate (% describing number of programs cancelled due to insufficient numbers)				X				X	
	Customer satisfaction level	X	X	X	X	X	X	X	X	X
	Customer retention rate	X	X	X	X	X	X	X	X	X
	Best Practice	BFP	BPAC	BTAC	CHAC	DPP	LPP	MPAC	RJP	WGPAC
HR Practices or Standards	Regularly and consistently update policies & procedures		X	X		X	X	X		
	Instructor quality check	X		X	X		X		X	X
	Lesson plans	X	X	X	X	X	X	X	X	X
	Program evaluation system	X		X	X		X		X	X
	Customer service training	X	X	X	X	X	X	X	X	X
	Basic life safety training (ex. CPR, First Aid)	X			X				X	X
	Enhanced life safety training	X	X			X		X		X
	Specialty skill training	X	X			X		X		X
	Marketing training									
	Training on calculating/tracking total cost of facility operations		X		X	X		X	X	
	Training on calculating/tracking cost of service		X		X	X		X	X	
	Continuing education	X	X		X	X		X	X	X
	Diversity training	X								
	Performance reviews; full-time	X	X			X		X		
	Performance reviews; part-time	X	X		X	X		X	X	X
Performance reviews; seasonal	X			X				X	X	
	Best Practice	BFP	BPAC	BTAC	CHAC	DPP	LPP	MPAC	RJP	WGPAC
Marketing and Promotions	Program guides (print)	X	X	X	X	X	X	X	X	X
	Program guides (online)	X	X	X	X	X	X	X	X	X
	Website	X	X	X	X	X	X	X	X	X
	Smart/mobile phone enabled site	X	X	X		X	X	X		X
	Apps									
	Flyers and/or brochures	X	X	X	X	X	X	X	X	X
	Direct mail									
	Email blasts and/or listserv		X	X		X	X	X		
	Public Service Announcements (PSAs)									
	Roadsign marquees	X	X	X	X	X	X	X	X	X
	Paid advertisements		X	X		X	X	X		
	Radio (paid or free)									
	TV (paid or free)									
	On-hold pre-programmed phone messages	X		X			X			X
	SMS/MMS/Text Message marketing									
	Newsletters (print)		X			X		X		
	Newsletters (online)		X			X		X		
	In-facility signage	X	X	X	X	X	X	X	X	X
	Facebook			X	X		X		X	
	Instagram									
	Twitter									
	Flickr									
YouTube channel										
Blogs / vlogs										
Webinars										
QR Codes										
Other										
	Best Practice	BFP	BPAC	BTAC	CHAC	DPP	LPP	MPAC	RJP	WGPAC
Public Input Methods	Pre-program survey									
	Post-program survey									
	Regular/recurring user surveys									
	Lost customer/user surveys	X	X	X	X	X	X	X	X	X
	Non-customer/non-user surveys			X			X			
	Focus groups									
	Statistically valid surveys									
	In-facility, in-park, or on-site surveys									
	Crowdsourcing tools (e.g., Peak Democracy, Chaordix, Mind Mixer, etc.)									
	Other			X			X			
	Best Practices	BFP	BPAC	BTAC	CHAC	DPP	LPP	MPAC	RJP	WGPAC
Volunteerism	Track the number of individual volunteers used annually?	X	X	X		X	X	X		
	Track the number of volunteer hours donated annually?	X	X	X		X	X	X		
	Have a formal/adopted volunteer policy?	X	X	X		X	X	X		
	Best Practices	BFP	BPAC	BTAC	CHAC	DPP	LPP	MPAC	RJP	WGPAC
Sponsorships and Partnerships	Maintain a list or database of all partner organizations?	X		X			X			
	Have a formal/adopted partnership policy?	X	X			X		X		
	Require a written agreement for all partnerships?	X								
Identify measureable outcomes for each partnership?										
	Best Practices	BFP	BPAC	BTAC	CHAC	DPP	LPP	MPAC	RJP	WGPAC
Similar	Maintain a list or database of major competitors/similar providers?	X		X			X			X
	Regularly (e.g., annually) conduct an environmental scan of competitors' offerings, pricing, and marketing?	X		X			X			X

ATHLETICS							
	Best Practice	East	North	South	West	Adult	Tennis
Performance Measures	Total participants	X		X	X	X	X
	Participant to staff ratio				X		X
	Program cancellation rate (% describing number of programs cancelled due to insufficient numbers)						X
	Customer satisfaction level				X	X	X
	Customer retention rate						
	Best Practice	East	North	South	West	Adult	Tennis
HR Practices or Standards	Regularly and consistently update policies & procedures	X		X	X	X	X
	Instructor quality check			X	X		
	Lesson plans				X		
	Program evaluation system				X		
	Customer service training	X		X	X	X	X
	Basic life safety training (ex. CPR, First Aid)	X		X	X	X	X
	Enhanced life safety training	X		X	X		X
	Specialty skill training	X		X	X		
	Marketing training			X	X	X	
	Training on calculating/tracking total cost of facility operations						
	Training on calculating/tracking cost of service						
	Continuing education			X			
	Diversity training			X		X	
	Performance reviews; full-time			X	X	X	X
Performance reviews; part-time			X	X	X	X	
Performance reviews; seasonal			X				
	Best Practice	East	North	South	West	Adult	Tennis
Marketing and Promotions	Program guides (print)			X	X	X	X
	Program guides (online)			X	X	X	X
	Website	X		X	X	X	X
	Smart/mobile phone enabled site	X		X	X		
	Apps						
	Flyers and/or brochures	X		X	X	X	X
	Direct mail	X			X		
	Email blasts and/or listserv	X		X	X	X	X
	Public Service Announcements (PSAs)	X		X	X	X	
	Roadsign marquees	X		X	X	X	X
	Paid advertisements	X		X	X	X	
	Radio (paid or free)			X			
	TV (paid or free)			X			
	On-hold pre-programmed phone messages			X	X		
	SMS/MMS/Text Message marketing			X			
	Newsletters (print)				X		
	Newsletters (online)			X	X		
	In-facility signage			X	X	X	X
	Facebook	X			X	X	X
	Instagram			X			
	Twitter						
	Flickr						
	YouTube channel						
	Blogs / vlogs						
	Webinars						
	QR Codes						
	Other						
	Best Practice	East	North	South	West	Adult	Tennis
Public Input Methods	Pre-program survey			X	X		
	Post-program survey			X	X		X
	Regular/recurring user surveys			X	X		
	Lost customer/user surveys						
	Non-customer/non-user surveys						
	Focus groups						
	Statistically valid surveys						
	In-facility, in-park, or on-site surveys						
	Crowdsourcing tools (e.g., Peak Democracy, Chaordix, Mind Mixer, etc.)						
	Other						
	Best Practices	East	North	South	West	Adult	Tennis
Volunteerism	Track the number of individual volunteers used annually?			X	X	X	
	Track the number of volunteer hours donated annually?			X	X	X	
	Have a formal/adopted volunteer policy?			X	X	X	
	Best Practices	East	North	South	West	Adult	Tennis
Sponsorships and Partnerships	Maintain a list or database of all partner organizations?			X	X	X	
	Have a formal/adopted partnership policy?			X	X	X	
	Require a written agreement for all partnerships?			X	X	X	
	Identify measureable outcomes for each partnership?			X	X	X	
	Best Practices	East	North	South	West	Adult	Tennis
Similar	Maintain a list or database of major competitors/similar providers?						
	Regularly (e.g., annually) conduct an environmental scan of competitors' offerings, pricing, and marketing?						

		HEALTH & WELLNESS	NATURAL & CULTURAL RESOURCES	RECREATION	SPECIAL EVENTS
<b>Best Practice</b>					
Performance Measures	Total participants	X	X	X	X
	Participant to staff ratio		X	X	
	Program cancellation rate (% describing number of programs cancelled due to insufficient numbers)	X		X	X
	Customer satisfaction level		X	X	X
	Customer retention rate			X	X
<b>Best Practice</b>					
HR Practices or Standards	Regularly and consistently update policies & procedures	X	X	X	X
	Instructor quality check	X	X	X	X
	Lesson plans	X	X	X	X
	Program evaluation system	X		X	X
	Customer service training	X		X	X
	Basic life safety training (ex. CPR, First Aid)	X	X	X	X
	Enhanced life safety training	X	X	X	
	Specialty skill training	X	X	X	X
	Marketing training	X			X
	Training on calculating/tracking total cost of facility operations	X		X	X
	Training on calculating/tracking cost of service	X		X	X
	Continuing education	X	X		X
	Diversity training	X		X	
	Performance reviews; full-time	X	X	X	X
	Performance reviews; part-time	X	X	X	X
Performance reviews; seasonal	X	X	X		
<b>Best Practice</b>					
Marketing and Promotions	Program guides (print)	X	X	X	X
	Program guides (online)	X	X	X	X
	Website	X	X	X	X
	Smart/mobile phone enabled site	X	X		
	Apps				
	Flyers and/or brochures	X	X	X	X
	Direct mail				
	Email blasts and/or listserv	X	X	X	X
	Public Service Announcements (PSAs)				
	Roadsign marquees	X		X	X
	Paid advertisements				
	Radio (paid or free)				
	TV (paid or free)				
	On-hold pre-programmed phone messages		X		X
	SMS/MMS/Text Message marketing				
	Newsletters (print)				
	Newsletters (online)	X			
	In-facility signage	X	X	X	X
	Facebook	X	X	X	X
	Instagram	X			
	Twitter	X			
	Flickr	X			
	YouTube channel				
	Blogs / vlogs				
	Webinars				
	QR Codes				
	Other	X		X	
<b>Best Practice</b>					
Public Input Methods	Pre-program survey				
	Post-program survey		X	X	X
	Regular/recurring user surveys			X	
	Lost customer/user surveys				
	Non-customer/non-user surveys				
	Focus groups		X		
	Statistically valid surveys				
	In-facility, in-park, or on-site surveys				
	Crowdsourcing tools (e.g., Peak Democracy, Chaordix, Mind Mixer, etc.)				
	Other				
<b>Best Practices</b>					
Volunteerism	Track the number of individual volunteers used annually?	X	X	X	X
	Track the number of volunteer hours donated annually?	X	X	X	X
	Have a formal/adopted volunteer policy?	X	X	X	
<b>Best Practices</b>					
Sponsorships and Partnerships	Maintain a list or database of all partner organizations?	X	X	X	X
	Have a formal/adopted partnership policy?	X			X
	Require a written agreement for all partnerships?	X			X
	Identify measureable outcomes for each partnership?	X			X
<b>Best Practices</b>					
Similar	Maintain a list or database of major competitors/similar providers?		X	X	X
	Regularly (e.g., annually) conduct an environmental scan of competitors' offerings, pricing, and marketing?		X	X	X

## Website

The Department's homepage has quick tabs to most core programs areas on the right and on the left sides of the screen. Often times, agencies will align their website to correspond to Core Program Areas. The Department's website largely reflects the identified Core Program Areas but with different wording and the addition of system features such as parks, rental venues, volunteerism, and much more. Live Healthy Gwinnet has a separate link to another website that links to the program registrations system. The recreation tabs have Sports leagues, Athletic Recreation, Senior Recreation, Therapeutic Recreation, Birthday Parties, Camps, an Event Calendar, and Ongoing Activities. These tabs could be challenging for the consumer looking for a specific program. Natural and Cultural Resources was only found through a separate search within the county website. The Natural and Cultural Resource page was not attached to supporting programs for nature or culture.



## Social Media

The Department's social media focus is mainly Facebook. The key to successful implementation of a social network is to move the participants from awareness to action and creating greater user engagement. This could be done by:

- Allowing controlled 'user generated content' by encouraging users to send in their pictures from the Department's special events or programs
- Introducing Facebook-only promotions to drive greater visitation to Facebook
- Leveraging the website to obtain customer feedback for programs, parks and facilities and customer service
- Expanding opportunities for Crowdsourcing information on an ongoing basis. *Crowdsourcing is used for a call out of all types of resources such as man power, volunteers, and equipment to help accomplish your set goal.*
  - Some existing resources include [mindmixer.com](http://mindmixer.com) and [peakdemocracy.com](http://peakdemocracy.com) which can be evaluated if the Department has the resources and can utilize it on an on-going basis.
  - Crowdsourcing options could also include printing program guides or developing marketing material
- Providing opportunities for Donations or Crowdfunding through the website. Crowdfunding is a monetary call out to complete a project or meet a goal.
  - The following sites could help bring small amounts of money together to create needed capital: [kickstarter.org](http://kickstarter.org) / [indiegogo.com](http://indiegogo.com) / [razoo.com](http://razoo.com).
- Maximizing the website's revenue generating capabilities
- Conducting annual website strategy workshop with the staff to identify ways and means that the website can support the Department's Social Media trends.

## Program Framework Recommendations

After reviewing the existing program delivery framework, the following recommendations are provided. These recommendations represent a comprehensive approach to program delivery, and they should be phased in over time to elevate the existing framework.

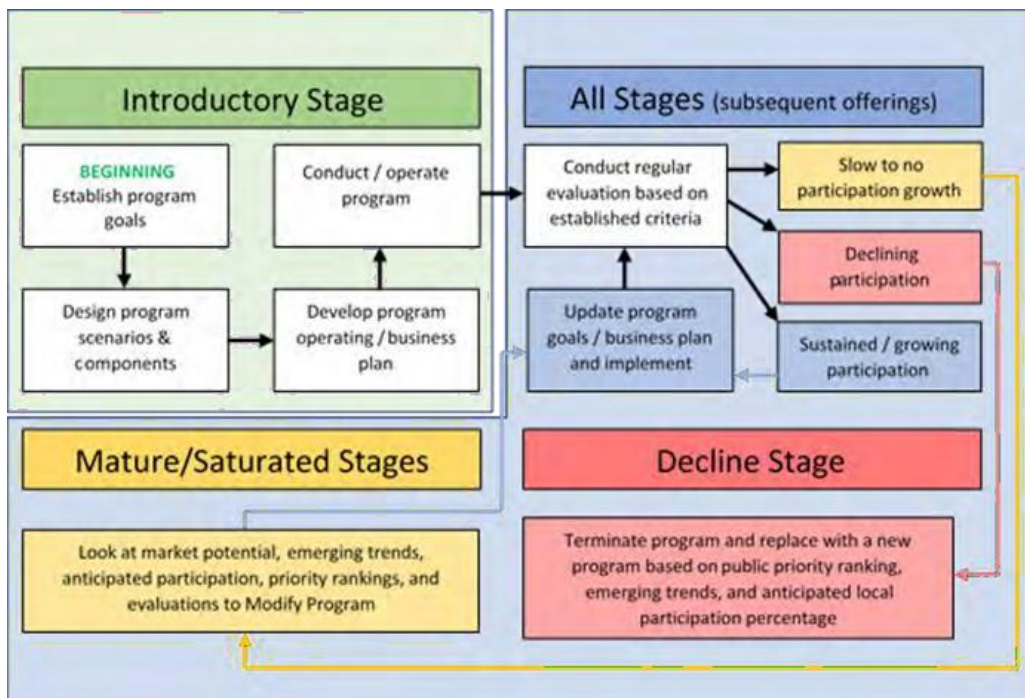
### Core Program Areas and Age Segmentation

The Department should annually review core program areas to ensure relevance to community priorities (more about this in the next chapter). Additionally, given the county's demographics, senior and teen programming should have a stronger focus much like there is for youth programming. Currently, senior programming is more of a "secondary" focus for the Department. There is a strong emphasis for youth, but seniors and teen programming can and should be expanded.

Program staff should include this information when creating or updating program plans for individual programs. An age segment analysis can also be incorporated into mini-business plans for comprehensive program planning.

### Program Lifecycles

Staff should complete a Program Lifecycle Analysis on an annual basis and ensure that the percentage distribution closely aligns with desired performance. Furthermore, staff should include annual performance measures for each core program area to track participation growth, customer retention, and percentage of new programs as an incentive for innovation and alignment with community trends. Additionally, the decision tree below should be used to evaluate programs in relation to lifecycles.



### Program Classifications Aligned with Cost Recovery Philosophy

Classifying programs allows the Department to articulate to users and community members where programmatic value reside. Additionally, a classification model provides Department staff with a foundation in which program fees and charges can be developed. All costs (direct and indirect) should be included in cost of service calculations. Therefore, overhead allocations and any additional indirect costs not calculated should be considered a top priority. This overall classification philosophy, cost recovery targets, and cost of service calculations should help produce key performance indicators (KPIs) such as:

- Per program hour costs
- Per square footage costs
- Per program user costs

## Recreation Program Plan

When developing program plans and strategies, it is useful to consider all of the Core Program Areas and individual program analysis discussed in this chapter. Lifecycle, Age Segment, Classification, and Cost Recovery Goals should all be tracked, and this information along with the latest demographic trends and community input should be factors that lead to program decision-making. As seen in the following figure, community input can help staff focus in on specific program areas to develop new opportunities in what group of citizens to target including the best marketing methods to use.

The two templates below are simple, easy-to-use tools that will help compare programs and prioritize resources using multiple data points, rather than relying solely on cost recovery. In addition, this analysis will help staff make an informed, objective case to the public when a program in decline, but beloved by a few, is retired.

### Marketing & Promotion Methods

Program Idea (Name or Concept): \_\_\_\_\_

Marketing Methods	Content Developed	Contact Information	Start Date
Activity Guide			
Website			
Newspaper Article			
Radio			
Social Media			
Flyers - Public Places			
Newspaper Ad			
Email Notification			
Event Website			
School Flyer/Newsletter			
Television			
Digital Sign			
Friends & Neighbors Groups			
Staff Promotion @ Events			

Program Idea (Name or Concept): \_\_\_\_\_

#### Internal Factors

**Priority Ranking:** High Medium Low

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**Program Area:** Core Non-core

--	--

**Classification:** Essential Important Discretionary

--	--	--

**Cost Recovery Range:** 0-40% 60-80% 80+%

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**Age Segment:** Primary Secondary

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#### Sponsorship/Partnership

**Potential Partnerships:** Monetary Volunteers Partner Skill Location/Space

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**Potential Sponsors:** Monetary Volunteers Sponsor Skill Location/Space

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#### Market Competition

**Number of Competitors:** \_\_\_\_\_

**Competitiveness:** High Medium Low

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**Growth Potential:** High Low

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## Pricing

Realizing that the Department's pricing is designed to produce good cost recovery percentages, a dynamic pricing strategy should be considered that involves prime/non-prime time rates. Dynamic pricing would allow additional flexibility when pricing programs and services throughout the County. Additionally, the market rate/tolerance should continue to be a consideration in pricing services.

## Performance Standards and Management

The Department should incorporate new best practices in its operations that focus on new KPIs, staff development, and solicitation of both user and non-user feedback regarding programs and services including:

- Customer retention rates
- Program cancellation rates
- Broader use of Social Media
- Additional public input methods utilized
- Use of formal partnership agreements with measurable outcomes
- Training about calculating total cost of facility operations and cost of service

## Partnership Polices

All recreation partnerships established by the Department should be formalized with a written agreement(s) with measurable outcomes. When seeking partnerships, the Department should look for organizations that could step into program/services weaknesses to provide a program/service that currently does not have resource support and has high priority by the community.

Developed partnerships need to be equitable for both organizations producing reasonable shared benefits between parties.

Certain partnership principles should be adopted by the Department for future partnerships to work effectively. These partnership principles are as follows:

- All partnerships require a working agreement with measurable outcomes to be evaluated on a regular basis. This should include reports to the Department on the performance, tracked investments, and outcomes of the partnership including an annual review to determine renewal potential.
- All partnerships should track costs associated with the partnership investment to demonstrate the shared level of equity.
- All partnerships should maintain a culture that focuses on collaborative planning on a regular basis, regular communications, and annual reporting on performance and outcomes to determine renewal potential and opportunities to strengthen the partnership.
- All partners should report to Department staff on a regular basis to plan and share activity-based costs and equity invested.
- Each partner will assign a liaison to serve each partnership agency for communication and planning purposes.
- If conflicts arise, highest ranking leader of each organization will meet to resolve the issue(s) in a timely manner. Any exchange of money or traded resources will be made based on the terms of the partnership agreement. Each partner will meet with the other partner's respective board or managing representatives annually.
- Additional partnerships can be pursued and developed with other public entities such as neighboring cities, colleges, state or federal agencies; nonprofit organizations; as well as with private, for-profit organizations.

## Program Capacity to influence Program Planning

Understanding *how* programs are being delivered should help influence how programs are assigned facility space and how many activities are offered within a given Core Program Area. The Department should conduct a capacity assessment with at least one year's worth of data for each core program area. Once complete, the following best practices should be adhered to:

- Base minimums and maximums off of desired cost recovery targets based on the full understanding of an activity's cost to deliver it (direct and indirect).
- Hold staff accountable to cancelling activities when a minimum threshold is not reached; however, there should be alternative offerings and some leeway provided to staff in cancelling.
- Look at program participation trends when assigning classes to specific program spaces.

## Website

The Department's website should continue to reflect the Core Program Areas and each section should be linked directly to the registration page of the specific program being addressed. Minimizing clicks to find a program and the registration process will increase website use for participants which may, in turn, increase registration and participation.

## Revenue Tracking by Center

The Consultant Team analyzed revenue and expenses for the Recreation Division from 2014-2019. Specifically, analysis focused on the performance of the organization's eight centers. The following figures reflect their performance for generating revenues against the cost for revenue production. The figures then demonstrate the performance in terms of percentage. The performance is reflected using the percent of revenue against the cost to produce those revenues. If the factor in the percentage column is less than 100%, it means the expenses to produce the activity is costing more than the revenues that are generated. It should be noted that when combining the performance of all centers (2014-2017), most of them performed under 100% and were revenue negative.

Key data observations include:

- Performance improvement started to show in 2018 and 2019
- Revenue and expenses fluctuated from year to year for each of the centers
- There is a good demonstration of revenue growth but the same is shown for expenses. No centers are achieving 30%; however, volunteer services were able to achieve the benchmark in 2018 and 2019

<b>Program Revenues v Expenses 2014</b>			
<b>Site</b>	<b>Revenue</b>	<b>Expenses</b>	<b>% of Rev v Cost</b>
Bethesda Senior Cntr	\$ 180,744	\$ 189,067	0.96
G Pierce Comm Cntr	\$ 194,276	\$ 211,461	0.92
Lucky Shoals Com Cntr	\$ 211,483	\$ 325,671	0.65
North Area Prog	\$ 169,890	\$ 183,561	0.93
P'ville Comm Cntr	\$ 239,158	\$ 248,883	0.96
South Area Programs	\$ 229,141	\$ 236,705	0.97
Volunteer Resources	\$ 60,452	\$ 84,397	0.72
<b>Totals</b>	<b>\$ 1,285,144</b>	<b>\$ 1,479,745</b>	<b>0.87</b>

<b>Program Revenues v Expenses 2015</b>			
<b>Site</b>	<b>Revenue</b>	<b>Expenses</b>	<b>% of Rev v Cost</b>
Bethesda Senior Cntr	\$ 190,731	\$ 194,611	0.98
G Pierce Comm Cntr	\$ 205,960	\$ 230,427	0.89
Lucky Shoals Com Cntr	\$ 337,745	\$ 306,159	1.10
North Area Prog	\$ 191,600	\$ 201,682	0.95
P'ville Comm Center	\$ 250,486	\$ 220,535	1.14
South Area Prog	\$ 264,086	\$ 266,651	0.99
Volunteer Resurces	\$ 100,552	\$ 121,642	0.83
<b>Total</b>	<b>\$ 1,541,160</b>	<b>\$ 1,541,707</b>	<b>0.98</b>

<b>Program Revenues v Expenses 2016</b>			
<b>Site</b>	<b>Revenue</b>	<b>Expenses</b>	<b>% of Rev v Cost</b>
Bethesda Senior Ctr	\$ 198,292	\$ 225,890	0.88
G Pierce Comm Cntr	\$ 213,273	\$ 208,405	1.02
Lucky Shoals Com Ctr	\$ 381,208	\$ 327,425	1.16
P'ville Comm Center	\$ 257,617	\$ 289,935	0.89
South Area Prog	\$ 277,115	\$ 277,547	1.00
Volunteer Resources	\$ 112,638	\$ 125,196	0.90
<b>Totals</b>	<b>\$ 1,641,272</b>	<b>\$ 1,704,846</b>	<b>0.95</b>

Program Revenues v Expenses 2017			
Site	Revenue	Expenses	% of Rev v Cost
Bethesda Senior Center	\$ 219,643	\$ 233,589	0.94
G Pierce Comm Center	\$ 316,123	\$ 251,475	1.26
Lucky Shoals Comm Center	\$ 284,042	\$ 297,206	0.96
North Area Programs	\$ 262,951	\$ 235,298	1.12
P'ville Comm Center	\$ 246,319	\$ 249,658	0.99
South Area Programs	\$ 271,047	\$ 267,516	1.01
Volunteer Resources	\$ 146,951	\$ 159,477	0.92
<b>Total</b>	<b>\$ 1,600,125</b>	<b>\$ 1,534,742</b>	<b>0.90</b>

Program Revenues v Expenses 2018			
Site	Revenue	Expenses	% of Rev v Cost
Bethesda Senior Center	\$ 215,865.00	\$ 229,358.85	0.94
G Pierce Comm Cnter	\$ 311,696.00	\$ 296,506.38	1.05
Lilburn Activity Bld	\$ 159,920.00	\$ 105,572.69	1.51
Lucky Shoals Comm Center	\$ 295,722.00	\$ 266,074.18	1.11
North Area Programs	\$ 239,088.00	\$ 236,491.00	1.01
P'ville Comm Center	\$ 279,090.00	\$ 241,063.40	1.16
South Area Programs	\$ 319,222.00	\$ 257,428.87	1.24
Volunteer Resources	\$ 129,705.00	\$ 93,661.54	1.38
<b>Total</b>	<b>\$ 1,950,308.00</b>	<b>\$ 1,726,156.91</b>	<b>1.18</b>

Program Revenues v Expenses 2019			
Site	Revenue	Expenses	% of Rev v Cost
Bethesda Senior Center	\$ 234,237	\$ 216,036	1.08
G Pierce Comm Cnter	\$ 316,438	\$ 281,463	1.12
Lilburn Activity Bld	\$ 127,084	\$ 125,165	1.02
Lucky Shoals Com Cnter	\$ 306,328	\$ 246,676	1.24
North Area Prog	\$ 258,576	\$ 221,027	1.17
P'ville Comm Center	\$ 279,951	\$ 234,954	1.19
South Area Prog	\$ 316,471	\$ 245,515	1.29
Volunteer Services	\$ 404,926	\$ 288,000	1.41
<b>Total</b>	<b>\$ 2,244,011</b>	<b>\$ 1,858,837</b>	<b>1.19</b>

The average center recovery was 1.01 from 2014-2019.

Recreation Center Year to Year Comparison / Revenue v Expenses			
Year	Revenues	Expenses	% of Recovery
2014	\$ 1,285,144	\$ 1,479,745	0.87
2015	\$ 1,541,160	\$ 1,541,706	0.98
2016	\$ 1,641,272	\$ 1,704,845	0.95
2017	\$ 1,600,125	\$ 1,534,741	0.90
2018	\$ 1,950,308	\$ 1,726,156	1.18
2019	\$ 2,244,011	\$ 1,858,837	1.19

## Revenue Tracking by Program Type

The following figures represent a composite of all the programs offered in the eight facilities. One facility is relatively new (Lilburn). The first three illustrations compare program areas for 2017-2019. As indicated previously, the performance is reflected using the percent of revenue against the cost to produce those revenues. If the factor in the percentage column is less than 100% it means the expenses to produce the activity is costing more than the revenues that are generated. Programming in the facilities are performing at the 30% level of productivity over the three study years. However, when removing the positive percentages in the Admission and Pass programs in each year, the change in the percentage is significant. (2017 – 1.13; 2018 – 1.28 due to a strong showing in Recreation Classes; 2019 – 1.31).

It appears the Summer Youth Programs and the Equipment and Facility Rental programs are underperforming as they are producing well under the 30% benchmark. It may be beneficial to address the rental contract rates to improve the percentage gained for providing facility rental services. Special Event programming demonstrates a large swing in revenues over expenses (2017 – 1.36; 2018 – 1.18; and 2019 – 1.29). Recreation program percentages appear healthy and show a significant change from 2017.

Program Revenues v Expenses 2017			
	Revenue	Expenses	% of Rev v Cost
Admission / Pass Revenues-Expenses	\$ 76,456.00	\$ 36,247.00	2.11
Special Events Program	\$ 72,034.00	\$ 52,971.00	1.36
Recreation Programs	\$ 298,720.00	\$ 252,804.00	1.18
Summer Youth Programs	\$ 450,957.00	\$ 474,882.00	0.95
Facility and Equip Rental Program	\$ 1,600,125.00	\$ 1,534,741.00	1.04
<b>Total</b>	<b>\$ 2,498,292.00</b>	<b>\$ 2,351,645.00</b>	<b>1.33</b>

Program Income v Expenses Analysis 2018			
Program Area	Revenue	Expenses	% of Rev v Cost
Special Event Programs	\$ 57,710.00	\$ 50,612.77	1.18
Admission Pass Program	\$ 49,183.00	\$ 30,572.07	1.66
Recreation Classes	\$ 348,343.00	\$ 218,553.94	1.74
Youth Summer Programs	\$ 517,135.00	\$ 512,638.31	1.09
Equipment Rental	\$ 937,362.00	\$ 883,292.11	1.10
<b>Totals</b>	<b>\$ 1,909,733.00</b>	<b>\$ 1,695,669.20</b>	<b>1.35</b>

Program Income Revenue v Expenses 2019			
Program Area	Revenue	Expenses	% of Rev v Cost
Admission / Pass Fees	\$ 50,023.00	\$ 29,647.00	1.69
Special Events	\$ 64,767.00	\$ 50,334.00	1.29
Recreation Classes	\$ 366,426.00	\$ 192,309.00	1.91
Youth Summer Program	\$ 565,140.00	\$ 577,412.00	0.98
Equipment and Facility Rental	\$ 886,985.00	\$ 843,561.00	1.05
<b>Totals</b>	<b>1,933,341.00</b>	<b>1,693,263.00</b>	<b>1.38</b>

Financial analyses regarding recreation staff expenditures as part of the overall budget and detailed analyses by program type at each center can be found in the **Appendix**.

# Needs Assessment

## Community-Wide Survey

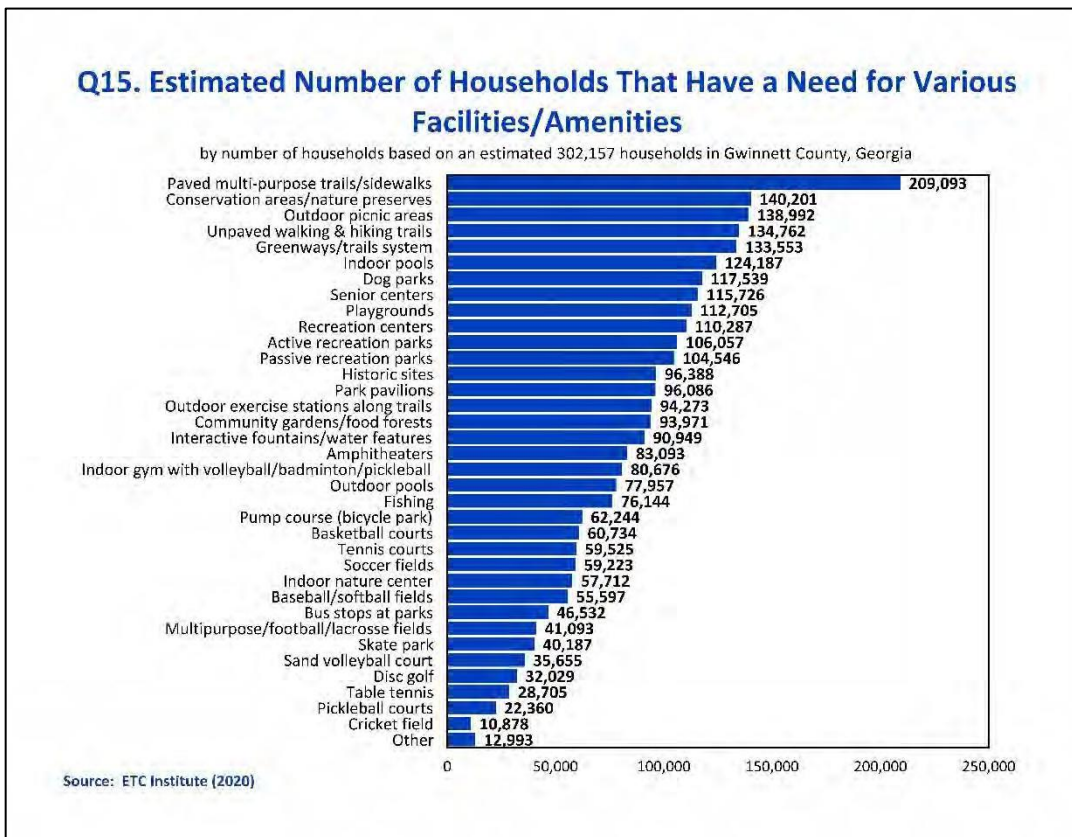
ETC Institute administered a parks and recreation needs assessment in the Winter of 2019. This assessment was administered as part of the County’s efforts to develop area parks, facilities, and programs. Information compiled from the assessment provided key data to set a clear vision for the future. The survey helped determine priorities for parks, recreation facilities, program offerings, and special event offerings in the county.

## Facility Needs and Priorities

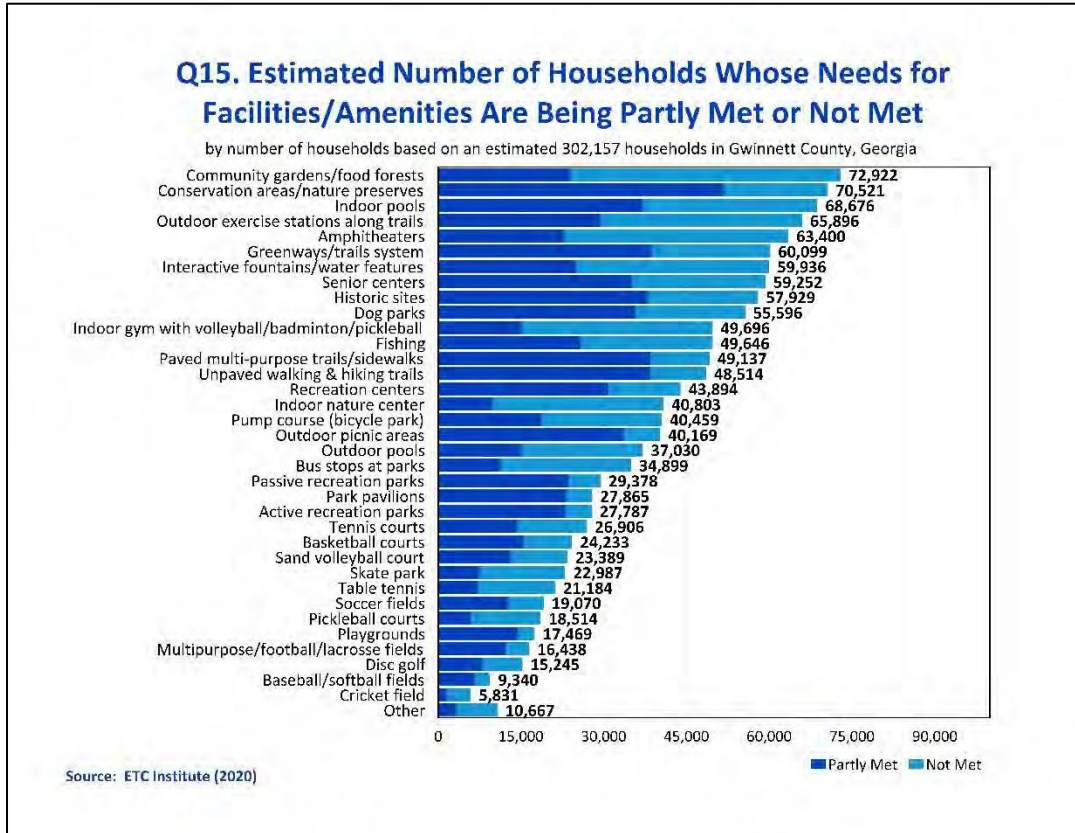
### Facility Needs

Respondents were asked to identify if their household had a need for 35 facilities and rate how well their needs for each were currently being met. Based on this analysis, ETC Institute was able to estimate the number of households in the community that had the greatest “unmet” need for various facilities.

The four recreation facilities with the highest percentage of households that indicated a need for the facility were: paved multi-purpose trails/sidewalks (69%), conservation areas/nature preserves (46%), outdoor picnic areas (46%), and unpaved walking and hiking trails (45%). ETC Institute estimates a total of 209,093 households of the estimated 302,157 households in Gwinnett County have a need for paved multi-purpose trails/sidewalks, an estimated total of 140,201 households of the estimated 302,157 households in Gwinnett County have a need for conservation areas/nature preserves, an estimated total of 138,992 households out of the estimated 302,157 households in Gwinnett County have a need for outdoor picnic areas, and an estimated total of 134,762 households out of the 302,157 households in Gwinnett County have a need for unpaved walking and hiking trails.



An estimated total of 72,922 households of the estimated 302,157 households in Gwinnett County have unmet needs for community gardens/food forests, an estimated total of 70,521 households of the estimated 302,157 households in Gwinnett County have unmet needs for conservation areas/nature preserves, an estimated total of 68,676 households of the estimated 302,157 households in Gwinnett County have unmet needs for indoor pools, and an estimated total of 65,896 households of the estimated 302,157 households in Gwinnett County have unmet needs for outdoor exercise stations along trails. The estimated number of households that have unmet needs for each of the 35 facilities that were assessed is shown in the figure below.

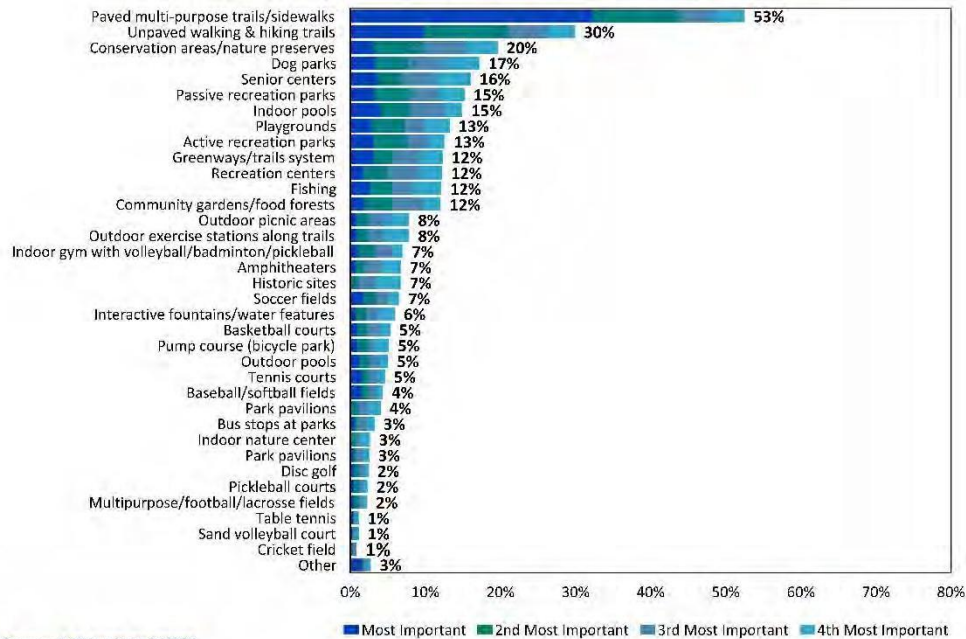


### Facility Importance

In addition to assessing the needs for each outdoor facility, ETC Institute also assessed the importance that residents placed on each facility. Based on the sum of respondents' top four choices, the four most important facilities to residents were: paved multi- purpose trails/sidewalks (53%), unpaved walking and hiking trails (30%), conservation areas/nature preserves (20%), and dog parks (17%). The percentage of residents who selected each facility as one of their top four choices is shown in the figure at the top of the next page.

## Q16. Facilities/Amenities Most Important to Households

by percentage of respondents who selected the items as one of their top four choices



### Priorities for Outdoor Facility Investments

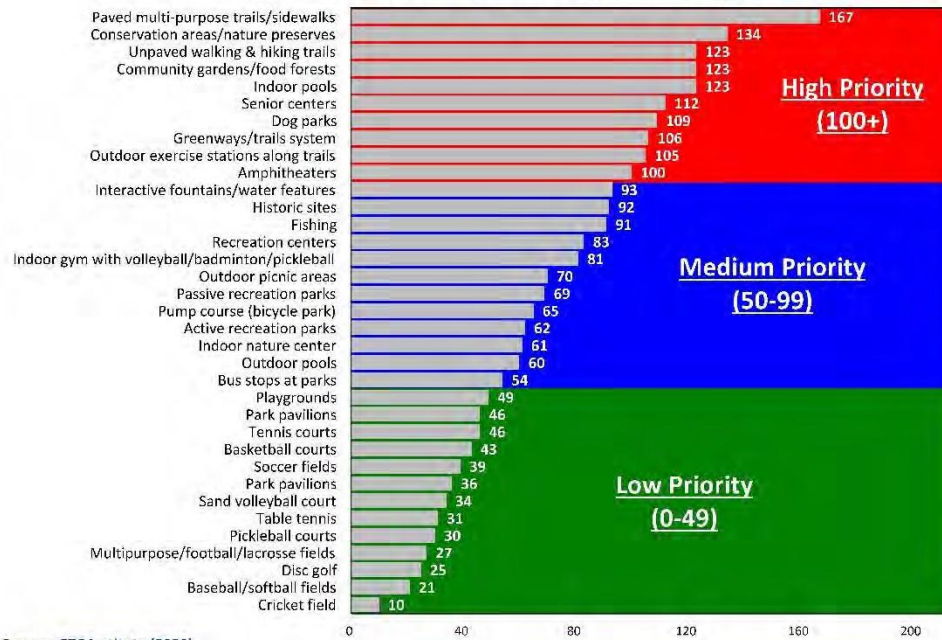
The **Priority Investment Rating (PIR)** was developed by ETC Institute to provide organizations with an objective tool for evaluating the priority that should be placed on Parks and Recreation investments. The Priority Investment Rating (PIR) equally weighs (1) the importance that residents place on facilities and (2) how many residents have unmet needs for the facility.

Based the Priority Investment Rating (PIR), the following ten facilities were rated as high priorities for investment:

- Paved multi-purpose trails/sidewalks (PIR=167)
- Conservation areas/nature preserves (PIR=134)
- Unpaved walking & hiking trails (PIR=123)
- Community gardens/food forests (PIR=123)
- Indoor pools (PIR=123)
- Senior centers (PIR=112)
- Dog parks (PIR=109)
- Greenways/trails system (PIR=106)
- Outdoor exercise stations along trails (PIR=105)
- Amphitheaters (PIR=100)

The figure on the next page shows the Priority Investment Rating for each of the 35 facilities that were rated.

## Top Priorities for Investment for Facilities/Amenities Based on the Priority Investment Rating



## Programming Needs and Priorities

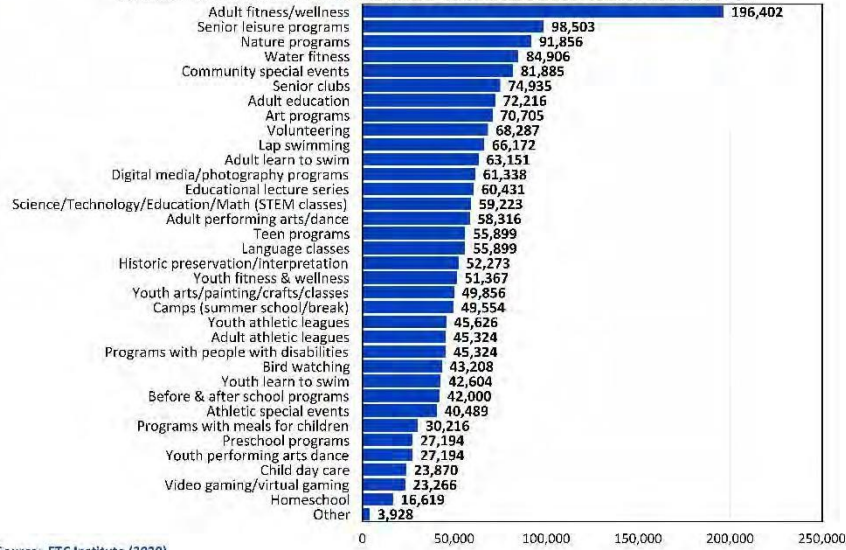
### Programming Needs

Respondents were also asked to identify if their household had a need for 34 recreational programs and rate how well their needs for each program were currently being met. Based on this analysis, ETC Institute was able to estimate the number of households in the community that had “unmet” needs for each program.

The four programs with the highest percentage of households that had needs were: adult fitness/wellness (65%), senior leisure programs (33%), nature programs (30%), and water fitness (28%). ETC Institute estimates a total of 196,402 households out of the estimated 302,157 households in Gwinnett County have a need for adult fitness/wellness programs, an estimated total of 98,503 households out of the estimated 302,157 households in Gwinnett County have a need for senior leisure programs, an estimated total of 91,856 households out of the estimated 302,157 households in Gwinnett County have a need for nature programs, and an estimated total of 84,906 households out of the estimated 302,157 households in Gwinnett County have a need for water fitness programs.

### Q17. Estimated Number of Households That Have a Need for Various Programs/Activities

by number of households based on an estimated 302,157 households in Gwinnett County, Georgia

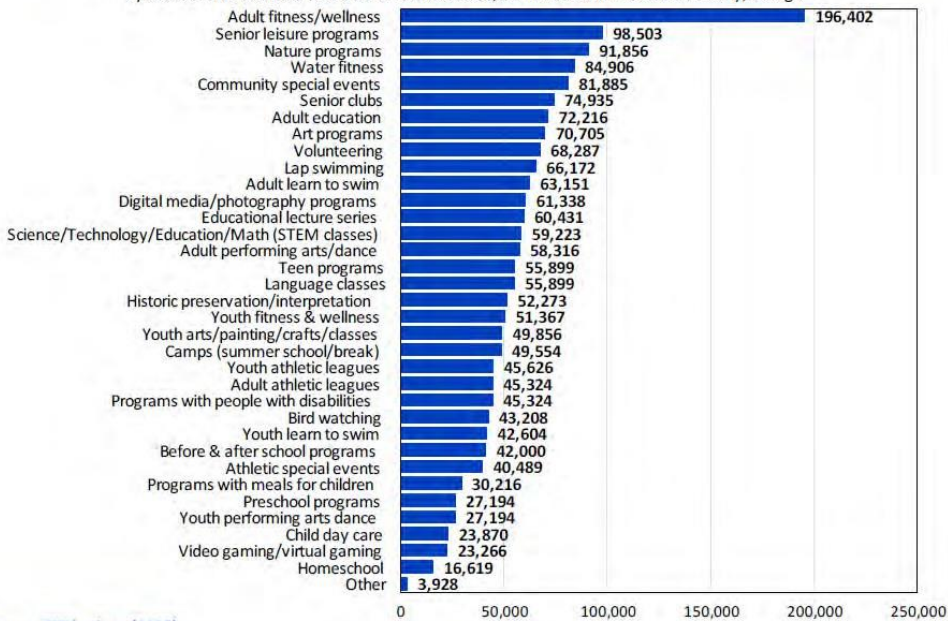


Source: ETC Institute (2020)

An estimated total of 122,752 households out of the estimated 302,157 households in Gwinnett County have unmet needs for adult fitness/wellness programs, an estimated total of 66,096 households out of the 302,157 households in Gwinnett County have unmet needs for senior leisure programs, an estimated total of 62,738 households out of the estimated 302,157 households in Gwinnett County have unmet needs for nature programs, and an estimated total of 56,038 households out of the estimated 302,157 households in Gwinnett County have unmet needs for water fitness programs. The estimated number of households that have unmet needs for each of the 34 programs that were assessed is shown in the figure below.

### Q17. Estimated Number of Households That Have a Need for Various Programs/Activities

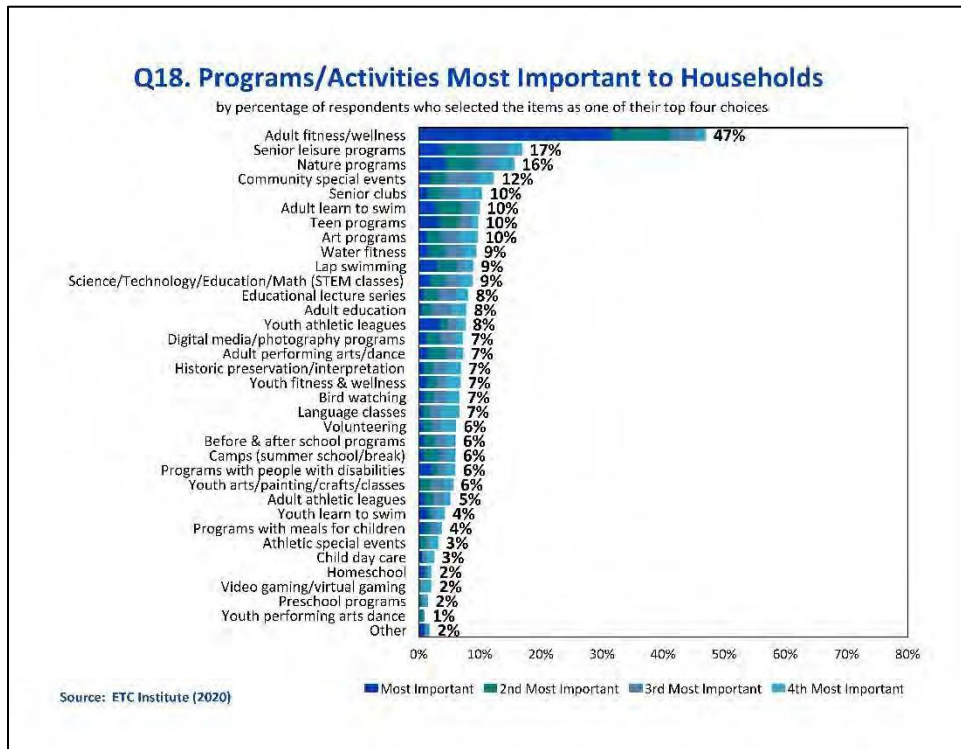
by number of households based on an estimated 302,157 households in Gwinnett County, Georgia



Source: ETC Institute (2020)

## Program Importance

In addition to assessing the needs for each program, ETC Institute also assessed the importance that residents placed on each program. Based on the sum of respondents' top four choices, the four most important programs to residents were: adult fitness/wellness programs (47%), senior leisure programs (17%), nature programs (16%), and community special events (12%). The percentage of residents who selected each facility as one of their top four choices is shown in the figure below.

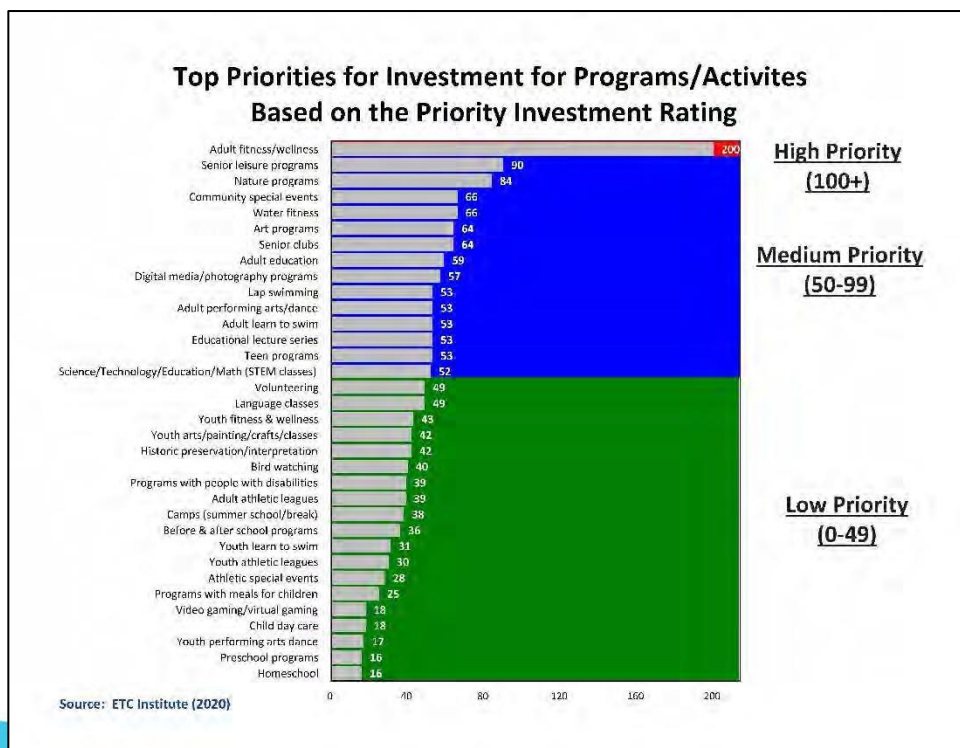


## Priorities for Programming Investments

Based on the priority investment rating (PIR), the following program was rated as a "high priority" for investment:

- Adult fitness/wellness programs (PIR=200)

The figure below shows the Priority Investment Rating (PIR) for each of the 34 programs that were rated.



## Facility/Program Use Times

Times on weekdays that responding households use County Parks and Recreation facilities and programs are: 29% of respondents use them sunrise to noon, 33% of respondents use them noon to 6pm, 34% of respondents use them 6pm to 9pm, and 4% of respondents use them 9pm to 11pm.

Times on weekends that responding households use County Parks and Recreation facilities and programs are: 32% of respondents use them sunrise to noon, 46% of respondents use them noon to 6pm, 18% of respondents use them 6pm to 9pm, and 5% of respondents use them 9pm to 11pm.

## Marketing and Communication

The three most popular ways to learn about Gwinnett County Parks and Recreation facilities, programs, and activities, based on respondent households, were: County website/Parks Online (47%), from friends and neighbors (40%), and Parks and Recreation magazine (Gwinnett L.I.F.E.) (35%).

Additionally, 37% of respondents would like the County to be available to interact via a Park phone app.

## Park and Recreation Providers in Gwinnett County

When examining the parks and recreation service offerings within a given county, there will typically be multiple levels of government (local, county, regional, and state) providing services, as well as private businesses and schools. The following sections represent the similar providers identified by the Department's Core Program Areas. Out-of-county similar providers were also included if they influence the local market.

### Aquatics

In consultation with the Department, staff estimates 26 similar providers exist for the Gwinnett County aquatics market. Of the 26 identified, there are six privately operated, one non-profit operated, and 19 publicly operated organizations/facilities providing similar services to the Department. Of the 20 non-private providers, only two organizations have fees set at a lower rate than the Department's current aquatic rates.

Aquatics Similar Providers				
Name of Agency	Location	Operator	General Description	Price Comparison
Chastain Park Aquatic Center	City of Atlanta	Public (Partner)	Outdoor Pool	Higher
Francis Meadows Aquatic Center	City of Gainesville	Public	Indoor/Outdoor with Leisure	Higher
Wade Walker -YMCA	Stone Mountain	Not-for-Profit	Indoor/Outdoor with Leisure	Higher
Cherokee Aquatic Center	Cherokee County	Public	Indoor/Outdoor with Leisure	Higher
Mtn. View Aquatic Center	Cobb County	Public	Indoor	Higher
Briscoe Pool	City of Snellville	Public	Outdoor Pool	Higher
City of Decatur/ Oakhurst Indoor Pool	City of Decatur	Public	Indoor Pool	Higher
Cumming Aquatic Center	City of Cumming	Public	Indoor/Outdoor with Leisure	Higher
Johnson Park Rec Center (Rockdale County)	Rockdale County	Public	Indoor	Higher
Briarwood Park Pool	City of Brookhaven	Public	Outdoor	Higher
Lynwood Park Pool	City of Brookhaven	Public	Outdoor	Higher
Murphy Candler Park Pool	City of Brookhaven	Public	Outdoor	Higher
City of Roswell	City of Roswell	Public	Outdoor	Higher
Central Aquatic Center	Cobb County	Public	Indoor	Higher
Sewell Park Pool	Cobb County	Public	Outdoor	Higher
South Cobb Aquatic Center	Cobb County	Public	Indoor Leisure	Higher
West Cobb Aquatic Center	Cobb County	Public	Indoor	Higher
Kennesaw State University	City of Kennesaw	Public	Indoor	Higher
Steve Lundquist Aquatic Center	Clayton County	Public	Indoor	Lower
City of Atlanta Pools	City of Atlanta	Public	Outdoor Pools	Lower
LA Fitness	Various/Inside Gwinnett	Private	Indoor	Higher
Dynamo Swim School	Various/Inside Gwinnett	Private	Indoor	Higher
Gold Fish Swim School	Various/Inside Gwinnett	Private	Indoor	Higher
Swim Atlanta	Various/Inside Gwinnett	Private	Indoor	Higher
Lifetime Fitness	Various/Inside Gwinnett	Private	Indoor/Outdoor with Leisure	Higher
Atlanta Swim Academy	City of Marietta	Private	Indoor	Higher

## Athletics

The Athletics Core Program Area has 26 identified similar providers, one of which is privately operated (the remaining are publicly operated). There are 11 providers that offer programs at a higher rate, eight at a lower rate, five at the same rate, and two at a similar rate as the Department.

Athletics Similar Providers				
Name of Agency	Location	Operator	General Description	Price Comparison
Atlanta Sport and Social Club	Atlanta, GA	Private	Adult Athletics: Basketball Leagues, Softball Leagues, Volleyball Leagues	Higher
Athens/Clarke	Athens, GA	Public	Field Rentals	Higher
Atlanta	Atlanta, GA	Public	Tennis	Higher
Brookhaven	Brookhaven, GA	Public	Summer Camp and Youth Athletics	Higher
Carroll County	Carroll County, GA	Public	Kidsplasion Summer Camp	Higher
City of Sugar Hill	Sugar Hill	Public	Youth Athletics	Higher
Cobb County	Marietta, GA	Public	Adult Athletics: Softball Leagues, Field Rentals, Basketball Leagues, Tennis	Higher
Dekalb	Dekalb, GA	Public	Tennis	Higher
Oconee County	Watkinsville, GA	Public	Adult Athletics: Softball leagues, Basketball Leagues, Flag Football Leagues	Higher
Sandy Springs	Sandy Springs, GA	Public	Tennis	Higher
Walton County	Monroe, GA	Public	Adult Athletics: Softball Leagues, Basketball Leagues; Men's 18-35, 35 & over, Women's-18 & over, Men's Baseball League	Higher
Barrow County	Winder, GA	Public	Adult Athletics: Softball Leagues, Volleyball Leagues, & Kickball Leagues	Same /Higher
Fulton County	Alpharetta, GA	Public	Adult Athletics: Softball Leagues, Field Rentals, Basketball Leagues, Tennis	Same /Higher
Athens/Clarke	Athens, GA	Public	Youth Sports	Same
Carroll County	Carroll County, GA	Public	Youth Sports	Same
Dekalb	Dekalb, GA	Public	Field Rentals	Same
Forsyth County	Cumming, GA	Public	Adult Athletics: Softball Leagues, Basketball Leagues, Flag Football Leagues, Soccer Leagues	Same
Hall County	Gainesville, GA	Public	Adult Athletics: Softball Leagues, Basketball Leagues	Same
Atlanta	Atlanta, GA	Public	Just Skills of Atlanta, Youth Athletics, Field Rentals	Lower
Brookhaven	Brookhaven, GA	Public	Field Rentals	Lower
Buford	Buford, GA	Public	Youth Athletics	Lower
Carroll County	Carroll County, GA	Public	Field Rentals	Lower
Dekalb	Dekalb, GA	Public	Youth Sports	Lower
Gainesville	Gainesville, GA	Public	Youth Athletics	Lower
Hall County	Gainesville, GA	Public	Youth Athletics	Lower
Sandy Springs	Sandy Springs, GA	Public	Youth Athletics	Lower

## Health & Wellness

Health and Wellness similar providers are dominated by private organizations, with only four considered non-profit or publicly operated. Almost all providers offer services at a higher rate than current Department pricing.

Health & Wellness Similar Providers				
Name of Agency	Location	Operator	General Description	Price Comparison
Chattahoochee Yoga & Pilates	Duluth, GA	Private	Yoga	\$109/month (Higher)
Sun Dragon Yoga	Norcross, GA	Private	Yoga	\$77/month (Higher)
Grey Owl Mind & Body Studio	Johns Creek, GA	Private	Yoga	\$59/month (Higher)
The Yoga Loft	Snellville, GA	Private	Yoga	\$18/class (Higher)
Bodies in Motion	Buford, GA	Private	Yoga, Relaxation classes	Higher
Bodymax Pilates	Norcross, GA	Private	Pilates, Yoga	Higher
Georgia Fitness of Buford	Buford, GA	Private	Yoga, Zumba, Stretch Class, Group Fitness Class	Higher
Kittness Dance Fitness Studio	Norcross, GA	Private	Yoga/ Gentle Restorative	Higher
LA Fitness	Buford, GA	Private	Group Fitness Classes, Indoor Pool, Personal Training	Higher
LA Fitness	Lawrenceville, GA	Private	Fitness	Higher
Norcross Sports Training Academy	Norcross, GA	Private	Fitness	Higher
Yoga in Daily Life	Buford, GA	Private	Yoga, Meditation	Higher
Anytime Fitness	Peachtree City, GA	Private	Fitness	Higher
Anytime Fitness	Suwanee, GA	Private	Fitness	Higher
YMCA	Lawrenceville, GA	Not-for-Profit	Fitness, childcare	Higher
Buford Community Center	Buford, GA	Public	community center	Higher
Suwanee Town Center	Suwanee, GA	Public	City park & events space	Higher
Cross Fit Tipping Point	Norcross, GA	Private	Yoga for Athletes	Same
Stage 3 Fitness	Suwanee, GA	Private	Fitness	Same
Sugar Hill Community Center	Sugar Hill, GA	Public	community center	Same

## Natural & Cultural Resources

There are six non-profit similar providers in Natural and Cultural Resources, four of which are rated higher than the Department. The one public representation of a similar provider had mixed pricing of higher and lower cost depending on the program type. None of these similar providers are within the county.

Natural & Cultural Resources Similar Providers				
Name of Agency	Location	Operator	General Description	Price Comparison
Chattahoochee Nature Center	Roswell, GA	Not For Profit	127 acre nature center on the Chattahoochee River with trails, exhibits, programs, and events	Higher
Tellus Science Museum	Cartersville, GA	Not For Profit	120,000 square foot museum with focus on science (rocks/minerals, fossils, science in motion, etc.) Digital planetarium and observatory	Higher
Elachee Nature Science Center	Gainesville, GA	Not For Profit	Promotes environmental understanding through education and conservation	Higher
Fernbank Museum	Atlanta, GA	Not For Profit	Brings science to life through immersive programming and museum experiences - inspires a life long learning of natural history	Higher
Dunwoody Nature Center	Dunwoody, GA	Not For Profit	Provides programming focused on love of nature and cultivating environmental understanding and stewardship	Same/Higher
Atlanta History Center	Atlanta, GA	Not For Profit	Mission to preserve Atlanta's history - multiple museum sites whose purpose is to connect people, history, and culture	Same/Higher
Roper Mountain Science Center (Greenville County Schools)	Greenville, SC	Public	Special history and science facility for Greenville County Schools offering public programming and camps	Lower/Higher

## Recreation

General recreation programs are typically the hardest activities to track comprehensively within the market. As the Department continues to assess similar providers for future planning, they may want to break down different areas within the recreation division. Of the 73 identified providers, 12 were considered not-for-profit or publicly operated. Additionally, almost all providers offer services at a higher price rate than the Department. The following figures represent the inventory.

General Recreation Similar Providers				
Name of Agency	Location	Operator	General Description	Price Comparison
Aurora Theatre	Lawrenceville, GA	Not-for-profit	Child care, performing arts	Higher
Norcross YMCA	Norcross, GA	Not-for-profit	Kids Tae Kwon Do	Higher
Suwanee Town Center	Suwanee, GA	Public	City park & events space	Higher
Buford Community Center	Buford, GA	Public	Community center	Higher
Norcross Senior Center	Norcross, GA	Public	Senior community center	Higher
Norcross Sports Training Academy	Norcross, GA	Public	Fitness	Higher
Hudgens Center	Duluth, GA	Public	Handbuilding, Wheel, Sculpting, Youth Pottery	Higher
Camp Success Academy	Norcross, GA	Private	Summer Camp	\$135/week/child (Higher)
Aikido Association Atlanta	Atlanta, GA	Private	Adult Aikido	\$150/month (Higher)
Dancing4fun Dance Studio	Peachtree City, GA	Private	Hip Hop, Ballet, Fitness dance	\$100/month (Higher)
Chattahoochee Yoga & Pilates	Duluth, GA	Private	Yoga	\$109/month (Higher)
Japanese Swordsmanship of Gwinnett	Snellville, GA	Private	Kids/Adults Swordsmanship	\$90/month + \$50 annual fee (Higher)
Sun Dragon Yoga	Norcross, GA	Private	Yoga	\$77/month (Higher)
Underground Martial Arts & Fitness	Buford, GA	Private	Kids Martial Arts	\$69/month + \$50 registration fee (Higher)
Sugarloaf Jazzercise	Duluth, GA	Private	Fitness dance	\$64/month (Higher)
N-Step Dance Academy	Suwanee, GA	Private	Hip Hop, Ballet, Fitness dance	\$63/month + \$35 registration fee (Higher)
Lilburn School of Ballet	Lilburn, GA	Private	Ballet	\$60/month + \$35 registration fee (Higher)
Grey Owl Mind & Body Studio	Johns Creek, GA	Private	Yoga	\$59/month (Higher)
Dance 101	Atlanta, GA	Private	Hip Hop, Ballet	\$25/ class (Higher)
The Yoga Loft	Snellville, GA	Private	Yoga	\$18/class (Higher)
Southern Performing Arts Academy	Lawrenceville, GA	Private	Dance, performing arts	Higher
Dacula Family Sports	Dacula, GA	Private	Specialty Camps, Karate, Dance, Afterschool, Gymnastics, Martial Arts	Higher
Bodies in Motion	Buford, GA	Private	Yoga, Relaxation classes	Higher
Kids R Kids- Hamilton Mill	Buford, GA	Private	General Afterschool	Higher
The Goddard School	Dacula, GA	Private	General Afterschool	Higher
Buford School of Ballet	Buford, GA	Private	Dance, Private Lessons	Higher
Karate World of North Georgia	Buford, GA	Private	Karate, Black Belt Classes	Higher
Dacula Dojo American Karate	Dacula, GA	Private	Karate, Camps, Afterschool	Higher

General Recreation Similar Providers				
Name of Agency	Location	Operator	General Description	Price Comparison
LA Fitness	Buford, GA	Private	Group Fitness Classes, Indoor Pool, Personal Training	Higher
Georgia Fitness of Buford	Buford, GA	Private	Yoga, Zumba, Stretch Class, Group Fitness Class	Higher
Discovery Point Hamilton Mill	Buford, GA	Private	Summer Camps, Afterschool	Higher
Great Beginnings of Dacula	Dacula, GA	Private	General Camp, Afterschool	Higher
Children Care Network	Norcross, GA	Private	Child care	Higher
Atrium	Norcross, GA	Private	Venue for rentals	Higher
Atlanta Silverback	Suwanee, GA	Private	Home to adult & youth leagues, this sports complex features indoor & outdoor soccer facilities.	Higher
Blissful Feet Dance Studio	Dacula, GA	Private	Ballet, Jazz, Hip Hop	Higher
Art in Motion Dance/ Yoga Fitness Studio	Norcross, GA	Private	Ballroom, Latin, Hip-Hop, Broadway, Jazz, Belly, Modern, Zumba, Yoga	Higher
Atlanta Dance Exchange	Norcross, GA	Private	Ballet/Jazz, Tap, Lyrical, Hip-Hop	Higher
Kittness Dance Fitness Studio	Norcross, GA	Private	Yoga/ Gentle Restorative	Higher
Bodymax Pilates	Norcross, GA	Private	Pilates, Yoga	Higher
Georgia Gymnastics Academy	Lawrenceville, GA	Private	Gymnastics	Higher
Yoga in Daily Life	Buford, GA	Private	Yoga, Meditation	Higher
Bodies in Motion	Buford, GA	Private	Yoga, Relaxation classes	Higher
Kids R Kids- Hamilton Mill	Buford, GA	Private	General Afterschool	Higher
The Goddard School	Dacula, GA	Private	General Afterschool	Higher
Buford School of Ballet	Buford, GA	Private	Dance, Private Lessons	Higher
Karate World of North Georgia	Buford, GA	Private	Karate, Black Belt Classes	Higher
Dacula Dojo American Karate	Dacula, GA	Private	Karate, Camps, Afterschool	Higher
LA Fitness	Buford, GA	Private	Group Fitness Classes, Indoor Pool, Personal Training	Higher
Georgia Fitness of Buford	Buford, GA	Private	Yoga, Zumba, Stretch Class, Group Fitness Class	Higher
Discovery Point Hamilton Mill	Buford, GA	Private	Summer Camps, Afterschool	Higher
Anytime Fitness	Peachtree Corners, GA	Private	Fitness	Higher
Sheltering Arms Norcross Center	Norcross, GA	Private	Child care	Higher
Beyond Basketball Training	Norcross, GA	Private	Fitness- basketball game	Higher
Suwanee Sports Academy	Suwanee, GA	Private	Athletic academy offers basketball, volleyball & lacrosse league play & camps for youths and pros.	Higher
Anytime Fitness	Suwanee, GA	Private	Fitness	Higher
Fit to Fight Atlanta	Atlanta, GA	Private	Adult/Kids Martial Arts	\$10/class (Same)
Tiny Hands Big Steps Childcare Academy Llc	Peachtree Corners, GA	Private	Child care	Same
Kid Paradise	Norcross, GA	Private	Child attraction	Same
Stage 3 Fitness	Suwanee, GA	Private	Fitness	Same
Cross Fit Tipping Point	Norcross, GA	Private	Yoga for Athletes	Same
Tucker Recreation Center	Tucker, GA	Public	Community center	Same
Norcross Cultural Arts and Community Center	Norcross, GA	Public	Community center	Same
Sugar Hill Community Center	Sugar Hill, GA	Public	Community center	Same
A Time to Dance Studio	Lawrenceville, GA	Private	Hip Hop, Ballet	\$36/month (Lower)
Legacy Academy for Children	Suwanee, GA	Private	Child care	-
Suwanee KinderCare	Suwanee, GA	Private	Child care	-
Learning Time	Lawrenceville, GA	Private	Child care	-
Funday Academy Daycare	Lawrenceville, GA	Private	Child care	-
LA Fitness	Lawrenceville, GA	Private	Fitness	-
Gwinnett Training Academy	Lawrenceville, GA	Private	Martial arts	-
YMCA	Lawrenceville, GA	Not-for-profit	Fitness, child care	-
Suwanee Performing Arts	Suwanee, GA	Not-for-profit	Performance art center	-

## Special Events

Four similar providers for Special Events were identified. All four are municipalities which offer special events at the same/similar pricing structure of the Department.

Special Events Similar Providers				
Name of Agency	Location	Operator	General Description	Price Comparison
City of Suwanee	Suwanee Towne Center - Suwanee	Public	City sponsored events; private event organizers/companies rent Towne Greene for their event	Same
City of Sugar Hill	E-Center - Sugar Hill	Public	City sponsored events; private event organizers/companies rent for their event	Same
City of Duluth	Town Greene - Downtown Duluth	Public	City sponsored events; private event organizers/companies rent for their event	Same
City of Lawrenceville	Lawn - Downtown Lawrenceville	Public	City sponsored events	Same

## Needs Assessment Recommendations -Recreation Program Plan 2020-2025

Based on the conducted needs assessment, the following recommendations are provided for consideration and inclusion into the Department's program portfolio.

### Concentrate on High Investment Program Areas

The Department should concentrate on enhancing, expanding, or initiating the following core program area and corresponding activities:

- Adult fitness/wellness programs

### Expand Specific Programming Based on Community Interest

As identified in the recreation program assessment analysis, the Department needs to expand its focus on adult and senior programming. When looking at the statistically-valid community survey's cross tabular calculations, households with no children rated the following recreation facilities and programs as highly important:

- Paved multi-purpose trails/sidewalks
- Dog parks
- Senior centers
- Senior leisure programs
- Senior clubs
- Conservation areas/nature preserves
- Community special events
- Adult education
- Water fitness
- Historic preservation/interpretation

When looking at the list in totality, adult/senior programming and nature/environmental programming are two areas that stand out. This should be balanced with maintaining passive recreation areas. The following activities are examples of what park systems do across the country to address these programmatic topics:

- Special events and community performances (amphitheater or mobile/permanent stage)
- Traveling beer/wine gardens
- Heart-healthy tails that indicate calories burned, mileage walked, etc. and are sponsored by a local health system
- "Walk with a Doc" programming

- Community gardens and urban agriculture
- Historic re-enactments and living history
- Public art in parks
- Meditation gardens

#### Identify the Preferred Program Format from Residents

Recreation program consumptive behavior has changed over the years and more activities are turning in to “drop-in” formats. This is largely due to residents stating, “no time” and “I’m too busy” as high real (or perceived) barriers to program participation. The Department needs to identify the characteristics associated with a Department “core user.” That is, how many activities participated in annually is a reasonable expectation for the common Department program user. In many instances, park agencies will have less than five programmatic opportunities each year per resident. Therefore, how the Department cross-markets/promotes services to users is paramount along with *how* the program is structured (i.e., multi-week, weekly, drop-in, etc.).

# Appendix

## Cost of Employees to Overall Budget Expenses – Recreation Personnel

The two following figures illustrate the ratio of personnel costs against the expense budget. These costs range from 66% in 2014 to nearly 80% in 2019. It is understood that the high cost of employees is due to the age of the employee as around 30% of employees are in a defined pension program.

Recreation Six Year Financial Performance		
Budget Year	Category	Current 2014 Budget
2014	Expenditures	\$ 312,322.00
	Revenues	\$ 180,744.00
	Net Position	\$ (131,578.00)
	Salaries & Wages	\$ 205,907.00
	<b>Staff Cost v Budget</b>	<b>0.66</b>
	Category	Current 2015 Budget
2015	Expenditures	\$ 318,801.00
	Revenues	\$ 190,731.00
	Net Position	\$ (128,070.00)
	Salaries & Wages	\$ 213,278.00
	<b>Staff Cost v Budget</b>	<b>0.67</b>
	Category	Current 2016 Budget
2016	Expenditures	\$ 328,939.00
	Revenues	\$ 198,292.00
	Net Position	\$ (130,647.00)
	Salaries & Wages	\$ 232,483.00
	<b>Staff Cost v Budget</b>	<b>0.71</b>

Recreation Six Year Financial Performance		
Budget Year	Category	Current 2017 Budget
2017	Expenditures	\$ 336,820.00
	Revenues	\$ 220,903.00
	Net Position	\$ (115,917.00)
	Salaries & Wages	\$ 244,620.00
	<b>Staff Cost v Budget</b>	<b>0.73</b>
	Category	Current 2018 Budget
2018	Expenditures	\$ 334,004.00
	Revenues	\$ 217,170.00
	Net Position	\$ (116,834.00)
	Salaries & Wages	\$ 251,886.00
	<b>Staff Cost v Budget</b>	<b>0.75</b>
	Category	Current 2019 Budget
2019	Expenditures	\$ 345,187.00
	Revenues	\$ 235,362.00
	Net Position	\$ (109,825.00)
	Salaries & Wages	\$ 268,570.00
	<b>Staff Cost v Budget</b>	<b>0.78</b>

## Center Performance in 2018

Admission/Pass Program Revenues v Expenses 2017				
Site	Program Area	Revenue	Expenses	% of Rev v Cost
G Pierce Comm Cnter	Admission Pass	\$ 41,406.00	\$ 6,650.70	6.23
Lucky Shoals Comm Center	Admission Pass	\$ 18,500.00	\$ 13,997.49	1.32
South Area Programs	Admission Pass	\$ 16,550.00	\$ 15,599.13	1.06
Administrative Pass Program	Total	\$ 76,456.00	\$ 36,247.32	2.87

Special Events Program Revenues v Expenses 2017				
Site	Program Area	Revenue	Expenses	% of Rev v Cost
Bethesda Senior Center	Special Events	\$ 15,000.00	\$ 18,408.39	0.81
G Pierce Comm Cnter	Special Events	\$ 8,250.00	\$ 11,265.98	0.73
Lucky Shoals Comm Center	Special Events	\$ 28,500.00	\$ 2,588.00	11.01
North Area Programs	Special Events	\$ 5,304.00	\$ 2,946.54	1.80
P'ville Comm Center	Special Events	\$ 6,840.00	\$ 5,277.71	1.30
South Area Programs	Special Events	\$ 4,610.00	\$ 8,004.00	0.58
Volunteer Resources	Special Events	\$ 3,530.00	\$ 4,481.00	0.79
Special Events Program	Total	\$ 72,034.00	\$ 52,971.62	2.43

Recreation Program Revenues v Expenses 2017				
Site	Program Area	Revenue	Expenses	% of Rev v Cost
Bethesda Senior Center	Recreation Classes	\$ 60,866.00	\$ 60,818.01	1.00
G Pierce Comm Cnter	Recreation Classes	\$ 45,000.00	\$ 40,965.61	1.10
Lucky Shoals Comm Center	Recreation Classes	\$ 18,226.00	\$ 14,804.00	1.23
North Area Programs	Recreation Classes	\$ 61,447.00	\$ 31,300.56	1.96
P'ville Comm Center	Recreation Classes	\$ 53,000.00	\$ 45,877.65	1.16
South Area Programs	Recreation Classes	\$ 42,000.00	\$ 38,506.09	1.09
Volunteer Resources	Recreation Classes	\$ 18,181.00	\$ 20,532.42	0.89
Recreation Programs	Total	\$ 298,720.00	\$ 252,804.34	1.20

Summer Youth Programs Revenues v Expenses 2017				
Site	Program Area	Revenue	Expenses	% of Rev v Cost
Bethesda Senior Center	Youth Summer Prog	\$ 70,526.00	\$ 72,276.85	0.98
G Pierce Comm Cnter	Youth Summer Prog	\$ 98,517.00	\$ 98,970.60	1.00
Lucky Shoals Comm Center	Youth Summer Prog	\$ 52,720.00	\$ 72,398.30	0.73
Lucky Shoals Comm Center	Youth Athletics	\$ 56,540.00	\$ 36,369.00	1.55
North Area Programs	Youth Summer Prog	\$ 86,200.00	\$ 97,566.71	0.88
P'ville Comm Center	Youth Summer Prog	\$ 46,079.00	\$ 46,078.46	1.00
South Area Programs	Youth Summer Prog	\$ 67,675.00	\$ 59,301.99	1.14
Volunteer Resources	Youth Summer Prog	\$ 29,240.00	\$ 28,289.52	1.03
Summer Youth Programs	Total	\$ 450,957.00	\$ 474,882.43	1.04

<b>Facility and Equip Rental Program Revenues v Expenses 2017</b>				
<b>Site</b>	<b>Program Area</b>	<b>Revenue</b>	<b>Expenses</b>	<b>% of Rev v Cost</b>
Bethesda Senior Center	Facility Equip Rental	\$ 73,251.00	\$ 82,086.00	0.89
G Pierce Comm Cnter	Facility Equip Rental	\$ 122,950.00	\$ 93,621.00	1.31
Lucky Shoals Comm Center	Facility Equip Rental	\$ 135,206.00	\$ 157,047.00	0.86
North Area Programs	Facility Equip Rental	\$ 110,000.00	\$ 103,484.00	1.06
P'ville Comm Center	Facility Equip Rental	\$ 140,400.00	\$ 152,424.00	0.92
South Area Programs	Facility Equip Rental	\$ 140,212.00	\$ 146,104.00	0.96
Volunteer Resources	Facility Equip Rental	\$ 96,000.00	\$ 106,174.00	0.90
<b>Facility and Equip Rental Program</b>	<b>Total</b>	<b>\$ 1,600,125.00</b>	<b>\$ 1,534,741.76</b>	<b>0.99</b>

### Center Performance in 2018

<b>Admission / Pass Revenues v Expenses 2018</b>			
<b>Site</b>	<b>Revenue</b>	<b>Expenses</b>	<b>% of Rev v Cost</b>
G Pierce Comm Cnter	\$ 16,275.00	\$ 9,732.04	1.67
Lucky Shoals Comm Center	\$ 16,358.00	\$ 8,240.24	1.99
South Area Programs	\$ 16,550.00	\$ 12,599.79	1.31
<b>Admission Pass Program</b>	<b>\$ 49,183.00</b>	<b>\$ 30,572.07</b>	<b>1.66</b>

<b>Special Event Program Revenues v Expenses 2018</b>			
<b>Site</b>	<b>Revenue</b>	<b>Expenses</b>	<b>% of Rev v Cost</b>
Bethesda Senior Center	\$ 15,521.00	\$ 19,064.55	0.81
G Pierce Comm Cnter	\$ 10,250.00	\$ 9,727.61	1.05
Lilburn Activity Bld	\$ 2,500.00	\$ 1,871.00	1.34
Lucky Shoals Comm Center	\$ 2,600.00	\$ 1,482.00	1.75
North Area Programs	\$ 5,179.00	\$ 3,280.04	1.58
P'ville Comm Center	\$ 6,500.00	\$ 5,229.00	1.24
South Area Programs	\$ 11,495.00	\$ 7,266.27	1.58
Volunteer Resources	\$ 3,665.00	\$ 2,692.30	1.36
<b>Special Event Programs</b>	<b>\$ 57,710.00</b>	<b>\$ 50,612.77</b>	<b>1.18</b>

### Recreation Class Programs Revenues v Expenses 2018

Site	Revenue	Expenses	% of Rev v Cost
Bethesda Senior Center	\$ 60,049.00	\$ 53,394.88	1.12
G Pierce Comm Cntr	\$ 70,576.00	\$ 41,199.00	1.71
Lilburn Activity Bld	\$ 20,000.00	\$ 17,899.07	1.12
Lucky Shoals Comm Center	\$ 17,808.00	\$ 12,593.81	1.41
North Area Programs	\$ 48,374.00	\$ 24,432.20	1.98
P'ville Comm Center	\$ 52,976.00	\$ 35,070.26	1.51
South Area Programs	\$ 62,140.00	\$ 28,141.52	2.21
Volunteer Resources	\$ 16,420.00	\$ 5,823.20	2.82
<b>Recreation Classes</b>	<b>\$ 348,343.00</b>	<b>\$ 218,553.94</b>	<b>1.74</b>

### Youth Summer Program Revenues v Expenses 2018

Site	Revenue	Expenses	% of Rev v Cost
Bethesda Senior Center	\$ 67,000.00	\$ 69,286.31	0.97
G Pierce Comm Cntr	\$ 99,295.00	\$ 102,012.00	0.97
Lilburn Activity Bld	\$ 35,000.00	\$ 25,837.00	1.35
Lucky Shoals Comm Center	\$ 69,850.00	\$ 77,477.00	0.90
North Area Programs	\$ 90,625.00	\$ 101,965.00	0.89
P'ville Comm Center	\$ 54,600.00	\$ 47,442.00	1.15
South Area Programs	\$ 70,525.00	\$ 67,537.00	1.04
Volunteer Resources	\$ 30,240.00	\$ 21,082.00	1.43
<b>Youth Summer Programs</b>	<b>\$ 517,135.00</b>	<b>\$ 512,638.31</b>	<b>1.09</b>

### Equipment Rental Program Revenues v Expenses 2018

Site	Revenue	Expenses	% of Rev v Cost
Bethesda Senior Center	\$ 73,295.00	\$ 87,613.11	0.84
G Pierce Comm Cntr	\$ 115,300.00	\$ 133,834.00	0.86
Lilburn Activity Bld	\$ 102,420.00	\$ 59,965.00	1.71
Lucky Shoals Comm Center	\$ 148,531.00	\$ 135,799.00	1.09
North Area Programs	\$ 94,910.00	\$ 106,813.00	0.89
P'ville Comm Center	\$ 165,014.00	\$ 153,321.00	1.08
South Area Programs	\$ 158,512.00	\$ 141,884.00	1.12
Volunteer Resources	\$ 79,380.00	\$ 64,063.00	1.24
<b>Equipment Rental</b>	<b>\$ 937,362.00</b>	<b>\$ 883,292.11</b>	<b>1.10</b>

## Center Performance in 2019

Admission / Pass Revenues v Expenses 2019				
Site	Program Area	Revenue	Expenses	% of Rev v Cost
G Pierce Comm Cnter	Admin Pass	\$ 17,223.00	\$ 10,859.12	1.59
Lucky Shoals Com Cnter	Admin Pass	\$ 16,250.00	\$ 7,960.68	2.04
South Area Prog	Admin Pass	\$ 16,550.00	\$ 10,828.15	1.53
Admission Pass Program		\$ 50,023.00	\$ 29,647.95	1.72

Special Event Program Revenues v Expenses 2019				
Site	Program Area	Revenue	Expenses	% of Rev v Cost
Bethesda Senior Center	Special Events	\$ 18,636.00	\$ 15,444.61	1.21
G Pierce Comm Cnter	Special Events	\$ 11,070.00	\$ 10,187.64	1.09
Liburn Activity Bld	Special Events	\$ 7,500.00	\$ 3,747.00	2.00
Lucky Shoals Com Cnter	Special Events	\$ 2,700.00	\$ 564.00	4.79
North Area Prog	Special Events	\$ 5,678.00	\$ 3,125.00	1.82
P'ville Comm Center	Special Events	\$ 6,500.00	\$ 4,800.00	1.35
South Area Prog	Special Events	\$ 9,997.00	\$ 7,170.00	1.39
Volunteer Services	Special Events	\$ 2,686.00	\$ 5,296.00	0.51
Special Event Programs		\$ 64,767.00	\$ 50,334.25	1.77

Recreation Program Revenues v Expenses 2019				
Site	Program Area	Revenue	Expenses	% of Rev v Cost
Bethesda Senior Center	Recreation Classes	\$ 61,203.00	\$ 43,882.00	1.39
G Pierce Comm Cnter	Recreation Classes	\$ 70,670.00	\$ 33,016.00	2.14
Liburn Activity Bld	Recreation Classes	\$ 38,914.00	\$ 23,570.00	1.65
Lucky Shoals Com Cnter	Recreation Classes	\$ 18,508.00	\$ 8,305.00	2.23
North Area Prog	Recreation Classes	\$ 48,378.00	\$ 18,963.00	2.55
P'ville Comm Center	Recreation Classes	\$ 52,981.00	\$ 34,554.00	1.53
South Area Prog	Recreation Classes	\$ 57,462.00	\$ 23,022.00	2.50
Volunteer Services	Recreation Classes	\$ 18,310.00	\$ 6,997.00	2.62
Recreation Classes		\$ 366,426.00	\$ 192,309.00	2.08

Youth Summer Program Revenues v Expenses 2019				
Site	Program Area	Revenue	Expenses	% of Rev v Cost
Bethesda Senior Center	Youth Summer Prog	\$ 72,875.00	\$ 68,360.00	1.07
G Pierce Comm Cnter	Youth Summer Prog	\$ 102,125.00	\$ 107,026.83	0.95
Liburn Activity Bld	Youth Summer Prog	\$ 39,150.00	\$ 50,249.41	0.78
Lucky Shoals Com Cnter	Youth Summer Prog	\$ 67,500.00	\$ 78,734.36	0.86
Lucky Shoals Com Cnter	Youth Athletic Prog	\$ 41,560.00	\$ 28,982.11	1.43
North Area Prog	Youth Summer Prog	\$ 100,000.00	\$ 99,862.06	1.00
P'ville Comm Center	Youth Summer Prog	\$ 54,600.00	\$ 47,007.41	1.16
South Area Prog	Youth Summer Prog	\$ 70,530.00	\$ 70,220.07	1.00
Volunteer Services	Youth Summer Prog	\$ 16,800.00	\$ 26,970.53	0.62
Youth Summer Programs		\$ 565,140.00	\$ 577,412.78	0.99

### Equipment and Facility Rental Revenues v Expenses 2019

Site	Program Area	Revenue	Expenses	% of Rev v Cost
Bethesda Senior Center	Facility Equip Rental	\$ 81,523.00	\$ 88,349.00	0.92
G Pierce Comm Cnter	Facility Equip Rental	\$ 115,350.00	\$ 120,373.00	0.96
Liburn Activity Bld	Facility Equip Rental	\$ 41,520.00	\$ 47,573.00	0.87
Lucky Shoals Com Cnter	Facility Equip Rental	\$ 159,750.00	\$ 122,130.00	1.31
North Area Prog	Facility Equip Rental	\$ 104,520.00	\$ 99,074.00	1.05
P'ville Comm Center	Facility Equip Rental	\$ 165,870.00	\$ 148,592.00	1.12
South Area Prog	Facility Equip Rental	\$ 161,932.00	\$ 134,273.00	1.21
Volunteer Services	Facility Equip Rental	\$ 56,520.00	\$ 83,197.00	0.68
<b>Equipment Rental</b>		<b>\$ 886,985.00</b>	<b>\$ 843,561.00</b>	<b>1.01</b>

### Exercise 1: Program Needs + Priorities

Attendees were asked to place a dot on the programs that they believed were most important to their families. Figure 2.2.4b illustrates responses that fell within the 98<sup>th</sup>, 85<sup>th</sup>, 75<sup>th</sup>, and above the 50<sup>th</sup> percentile of total responses.

Figure 2.2.4b – Summary Findings from Dot Exercise of Programs that were Most Important to Families

County	RPD 1	RPD 2	RPD 3	RPD 4	RPD 5
Youth Learn to Swim	Language Classes	Youth Learn to Swim	Youth Learn to Swim	Youth Learn to Swim	Language Classes
Language Classes	Programs for People with Disabilities	Programs for People with Disabilities	Programs for People with Disabilities	Language Classes	Adult Fitness/Wellness
Programs for People with Disabilities	Cooking Classes	Language Classes	Language Classes	Programs for People with Disabilities	Community Special Events
Community Special Events	Teen Programs	Youth Fitness/Wellness	Adult Fitness/Wellness	Community Special Events	Before and After School Programs
Adult Fitness/Wellness	Youth Learn to Swim	Adult Learn to Swim	Community Special Events	Adult Fitness/Wellness	Programs for People with Disabilities
Youth Fitness/Wellness	Adult Fitness/Wellness	Community Special Events	Youth Fitness/Wellness	Video Gaming/Virtual Gaming	Nature Programs
Video Gaming/Virtual Gaming	Programs with Meals	Video Gaming/Virtual Gaming	Teen Programs	Youth Fitness/Wellness	Teen Programs
Teen Programs	Community Special Events	Adult Fitness/Wellness	Video Gaming/Virtual Gaming	Water Fitness	Youth Learn to Swim
Before and After School Programs	Nature Programs	Adult Performing Arts/Dance	Water Fitness	Adult Learn to Swim	Video Gaming/Virtual Gaming
Nature Programs	Before and After School Programs	Senior Leisure Programs	Programs with Meals	Nature Programs	Youth arts/Painting/Crafts/Drawing Classes
Adult Learn to Swim	Movies in the Park	Water Fitness	Adult Learn to Swim	Teen Programs	Cooking Classes
Water Fitness	Water Fitness	Programs with Meals	Movies in the Park	Before and After School Programs	Water Fitness
Camps (summer/school break)	Youth Fitness/Wellness	Teen Programs	Before and After School Programs	Movies in the Park	Youth Fitness/Wellness
Programs with Meals	Youth arts/Painting/Craft/Drawing Classes	Camps (summer/school break)	Nature Programs	Senior Leisure Programs	Digital Media, Photography Programs
Senior Leisure Programs	Digital Media, Photography Programs	Senior Clubs	Senior Leisure Programs	Senior Clubs	Movies in the Park
Movies in the Park	Video Gaming/Virtual Gaming	Youth Athletic Leagues	Cooking Classes	Programs with Meals	Preschool Programs
Senior Clubs	Preschool Programs	Movies in the Park	Camps (summer/school break)	Preschool Programs	Camps (summer/school break)
Preschool Programs	Senior Clubs	Nature Programs	Preschool Programs	Cooking Classes	Child Day Care
Digital Media, Photography Programs	Senior Leisure Programs	Before and After School Programs	Digital Media, Photography Programs	Youth arts/Painting/Crafts/Drawing Classes	Senior Clubs
Youth arts/Painting/Crafts/Drawing Classes	Camps (summer/school break)	Preschool Programs	Senior Clubs	Camps (summer/school break)	Programs with Meals
Child Day Care	Child Day Care	Youth Performing Arts/Dance	Youth arts/Painting/Crafts/Drawing Classes	Child Day Care	Youth Performing Arts/Dance

Youth Performing Arts/Dance	Youth Performing Arts/Dance		Child Day Care	Digital Media, Photography Programs	Adult Learn to Swim
Cooking Classes	Adult Athletic Leagues		Youth Performing Arts/Dance	Youth Performing Arts/Dance	Senior Leisure Programs
Adult Athletic Leagues			Adult Athletic Leagues	Adult Athletic Leagues	Adult Athletic Leagues
Adult Performing				Adult Performing	Educational Lecture Series
Educational Lecture Series				Educational Lecture Series	Adult Education
Adult Education				Adult Education	

### Exercise 2: Facility Needs + Priorities

Attendees were asked to place a dot on the facilities that they believed were most important to their families Figure 2.2.4c illustrates responses that fell within the 98<sup>th</sup>, 85<sup>th</sup>, 75<sup>th</sup>, and above the 50<sup>th</sup> percentile of total responses.

Figure 2.2.4c - Summary Findings from Dot Exercise of Facilities that were Most Important to Families

County	RPD 1	RPD 2	RPD 3	RPD 4	RPD 5
Community Gardens/ Food Forest	Community Gardens/ Food Forest	Unpaved Walking & Hiking Trails	Community Gardens/ Food Forest	Community Gardens/ Food Forest	Community Gardens/ Food Forest
Unpaved Walking & Hiking Trails	Interactive Fountains/ Water	Soccer Fields	Interactive Fountains/ Water	Unpaved Walking & Hiking Trails	Indoor Pool
Interactive Fountains/ Water	Indoor Nature Center	Interactive Fountains/ Water	Unpaved Walking & Hiking Trails	Indoor Pool	Indoor Nature Center
Indoor Pool	Indoor Pool	Outdoor Pool	Outdoor Pool	Interactive Fountains/ Water	Interactive Fountains/ Water
Senior Center	Outdoor Pool	Senior Center	Indoor Pool	Sidewalks	Unpaved Walking & Hiking Trails
Outdoor Pool	Senior Center	Paved Multi-Purpose Trails	Senior Center	Senior Center	Senior Center
Sidewalks	Unpaved Walking & Hiking Trails	Indoor Pool	Indoor Nature Center	Soccer Fields	Dog Park
Soccer Fields	Sidewalks	Sidewalks	Sidewalks	Outdoor Pool	Outdoor Pool
Dog Park	Recreation Centers	Active Recreation Parks	Paved Multi-Purpose Trails	Dog Park	Sidewalks
Conservation Areas/ Nature Preserves	Adventure Discovery Playground	Conservation Areas/ Nature Preserves	Conservation Areas/ Nature Preserves	Indoor Nature Center	Conservation Areas/ Nature Preserves
Indoor Nature Center	Conservation Areas/ Nature Preserves	Playground	Soccer Fields	Paved Multi-Purpose Trails	Adventure Discovery Playground
Paved Multi-Purpose Trails	Paved Multi-Purpose Trails	Dog Park	Dog Park	Conservation Areas/ Nature Preserves	Paved Multi-Purpose Trails
Playground	Amphitheater	Park Pavilions	Active Recreation Parks	Adventure Discovery Playground	Soccer Fields
Adventure Discovery Playground	Dog Park	Community Gardens/ Food Forest	Recreation Centers	Transportation to Parks	Amphitheater
Transportation to Parks	Indoor Fitness Center	Transportation to Parks	Playground	Playground	Transportation to Parks

Active Recreation Parks	Restrooms in Parks	Recreation Centers	Adventure Discovery Playground	Active Recreation Parks	Outdoor Exercise Stations
Recreation Centers	Multi-Purpose Football/Lacrosse	Neighborhood Parks	Transportation to Parks	Neighborhood Parks	Playground
Skate Park	Skate Park	Skate Park	Park Pavilions	Park Pavilions	Basketball Courts
Park Pavilions	Neighborhood Parks	Indoor Nature Center	Neighborhood Parks	Recreation Centers	Bus Stops at Parks
Neighborhood Parks	Playground	Restrooms in Parks	Skate Park	Skate Park	Recreation Centers
Amphitheater	Basketball Courts	Outdoor Picnic Areas	Restrooms in Parks	Amphitheater	Skate Park
Outdoor Picnic Areas	Outdoor Exercise Stations	Baseball/Softball Fields	Outdoor Picnic Areas	Restrooms in Parks	Fishing
Restrooms in Parks	Active Recreation Parks	Adventure Discovery Playground	Amphitheater	Indoor Gymnastics	Indoor Gymnastics
Basketball Courts	Indoor Gymnastics		Indoor Gymnastics	Outdoor Picnic Areas	Outdoor Picnic Areas
Indoor Gymnastics	Transportation to Parks				Multi-Purpose Football/Lacrosse
					Teen Center

### Exercise 3: County Challenges

Attendees were asked to place a dot on the top five social, economic, and environmental challenges that they believed the County was facing and that were most important to their family. Figure 2.2.4d illustrates the findings from this exercise.

Figure 2.2.4d - Summary Findings from Dot Exercise of Social, Economic, and Environmental County Challenges

Ranking	County	RPD 1	RPD 2	RPD 3	RPD 4	RPD 5
1	Traffic congestion	Traffic congestion	Traffic congestion	Traffic congestion	Traffic congestion	Traffic congestion
2	Lack of affordable/workforce housing	Lack of affordable/workforce housing	Community safety/crime	Lack of affordable/workforce housing	Lack of affordable/workforce housing	Lack of affordable/workforce housing
3	Homelessness	Homelessness	Lack of affordable/workforce housing	Homelessness	Homelessness	Homelessness
4	Community safety/crime	Poverty	Homelessness	Community safety/crime	Community safety/crime	Poverty
5	Poverty	Retaining/attracting youth and young families	Preservation of natural areas	Poverty	Poverty	Retaining/attracting youth and young families

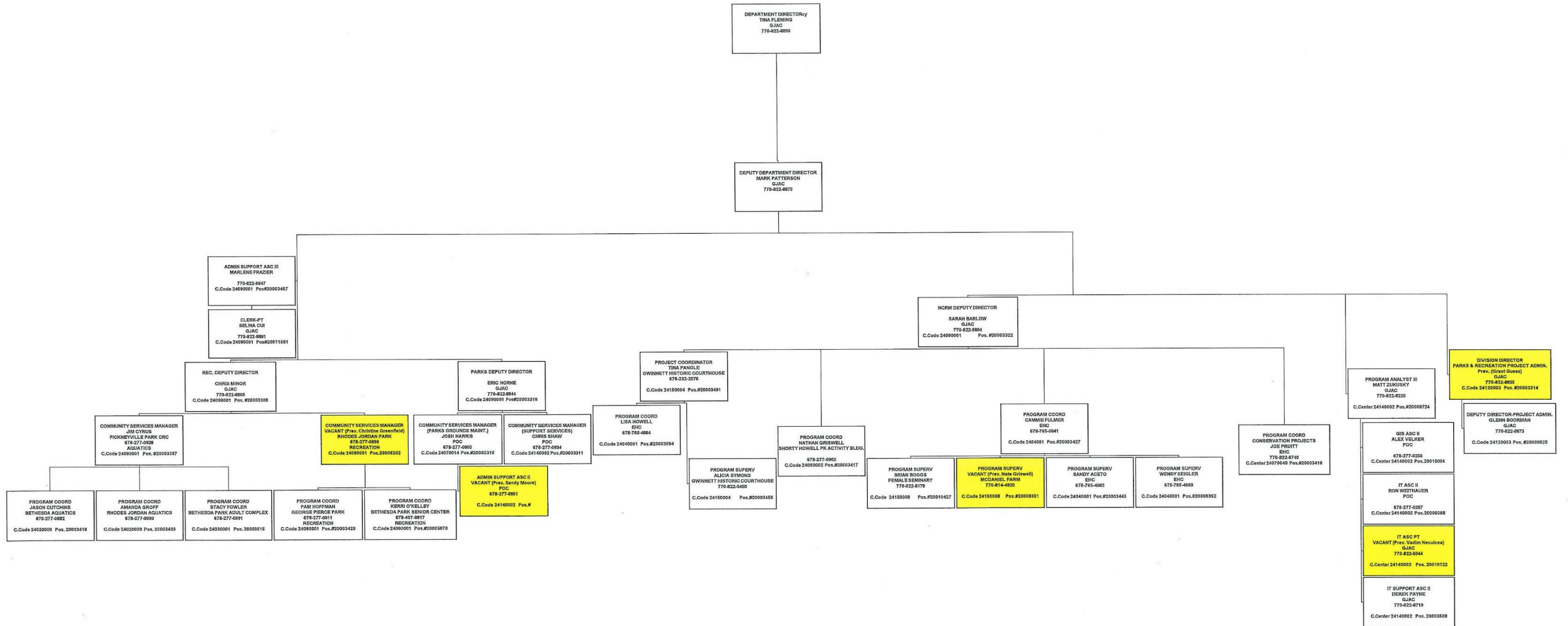


# 2020 Gwinnett Comprehensive Parks and Recreation Master Plan

APPENDIX E:  
Organizational Charts

DEPARTMENT OF COMMUNITY SERVICES  
PARKS & RECREATION OPERATIONS

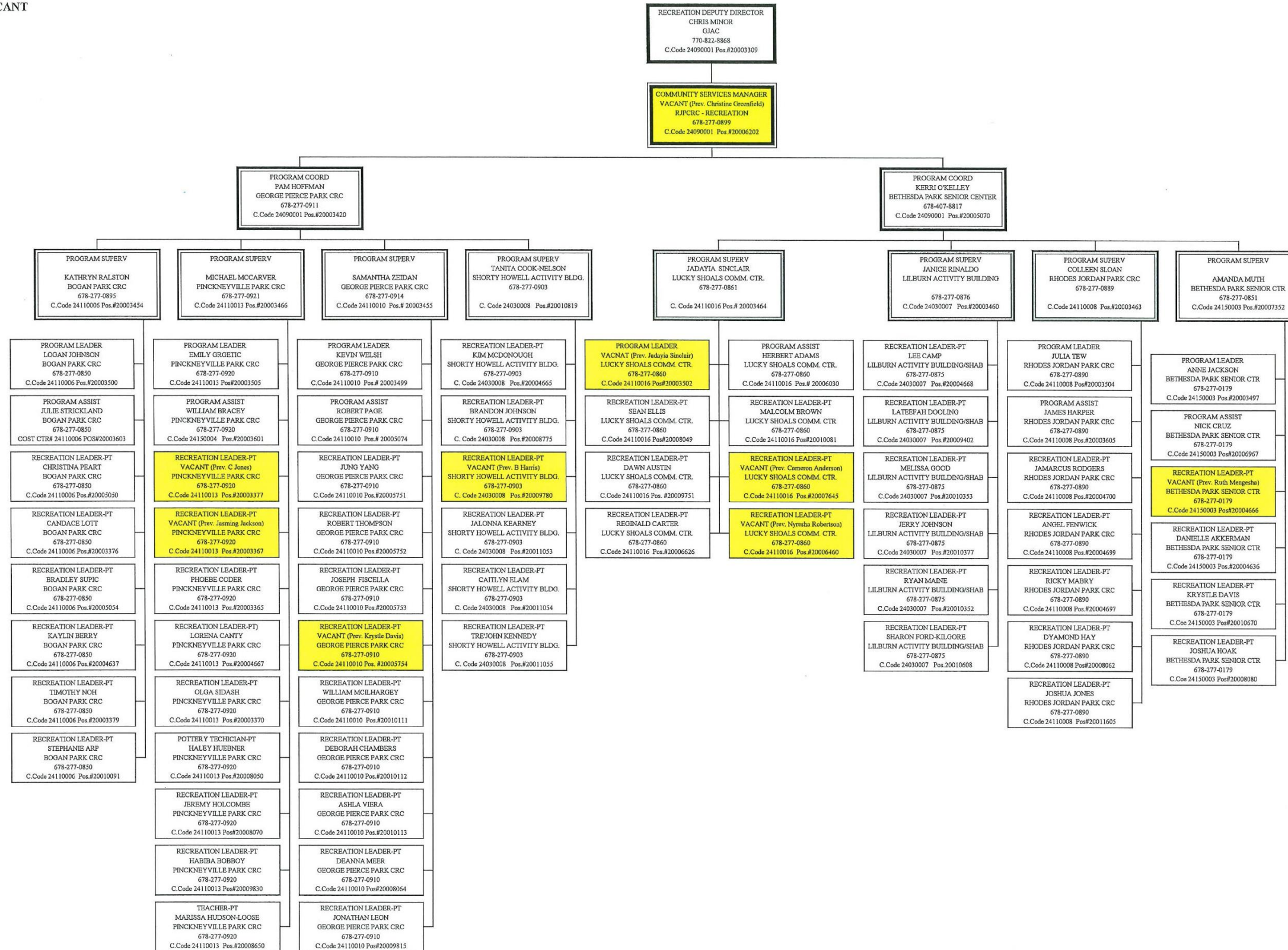
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PARKS & RECREATION OPERATIONS

RECREATION PROGRAMMING

VACANT

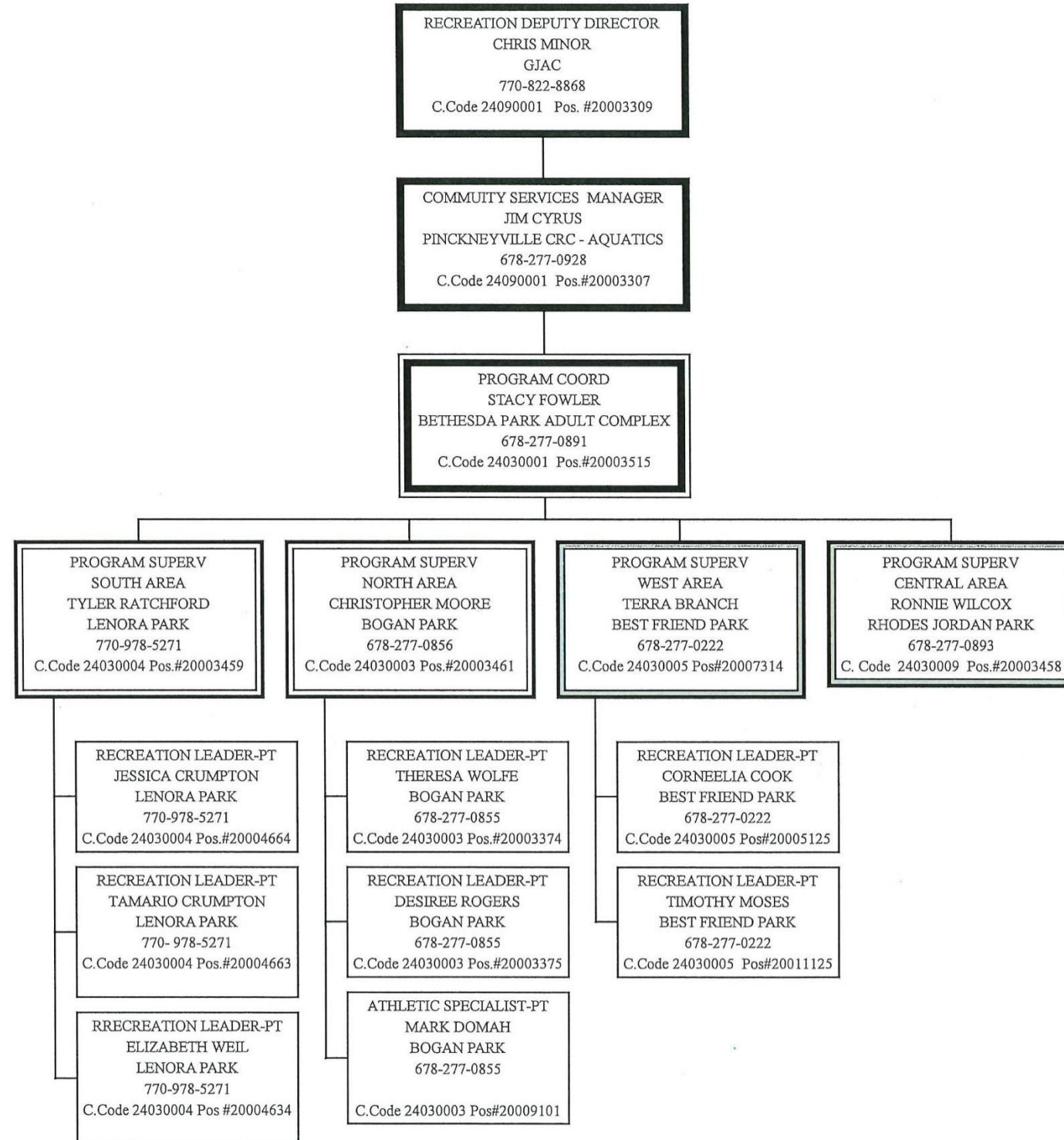


PARKS & RECREATION OPERATIONS

Revised  
04/26/2021

RECREATION - ATHLETICS

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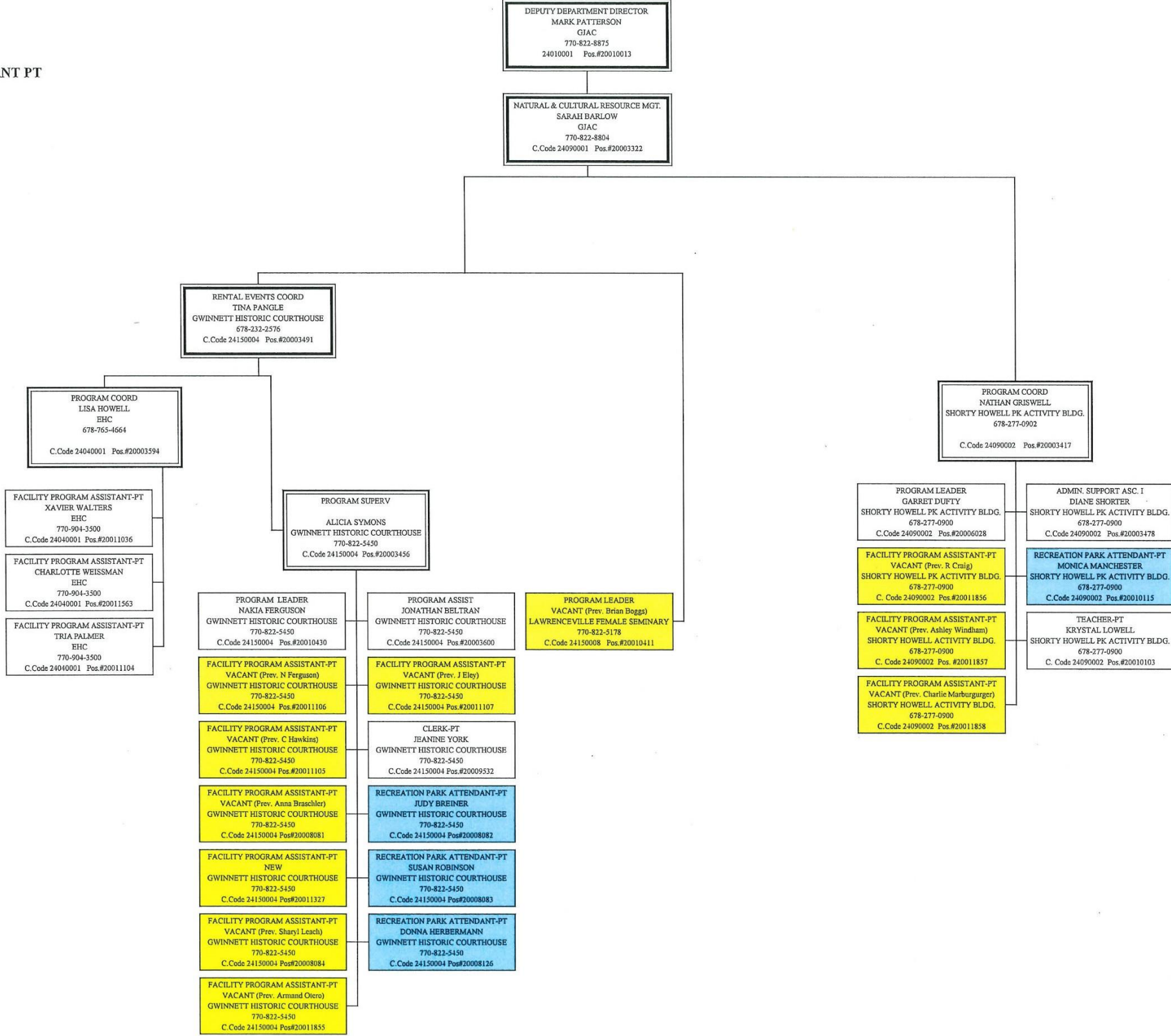




NATURAL & CULTURAL RESOURCES

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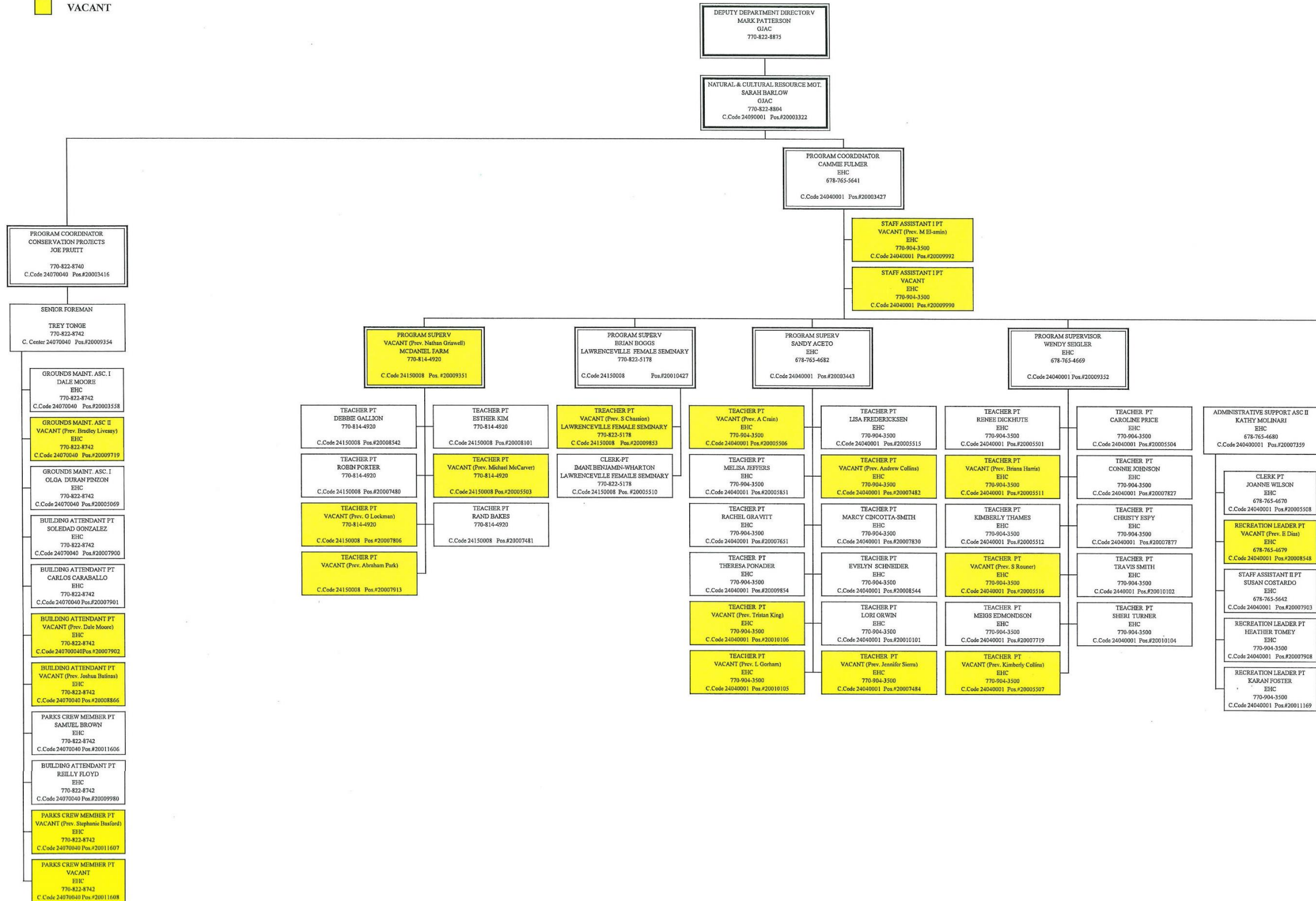
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NATURAL & CULTURAL RESOURCES

Revised  
04/26/2021

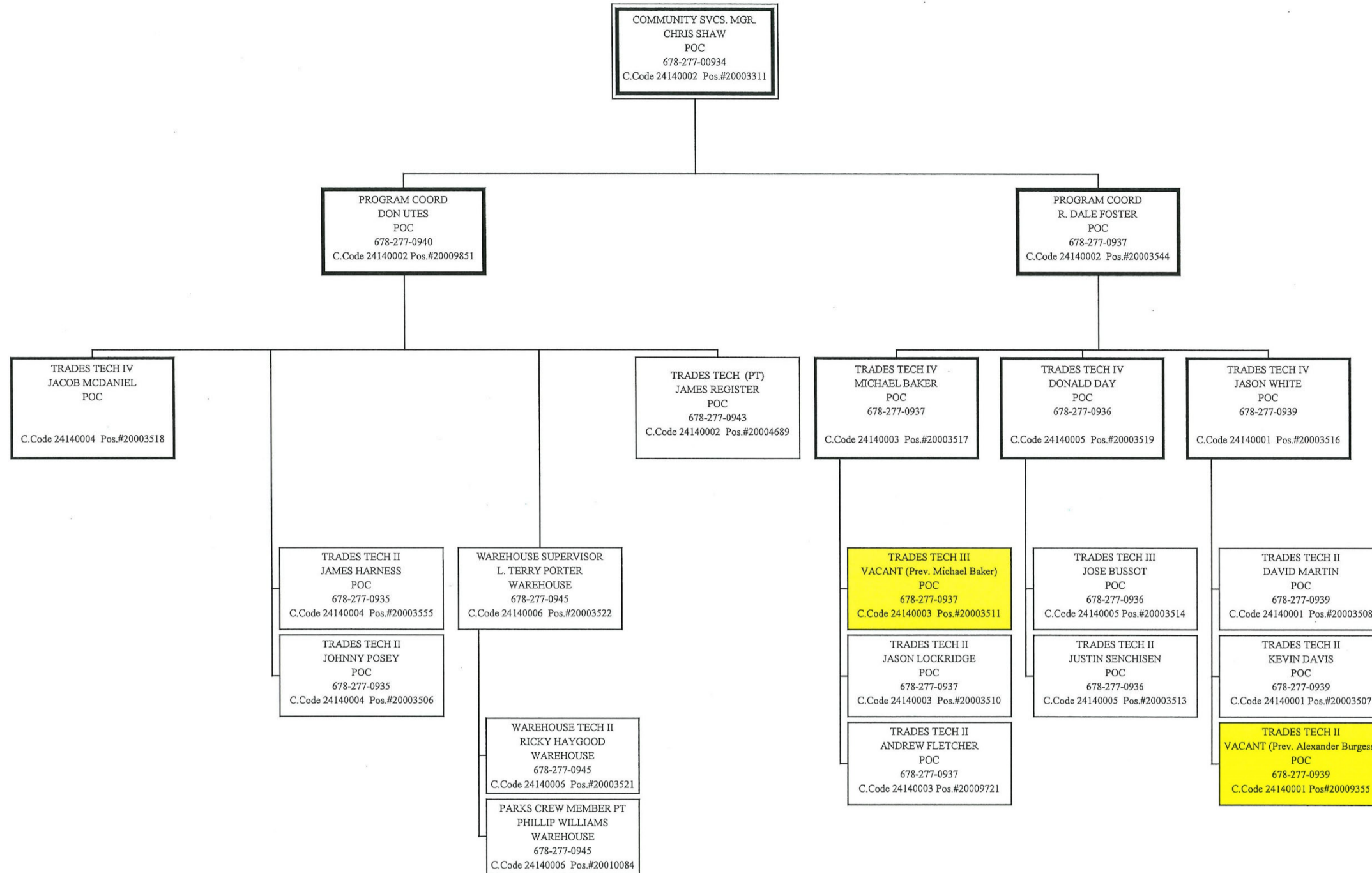
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PARK & RECREATION OPERATIONS  
SUPPORT SERVICES

Revised  
04/26/2021

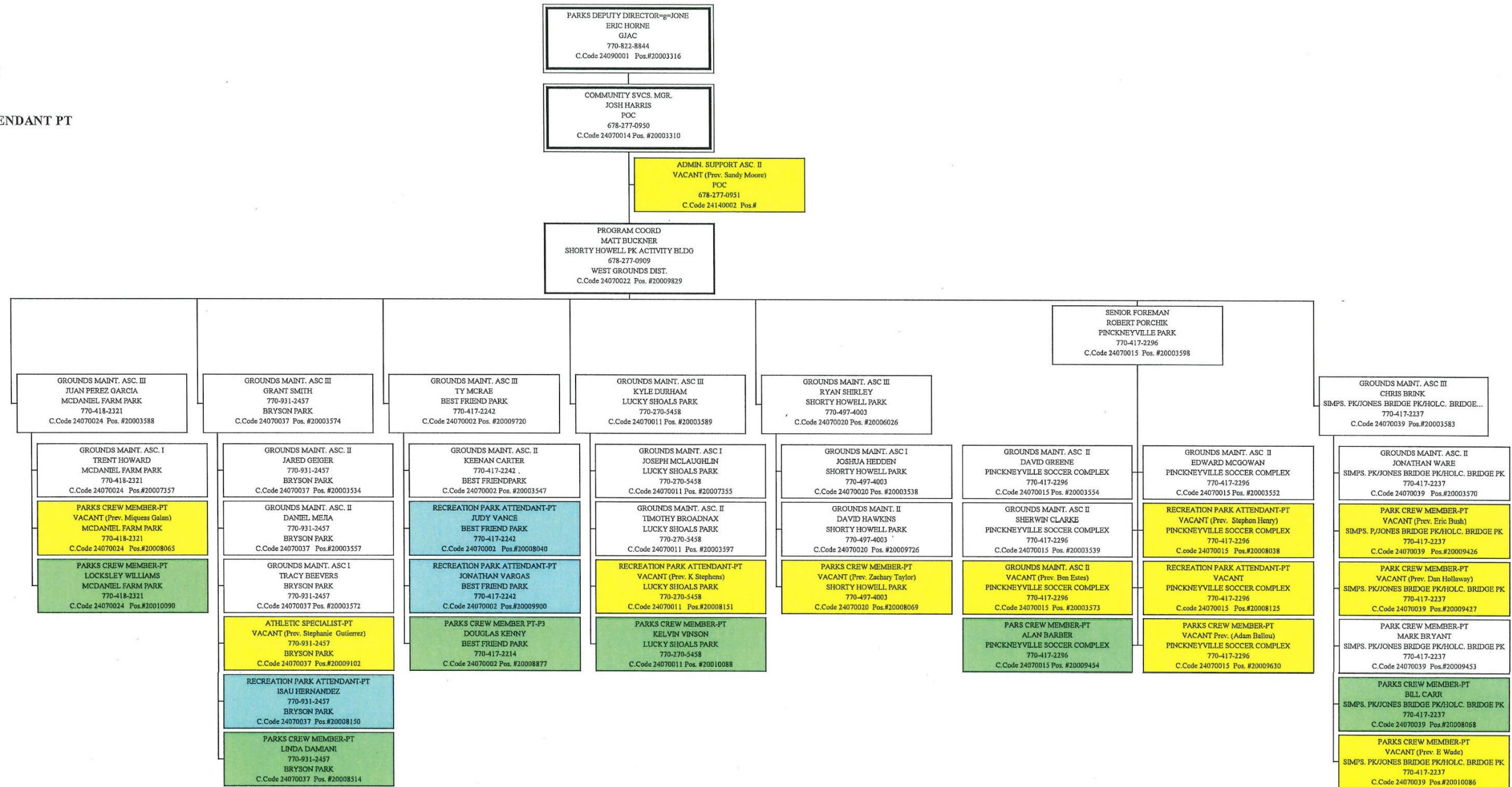
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PARKS MAINTENANCE  
WEST GROUNDS DISTRICT

Revised  
04/26/2021

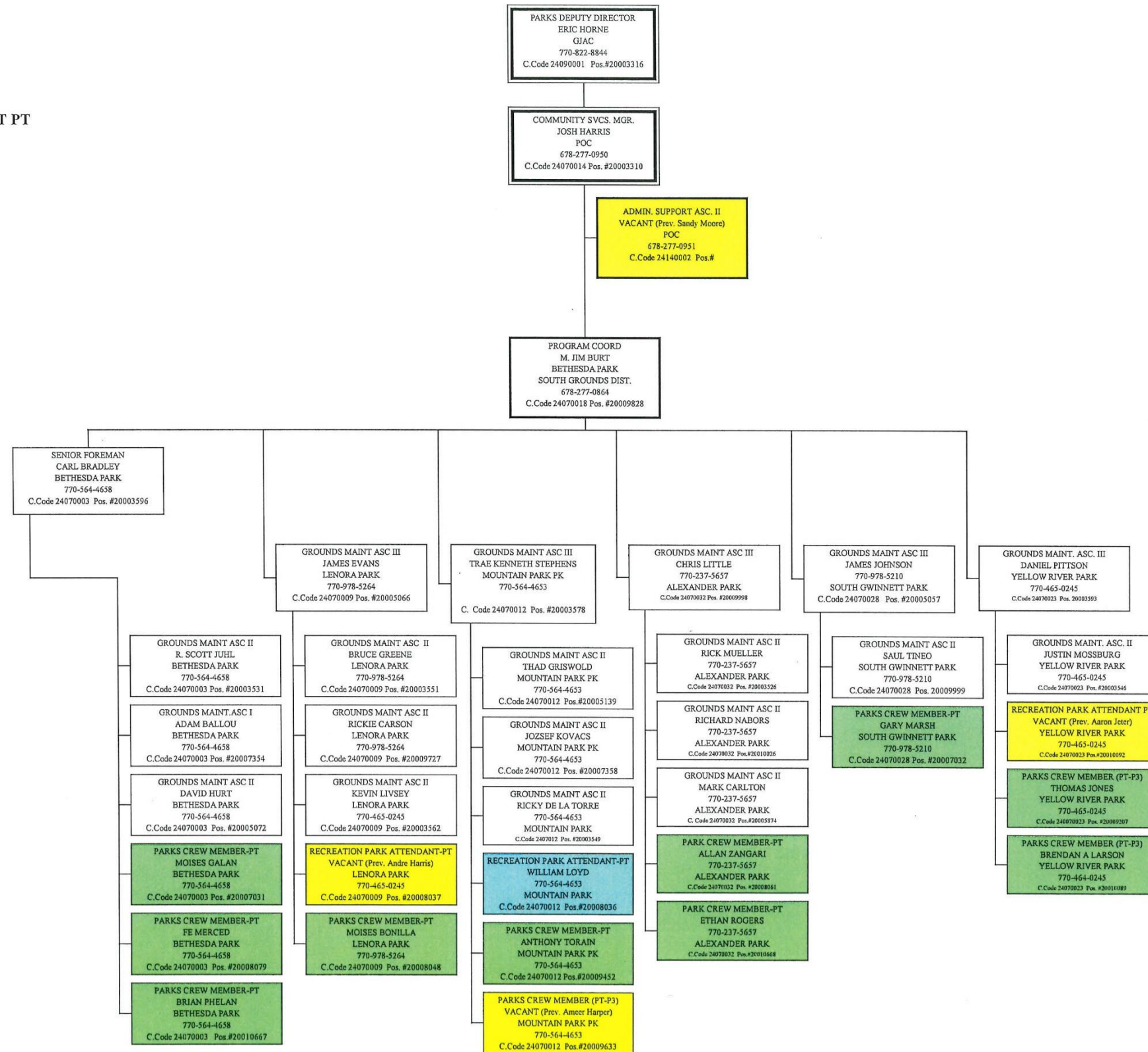
- VACANT
- PARK CREW MEMBER PT
- RECREATION PARK ATTENDANT PT



PARKS MAINTENANCE  
SOUTH GROUNDS DISTRICT

Revised  
04/26/202

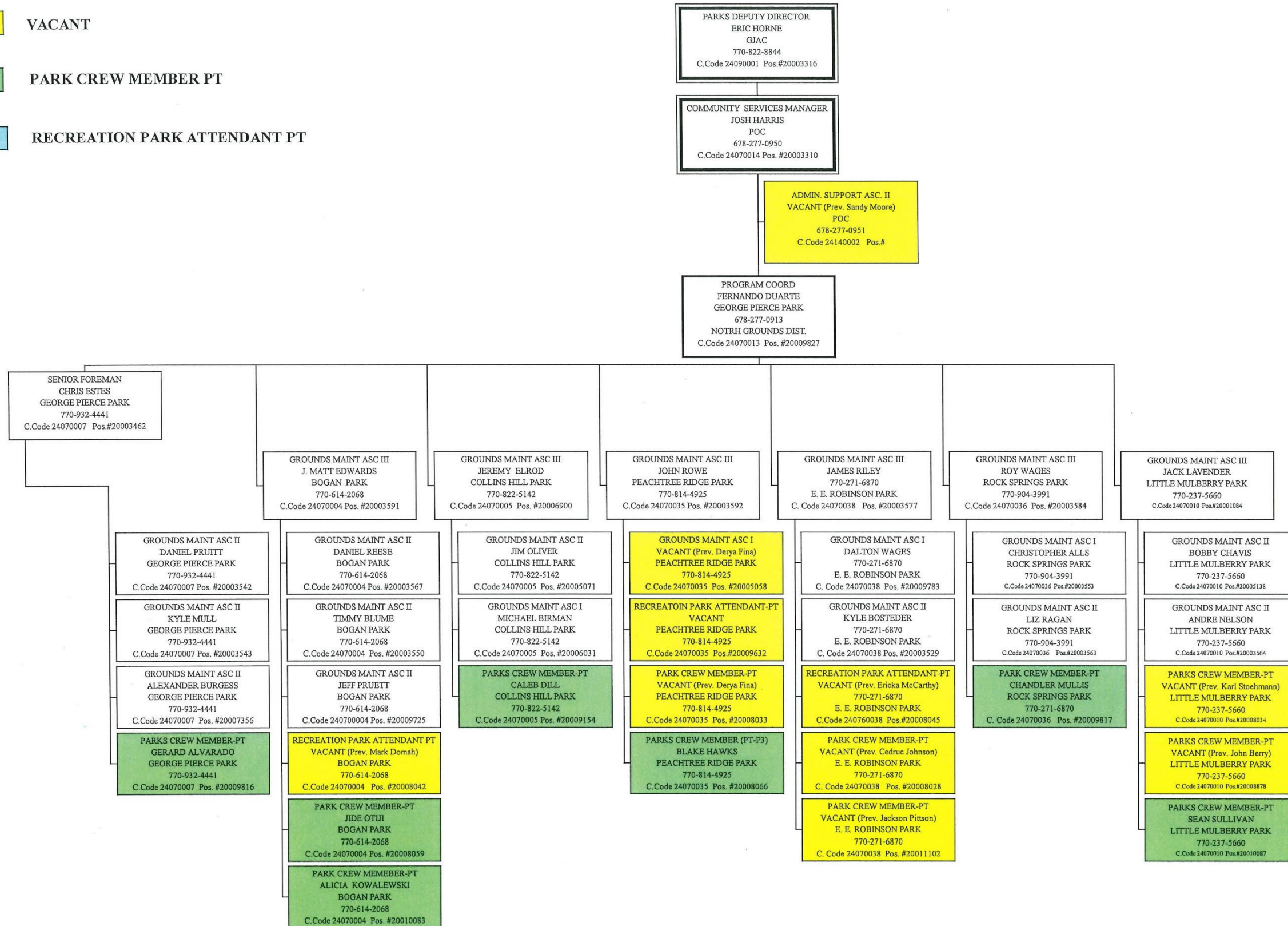
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- RECREATION PARK ATTENDANT PT



PARKS MAINTENANCE  
NORTH GROUNDS DISTRICT

Revise  
04/26/2021

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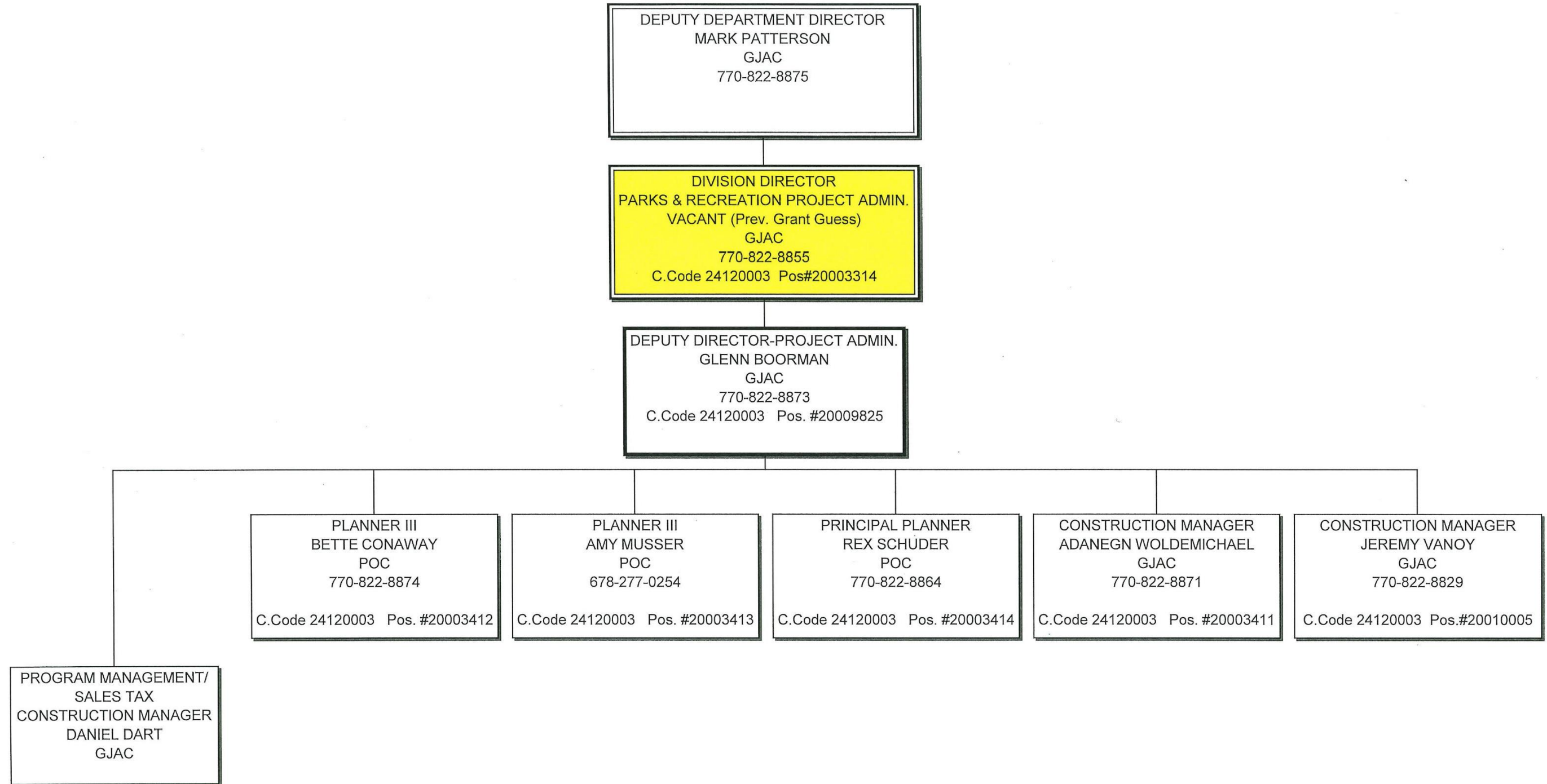




DEPARTMENT OF COMMUNITY SERVICES  
PARKS & RECREATION PROJECT ADMINISTRATION

Revised  
04/26/2021

 VACANT



# 1.1 CONTEXT OVERVIEW

## UNDERSTANDING EXISTING CONDITIONS

Parks and recreation facilities occupy a unique and powerful space between the physical framework of a place and its people. Besides road right-of-way, parks are commonly a dominant proportion of a jurisdiction's publicly owned land. In many cases, they are the public places citizens interact with most directly. Parks provide a critical opportunity to strengthen the fabric of a community, Weaving together social culture with the built and natural environment. In a dynamic and diverse environment like Gwinnett, understanding the nuances of context is extremely valuable to contributing to the overall success of the community.

The complete context for the 2020 Gwinnett Comprehensive Parks and Recreation Master Plan (2020 GCPRMP) is understood through the review and analysis of the following three context elements:



### **Gwinnett's Planned Context**

The initiatives and projects previously completed in Gwinnett.



### **Gwinnett's Demographic Context**

The characteristics of the existing and projected population of Gwinnett.



### **Gwinnett's Parks System Context**

The organization, programmatic, and physical condition of the Gwinnett's existing parks and recreation system.

# 1.2 GWINNETT'S PLANNED CONTEXT

## UNDERSTANDING GWINNETT'S PREVIOUSLY PLANNED CONTEXT

This section provides an overview of Gwinnett's planning context – plans previously completed for the County - and identifies specific factors that the 2020 Comprehensive Parks and Recreation Master Plan (2020 GCPRMP) should consider. Plans reviewed consisted of:

- 2004 Comprehensive Parks and Recreation Master Plan
- Gwinnett County Parks and Recreation 2002 Needs Assessment Survey (A.L. Burruss Institute of Public Service Kennesaw State University)
- 2007 Parks & Recreation Capital Improvement Plan
- 2012 Gwinnett County Parks and Recreation Survey
- 2013 Gwinnett County Parks + Recreation Capital Improvements Plan (CIP) Update
- 2017 Gwinnett County Parks + Recreation Capital Improvement Plan (CIP) Update
- Open Space and Greenway Master Plan, 2002, 2012, and 2014
- Gwinnett Countywide Trails Master Plan
- Gwinnett 2040 Unified Plan
- Destination 2040, Comprehensive Transportation Plan + Countywide Trails Master Plan
- 2018-2019 Gwinnett County Community Health Needs Assessment
- Individual Park Site Master Plans

### 1.2.1 - 2004 Comprehensive Parks and Recreation Master Plan

The 2004 Comprehensive Parks and Recreation Master Plan updated Gwinnett County's 1996 Master Plan and 2000 Capital Improvement Plan.

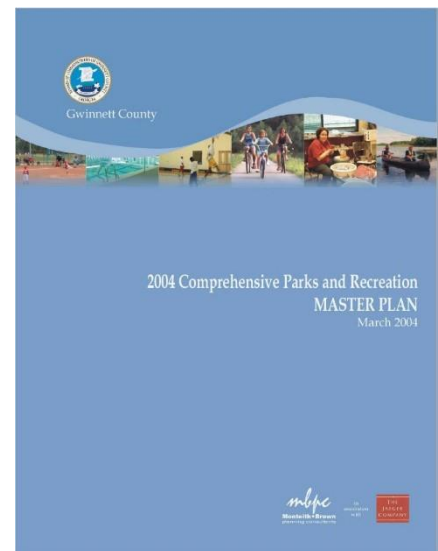
The purpose of the revised plan was to provide a strategic roadmap for improving the provision, quality, and quantity of parks, facilities, and services in Gwinnett. The reevaluation of county-wide recreational needs was critical in 2004 because of an oncoming decision regarding the extension of the Special Purpose Local Options Sales Tax (SPLOST) for an additional four years.

In response to the oncoming SPLOST decision, the 2004 Comprehensive Parks and Recreation Master Plan accomplished three major tasks to prioritize capital projects consistent with the current and emerging needs of residents at the time:

1. Evaluated the County's ability to provide services to its increased number of capital facilities.
2. Analyzed service gaps and needs related to changes in population and location of existing facilities.
3. Proposed a refined Capital Program for the intended future SPLOST program.

The prior three-district recreation planning model was amended in the 2004 update to a five-district model. This shift was based on changes in the interstate and highway system, the rapidly growing population, the geographic size of the County, and the distribution of high concentrations of children, teenagers, seniors, and ethnic communities. The five-district model was intended to better serve the specific needs of its growing communities.

Goals and strategies were developed and prioritized based upon public input, the analysis of facility and park needs, and the experiences of similar agencies. The goals listed below build upon the anticipated



needs of the County's rapidly growing and diversifying population through planning in a forward-thinking, comprehensive, and fiscally responsible manner. The refined goals are listed below in order of priority:

1. Prioritization of Pedestrian and Bicycle connectivity between parks and other points of interest. The highest priority efforts should link parks, libraries, schools, and communities to increase alternative modes of transportation, such as walking and biking.
2. Maintenance of a just approach to the continued acquisition and development of both active and passive parks and recreation.
3. Provision of structured and unstructured recreational opportunities for all age groups, including adults.
4. Completion of construction of existing planned parks prior to new park construction
  - a. Proceed with acquisition of park land in under-served areas.
  - b. Continue acquisition of park land in developing areas.
5. Revitalization of existing underserved communities through the utilization and development of parks
  - a. Consider the incremental costs associated with the standards of service required for competitive sports tourism versus community facilities.
6. Maintenance of an approach that integrates and coordinates
  - a. With other departments and agencies to leverage the public's disposable dollars for parks and recreation.
  - b. The renovation of existing parks and recreation facilities.
  - c. Adequate parks and recreation staffing to keep with the growing demands and facilities of Gwinnett.
7. Use of planning and design methods to increase user security as parks and recreation facilities through the use of park police.

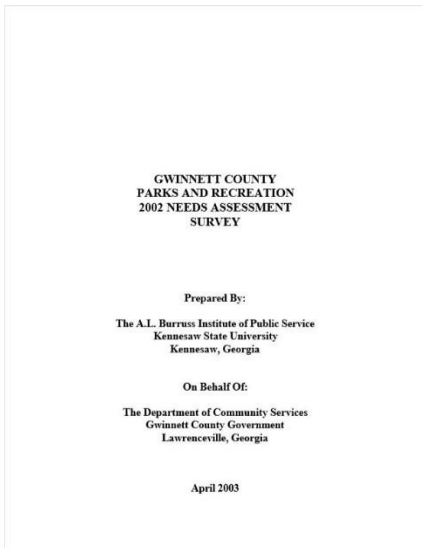
## **Implications to the 2020 Gwinnett Parks and Recreation Master Plan**

The 2004 Comprehensive Parks and Recreation Master Plan acted as a preliminary guide for Gwinnett's future Parks and Recreation planning efforts. It was noted through the 2004 Master Plan that the County's excellent parks system provided and continues to provide a significant contribution to the community's high quality of life. Similar to today, the 2004 Master Plan faced the challenge of providing parks and recreation facilities to a rapidly growing and diverse population. The emphasis on community engagement and serving the needs of a changing population throughout the planning process will continue to be of critical value. This means creating community engagement events that adapt to the current needs of the increasingly diverse community.

In addition to updating public engagement methodology, the 2020 GCPRMP considers an update to the prioritizations of major tasks, capital improvement projects, and the goals identified in the 2004 Master Plan to meet the needs of the current and projected population.

Going forward, it will be important to consider the acquisition and development of park land as it relates to connectivity (including a variety of transportation alternatives such as walking trails, greenways, and bike transit), community amenities versus regional amenities, and the fair distribution of park lands to a variety of underserved, established, and developing neighborhoods as well as programming for a variety of users and populations.

### 1.2.2 - Gwinnett Parks and Recreation 2002 Needs Assessment Survey (A.L. Burruss Institute of Public Service Kennesaw State University)



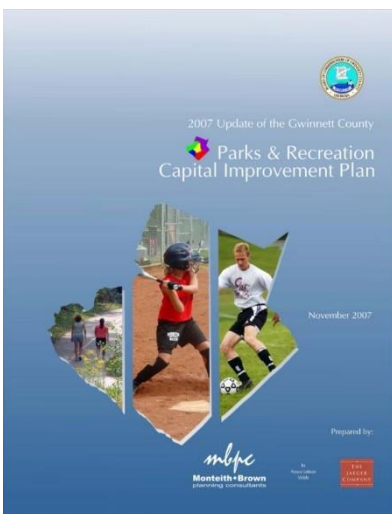
The A.L. Buruss Institute of Public Service at Kennesaw State University completed a Parks and Recreation Needs Assessment for Gwinnett’s Department of Community Services in 1994 and again in 2002. A major component in the 2002 Needs Assessment was a telephone survey which included 895 randomly selected adults living in the County, and a series of focus group sessions with members of the Hispanic and Korean populations. Both the 1994 and 2002 Needs Assessments intended to identify the favorite recreational and leisure activities of Gwinnett residents in order to determine the extent to which citizens utilize County operated parks and recreational facilities. In concurrence the survey gauged the levels of citizen support for the use of SPLOST monies to pay for future park land acquisition and development.

It was identified through demographic studies that Gwinnett’s population had increased and diversified significantly over the last 10 years. The demographic profile provided an increased relative number of Asian, African-American, and Hispanic populations living in Gwinnett. The survey and focus groups provided the County with valuable information about the park, recreation, programming and park facility needs of the diversified community.

### Implications to the 2020 Gwinnett Parks and Recreation Master Plan

The findings from the Needs Assessment Survey offered insight into park recreation and programming trends and expectations from the residents of Gwinnett. Specific information about cultural park and recreation preferences were provided by Korean and Hispanic residents in the focus group sessions, as well as specific preferences identified in park programming, facilities, and recreation provided and statistically analyzed in the telephone surveys. The 2020 GCPMP will consider the preferences provided in this report as it plans for the future of Gwinnett Parks.

### 1.2.3 - 2007 Parks & Recreation Capital Improvement Plan



The 2007 Parks and Recreation Capital Improvement Plan focused on the development of Gwinnett’s parks greenways, and recreation facilities from 2009 to 2013. It considered and expanded upon the County’s 2000 Capital Improvement Plan and the 2004 Comprehensive Parks and Recreation Master Plan for Gwinnett Parks and Recreation Division.

Important factors considered when updating the CIP included: public input, leisure trends, projects and characteristics of demographics, inventory of parks and facilities, service gaps and provision standards, and guidance from the Recreation Authority and County Staff.

The 2007 Parks and Recreation Capital Improvement Plan:

- Considered the County’s ability to provide services based on the current status of its capital facilities.
- Analyzed the relationships between County demographic changes, service gaps, and the distribution of existing facilities.
- Suggested an updated capital program to be considered for the anticipated next phase of the SPLOST program.

## Implications to the 2020 Gwinnett Parks and Recreation Master Plan

The 2007 CIP identified economic, individual, community, and environmental benefits available through the development, upkeep, and planning of Parks and Recreation Facilities that could be relevant when searching for partners and funders in the planning process of the 2020 GCPRMP. Important information about the accumulated costs of individual parks was provided as well, which could offer examples of the realistic cost of acquiring, building, and maintaining new and existing parks. This information would be useful for financial supporters and for the public to know where their SPLOST funding is distributed.

In addition, the CIP report provided leisure trends for a variety of demographic groups that would be helpful in identifying community parks and recreation needs for the current and projected population. With an updated and mapped analysis of Gwinnett's demographics, the seven Park land Gap areas identified in the CIP will help guide where necessary leisure activities would be most appropriately utilized.

### 1.2.3 - 2012 Gwinnett Parks and Recreation Survey

In 2012 the Gwinnett Department of Community Services contracted Kennesaw State University's A.L. Buruss Institute of Public Service and Research to conduct a dual-mode survey about adult Gwinnett residents' usage and opinions of County park and recreation facilities and issues related to the future of the park system's development. Age, gender, race, education, and ethnicity were all demographics considered when analyzing responses about County park and facility infrastructure.

Survey respondents suggested that the majority of Gwinnett adults use the park system and seem to be satisfied with County park services available within their neighborhoods. Over two-thirds of respondents responded positively to the extension of the SPLOST tax for park land acquisition and park development in 2013. While some populations in the southwest county prefer newer park land acquisition and development, the majority of the rest of the county would like to see improvements to existing park land. This suggests the existing park infrastructure is seen as useful to the majority of county residents, and those residents would like to see improvements to their nearest parks and park facilities. Those residents in the southwest corridor might suggest a need to continue acquiring and developing new park land in conjunction with the upkeep and renovation of existing facilities.

2012 Gwinnett County Parks and Recreation Survey	
Introduction	1
Are More Recreational Facilities Needed?	2
Use of County Park Facilities	4
Most Frequent Recreational Activities	5
Favorite Recreational Activities of Children	11
Children Under 6 Years of Age	12
Children Ages 6 - 13	13
Children Ages 14 - 17	14
Do Children Play Organized Sports?	15
Which Organized Sports Do Children Play?	15
Which County Park Does Respondent Use Most Often?	16
Opinions on SPLOST Revenues and Park Improvements	18
Would Respondents Support 2013 Renewal of SPLOST for Park Improvements?	19
What Should County's Focus Be in Regards to Future Park Development?	20
What Type of New Facilities Should Be Developed?	21
Activities and Services That Would Appeal to Respondent and Family	22
Services That Would Help Maintain Health	23
Are There Enough Recreational Opportunities for Seniors in Area?	25
A Note on Non-users of Gwinnett County Recreational Facilities	25
SURVEY INSTRUMENT	26

## Implications to the 2020 Gwinnett Parks and Recreation Master Plan

The 2020 GCPRMP compares, analyzes and assesses the demographic, developmental, and park access/inventory differences between the southwest corridor residents and the rest of the county to better understand the divide between park land acquisition and ensure all residents have equal access to park land.



### 1.2.4 - 2013 Gwinnett Parks + Recreation Capital Improvements Plan (CIP) Update

The purpose of the 2013 Gwinnett Parks + Recreation CIP Update was to proactively address the growing demands of Gwinnett’s increasingly diverse and dynamic community through the acquisition and renovation of County park land. Public Input, Planning Goals and Priority Recommendations, and identifying Recreation Planning Areas are emphasized as important aspects to the success of the Parks and Recreation CIP planning process. The 2013 CIP accomplished three main tasks:

1. It analyzed the County’s current ability to provide and sustain services based on its existing capital facilities.
2. It evaluated the gaps in service and potential needs of the County due to changes in population and existing/planned park facilities.
3. It offered an updated and improved Capital Program for 2013-2018.

### Implications to the 2020 Gwinnett Parks and Recreation Master Plan

Similar to the intentions provided in the 2020 GCPMP, the 2013 CIP recognized the need to improve its award-winning park system based on its changing demographics and long-time resident’s needs. The 2013 plan could serve as a good reference when identifying gaps and inequities in service to provide improved access and quality of facilities for residents and County park visitors.



### 1.2.5 - 2017 Gwinnett Parks + Recreation Capital Improvement Plan (CIP) Update

Gwinnett Parks and Recreation completed the 2017 CIP update to continue the County’s legacy of adapting its park system to better serve the changing needs of residents. The 2017 CIP emphasized the importance of continuing the valued Public Input, Plan Goals and Priority Recommendations, and Recreation Planning Areas identified throughout the process.

Similar to the 2013 CIP, the 2017 CIP accomplished three main tasks:

1. It analyzed the County’s current ability to provide and sustain services based on its existing capital facilities.
2. It evaluated the gaps in service and potential needs of the County due to changes in population and existing/planned park facilities.
3. It offered an updated and improved Capital Program for 2017-2022.

### Implications to the 2020 Gwinnett Parks and Recreation Master Plan

Similar to the 2013 CIP, the 2020 CIP will serve, when completed, as a reference when identifying gaps and inequities in service in order to provide improved access and quality of facilities for residents and County park visitors.

## 1.2.6 - Open Space and Greenway Master Plan, 2002, 2012, and 2014

### 2002

The Open Space and Greenway Master Plan was adopted by the Gwinnett Board of Commissioners in 2002. The initial plan identified four main goals that remain intact: (1) to increase recreational opportunities; (2) to protect and improve water quality; (3) to increase connectivity via a system of greenway trails; (4) to reduce environmental impacts of development.

### 2012

In 2012, Gwinnett updated the 2002 Open Space & Greenways Master Plan. In particular, Section 6, which included trail design standards and a feasibility study of the proposed Greenway System, was reevaluated. Three main goals were identified:

1. Research and Documentation to: explore the relationships between how Greenway development can enhance stream buffer, floodplain, and tree preservation ordinances from an environmental perspective while continuing to grow the development of new Greenway systems; Investigate how subdivision and commercial developments can include new, or preserve past, greenway corridor developments into their approval processes; and Expand the potential relationship of County open spaces and greenway systems as it pertains to wetland and stream bank restoration projects in conjunction with Gwinnett DWR and DOT projects.
2. Greenway Trail Feasibility and System Map update: To consider the 2002 MP and 2007 Update of GCPR CIP while developing a more deliberate System Map that identifies new opportunities or constraints. This will result in a prioritization of future Greenway Development.
3. Develop Design Guidelines for the Greenway system that apply to public and private entities.

### 2014

The 2014 update retains the tasks provided in 2002 and 2012 while greatly simplifying the proposed Gwinnett Greenway System into a realistic and prioritized system for the implementation phase by the County and private developers in conjunction with the four main goals developed in the 2002 master plan.

## Implications to the 2020 Gwinnett Parks and Recreation Master Plan

Both the 2020 GCPRMP and the Open Space and Greenways Master Plans identify similar priorities in development. The two plans can work as reference documents to each other as they prioritize certain areas for Greenway and Park land development. As parks and park facilities become more available, the Greenway system can be expanded in conjunction, providing access immediately from neighborhood to park land via greenways.

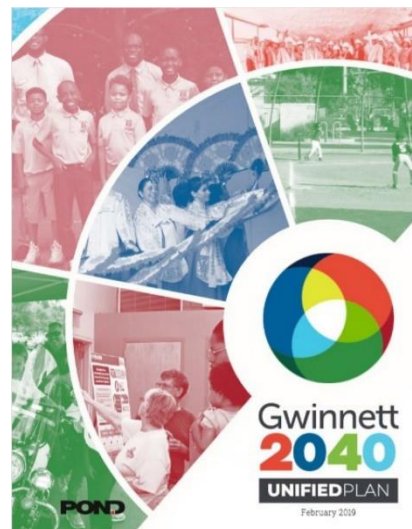
The Open Space & Greenways Master Plan addresses the need for a cohesive document for the County and Private developers in order to streamline the development process and provide environmentally conscious options for development that enhance community transportation. This could serve as a guide to format a similar dynamic document for the processes involved in developing and acquiring park land proposed in the 2020 plan.



## 1.2.7 - Gwinnett 2040 Unified Plan

The Gwinnett 2040 Unified Plan fulfills the County's mission to address and successfully unify its array of thoughtfully constructed plans: Destination 2040 Comprehensive Transportation Plan, Gwinnett Trails Master Plan, Sewer Master Plan 2050, Consolidated Plan (Housing), Connect Gwinnett Transit Plan. The County sees the unification of these reports as imperative because of the profound changes that have affected Gwinnett. Predominant changes include evolving from a majority rural and agrarian community to an increasingly diverse community nearing 1 million people. The juxtaposition of a growing population with aging infrastructures and limiting transportation demands the County become more dynamic, connected, and resilient to the challenges ahead. With these challenges come increased opportunities to progress and transform in a way that boosts economic development, transportation opportunity, and overall quality of life.

Through five phases, the 2040 Unified Plan was carefully drafted unpacking the necessary steps to unify County priorities. The five phases conducted from winter 2018 to winter 2019 were as follows: research, vision, development, documentation, and adoption of the 2040 Unified Plan.



### Implications to the 2020 Gwinnett Parks and Recreation Master Plan

The 2040 Unified Plan contains a great deal of information that is critically important to understand as it pertains to the 2020 GCPRMP. The 2040 Unified Plan suggests the County's projected population up to the year 2040 which will be important to consider in completing Parks and Recreation Level-of-Service (LOS) Analyses.

Additionally, the 2040 Unified Plan identified top community needs and opportunities discovered through the public engagement process.

Top priority needs were:

1. Redevelopment and revitalization of Gwinnett Place Mall area
2. Alternative modes of transit (heavy rail, light rail, etc.)
3. Create activity centers that are walkable/mixed use
4. Repurpose dead retail space
5. Address traffic congestion on major facilities
6. Accessibility and sidewalks
7. Jobs for college graduates
8. Affordability in housing
9. Develop multi-use trails
10. Incentives to attract business

Top Opportunities were:

1. Repurpose vacant shopping centers to community spaces / Adaptive re-use for empty shopping strips / minimize abandoned retail buildings
2. Promote reuse of existing developed sites
3. Reduce number of commercial storage units on major areas ripe for mixed use
4. (Tie) Develop improved mass transit
4. (Tie) Protect green/low density development
6. (Tie) Trail systems to connect activity centers
6. (Tie) Preserve rural/agricultural properties within the county
6. (Tie) Connect transit to neighboring counties
9. Disincentivize retailers to vacate to new locations
10. (Tie) Minimize abandoned retail buildings
10. (Tie) Make Gwinnett a 'Greener County'
10. (Tie) Develop mixed age communities where shopping and services are available and affordable

The 2020 GCPRMP will consider how parks and recreation may be able to help address these needs and opportunities. Additionally, the 2040 Unified Plan established five themes that the County developed as an overall framework to guide future policies:

1. Maintain economic development & fiscal health
2. Foster redevelopment
3. Maintain mobility & accessibility
4. Provide more housing choices
5. Keep Gwinnett a “Preferred Place”

Although numerous aspects of the five themes relate to the role that parks play within the community, Theme 5 – Keep Gwinnett a Preferred Place - most closely aligns with the 2020 GCPRMP. Theme 5 identifies a range of policies that directly apply to parks, including:

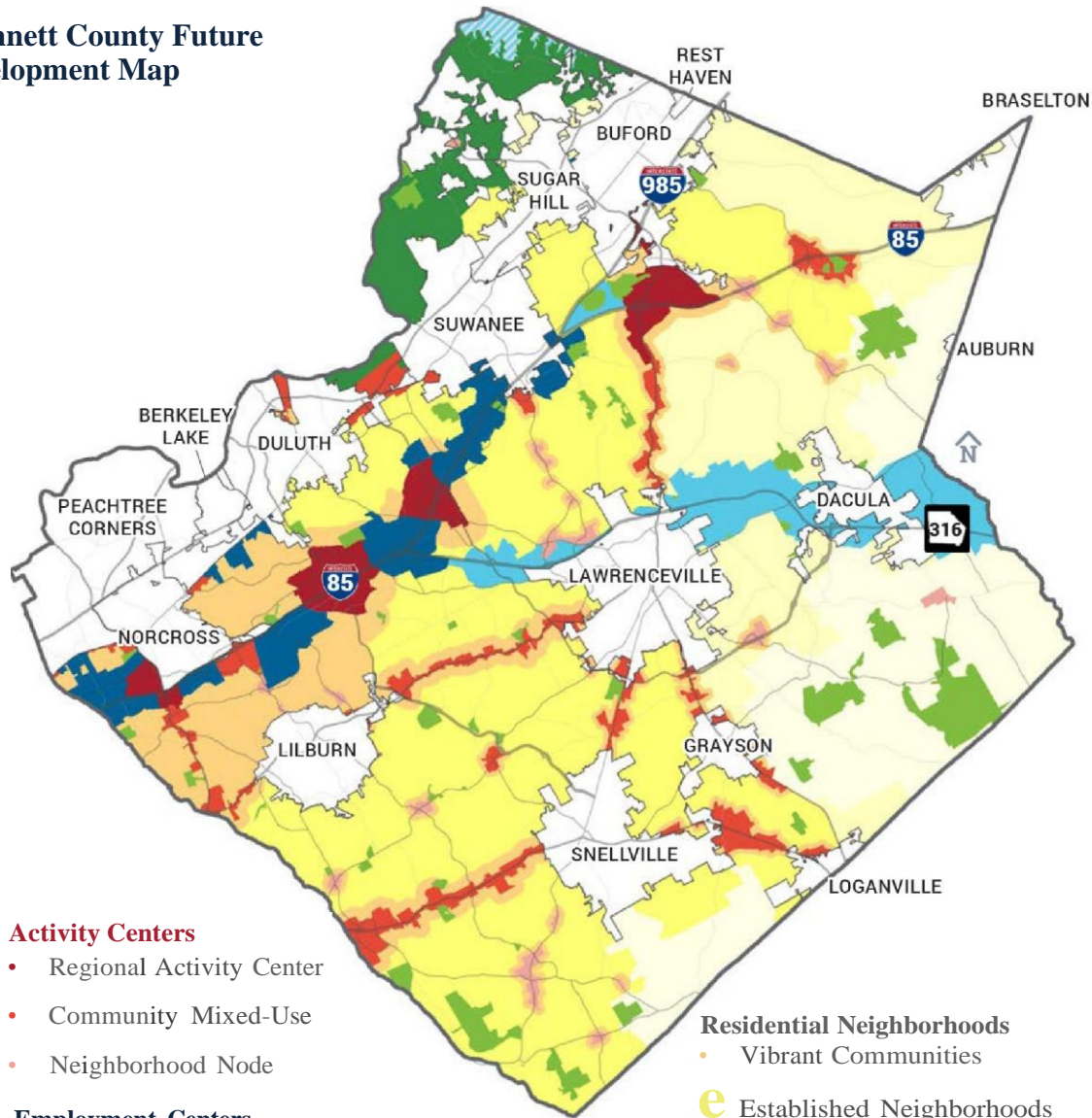
- Invest in youth enrichment programs
- Provide venues to celebrate the cultural diversity of the county
- Expand presence of the “Arts Community”
- Provide incentives for enhanced open space trails
- Create trail connections between existing parks, schools, libraries, and other community facilities as appropriate
- Ensure protection of Gwinnett’s environment, recognizing that a healthy environment is the basis of a desirable community

The 2040 Unified Plan also established a vision for the County – a Future Development Map – that identifies various Character Areas as shown in Figure 1.2.7a. These Character Areas are intended to illustrate the types of development patterns that are desired throughout the County.

Associated with these character areas are proposed Public Space Typologies which suggest the size, uses, amenities, development frontage, and parking strategies that should be considered for each park typology. Figure 1.2.7b illustrates these park typologies. While different than the County’s existing park classifications, it is important for the 2020 GCPRMP to consider these as the County’s development pattern continues to change from a Rural-Suburban County to a more Urban County over the next 10 to 20 years.

Figure 1.2.7a – Gwinnett Future Development Map

## Gwinnett County Future Development Map



### Activity Centers

- Regional Activity Center
- Community Mixed-Use
- Neighborhood Node

### Employment Centers

- Workplace Center
- Innovation District

### Other

- Municipalities

1& Lake Lanier

### Residential Neighborhoods

- Vibrant Communities
- e Established Neighborhoods
- Emerging Suburban
- Suburban Estate Living

### Low Intensity Areas

- Chattahoochee River Area
- Community Amenities

Figure 1.2.7b – 2040 Unified Plan Public Space Typologies (Least Urban)

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**Passive Park**

- 8 acre minimum
- Not fronted by development
- Parking lots provided inside park
- Uses are mostly passive
- Potential amenities include walking trails, playgrounds, ponds, wooded areas, meadows, and benches

**Green**

- 0.5 to 8 acres
- Fronted by low-density residential development
- Parking provided on street
- Uses are mostly passive
- Potential amenities include pavilions, dog parks, playgrounds, and seating areas



**Active Park**

- 8 acre minimum
- Not fronted by development
- Parking lots provided inside park
- Uses are mostly active
- Potential amenities include baseball, softball, soccer, or similar fields; tennis or basketball courts; swimming pools; playgrounds; and gyms or recreation buildings

Figure 1.2.7b – 2040 Unified Plan Public Space Typologies (Most Urban)

Most Urban



**Square**

0.5 to 5 acres  
 Fronted by medium-density residential or commercial development  
 Parking provided on street  
 Uses are mostly passive  
 Potential amenities include lawns, plazas, seating areas, playgrounds, monuments, and fountains

**Plaza**

No minimum size  
 Fronted by high-density mixed use  
 Parking provided on street  
 Uses are mostly passive but dominated by paved areas  
 • Potential amenities include plazas, seating areas, public art, fountains, monuments, and play equipment



**Pocket Park**

0.5 to 2 acres  
 Fronted by high-density mixed use  
 Parking provided on street  
 Uses are mostly passive but dominated by paved areas  
 Potential amenities include plazas, seating areas, public art, lawns, monuments, and play equipment

## 1.2.8 – Destination 2040, Comprehensive Transportation Plan

Destination 2040 serves as the most up-to-date version of Gwinnett’s Comprehensive Transportation Plan (CTP). The CTP acts as a guide for the current and future needs of Gwinnett residents’ transportation networks in order to improve their quality of life. The CTP includes a roadmap for roadways and bridges, transit, bicycle and pedestrian facilities, and freight and air. The CTP planning process includes an analysis and consideration of Existing Conditions, Needs Assessment, Recommendations from County Staff and residents, and Policy Recommendations.

The main goals were:

1. Improve connectivity
2. Leverage the county’s transportation system to improve economic vitality and quality of life
3. Improve safety and mobility for all people across all modes of travel
4. Proactively embrace future transportation opportunities
5. Continue to serve as responsible stewards of transportation resources.



The CTP proposed three levels of priority improvements based on possible funding sources:

- Level 1: Short-Range (6-year), includes SPLOST + sidewalks and pedestrian safety is prioritized here only
- Level 2: Mid-Range (9-year)
- Level 3: Long-Range (9-year, after Level-2 priority)

Additionally, the CTP led to the completion of the Countywide Trails Master Plan. The Countywide Trails Master Plan was developed in conjunction with the Gwinnett Department of Transportation (DOT), the Gwinnett Department of Community Services, Cities, and Community Improvement Districts (CIDs) across the County. It established a Countywide Trails system classified into four networks:

- Core Trail
- Priority Trail
- Trails with Partners
- Riverline Trail

It also identified a series of signature trails that will help to create an identity for the trails system and serve as examples of how bicycle and pedestrian facilities should be designed and built in Gwinnett. These Signature Trails were identified because of their importance to the overall trail system considering such factors as scale of facility, amenities, connectivity, location, and other defining features.

### Implications to the 2020 Gwinnett Parks and Recreation Master Plan

The 2020 GPCRMP considers the proposed projects of the three levels of priority identified in the 2040 Transportation Plan. In particular, Level 1: Short-Range (6-year) and Level 2: Mid-Range (9-year). Level 1 projects include SPLOST funding sidewalk and pedestrian safety projects and Level 2 projects are within the 10-year planning horizon of the 2020 GPCRMP. These considerations are of importance for the development and connectivity to parks. Additionally, two Policy Recommendations are relevant: Bicycle and pedestrian (includes trail master plan expansion, bike lanes, sidewalk, priority bicycle network), and the Transportation Demand Management (emphasizes multi-modal connections, strong land use policies, and alternative work schedules).

Lastly, while the 2020 GPCRMP considers the findings from the Countywide Trails Master Plan, the 2020 GPCRMP also acts to support the implementation and prioritization of the Countywide Trails Master Plan, particularly the implementation of the proposed Signature Trails identified in Figure 1.2.8d.



Figure 1.2.8b - Level 2: Mid-Range (9-year) Gwinnett Comprehensive Transportation Plan Projects

## LEVEL 2

- Bridges, Culverts and Transportation Drains
- Intersections and Roadway Corridor ATMS/TTS
- Major Roads
- Road Safety and Alternative Roadway School Safety

Level 2 Project Funding  
 Fully Funded by Level 2  
 Partially Funded by Level 1

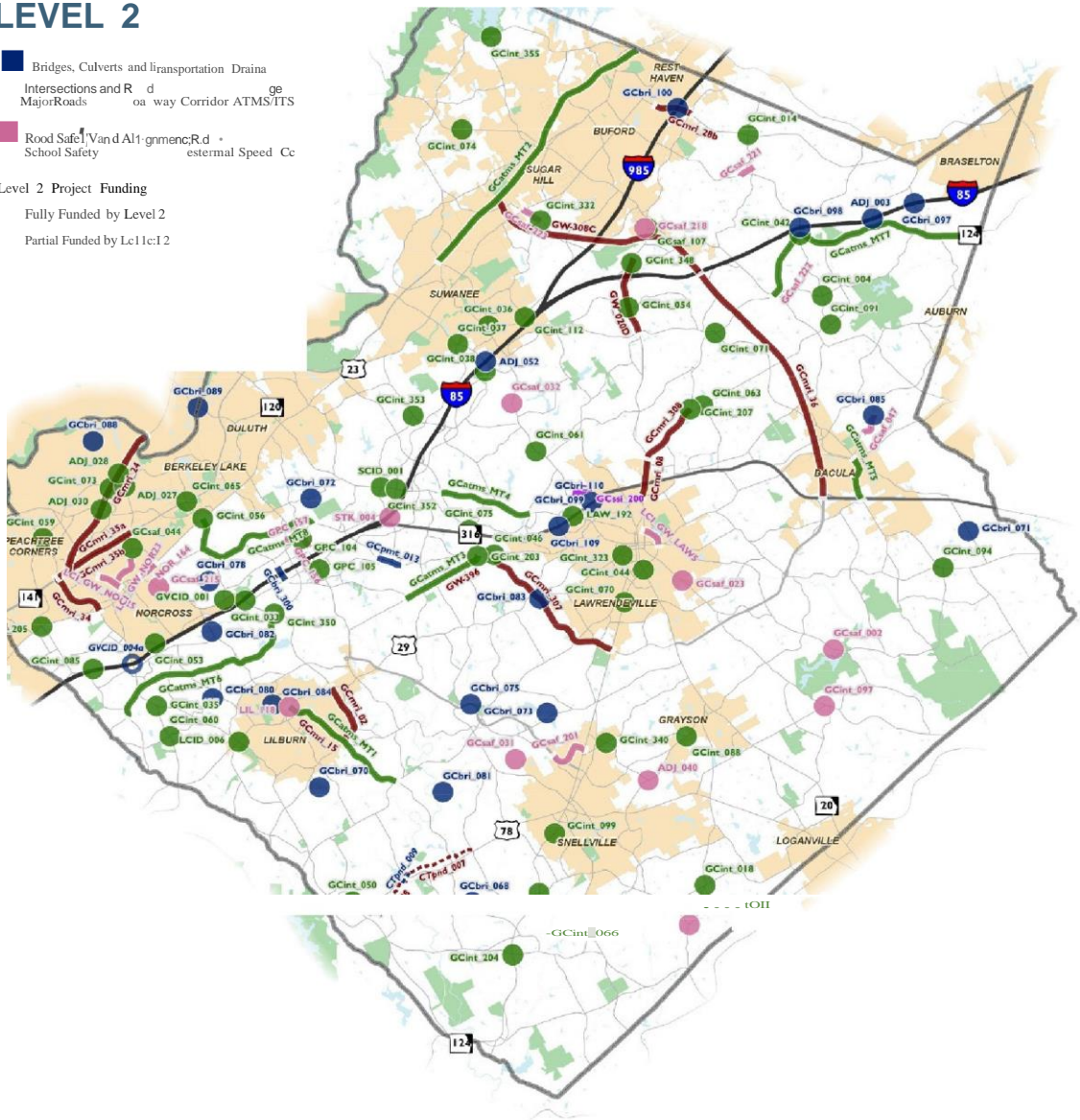


Figure 1.2.8c – Countywide Trails System Map

**COUNTYWIDE TRAILS**

- , , , CORE TRAIL NETWORK
- /"ti/ PRIORITY TRAILS
- /N/ TRAILS WITH PARTNERS
- CHATTAHOOCHEE TRAIL NETWORK

**EXISTING & FUNDED BICYCLE & PEDESTRIAN FACILITIES**

- Λ./ EXISTING TRAIL
- FUNDED TRAIL
- PARTIALLY FUNDED TRAIL

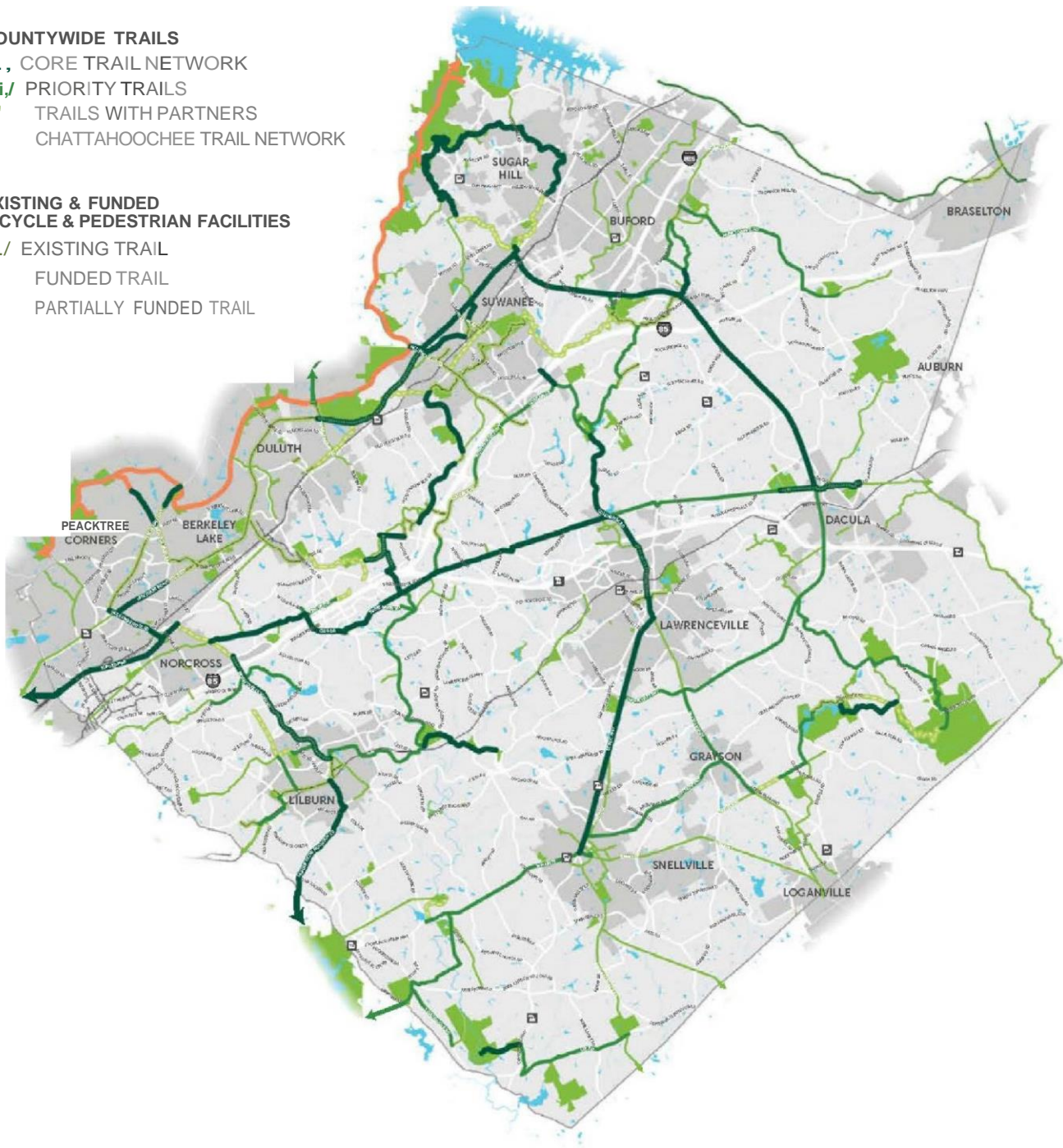
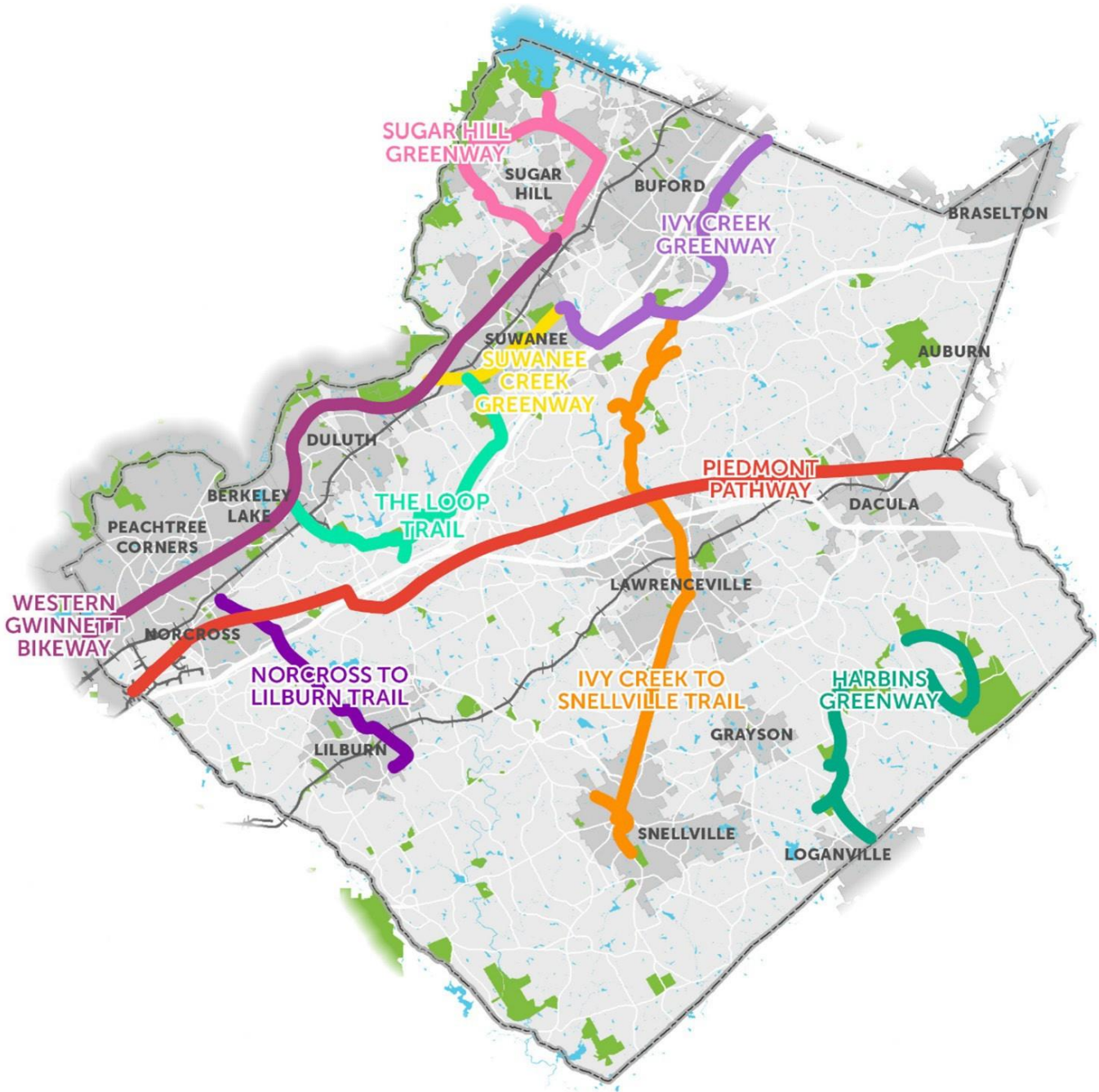
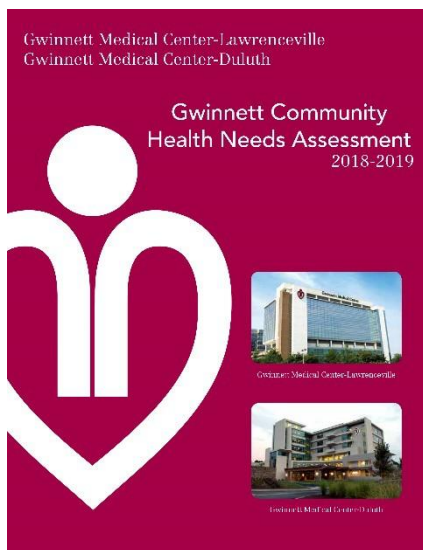


Figure 1.2.8d – Signature Trails Map



## 1.2.9 – 2018 – 2019 Gwinnett Health Needs Assessment



Gwinnett Medical Center, in collaboration with the Gwinnett Health Department, completed a Community Health Needs Assessment (CHNA) in 2019 to focus their efforts on the most important health needs of residents. The comprehensive community-wide health assessment was intended to help shape coordinated community plans to improve health. The CHA was based on the World Health Organization's (WHO) holistic definition of health:

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

– World Health Organization (WHO)

Based on this definition, the report focused not just on disease indicators like death rates and case counts, but also on the many factors that influence health, which include income, housing, education, and transportation. The report was completed in collaboration with various partners including the Gwinnett Coalition, Gwinnett Medical Center, a Steering Committee, County

Departments, School District, and Community Service agencies providing health and related services. Additionally, focus groups meetings, a town hall meeting, and community leader interviews were conducted.

The report indicated that Gwinnett is the 5th healthiest county in Georgia. In 2018, Gwinnett ranked eighth healthiest by illness and disability (morbidity) and second lowest in premature death (mortality) among Georgia's 159 counties.

Although Gwinnett has favorable health rankings overall, certain groups bear a much heavier burden of disease and premature death. While the proportion of the population with a physical, mental, or emotional disability (7.3%) was lower than the national average (12.7%), this measure indicates that one in fourteen Gwinnett residents has a disability that puts them at higher risk for poor health outcomes. With an estimated 920,260 residents in Gwinnett, relatively small changes in health metrics can translate into significant changes in the number of people needing healthcare services. Paying close attention to social and economic indicators is important in areas with rapid population growth and diverse populations, especially considering that social and economic factors strongly influence the health of individuals and the community. Studies show a strong correlation between socioeconomic status and health outcomes.

Figure 1.2.9a – SocioNeeds Index

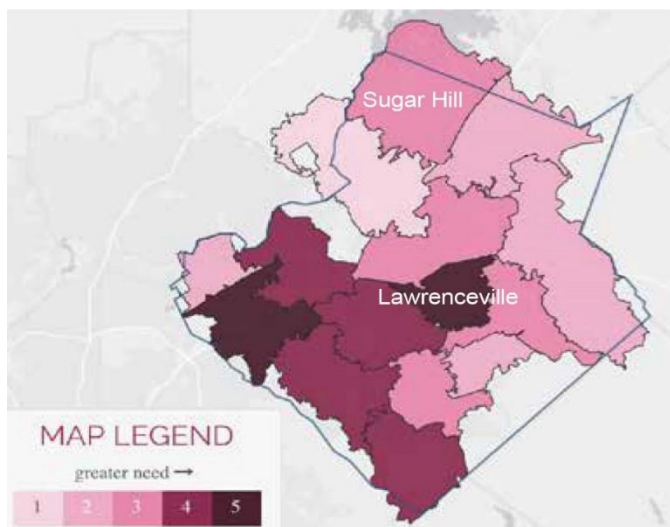


Figure 1.2.9a is a Gwinnett map that illustrates the 2018 SocioNeeds Index. The index, provided by Healthy Community Institute, considers poverty, income, unemployment, occupation, education, and language and suggests areas of great need.

The report suggests that seniors age 65 and older are a vulnerable group. In fact, the leading causes of life years lost in Gwinnett primarily affect older adults and are:

- Ischemic heart and vascular disease
- Cerebrovascular disease
- Alzheimer's Disease
- All chronic obstructive pulmonary disease (COPD) except asthma
- Hypertension and hypertensive renal and heart disease

Chronic conditions are also major causes of death in the County. These include:

- Cardiovascular disease
- Cancer
- Neurologic disease

Other concerns identified in the County that are associated with chronic illness were obesity and diabetes. Twenty-eight percent of Gwinnett residents are obese and sixteen percent of Gwinnett low-income children in preschool are obese.

Another important concern identified in the report was that the local public health system (LPHS) in general felt that the community at large is not educated on the County's collective health status. In addition, the LPHS felt the community could benefit from a centralized area for healthcare information. Those that do know about health issues are often at a loss as to how to address them. The LPHS also acknowledged that there are many barriers to health information and healthcare, and that those working in healthcare typically work in silos.

### **Implications to the 2020 Gwinnett Parks and Recreation Master Plan**

The Gwinnett Health Assessment and Health Improvement Plan findings suggest that senior health is an important area to prevent disease and premature deaths in Gwinnett. As the County's population ages, chronic conditions will almost certainly increase among the top causes of premature death.

Additionally, the report suggests that access to information and interventions to foster healthy behaviors have huge potential impacts on health and are imperative to consider and implement. For example, healthy eating habits and physical activity play a major role in combating obesity and diabetes. Innovative, culturally relevant, and targeted prevention and intervention strategies are needed specifically for vulnerable populations. These are elements that the 2020 GCPRMP may be able to help address.

## 1.2.10 - Gwinnett Individual Park Site Master Plans

Gwinnett Parks and Recreation has developed individual park master plans for 51 park sites. These master plans have all been developed through Gwinnett’s exemplary community-based park design process. While many of these park site master plans have been fully implemented, others remain partially implemented. Figure 1.2.10a provides an example of a park – Peachtree Ridge Park - that is partially implemented. Over time, and as the County continues to grow and the parks and recreation needs of the County increase, remaining phases of park site master plans may be implemented. Over the past 10 years, the need to implement these remaining park phases has been informed by the Capital Plan Improvement Plan Updates.

Figure 1.2.10a – Peachtree Ridge Park



Figure 1.2.10b identifies the park master plans and specific parks and recreation facilities that remain to be implemented. Outdoor tennis courts, outdoor volleyball courts, playground areas, and soccer fields are the facilities that have the most amount of facilities that remain to be implemented.

## Implications to the 2020 Gwinnett Parks and Recreation Master Plan

Findings from the 2020 GCPMP will directly influence the implementation of park site master plans that remain to be implemented. Additionally, considering Gwinnett’s changing demographics, evolving parks and recreation needs and trends, and the County’s financial capacity, it will be important for the County to consider revising some of the park site master plans, particularly those that were planned over 5 years ago and are currently not implemented or partially implemented.

Figure 1.2.10b – Parks + Facilities Master Planned that Have Not Been Implemented

Gwinnett Park Facility Inventory	Indoor Facilities					Outdoor Facilities																			
	Bathhouses	Community Centers	Activity Buildings	Gymnasiums	Senior Centers	Basketball Full Courts	Basketball Half Courts	Baseball/Softball Fields- 120'	Baseball/Softball Fields- 200'	Baseball/Softball Fields- 225'	Baseball/Softball Fields- 300'	Disc Golf Courses	Dog Parks	Field- Football, Stand-alone	Field- Multi-Purpose, Grass	Field- Soccer, Stand-alone	Fishing Piers	Free Skating Area	Outdoor Leisure Pools w/Restrooms	Interactive Fountain/Splash Pads	Outdoor Roller Hockey Rinks	Outdoor Tennis Courts	Outdoor Volleyball	Playground Areas	Total Trails
Alexander Park							2					1						1					1	1	2
Bay Creek Park	1	1		1		1												1					1		1
Best Friend Park														2											0
Bethesda		1												1	4										0
Bogan Park												1											5		5
Bryson Park	1	1													2				1			2	3		6
Club Drive Park																1	1								0
Dacula Park																							1		1
DeShong Park											1	1											1	1	2
Duncan Creek Park															4					1	6				7
Graves Park																	1		1						1
Harbins Community Park (Baseball Complex)		1		1	1	2	2				1			2	4		1		2		6	3	3		14
Harbins Park (Main Park)						1						1		1			1						1		1
Jones Bridge Park																							1		1
Lenora Park						2		1							4		1		1	1	4	2	1		9
Lion's Club Park						2											1								0
Lucky Shoals Park								1					1	1	1									3	3
Peachtree Ridge Park									1	1				2	3		1				6	2	2		10
Pinckneyville Park &																						2			2
Rabbit Hill Park																			1		8	4	2		15
Rhodes Jordan Park						1						1											1		1
Rock Springs Park		1	1														1								0
Ronald Reagan Park												1					1								0
Settles Bridge Park																			1						1
Shorty Howell Park																							2		2
South Gwinnett Park								1	2														1		1
Sweet Water Park												1					1						1		1
Tribble Mill Park																5								2	2
Vines Park												1											3	3	6
West Gwinnett Park &														1							2		1		3
Simpsonwood Park																							1		1
<b>Totals</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>6</b>	<b>7</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>8</b>	<b>1</b>	<b>10</b>	<b>22</b>	<b>6</b>	<b>11</b>	<b>1</b>	<b>7</b>	<b>2</b>	<b>32</b>	<b>32</b>	<b>25</b>	<b>98</b>

## 1.2.11 – Gwinnett’s Planned Context Summarized

As noted previously, Gwinnett’s success is not by chance. The County has a long history of strategically planning for its future. Gwinnett’s planned context suggests the important role that parks and recreation facilities have played in enhancing Gwinnett’s high quality of life and the important role they must play to sustain it.

Over the last 60 years, Gwinnett has experienced unprecedented population growth. During this growth, it has transitioned from being a mostly rural and suburban county to a more urban county. In order to keep up with this growth and maturation, Gwinnett Parks and Recreation has continuously focused on planning for equitable access and connectivity to parks and recreation facilities as well as the provision of high-quality facilities, programs, and services that meet the needs of Gwinnett’s diverse population. This focus, and Gwinnett’s financial commitment through various SPLOST campaigns has led to the creation of an award-winning park system, considered to be the premier park system in Georgia and a major contributor to the County’s high quality of life.

While unprecedented population growth has been a product of Gwinnett’s high quality of life, it has also led to some social and economic challenges throughout the County. These challenges include:

- Increased traffic congestion
- Limited accessibility and walkability
- Limited alternative modes of transportation
- Underperforming retail/commercial areas
- Limited well-paying jobs
- Affordability in housing
- Incentives to attract business
- Homelessness

While these challenges may affect many residents in Gwinnett, they are particularly more acute for the County’s vulnerable populations. These vulnerable populations include a growing senior population, low-income families, and low-income minority populations. Figure 1.2.9a on page 19 considers poverty, income, unemployment, occupation, education, and language to suggest population areas in the County that may be the most challenged.

Over the next 20 years, Gwinnett is poised to continue its population growth and maturation to become the most populous and diverse county in Georgia. Looking forward, Gwinnett has developed a future development vision and overall policy framework to guide the County’s growth. Figure 1.2.7a on page 11 illustrates this vision. This vision is supported by the following five themes:

1. Maintain Economic Development & Fiscal Health
2. Foster Redevelopment
3. Maintain Mobility & Accessibility
4. Provide More Housing Choices
5. Keep Gwinnett a “Preferred Place”

Supporting this vision and these growth policies are a multitude of plans with initiatives and capital improvements aimed at leveraging Gwinnett’s growth to achieve Gwinnett’s desired vision.

Similarly, the 2020 GCPRMP seeks ways to join and leverage these plans, initiatives, and capital improvements to not only continue to sustain Gwinnett’s quality of life, but further create a unified and vibrantly connected Gwinnett.

The next chapter considers the characteristics of the existing and projected population of Gwinnett and explores the implications of this population for the 2020 GWCPMP.

# 1.3 GWINNETT'S DEMOGRAPHIC CONTEXT

## DOCUMENTING A RAPIDLY CHANGING COMMUNITY

Since 1960, Gwinnett has seen tremendous population growth, increasing by over 2,000% to the present population of nearly 1 million residents. Over these past six decades, it has consistently been one of Georgia's fastest-growing counties, and for periods during the 1970s and 80s, was the nation's fastest growing county. The Atlanta Regional Commission (ARC) forecasts that in coming years, Gwinnett will continue to grow. ARC projects that by 2040, Gwinnett will surpass Fulton to become the most populous and diverse county in the metro region (and the state), with over 1.3 million people.

The characteristics and distribution of Gwinnett's residents provide critical insights related to the potential that the 2020 Gwinnett Comprehensive Parks and Recreation Master Plan (2020 GCPRMP) has for improving the quality of life of residents in the County.

Following is an overview of the key findings from the analysis of specific demographic attributes:

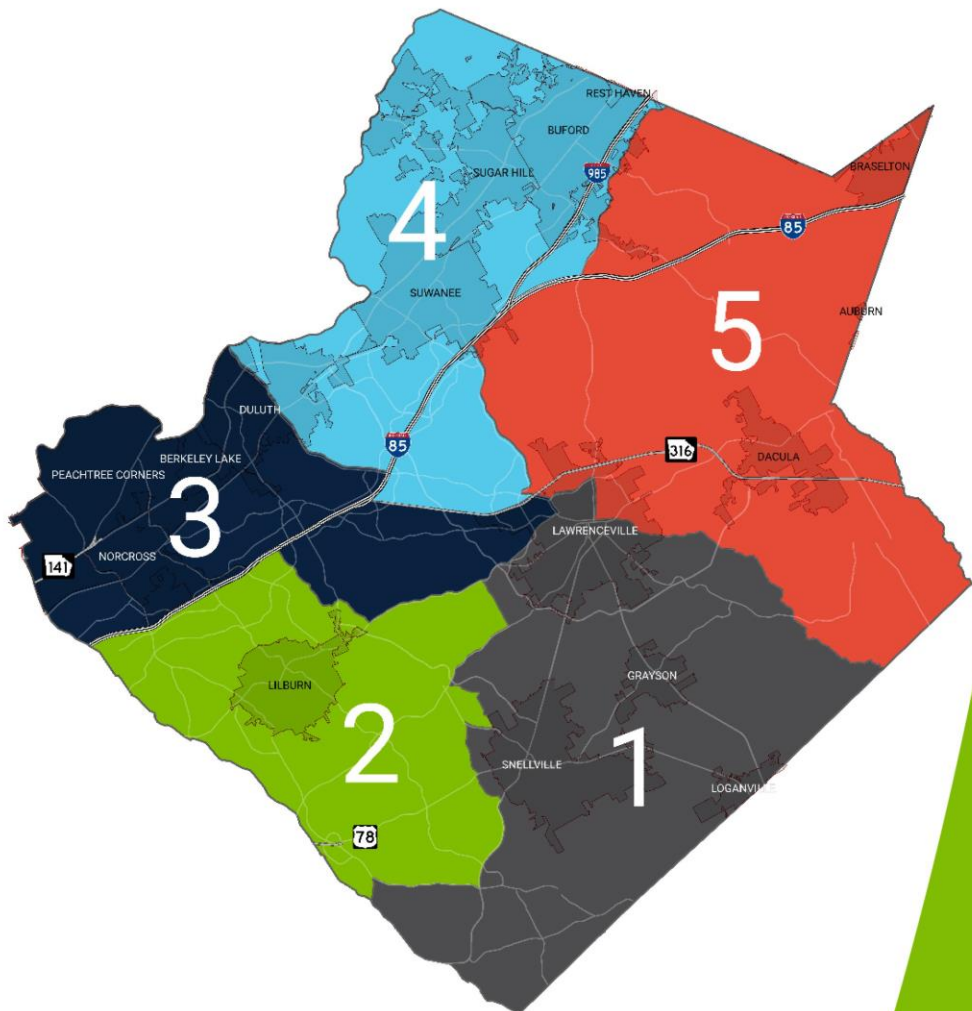
- Population Density
- Population Growth
- Age Distribution
- Race and Ethnicity
- Income and Poverty

**Figure 1.3a – Gwinnett Comprehensive Parks and Recreation Master Plan Recreation Planning Districts (RPDs)**

In this analysis, most of Gwinnett's demographics were compared to the Atlanta Metropolitan Area (MSA), State of Georgia, and United States.

The County was also organized into five Recreation Planning Districts (RPD) identified in Figure 1.3a. to facilitate a more in-depth analysis of Gwinnett residents' parks and recreation needs and priorities.

RPD boundaries sought to establish a balance between population, race, ethnicity, and income.



GWINNETT COUNTY

BOARD OF COMMISSIONERS

LAWRENCEVILLE, GEORGIA

RESOLUTION ENTITLED: A Resolution Adopting the 2020 Gwinnett Comprehensive Parks and Recreation Master Plan

ADOPTION DATE: JULY 20, 2021

At the regular meeting of the Gwinnett County Board of Commissioners held in the Gwinnett Justice and Administration Center, Auditorium, 75 Langley Drive, Lawrenceville, Georgia.

---

Name	Present	Vote
Nicole L. Hendrickson, Chairwoman	Yes	Aye
Kirkland D. Carden, District I	Yes	Aye
Ben Ku, District 2	Yes	Aye
Jasper Watkins, III, District 3	Yes	Aye
Marlene M. Fosque, District 4	Yes	Aye

---

On motion of **Commissioner Ku**, which carried by a **5-0** vote, the Gwinnett County Board of Commissioners hereby adopts the following Resolution:

**A RESOLUTION ADOPTING THE  
GWINNETT COMPREHENSIVE PARKS AND RECREATION  
MASTER PLAN**

**WHEREAS**, Gwinnett County has a long history of strategically planning for the future needs of the County, its residents, and its businesses, including strategically planning for future parks and recreation needs; and

**WHEREAS**, in 2004, the Gwinnett County Board of Commissioners adopted a Comprehensive Parks and Recreation Master Plan which acted as a guide for Gwinnett County's future parks and recreation efforts; and

**WHEREAS**, since the adoption of the 2004 Comprehensive Parks and Recreation Master Plan, Gwinnett County has experienced significant growth in population and demands for services to diverse urban and suburban communities; and

**WHEREAS**, over the next twenty (20) years, Gwinnett County is projected to continue to grow to potentially become the most populous and diverse County in the State of Georgia; and

**WHEREAS**, parks, trails, and community services are vital physical, social, and environmental infrastructure; and

**WHEREAS**, strategically planning for current and future parks and recreation needs of the County helps support and achieve the County's Vision of the County being the preferred community where everyone thrives and helps fulfill the County's Mission of proudly supporting the County's vibrantly connected community by delivering superior services; and

**WHEREAS**, the 2020 Comprehensive Parks and Recreation Master Plan builds directly on Gwinnett County's 30-year planning history taking into account the County's existing and projected demographics; current parks inventory, including city, regional, and national parks; local and national recreation trends; resident and stakeholder needs and priorities; and the County's future financial outlook; and

**WHEREAS**, the planning process used in the development of the 2020 Comprehensive Parks and Recreation Master Plan utilized a robust, multi-lingual approach to public engagement to inform and collect input from residents; and

**WHEREAS**, the 2020 Comprehensive Parks and Recreation Master Plan is also fundamental for the County achieving accreditation through the Commission for Accreditation of Park and Recreation Agencies demonstrating that Gwinnett County's parks and recreation system meets the highest possible national standards; and

**WHEREAS**, on June 10, 2021, the Recreation Authority of Gwinnett County reviewed, considered, and recommended approval of the 2020 Comprehensive Parks and Recreation Master Plan; and

**WHEREAS**, the Gwinnett County Board of Commissioners finds the 2020 Comprehensive Parks and Recreation Master Plan promotes the health, safety, and welfare of the present and future residents of Gwinnett County; and

**WHEREAS**, the Gwinnett County Board of Commissioners further finds that it is in the best interest of Gwinnett County and its residents to adopt the 2020 Comprehensive Parks and Recreation Master Plan.

**NOW, THEREFORE BE IT RESOLVED**, by the Gwinnett County Board of Commissioners that the 2020 Comprehensive Parks and Recreation Master Plan is hereby adopted.

This Resolution is hereby adopted this 20<sup>th</sup> day of July 2021.

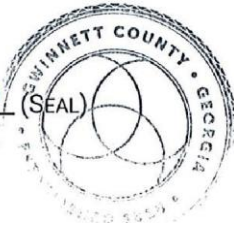
GWINNETT COUNTY BOARD OF COMMISSIONERS

By sofi / Jkzrh « J&Jv

NICOLE LOVE HENDRICKSON, CHAIRWOMAN

ATTEST:

BY: Diane Kemp  
DIANE KEMP, COUNTY CLERK



APPROVED As TO FORM:

BY: Thomas A. Cox  
DEPUTY COUNTY ATTORNEY

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## 4.9 – Trends and Industry Best Practices

Although every community is unique, there are some national parks and recreation trends observed in multiple types of cities and towns regardless of geography. These include the need for more age-friendly communities, a desire for greater connectivity, a need for more access to nature, the importance of placemaking, and the rise of intergenerational spaces.

### More Age Friendly Communities

Communities throughout the United States are recognizing the benefits of creating the importance of developing age-friendly communities. The World Health Organization (WHO) states that:

“Age friendly environments foster health and well-being and the participation of people as they age. They are accessible, equitable, inclusive, safe and secure, and supportive. They promote health and prevent or delay the onset of disease and functional decline. They provide people-centered services and support to enable recovery or to compensate for the loss of function so that people can continue to do the things that are important to them.”<sup>4</sup>

More specifically, the American Association of Retired Persons (AARP) Network of Age-Friendly Communities targets eight domains of livability:

1. **Outdoor spaces and buildings.** Availability of safe and accessible recreational facilities.
2. **Transportation.** Safe and affordable modes of private and public transit.
3. **Housing.** Range of housing options for older residents, the ability to age in place and home-modification programs.
4. **Social participation.** Access for older adults to leisure and cultural activities, and opportunities for social and civic engagement with both peers and younger people.
5. **Respect and social inclusion.** Programs to promote ethnic and cultural diversity, as well as multigenerational interaction and dialogue.
6. **Civic participation and employment.** Paid work and volunteer activities for older adults, and opportunities to engage in the creation of policies relevant to their lives.
7. **Communication and information.** Access to technology that helps older people connect with their community, friends and family.
8. **Community support and health service.** Access to homecare services, health clinics and programs that promote wellness and active aging.

Recreation expert John Crompton at Texas A&M notes that “seniors are moving from being a relatively small fringe group to being a large central focus” of parks and recreation service. “Five changes in the status of seniors suggest that recreation and park departments should...move them to the center of their service efforts: extension of active retirement time, enhanced discretionary income, contributions to economic development, enhanced leisure literacy and disproportionate political influence.”<sup>5</sup>

There are direct implications for parks and recreation systems in becoming more age friendly. For example, seniors are living longer and staying more active than ever before, resulting in a need for more recreational facilities and activities such as pickleball courts and fitness classes. Active seniors also typically desire better multi-modal access to the County’s parks and recreation centers, particularly by bike or transit. They have more free time and are better connected than previous generations and want to be kept informed via social media and the internet.

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<sup>4</sup> World Health Organization, (2015). Ageing and Life Course, Age-friendly environments, (<http://www.who.int/ageing/projects/age-friendly-environments/en>)

<sup>5</sup> Crompton, John L. (2013) National Recreation and Park Association, Are Your Seniors Moving to Center Stage? (<http://www.parksandrecreation.org/2013/December/Are-Your-Seniors-Moving-to-Center-Stage>)

## Improved Connectivity

No matter the size, geography or demographic makeup of a community, the need for improved connectivity is consistently a priority in parks and recreation surveys.

Historically, many suburban communities like Gwinnett emphasized winding streets and cul-de-sacs rather than interconnected streets and sidewalks. Instead of an interconnected street and sidewalk network, wide four- to six-lane collector and arterial roads were built to accommodate automobile traffic with little regard to pedestrian or bicycle connectivity. Congested, auto-dependent communities were the result. Additionally, the abundance of gated communities within Gwinnett is limiting improved connections.

Trends such as Smart Growth, New Urbanism and Complete Streets have evolved over the past two decades to try to reverse the suburban development patterns and improve connectivity. The Georgia Department of Transportation (GDOT), once a leading proponent of just “moving cars,” now promotes Complete Streets.

This trend is directly reflected in findings from the public workshops and surveys conducted as part of 2020 GCPRMP planning process: Gwinnett residents clearly expressed their desire for more paved multi-purpose trails.

## Access to Nature

Gwinnett residents are requesting protection and access to natural areas for hiking and biking. This is consistent with the nationwide desire for closer connection with nature in response to higher population densities, increasing congestion, and loss of environmental lands.

Numerous researchers and authors have noted the increasing lack of connection between Americans and the natural environment, and the need to make conservation more relevant to the citizens who must fund and support it. In an April 2014 interview with the National Recreation and Park Association (NRPA), Director of the U.S. Fish and Wildlife Service (FWS) Dan Ashe stated that,

“Building a connected conservation constituency is a priority for the entire Service. This is grounded in the notion that we have to make conservation relevant to all American citizens, citizens who are becoming increasingly urban and increasingly disconnected from nature and wildlife. We have been trying to achieve this for years, and in my mind, it has been largely unsuccessful. Connecting to a new generation of Americans is vital. It is a vision that respects diversity and engages people in conservation stewardship. And there are abundant opportunities for cooperation to do this in city parks, local parks and state parks. We understand that much of this effort needs to be local.”<sup>6</sup>

However, Richard Louv notes in *Last Child in the Woods* that adults are the predominant users of natural lands, and that today’s youth are losing any sense of connection with nature: “in the space of a century, the American experience of nature...has gone from direct utilitarianism to romantic attachment to electronic detachment.” In response he calls for a new back-to-the-land movement, including green cities and towns “that, by their very design, reconnect both adults and children to nature.”

To reconnect residents to natural areas – and maintain their support for public spending – the County may need to focus on creating quality outdoor experiences for all age groups. For kids, this may mean programs and activities that allow them the freedom to run around, have fun, explore, and get dirty. For adults, it may mean a greater focus on safety and security, clean facilities (e.g., restrooms and interesting educational, nature, and fitness programs). Ease of access is important to all users, as studies show that closer proximity equates to higher levels of use.

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<sup>6</sup> Dolesh, Richard J., (2015). National Recreation and Park Association, Defender-in-Chief of Fish and Wildlife, Interview with Dan Ashe (<http://www.parksandrecreation.org/2015/April/Defender-in-Chief-of-Fish-and-Wildlife/>)

## Placemaking

Many of Gwinnett's parks were developed within the "Recreation Era", characterized by architectural historian Galen Cranz as emphasizing basic, universal facilities to meet the increased demand for recreation, such as playgrounds, ball fields, and picnic shelters. According to Cranz, this era was epitomized by "the park bench and the cyclone fence."

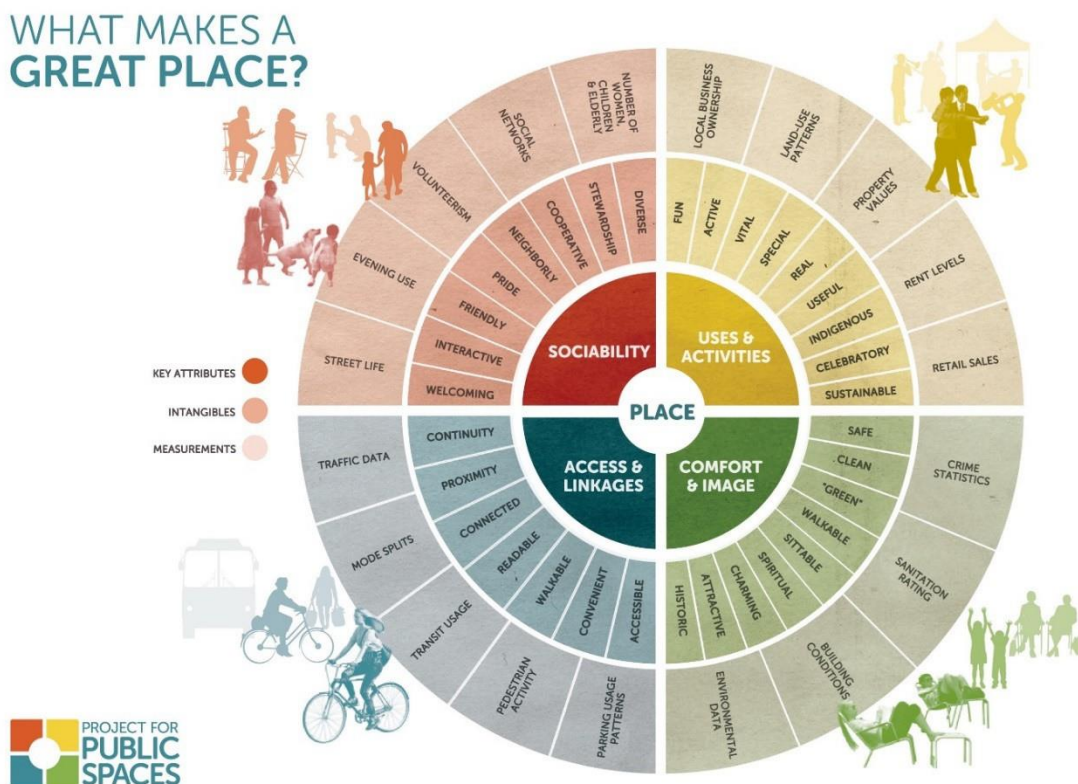
In 2004, Cranz and Boland identified a new trend in parks and recreation design, the 'Sustainable Park', that responds to the needs for communities to become more ecologically and socially sustainable. Characteristics of Sustainable Parks include self-sufficiency of resources and maintenance, solving larger urban problems outside of park boundaries, and adopting new standards for aesthetics and landscape management.

This trend is not limited to urban signature parks, as communities are becoming more aware of the need to design all parks and recreation facilities as great public spaces. The Project for Public Spaces (PPS), a recognized leader in placemaking, proposes nine strategies to help parks achieve their full potential as great places:

1. Use transit as a catalyst for attracting visitors
2. Make management of the park a central concern
3. Develop strategies to attract people during different seasons
4. Acquire diverse funding sources
5. Design the park layout for flexibility
6. Consider both the "inner park" and "outer park"
7. Provide amenities for the different groups of people using the park
8. Create attractions and destinations throughout the park
9. Create an identity and image for the park

The chart below shows the four key attributes of great places (center circle), characteristics of each attribute and metrics or indicators of success as a public space.

Figure 1.4.9a – Project for Public Spaces Attributes for Great Places



## Intergenerational Spaces

Communities throughout the United States are recognizing the importance of creating intergenerational spaces. These are spaces that can be enjoyed by people of different ages at the same time. This concept has recently become popular with playgrounds. Instead of designing playgrounds that are just for kids with benches in the periphery for parents to passively observe, intergenerational playgrounds encourage children and parents to play together. At the heart of this concept is the social aspect of children working intimately with caregivers, parents, older children, and grandparents as they gain confidence and coordination.

An example of this type of space is the Alexander Kemp Playground in Cambridge, Massachusetts. It uses sand and water, which are not age-specific pleasures, to engage users of all ages. This may be why the Kemp playground has become one of the most widely used in the city. The design by the City's landscape architect Robert Steck integrates a watery play system, sand accessories, and a custom-built boat installation to stimulate the imaginations of children and their caregivers. The Rodeo seesaw, a Farm pump, and the Integration Carousel complete a fluid design with enough variety to keep children engaged as they challenge their fine motor skills and learn about weight, measurement, and gravity.

Creating intergenerational spaces is an idea that can present exciting opportunities for Gwinnett as it explores new a strategy for the County's system of playgrounds.

### Alexander Kemp Intergenerational Playground



Source: [playenthusiasts playground blog.com](http://playenthusiastsplaygroundblog.com)

## 6<sup>th</sup> Grade Minerals, Rocks, & Soil by Theresa Ponader 2018 – 2019 School Year

### **From the Brochure:**

#### **Environmental Connection:**

Our earth provides us with many valuable and useful rocks and minerals; we need to find ways to use these natural resources without negatively affecting the environment. If protected, different soil types can provide a range of benefits, from rich agricultural land to storm water retention and wastewater filtration.

#### **Career Cluster Pathway Connection:**

Science, Technology, Engineering, Mathematics, and Natural Resources Career Clusters.

What careers are well suited for those who enjoy studying minerals, rocks and soil? Geologist, soil scientist, environmental scientist, materials scientist, engineer, forest ranger, miner, and farmer.

#### **GSE Standards:**

- S6E5b – Plan and carry out an investigation of the characteristics of minerals and how minerals contribute to rock composition.
- S6E5c – Construct an explanation of how to classify rocks by their formation and how rocks change through geologic processes in the rock cycle.
- S6E5h – Plan and carry out an investigation to provide evidence that soil is composed of layers of weathered rocks and decomposed organic material.
- S6E5d – Ask questions to identify types of weathering, agents of erosion and transportation, and environments of deposition.
- S6E5e – Develop a model to demonstrate how natural processes (weathering, erosion and deposition) and human activity change rocks and the surface of the earth.

The four sections to this program are Rock and Mineral Lab, Soil Lab, Soil Forming Factors Game, and Weather and Erosion Hike.

#### **Background Information:**

In everyday parlance, the term mineral usually refers to nutritional supplements (i.e., essential vitamins and minerals). This sense of the word refers to elements that are necessary for good health, such as potassium and calcium. In geology, a mineral is a naturally occurring, inorganic solid with a specific chemical composition and crystalline atomic structure. Although there are nearly 4000 known minerals, there are only a handful that are very common on the earth's surface. Many of these minerals are easily identified with a few simple tests based on their physical properties: crystal shape (outward expression of atomic structure), hardness (resistance of mineral to being scratched), color (least diagnostic since many minerals are found in more than one color), streak (the mineral in powdered form, which shows its true color), luster (the quality of light reflected from its surface), cleavage (smooth breakage along planes of atomic weakness), fracture (irregular breakage), density, chemical reaction (carbonate minerals react with a weak acid), optical properties, fluorescence, and magnetism.

Minerals are important because they make up socially valuable commodities (i.e., elements like iron, aluminum, gold, zinc, copper, etc. and gemstones like diamonds, rubies, etc.).

Rocks are generally an aggregate of one or more minerals, although they can also be composed of organic matter (coal) or non-minerals (obsidian). Rocks are important because they make up the earth's crust upon which we live. They hold important ore deposits of minerals, as well as fossil fuels (i.e., coal, oil, and natural gas).

At the simplest level, rocks are classified by how they formed: igneous (from magma), sedimentary (from sediments), and metamorphic (from pre-existing rock that is changed by great heat and/or pressure). A rock can be transformed into another type of rock through the rock cycle. The rock cycle is a simplified but useful way to illustrate how rocks are related to one another and how changes to rocks happen in a recurring cycle of magma solidifying or crystallizing into igneous rock, weathering of exposed rock into sediments which are then subsequently transported, deposited, buried, compacted, and cemented together into sedimentary rock, transformation of any type of pre-existing rock by extreme heat or pressure (generally along plate boundaries) into metamorphic rock, or – with enough heat – rock melting into magma. It's important to remember that the rock cycle has many paths.

Any rock (igneous, sedimentary, or metamorphic) can be weathered into sediment; it just needs to be exposed to the elements on the earth's surface. Any rock (igneous, sedimentary, or metamorphic) can be subjected to extreme conditions where it becomes metamorphosed (or re-metamorphosed), and any rock (igneous, sedimentary, or metamorphic) can be melted to form magma.

Understanding the rock cycle is important to understand the surface we are building on (safe engineering), building with (construction materials), and growing our food on (farming), as well as the potential for natural disasters, such as volcanic eruptions, landslides, and earthquakes. The rock cycle also influences weather and climate – the formation of mountain ranges affects air flow, the breakdown or formation of certain rock types, as well as volcanic eruptions, affect the composition of the atmosphere.

Soil is formed from the weathering of rock mixed with organic matter (decomposed remains of plants and animals). Soil, along with water, is one of the most important natural resources. Ninety-five percent of our food is directly or indirectly produced from soil. Soil stores and filters water and provides a habitat for a huge variety of life. In fact, soil is one of the most diverse habitats on earth, hosting a quarter of the world's biodiversity. Soil is generally classified based on the sizes of particles making up the soil texture. The soil particle sizes are – from largest to smallest – gravel, coarse sand, fine sand, silt, and clay. Depending on the relative abundance, soil can be considered sandy soil, clay soil, silt soil, or loam soil (mix of sand, silt, and some clay). The different designations are important when considering the ability of the soil to retain water and nutrients. It can take hundreds to thousands of years to form an inch of topsoil.

Soils form from the interplay of five factors: parent material, time, climate, relief, and organisms.

- **Parent material:** This refers to the bedrock from which the soil is formed. Soil will retain characteristics of its parent material, such as color and mineral composition.
- **Time:** Soil can take hundreds to thousands of years to form. Younger soils have some characteristics from their parent material, but as they age, the addition of organic matter, exposure to moisture and other environmental factors may change its features. Eventually, they may change from one soil type to another.
- **Climate:** This is probably the most important factor in soil formation. Temperature and precipitation determine the rate of weathering, as well as the plants and animals in the region. Warmer climate with more rainfall means more vegetative cover and more animal action. It also means more percolation, runoff, and erosion.
- **Topography:** Steep slopes lead to more runoff and erosion and less percolation of water. The effect will be poor soil on the slopes and richer soil at the foot of the slopes.
- **Organisms:** Plants provide nutrients for soil. Their roots also hold the soil and protect them from wind and water erosion. They shelter the soils from the sun and other environmental conditions, helping the soils to retain the moisture needed for chemical and biological reactions. Fungi, bacteria, insects, earthworms, and burrowing animals help with soil aeration. Worms help break down organic matter and aid decomposition. Animal droppings, dead insects and animals result in more decaying organic matter. Microorganisms also help with mineral and nutrient cycling and chemical reactions.

**Activity 1: Mineral ID** (10 minutes)

**Materials Needed:**

- Four tables
- Laminated mineral testing station signs lettered A-H (two sets).
- Mineral samples (two each): Calcite, galena, graphite, hematite, kaolinite, pyrite, quartz, and talc
- Eight Streak plates
- Eight Glass plates
- Eight dropper bottles with white vinegar (or 1M HCl)
- 16 laminated dichotomous keys
- Slip of paper with eight numbered lines (one for each group)
- Pencils (one for each group)

**Set Up (two duplicate set ups):**

1. On two tables, set out the eight mineral station signs.
2. Put a mineral sample on each sign.
3. Put a streak plate, glass plate, and dropper bottle with vinegar between each station (shared).
4. Put a dichotomous key at each station.
5. Put response sheets and pencils on each table.

**Procedure:**

1. Model how to use the dichotomous key.
2. Have students break into groups of two.
3. Have groups go to one of the mineral ID stations.
4. Have students identify the mineral at each station using the dichotomous key and write the name of each identified mineral next to the letter for its station on the answer sheet.
5. On “go”, have students move to the next station.
6. Repeat steps 4 and 5 until all minerals are identified (or time is nearly up).
7. As a group, check response sheets.

**Activity 2: Rock ID Game** (10 minutes)

**Materials Needed:**

- Four tables
- Rock game kit (one bag per group):
  - Six rock samples (granite, sandstone, shale, limestone, gneiss, and schist)
  - Six photo cards with same numbers as rock samples

- Six rock description cards
- Plastic answer pockets (one per group)

**Set Up:**

1. From each game kit, place the rock samples on their corresponding photo card (rock and photo should have the same number).
2. Set out the plastic answer pockets.
3. Scatter the six rock description cards.

**Procedure:**

1. Have students break into groups of two to three
2. Have each group go to one of the four tables
3. Students must read the six rock description cards and look at the rock samples.
4. Students must match each rock sample with one of the descriptions.
5. Students must place the photo card that matches their numbered rock sample into the plastic answer packet.
6. Students can check their work by flipping the plastic answer pocket over. If they're correct, there should be a word or phrase spelled out.

**Activity 3: Rock Cycle Shuffle** (10 minutes)

**Materials Needed:**

- Three tables
- Rock Cycle Shuffle directions (one to two per table)
- Rock Cycle Shuffle dice (one per station)
- Rock Cycle station signs (11 stations)
- Rock Cycle tally sheet (one per station)
- 11 dry erase markers & eraser (one per station)

**Set Up:**

1. There are 11 station cards. Place three to four station cards on each table (one on each side).
2. Next to each station card, place the corresponding Rock Cycle Shuffle die and Rock Cycle tally sheet with a dry erase marker and eraser.
3. In the center of each table, place one or two Rock Cycle Shuffle directions.

**Procedure:**

1. Have students break into groups of three, and then assign each group a letter (i.e., A, B, C, etc.).
2. Have each group go to one of the 11 rock cycle stations.
3. Explain that each station is color coded (outlined in directions), labeled (Station #: Name of Station), and has a color-coded die.
4. At their beginning station, each group must write "start" in the box that matches their group letter on the Rock Cycle tally sheet.

5. On “go”, each group must roll the die at their station.
  - a. Whichever face lands face up, the team should go to that color-coded station.
    - i. Once at the station, groups must make a tally mark in the box that matches their group letter on the Rock Cycle tally sheet and then roll the die at that station and repeat the process.
  - b. If the die face is the same as the station they are currently at, they stay there, make a tally mark, and roll again. (Note: some teams may end up at the same station for multiple rolls.)
6. Play the game for a minimum of 20 rolls or about five to seven minutes.
7. At the end of the game, each group must stay at their last station.
8. Ask the following questions:
  - a. Why is the rock cycle called a cycle?

*The rock cycle describes the processes that take any rock and transform it into another rock. It’s called a cycle because it never ends but depends on the various processes that are always taking place on and under the earth’s crust. Magma can solidify into igneous rock, which can then be weathered into sediment. Sediment is transported by various agents (erosion) and deposited, where it can become buried, compacted and cemented together into sedimentary rock. If the rock is then subjected to great heat and pressure it can transform into metamorphic rock, or, with enough heat, melt back into magma. It is important to understand that a rock doesn’t necessarily follow this linear path. Any rock (igneous, sedimentary, or metamorphic) can melt into magma given enough heat. Any rock (igneous, sedimentary, or metamorphic) can be weather if exposed at the earth’s surface. Any rock (igneous, sedimentary, or metamorphic) can be metamorphosed (or re- metamorphosed) if subjected to heat or pressure. The fundamental concept is the processes that act on a rock to transform it.*

- b. Why didn’t everyone follow the same path?

*There is more than one path a rock can follow depending on conditions. (Is it exposed at the surface? → Weathering. Is it being recycled back into the earth at a plate boundary? → Metamorphism or even Melting. You get the picture.)*

- c. Where did you spend the most time and why?

*Some processes are very prevalent (e.g., weathering and erosion) or take a long time (e.g., magma cooling deep in the earth).*

- d. How might people be affected (short- and long-term) by the movement of earth material through the rock cycle?

*Recreation (mountains, beaches), availability of construction material or decorative stone, location and availability of mineral resources such as mined ore (iron, aluminum, gold, etc.) and fossil fuels (coal, oil/gas), natural disasters (volcanic eruptions, earthquakes, landslides), climate (volcanic emissions, removal or release of CO<sub>2</sub> by rock formation or weathering).*

- e. If each “roll” (group tally mark) represents 200,000 years, about how long does it take for a rock to melt, metamorphose, weather into sediment, cool and crystallize, etc.?

*It takes a very long time for each step of the rock cycle, but the exact amount of time will depend on the starting material and geologic conditions. A conservative estimate would be on the order of 20 million years for metamorphism; 10s to 100s million years to cool magma underground; 100s of thousands to millions of years to accumulate enough sediments to form sedimentary rock, and then millions more years to compact and cement the sediments into rock.*

**Materials Needed:**

- Hand shovel (or soil auger) for collecting soil (one per group)
- Plastic sandwich bags to hold soil samples (two per group)
- Marking pen to write on sandwich bags (one per group)
- Alternative to students collecting soil: Two to four buckets with soil from different locations (labeled) in classroom for student use
- Sifter (one per group)
- Tweezers (one to two per group)
- Magnifying glasses (one to two per group)
- Brock scope (one per two groups)
- Set of five samples of particles found in soil (one set per two groups)
- Laminated soil sorting sheet (one per group)
- Laminated Soil Properties poster (one per group)
- Optional: Soil color book (one per table)
- Empty Hill Plant bottles with lids (two per group)

**Procedure:**

1. Have students collect soil samples from two different spots (e.g., a forested area and an open area or a flat area and a slope).
2. Put a handful of soil from each spot into a plastic sandwich bag.
3. Seal the bag and label it with a marking pen as to the location where it was collected (i.e., forest, open area, slope, flat area, etc.).
4. Alternative: pre-collect soil from several areas in buckets and have available for students.

**Activity 1: Soil Jars**

1. Get 2 different soil samples (see above).
2. Take a plastic bottle and add enough Soil Sample 1 to the bottle to fill it about halfway.
3. Add water to bottle to the fill line (approximately  $\frac{3}{4}$  full). Replace the lid on the bottle. Label the water bottle as Soil Sample 1. Observe carefully and make notes about what you see in the data table.
4. Next, shake the bottle vigorously for several seconds.
5. Repeat steps 2 through 4 with Soil Sample 2.
6. Put the two bottles aside and allow the soil to settle out of the water while completing the next activity (Soil Sorting).
7. After the soil has been allowed to settle (about 10 minutes), observe carefully and note any differences between the two samples.

**Activity 2: Soil Sorting**

1. Spread the remaining portion of each soil sample out on the sorting sheets.
2. Use sifters to help sort the soil.
3. Examine each soil sample with a magnifying glass or microscope. Observe the characteristics of the soil (i.e., color, texture, and composition).
  - a. Color: Use the chart on the Soil Properties poster to estimate the dominate minerals in your soil.
  - b. Compare the particles in your soil to the samples on display and sort them into the boxes on your sorting sheet (humus, quartz, mica, slate, granite/gneiss).
4. Note the differences and similarities between the two samples.

**Extension:** Students take their soil sample bottles back to school and use the worksheet (submit to teacher) to calculate the percentage of components and determine the type of soil from a soil texture triangle.

1. Examine the soil layers and use a ruler to make the following measurements:
  - a. Thickness of clay layer;
  - b. Thickness of silt layer; and
  - c. Thickness of sand layer.
2. Add the three measurements together to get the total thickness of the soil layers.
3. Calculate the percentage of sand in the jar: divide the thickness of the sand by the total thickness of the soil layers and multiply by 100.
4. Repeat the process to calculate the percentage of silt.
5. Repeat again to calculate the percentage of clay.

### **Soil Forming Factors Game: Make Some Soil**

Copy game from Soil Rocks!; hand rakes and shovels are available at this station to explore and dig in soil.

### **Weathering & Erosion Walk**

To point out:

- Building stones
- Silt fences
- Stream cut bank and point bar
- Examples of physical weathering by humans, animals, or plants (grading and digging, animals burrowing, plant roots in cracks)
- Examples of chemical weathering (red clay, friable schist, "stalactites")

Depositional environments:

- Land (landslide – rock debris; beach – sand)
- Water (lake – silt, stream – gravel, sand, silt; delta – sand, silt, clay; deep ocean – clay)
- Size of particles correlated to energy

## 7<sup>th</sup> Grade Everyday Ecology 2017 – 2018 School Year

**From the Brochure:** Dig into the interactions that make our planet so dynamic! Model the defining factors of global biomes and track carbon through an ecosystem. Venture into the GEHC's temperate deciduous forest to reveal local food webs and symbioses and discover the unique adaptations of aquatic macroinvertebrates in our streams and how they respond to human activity.

**Environmental Connection (Theme):** Possessing a thorough grasp of the ecological roles filled by living organisms on our planet is critical for the process of understanding and restoring balance to the ecosystems around us which we disturb so easily.

**Career Cluster Pathway Connection:** Science and Technology Career Clusters

What careers are possible for those who enjoy working with plants or animals and discovering new species?

What jobs would be best for those who enjoy nature and being outdoors?

**7<sup>th</sup> Grade Georgia Standards of Excellence:** S7L4. Obtain, evaluate, and communicate information to examine the interdependence of organisms with one another and their environments.

- Construct an explanation to describe the patterns of interactions in different ecosystems in terms of the relationships between organisms and abiotic components of the ecosystem.
  - Clarification statement: The interactions include, but are not limited to, predator-prey relationships, competition, mutualism, parasitism, and commensalism.
- Develop a model to describe the cycling of matter and the flow of energy among biotic and abiotic components of an ecosystem.
  - Clarification statement: Emphasis is on tracing movement of matter and flow of energy, not the biochemical mechanisms of photosynthesis and cellular respiration.
- Analyze and interpret data to provide evidence for how resource availability, disease, climate, and human activity affect individual organisms, populations, communities, and ecosystems.
- Ask questions to gather and synthesize information from multiple sources to differentiate between Earth's major terrestrial biomes (i.e., tropical rain forest, savanna, temperate forest, desert, grassland, taiga and tundra) and aquatic ecosystems (i.e., freshwater, estuaries, and marine).
  - Clarification statement: Emphasis is on the factors that influence patterns across biomes such as the climate, availability of food and water, and location.

### **Program Setup & Supplies**

This program is designed with four learning stations, with each rotation lasting 30 minutes, with maximum class sizes of 28 students each.

1. **Overlook Trail:** Place a large, lidded tub or box containing the following at the start of the trail:
  - a. One large plastic tub to fit all the supplies and keep them covered on rainy days
  - b. 10 clipboards
  - c. 10 or more sharpened pencils
  - d. Four copies of the Temperate Forest Scavenger Hunt student worksheet per clipboard
  - e. One laminated copy of the Temperate Forest Scavenger Hunt Teacher Key worksheet

- 2. Creekside Trail Stream:** Prepare six sets of materials with each of the following, and lay them out in the two clearings by the stream at the start of Creekside Trail:
- a. Big 3-inch white tray
  - b. Clear plastic shoebox containing the remaining supplies
  - c. Freshwater macroinvertebrate laminated ID guide
  - d. Ice cube tray
  - e. Hand lenses
  - f. Plastic spoons
  - g. Seven stream pollutant bottles (grab fresh algae from the turtle pond for the algae bottle, and remember to empty these at the end of the day to prevent the pungent smell of decomposition)
  - h. There should also be:
    - i. Rubber boots for the Gwinnett Environment and Heritage Center educators
    - ii. White buckets filled beforehand with clean stream water
    - iii. Baby wipes
    - iv. Plastic bag for trash

During setup, educators will need to wear rubber boots and get into the stream to grab leaf packs and other substrates to place in each of the big white trays for students to examine. Using Adopt-A-Stream protocols, try to grab samples from a variety of micro-habitats such as under the stream banks, sunken decomposing leaf packs, silt and sand from the stream substrate, and so on. Place one or two handfuls of material into each tray and then pour some clean stream water into the tray to allow the macroinvertebrates to breathe and move around.

- 3. Dining Room or Classroom:** Set up four round tables in the dining room (or two tables together by four in a classroom), each with a set of the following materials:
- a. Seven laminated carbon sink pentagons, laid out in a circle with the pentagon's facing towards the students, in the following sequence:
    - i. Deep ocean
    - ii. Ocean surface
    - iii. Atmosphere
    - iv. Fossil fuels
    - v. Soil
    - vi. Plants
    - vii. Animals
  - b. 136 wooden carbon atom discs stacked on the pentagons based on number indicated in the black font (use glued bundles of 5 carbon atoms to form the higher stacks)
  - c. Seven dice in (one on each pentagon with its respective dice in it)
  - d. Seven dice designed to correspond to each carbon source, with sides painted to match the possible sinks that carbon will travel to:

- i. Deep ocean (dark blue – two dark blue faces; three sky blue faces; one red face)
- ii. Ocean surface (sky blue – two sky blue faces; two dark blue faces; two white faces)
- iii. Atmosphere (white – three white faces; two green faces; one sky blue face)
- iv. Fossil fuels (black – four black faces; two white faces)
- v. Soil (brown – two brown faces; two black faces; one green face; one white face)
- vi. Plants (green – four green faces; one brown face; one red face)
- vii. Animals (red – two red faces; three white faces; one brown face)

#### 4. Classroom

- a. Four large Ziploc bags with eight laminated hexagonal puzzle pieces (one bag each for Tundra, Desert, Tropical Forest, Savanna)
- b. Four 9-by-12-inch dry erase boards
- c. Four felt erasers
- d. Dry erase markers
- e. Four hotel bells
- f. Laminated educator question sheet

### Program Procedures

#### 1. Temperate forest scavenger hunt

Lead your class to the braille-rope bound space atop Overlook Trail. This defined outdoor space will become the students' entire world during this activity. Break up the class into 10 groups of 2-3 students each and give each group a clipboard with the Temperate Forest Scavenger Hunt sheet and a pencil.

Ask the students to help you define the terms found in Section 1 and 2 of the sheets (use the laminated Teacher Key to provide definitions they may not know and provide examples of what they should be looking for). Clearly define the outer boundaries (i.e., always staying inside the ropes) of the habitat search area and remind students to be respectful as they explore, replacing overturned rocks and logs, not harming wildlife, etc. Let the students loose to begin observing and recording. Give them about 15 minutes to explore and take notes, allowing about 5 minutes at the end to gather the group, let students share their most interesting discoveries, and show examples of terms they may have struggled with, especially for symbiosis.

**CAUTION:** While the study site is free of poison ivy, there are other hazards that warrant caution. Catbrier vines are often present and have sharp thorns. There may also be wildlife present, including insect mounds and snakes. Instruct students to lift/roll all logs and stones towards themselves; this allows an escape route for creatures to run AWAY from the student rather than towards them and a potentially dangerous encounter. The goal is to encourage ecological common sense, not fear. All wildlife should be respected.

Reset/Cleanup: Let the students take their copies of the worksheet with them but leave the clipboards with remaining worksheet copies and pencils in the plastic tub to be used by the next group. If you are the last group to do this rotation, then pack up the whole supply bin and carry it to the building as you lead your group back.

#### 2. Stream Study

Hike down Creekside Trail, cross the foot bridge, and gather the students in the clearing on the left-hand side by the stream. Tell students they are going to focus on the inhabitants of a temperate forest stream ecosystem and the man-made changes that can affect these streams. Explain that these life forms are dependent on the water in the stream for survival: for oxygen, for food (there are many food webs in the stream), and for moisture, habitat and shelter. These aquatic macroinvertebrates serve as indicators of the overall health and quality of the stream habitat, and can be ranked as sensitive, somewhat tolerant, or very tolerant of pollutants that enter the stream.

### **Activity 1: Macroinvertebrate Hunt**

Students will split up into groups of about 4 per tray, using the two clearings by the stream. The trays are already filled with leaf packs, silt, and other material gathered directly from the stream, along with some clear stream water for the organisms to move in. Students will be given about 10 minutes to find and identify as many organisms as they can from their tray, sharing their findings with others to compare biodiversity from different sections of the stream. Most of what they will find will be very small macroinvertebrates such as larvae and nymphs, using the aquatic habitat to feed and grow before becoming adult insects on land or in the air. Explain the following guidelines and criteria to the students before they start their search:

- Containers and tools are provided to temporarily store found critters. Each team is responsible for keeping track of their trays, spoons, etc.
- The trays will have been sitting undisturbed for a short while before the group approaches. This is when the organisms usually start moving around in the tray, so the first thing for a group to do before stirring up the packs is simply a visual reconnoitering to see what might be moving around.
- After the initial visual inspection, begin using hands and spoons to slowly and carefully search through the whole tray. These organisms are mostly very small and are masters of disguise; leave no rock or leaf unturned! It can also help to add in a little clearer water and gently tilt the tray back and forth; keep a sharp eye out for movement running against the flow of water.
- When an organism is found, use a spoon or hands to gently transfer it to either an ice cube tray slot or a larger clear container if needed (for minnows, large crayfish, salamanders). Remember that these are aquatic organisms that breathe underwater; they will suffocate if you do not immediately put some clear stream water in their new container. Try to keep species separated, as some predators like dragonflies will feed on the smaller macroinvertebrates.
- Students can use the laminated macroinvertebrate ID guides to identify the organisms they find. Some will prove harder than others to differentiate; seek help as needed from the teacher and GEHC educator. Critical factors to look for include number of legs, number of tails, presence of gills, overall size and body profile, behavior/movement patterns
- Amphibian species like salamanders, though not invertebrates, are critical indicators of good water quality. They should NEVER be handled directly. Salamanders absorb part of their oxygen and moisture through their pores, so any lotions, soaps, repellents, etc. on students' hands could cause direct damage to the salamander's sensitive skin. Use a spoon or extremely mucky hands to handle and move them between containers.
- At the end of the rotation, students can either leave their species in their sorting trays or return them to the initial large white tray for the next group to hunt.

### **Activity 2: Pollutant Prevention**

Once the students have had enough time to examine and ID the organisms in their trays, transition to the stream pollutant bottles. This activity is designed to help students understand that what we do on land has a direct impact on our water quality and the overall health of aquatic ecosystems. Adding more pavement and other impervious surfaces, littering, driving cars which drip oils and antifreeze, applying excessive fertilizers and other activities all contribute to toxic and nonpoint source pollution in our waterways.

Each student group has seven bottles of common stream pollutants. As a group, they are to identify the pollutant (looking only; this is not the place for a scratch and sniff test!), figure out how it could have ended up in the stream, and determine how its presence affects the aquatic plant and animal life. After a few minutes, take turns holding up each of the bottles for the students to tell you what it represents; then discuss brief ways that we can personally prevent these contaminants from entering the water. All seven substances are examples of non-point source pollution yet are also ones that we can directly control in our own homes and neighborhoods.

Reset/Cleanup: The last class down at the stream needs to return all the leaf packs, silt, and living organisms in the various trays and bins back into the stream. Use any remaining clear stream water to rinse off the trays and if possible have the students help with carrying all the stream study supplies back up towards the building (they can be left at the water spigot by the bog garden for staff to finish cleaning off later).

### 3. Carbon Cycle Game (Project WET's "The Incredible Journey" Adaptation)

Although carbon makes up only a small fraction of the elements on Earth, it is essential for organic life as we know it. Carbon atoms travel in a perpetual cycle through our planet, appearing in both biotic and abiotic forms as it goes through a wide range of physical and chemical changes. Carbon atoms move from a source (where a large amount of carbon is stored) to a sink (where that carbon is deposited or taken up in another form). Allow students to provide some examples of carbon sources and sinks.

#### Game Set Up:

Arrange the hexagonal carbon source cards in a circle on the table starting with Deep Ocean and ocean surface next to it on one side then atmosphere then fossil fuels then soil then plants then animals completing the circle. Each card has a number in BLACK which represents the number of carbon atoms present. Count out the discs so that the correct number of discs is on each biome card. Note there are stacks of 10 and stacks of 5 and there are single discs. Place the corresponding disc with each carbon source. Only one dice is needed.

The following game will help students understand the flow of carbon through an ecosystem, think about whether it is in living or non-living forms, and grasp the relative speed at which carbon moves between different sinks. Divide students amongst the four round tables, with each student standing in front of one of the carbon pentagons. Guide the students through the game as follows:

1. Each student is standing in front of a carbon source pentagon and has 1 dice that corresponds to the sinks that their carbon can travel to.
2. The disks stacked on their pentagon represent carbon atoms that will be moving through the ecosystem. They should all have a starting amount of carbon atoms equivalent to the number of atoms indicated in the black font on their pentagon. These numbers represent an approximate ratio of carbon stored throughout the Earth that regularly participates in the carbon cycle (it does not include the lithosphere).
3. To start the game, students roll their individual dice all at the same time. The color on the dice indicates what carbon source that atom should be moved to (in many cases, the atom just stays where it is). Move the carbon atom to its new location by stacking it on another player's pile. If any player runs out of carbon atoms at their source, they must wait for others to deposit more atoms for them.
4. Continue this action with all players rolling their dice and transferring carbon atoms amongst their table for about five minutes and then stop the game.
5. End the first round of the game. Have students look at their carbon stacks, which provide a sort of 3D bar graph of the planet's carbon allocation. Do they have roughly the same number of atoms as they started with or have the ratios shifted drastically? What would explain this? What are some of the chemical and physical processes that can change carbon or get it moving around our planet?

6. During the second round of the game, we will study what happened to our initial and ending ratio of carbon after a human-caused disturbance event: the building of a major new coastal city.
7. Have the students restack their initial carbon atoms, but this time using the numbers in the red font (indicating disturbance ratios).
8. Let the game begin just like in the first round, with all students rolling their dice and moving carbon around simultaneously. Continue play for about five minutes and then stop.
9. Have the students analyze their carbon stacks again. How do their final numbers compare to their initial numbers? Did the final numbers stabilize and return closer to the pre-disturbance carbon ratios, or did they remain off-balance? What would explain this? Are there examples of changes we make to our ecosystems that are irreversible, or can it all theoretically be restored through technical know-how or ethical choices?

Reset/Cleanup: Have each team to reset their carbon atoms to the original numbers as indicated by the carbon atom number in black font on their carbon pentagons. Each student should place the die they used back in its cup and place on their respective carbon source pentagon.

#### 4. **Battle of the Biomes**

Upon entering the classroom, divide students into four teams of seven or less students each and then sit down with their team. Hand each team a 9-by-12-inch whiteboard, felt eraser, dry erase marker, hotel bell, and bag of biome pieces.

Intro: What is a biome? What makes each one unique?

##### **Activity 1: Battle of the Biomes**

Game rules:

##### **Activity 2: Biome Disruptors**

One extra piece: why is it a disturbance factor? Why does it not belong? Long term ramifications?

Invasive species or disturbance agent:

- **Tundra – Red Fox:**
- **Savanna – Fire Ant:** The Fire Ant may be small, but its impact in the savanna biome is large. Because it is not a native species, Fire Ants often replace native ant species and cause drastic changes to the biome food chain by eliminating other arthropods. It often eats plants that are needed by other species and interrupts the mutualism between them. The Fire Ant can also cause problems to other species in the savanna, such as elephants and large cats, with its bite. In addition, the invasive ant reduces biodiversity among organisms by hurting them or meddling with their food supply. Elephants have such an aversion to the ants that they will avoid eating the acacia, which helps prevent the woody savanna from becoming a grassland.
- **Desert – European Rabbit:** They may look cute, but since the introduction of the European Rabbit in 1857 for recreational hunting and food, the prolific breeders began destroying Australia's land. In an unsuccessful attempt to contain the rabbits, a rabbit-proof fence was built across the land in Western Australia. By causing damage to crops, killing young trees in orchards and forests, and being responsible for erosion problems, these rabbits have become one of the most significant factors in the loss of native plant species in Australia.
- **Tropical Forest – Rubber Vine:** *Cryptostegia madagascariensis* a native of Madagascar, is found in tropical climates world-wide where it is has naturalized. It has been dispersed widely due to its popularity as an ornamental; and for extraction of its latex content for rubber manufacture. The plants grow rampantly in a

favorable climate and are invasive in some areas. In Australia *Cryptostegia grandiflora* in particular has been declared a Weed of National Significance. It is regarded as one of the worst weeds in Australia because of its invasiveness, potential for spread, and economic and environmental impacts.

Reset/Cleanup: Make sure the students wipe their whiteboards clean and place all 8 of their hexagonal biome pieces back in the bag.

## RAIN PLAN ACTIVITIES

### **Insect Dichotomous Key**

Students will use their

### **Program Vocabulary & Diagrams**

- **Autotroph:** Organisms (producers) which can provide their own nourishment by using simple substances in their surroundings and by harnessing the sun's energy through photosynthesis.
- **Heterotroph:** Organisms (consumers and decomposers) which require complex compounds obtained from consuming living or dead plant or animal matter to sustain metabolism.
- **Niche:** An environment that has all things that a particular organism needs to survive.
- **Population:** A group of organisms all belonging to the same species.
- **Community:** An interacting group of organisms comprised of members of different species.
- **Habitat:** The type of place where an organism naturally lives and grows, comprised of both biotic and abiotic factors.
- **Biome:** A major ecological community type (temperate forest, grassland, desert, tundra, etc.).

### **Energy Cycling in Ecosystems**

As the sun's energy enters earth's atmosphere, about 90% of that energy is lost back to space through reflection off the surface of the earth. Of the remaining percentage that is captured by autotrophs, a further 90% of the usable energy is lost every time one goes higher in the food chain.

## 2<sup>nd</sup> Grade Georgia's Native People

### Description From the 2019 to 2020 Educator Guide:

Discover the heritage of the Cherokee and Creek people by understanding how they adapted to and were influenced by the environment. Compare and contrast their way of life to today.

Explore the science behind the Three Sisters Garden. Understand the contributions of Sequoia and learn how tools of the day were used to print the first Native American newspaper. Create a model of a Native American home using local and natural resources.

### Updated Description 2021:

Discover the heritage of the Cherokee and Creek people by understanding how they adapted to and were influenced by the environment. Discover some of the ways they assimilated with European settlers and experience Native Village life through S.T.E.A.M centers. Students will also create a model of a Native American home using local and natural resources and examine the forest through the eyes of a Native Indian on an outdoor hike.

**Staff needs:** One staff member per 25 participants

**Time needed for this activity:** Two hours

**Program notes:** Prior to the program prepare take-away bags containing a copy of the Cherokee Phoenix, three Sister's Coloring activity, and Bean Bread recipe for each classroom.

Activity	Location	Time Allotment	Setup Needed
Cherokee Life Before & After Assimilation & Sequoyah	Waterway Bay 1	15 minutes	One table with Sequoyah Bust, deer pelt, deer, antler, and projectile points
Chunkey (outdoor games)		15 minutes	Large wooden hoops, feathered cobs, Stickball replica set
Cherokee Village Centers	Teaching Studio or Back Plaza	30 minutes	
Native Knowledge Hike & Storytelling	Overlook Council Ring, Fern Loop Classroom	30 minutes	Story-Why possum's tail is bare; skin
Wattle & Daub Homes	Two Classrooms or Dogwood Classroom	30 minutes	Model of wattle and daub

Rain plan:

Activity	Location	Time Allotment	Setup Needed
Cherokee Life Before & After Assimilation & Sequoyah	Waterway Bay 1	15 minutes	One table with Sequoyah Bust, deer pelt, deer, antler, and projectile points
Corn Husk Dolls	Classroom(s)	30 minutes	Corn husk soaked in water; twine precut in 6 to 8-inch pieces
Cherokee Village Centers	Teaching Studio or Back Plaza	30 minutes	
Storytelling	Ivy Room	15 minutes	Story-Why possum's tail is bare; skin
Wattle & Daub Homes	Classroom(s)	30 minutes	Model of wattle and daub

### Social Studies Georgia Standards of Excellence

SS2H1 Describe the lives and contributions of historical figures in Georgia history.

- Sequoyah (development of a Cherokee alphabet)

SS2H2 Describe the Georgia Creek and Cherokee cultures of the past in terms of tools, clothing, homes, ways of making a living, and accomplishments.

- Compare and contrast the Georgia Creek and Cherokee cultures of the past to those of Georgians today.

SS2G2 Describe the cultural and geographic systems associated with the historical figures in SS2H1 and Georgia's Creek and Cherokee in SS2H2.

- Identify specific locations significant to the life and times of each historic figure, and the Creek and Cherokee, on a political or physical map.
- Describe how each historic figure and the Creek and Cherokee adapted to and were influenced by their environments.
- Describe how the region in which these historic figures lived affected their lives and compare these regions to the region in which students live.
- Describe the regions in Georgia where the Creek and Cherokee lived and how the people used their local resources.

S2E3. Obtain, evaluate, and communicate information about how weather, plants, animals, and humans cause changes to the environment.

- Construct an explanation of the causes and effects of a change to the environment in your community.

#### **Goals and objectives:**

1. Introduce students to multiple aspects of Cherokee and Muskogee (Creek) children's culture and history.
2. Realize the importance of the preservation of culture through enculturation (passing down of culture to the next generation).
3. Learn how the Cherokee Nation was divided in their feelings on assimilation.
4. To form an initial connection with the Cherokee people and their way of life through hands on activities culture and history

#### **Program Activity Outline:**

##### **Activity 1: Cherokee and Creek Life Before and After Assimilation** (15 Minutes)

Overview:

- Students will understand how tools, plants, and animals were used by the Cherokee and Creek Indians.
- Students will compare and contrast Cherokee lifestyles before and after the arrival of European settlers

Note: Have the Sequoyah bust, Cherokee Phoenix Newspaper, deer pelt, and squirrel pelt available on an additional table set up adjacent to Bay 1.

Intro: Ask students if they know the names of the two American Indian groups who lived here in Georgia. Ask them if they know any other facts about the Cherokee and the Creek.

It is important to recognize that the American Indians adapted to and were influenced by their environment – meaning water, plants, animals, and an understanding of nature was important to their survival. The Native Americans in this area were the Creeks and Cherokees. They called themselves the Muskogee, but early European settlers called them Creek Indians because they lived near the Ocmulgee Creek in Georgia. Ask students why they believe the American Indians lived near water ways like creeks and rivers.

**Answer 1:** Rivers were used as trade routes. Today if we wanted to get from here to Atlanta we would get in a car and drive there. Did the American Indians drive to where they wanted to go? Of course, not - they would have walked or used a canoe.

Using the artifacts in the display, review the following items:

**Point out Canoe:**

- Prior to the European settlers, canoes were essential for transportation.
- Canoes were often made from Tulip Poplar trees (known for growing very tall and straight) Be sure to point out a Poplar Tree on the Nature Walk
- Making a dugout canoe - To fell a tree, a fire would be set at the base of the tree on one side, as the fire charred the wood, the Cherokee would use stone and stick to scrape away at the charred wood until the fire had worked its way through enough of the tree that the weight of the remaining tree would cause it to fall.
- Once the tree was on the ground, the remaining bark would be removed to be reused for their houses, making thick roofs
- Next, fires or hot embers would be placed on top of the canoe and the same process, slowly burning, and chipping away at the charred wood make a concave seating area.

**Answer 2:** Because they would need water to drink. Also, the animals they hunted for food would be nearby because they need water to survive too.

**Show Projectile Points, Bow, and Blow Gun/Darts:**

- Ask students what the items in the case (projectile points) are? If they say arrowheads, explain that they are called projectile points - some are arrowheads, some are spear heads and some are dart heads and collectively they are called projectile points. Explain that these were the tools that native people used for hunting. Notice that different shapes and sizes. A variety of materials were used including quartz. It was the American Indians' understanding of nature and natural materials like different types of rocks that allowed them to be able to make such a variety of different types of hunting tools.
- Bows and arrows were used for larger game like deer, bear, and some wild turkey, while the hollowed-out blow guns made of river cane would be used for smaller game like rabbits, squirrels, and birds. Pass around Rabbit Skin for students to touch.
- Other examples of their understanding of nature and their environment were what they chose to make the bows out of: Wood for bows would be chosen from straight, tall hardwood trees like the oak or beech, however, the wood would also need to be strong and flexible. Sinew, or shredded animal tendons would be used for the bow string and to secure the quivers into the arrow. Flint knapped arrowheads would provide the pointed, lethal tip. This successful combination of a strong bow and arrow could reach game at 300 feet (that's almost the length of a high school football field).
- When not in use, bows would be unstrung (like our bow on display) to not weaken the wood.

Ask students what type of animals the American Indians would have hunted? Deer, bear, wild turkeys, rabbits, and small game are all good answers. Native Americans lived in a manner where they only took from the land what they needed and used it to its fullest.

**Point out deer:**

- Like many foraging cultures, everything had a purpose and there was little waste-large game, like deer, provided the Cherokee not only with nutritious food, the skin and bones were used as well

- Skin would be tanned, then used in the Cherokee home for clothing and ground cover. Deer skin was even used as currency for trading.
- Bones would be used for tools or turned into highly prized pieces of jewelry or decorative beads.
- As tools, the Cherokee used deer bones while flint-knapping (the process of reducing a large piece of stone or bone carefully to create sharp points for arrowheads or sharp tools) to help get fine edges.

**Point out River Cane:**

- Giant River Cane, commonly referred to as river cane, was once a vital resource for Cherokee daily life and referred to as “I-hi”
- River cane is the only native bamboo found in the United States and is closely related to Switch cane, which is a type of grass
- River cane was used by the Cherokee from everything to houses, hunting, dye, jewelry, and basket making.
- For baskets and mats used on home floors the Cherokee would first split the river cane in half and then stripping small sheaths off the cane, making many long strips which would be dyed and woven together - cane basketry was traded with early settlers and explorers
- River cane was also important for hunting by cutting down the tallest stalks (six to eight feet), hollowing them out with hot embers and using the empty tubs for blow darts for hunting smaller animals like squirrels, rabbits, and birds
- The Cherokee constructed houses by weaving cane walls plastered with mud
- Reasons for decline
- European settlements brought about a decline in cane breaks. Rivercane provided a year-round source of food for livestock, which was greatly preferred above other grasses. The overgrazing by domestic-by-domestic livestock devastated canebrakes. Settlers also recognized canebrakes as areas of fertile soil and began clearing these areas for agriculture. Today, it is estimated that canebrakes occupy less than 2% of their original habitat.

**Answer 3:** To gather plants (which also need water to survive) they needed to make tools.

**Point out Cherokee Double Weave Basket:**

- In Cherokee culture, women wove intricate baskets made of stripped river cane, white oak, and beech. Blood root and black walnut dyes would be used to dye the cane black and red
- This basket is a double weave basket, which is really “two baskets, one inside the other, and woven together”
- James Adair, originally from Ireland and one of the earliest traders with the Cherokee nations described these unique baskets best in his book History of the American Indians published in London in 1775,
  - “They make the handsomest baskets I ever saw, considering their materials. They divide large swamp canes into long, thin, narrow splinters, which they dye of several colors, and manage the workmanship so well, that both the inside and outside are covered with a beautiful variety of pleasing figures; ... (the basket layers are) worked into one... as if they were two joined a-top by some strong cement.”

**Point out Fishing Basket:**

- The Cherokee used baskets (not fishing poles) to catch fish and are credited with teaching the skill to early European settlers.
- This fishing weir or trap (Uga'yatun'i in Cherokee) would be used in a larger pool of water to catch fish. Large stones, wood, or organic materials, like mud or spent shells, would be built along rivers or streams to dam water, and send fish to a specific area along the stream and straight to these types of baskets (often made from river cane) or woven nets to catch fish.

## **Cherokee Assimilation**

The Cherokee were a more settled people as compared to western Plains Indians who needed to keep their homes more mobile. Cherokee homes were designed to remain within the village walls and often contained areas for storage and a doorway covered by animal skins. Many Cherokees had storehouses for dried food storage and a hothouse to sleep in during cold weather. The Cherokee began copying the log homes of the steelers during the colonial times.

Traditional Cherokee Clothing consisted of clothing made of tanned hides and woven cloth. Women's skirts were about knee length, made of woven cloth from nettle, milkweed, or mulberry bark. Capes made from deerskin and feathers were used in cold weather. Men wore a breechcloth (seen in the display) between their legs, folded over a cord around their waist. Leggings and mantles were added in the cold.

By the late 1700's most Cherokee wore clothing entirely of European manufacture but added their own special touches. By the 1800's women had acquired spinning wheels and looms and began making cotton dresses for themselves and fringed loose fitting hunting shirts for the men.

## **Sequoyah**

Sequoyah, also called George Gist or George Guest (c.1760 – c.1840) was born in a small village in present-day East Tennessee, approximately 8 miles from Echota, the old capital of the Cherokee Nation.

He was the son of a Cherokee mother, Wu-te-he of the Red Paint Clan, and a white father—possibly Nathaniel Gist, a commissioned officer in the Continental army and emissary of George Washington. He worked for many years as a trader and later became a silversmith as well as a blacksmith.

Sequoyah, intrigued by the whites' ability to communicate through writing, worked for twelve years to create a system of approximately eighty-six characters that represented syllables in spoken Cherokee. The first to read and write in Cherokee was Sequoyah's daughter, A-Yo-Ka. Once the Cherokee officially adopted his syllabary, a large part of the Nation achieved literacy in a very short time. Sequoyah is credited by the Cherokee Nation as having gifted them with the ability to communicate across long distances and throughout the ages by preserving the tribe's history, culture, and spiritual practices through the written word.

From 1828 to 1834, the Cherokee syllabary was used to print articles in the *Cherokee Phoenix*, a newspaper published in New Echota, Georgia (capital of the eastern Cherokee from 1825 until 1832).

## **Activity 2: Chunkey (15 Minutes)**

### **Overview:**

Students will participate in a variation of the traditional Native American game of Chunkey.

### **Materials:**

Large wooden hoops, feathered corn cobs, Stickball replica set

### **Directions for Activity:**

- Option 1: Have one preselected student (or educator if preferred) roll the large wooden hoop across the playing field, as the hoop (representing the Chunkey stone) passes each student they will attempt to throw their feathered cob (representing the wooden poles) through the hoop
- Option 2: Have one preselected student (or educator if preferred) roll the large wooden hoop (representing the Chunkey stone) across the playing field. When the hoop has stopped, each student will attempt to throw their feathered cob (representing the wooden poles) into the hoop

### **Background Information:**

Chunkey, or Chunky, was a traditional game played within the Creek and Cherokee societies. Chunkey was played by the men of the tribe using a disc stone and wooden poles. The discoidal stone was rolled, and poles were thrown estimating the point where the disc stopped. The pole closest to the stone gained the most points. Games were played for hours, sometimes days and gambling was a common activity.

Chunkey was played on a smooth field of packed sand or clay about 100 feet long and 12 feet wide. Typically, there was only one disc that belonged to the village. The disc was polished stone, sometimes made of quartz. The disc size was approximately 1 ½ inches wide and 5 to 7 inches high. The poles were carved hickory sticks about 8 feet long with marked notches. They were often rubbed with bear grease.

Only two men at a time played the game. One would roll the stone and almost simultaneously they both would throw the sticks. The players would often run parallel to their sticks as if to encourage the flight. Once the disc and poles had landed the score was determined by how close to the stone the stick landed. In the Cherokee games if the pole touched the disc no points were awarded.

Spectators filled the banks of the Chunkey yard where much gambling occurred. Accounts of this game indicated an electric and frenzied atmosphere fueled by betting.

### **Stickball (A-ne-jo-di) Little Brother of War or Indian Ball**

Stickball began in prehistoric times as a way for tribes to settle disputes without going to war. Although incredibly violent and fraught with danger, the death or severe injury of a few men was preferable to the more significant deaths and injuries sure to occur in full-fledged warfare. Stickball is like a game of lacrosse, except that the ball is carried and thrown with two sticks that grasp the ball rather than with a single stick as in lacrosse. The ball is made of a rock covered with hair, and then covered again with hide, which is sewn on with sinew.

The sticks are typically made of hickory because of their hardness and abundance in the eastern woodlands of North America, where the game originated. The top of the stick is covered in a webbing of sinew or leather.

Cherokee stickball is played on a field with two goal posts set on either end. Two opposing teams line up against each other in a game. Whichever team scores 12 points first wins. There are no time-outs allowed.

Stickball is still played regularly across the Cherokee Nation.

### **Activity 3: Native American S.T.E.A.M Town** (30 Minutes) (Tulwa – Creek for town) (ga-du-hv SS& Cherokee for town)

#### **Overview:**

Students will explore aspects of life in a Creek or Cherokee town

#### **Centers:**

#### **Pottery**

Students will create a bowl from clay like those used by the Cherokee and Creek

**Materials:** clay, wood paddles, small sticks, and twigs

The creation and use of pottery dates back several thousand years in native civilizations. After pulverizing the dried clay and mixing it with water, the Cherokee molded and coiled their earthen vessels. Common characteristics of Cherokee pottery include stamped designs and the use of grit temper. Stamped designs were impressed on the exterior surface of the vessel with carved wooden paddles to make the vessel wall thinner and waterproof. Grit temper, usually crushed

quartzite or sand was mixed with the pottery clay so that the vessel would dry more evenly and be less likely to crack during firing. Pottery colors were determined by type of wood used in the firing.

### **Native Foods**

Students will identify common Native foods eaten by local Native American groups.

**Materials:** Identification cards for matching, food replicas of the following: chestnuts, hickory nuts, blueberries, acorns, wild strawberries, mushrooms, trout, persimmons, muscadines, blackberries,

The Cherokees and Creek were farming people. Creek and Cherokee women harvested crops of corn, beans, squash, and sunflowers. They also gathered berries, nuts, and fruit to eat. Creek and Cherokee men hunted deer, wild turkeys, and small game and fished in the rivers. Cherokee foods included cornbread, soups, and stew cooked on stone hearths.

### **Beading**

Students will create beadwork like that made by Cherokee and Creek natives.

**Materials:** lacing string; multi-colored pony beads

Traditionally, the patterns and designs of Cherokee beadwork had special meanings and significance. Before the introduction of modern materials, the Cherokee people used the teeth, bones, and claws of wild animals to decorate their clothing. They also used dried berries and gray Indian corn for beads. Sometimes they would use small colorful seashells traded to the Cherokee by the coastal tribes. Homemade needles carved from the straight bone of a deer's leg located just above the hoof were used to pull thread made from the fibers of hemp. Beadwork was used to decorate the clothing of men and women, for making belts, headbands, and necklaces.

### **Basket Weaving**

Students will explore the process of basket weaving

**Materials:** weaving boards

Traditional Cherokee baskets were made from river cane, white oak, and honeysuckle. Natural dyes made from roots and bark added color. Cherokee baskets have been integral to their way of life since prehistoric times. Baskets were crafted in a variety of shapes and sizes, to be used for catching fish, gathering, storing grain, and even used for playing games.

### **Music**

Students will create water drums using a set of predetermined supplies and compare and contrast the different tones and pitches of the drums. Students will count musical rhythm patterns while tapping their drums.

**Materials:** metal cans of various sizes, large rubber bands, precut squares of faux leather

Music, dance, and ritual were closely related among Southeastern Natives. Music accompanied dance and many rituals included both music and dance. Traditional instruments used by Southeastern Natives were the drum, the rattle, and the flageolet. The most favored drum was made by stretching a wet deerskin over a small earthen pot, sometimes partially filling the pot with water, which could also be used periodically to moisten the drumhead. Rattles were made from dried gourds and filled with grains of corn or pebbles then affixed to wooden or bone handles. Flageolets were simple wind instruments made of a length of cane or deer tibia used as a musical embellishment rather than to accompany singing or dancing.

### **Writing**

Students will practice writing symbols from the Cherokee Syllabary.

**Materials:** small sticks or twigs, large cafeteria tray with shallow layers of sand, copy of the Cherokee Syllabary, Cherokee Vocabulary Picture cards

Sequoyah also known as George Guess or George Gist was born between 1760 and 1765 in Tennessee. In 1809, he began working on a writing system for the Cherokee language.

Around 1821 he presented his ideas for a syllabary to the Cherokee Nation. His syllabary consists of eighty-four signs, one for each syllable of the Cherokee language. Though not immediately embraced by the Nation within several years thousands of Cherokees had become literate. The Cherokee Nation printed their first newspaper in 1828 the "Phoenix" using Sequoyah's syllabary.

### **Games**

Students will participate in several common games played among the Cherokee people

**Materials:** large flat basket, butterbean game pieces, scorecard, direction sheet, large craft sticks with "stick game" images added

Although many Native American games were competitive, like Stickball and Chunkey, the basket game was more of a social pastime. Men, women, and children enjoyed playing. It could be played individually or in teams. Beans or painted pebbles were placed in a flat basket, and participants take turns gently tossing the beans and allowing them to land back in the basket. Score is determined by the number of painted or plain sides that are shown. Almost every Native American tribe in North America played some form of stick toss. Sticks may have been made from rib bones of deer and the designs painted on them with paints made from clay and berries. Sticks were tossed gently into the air, -and scores were determined by the images facing upwards upon landing.

### **3 Sisters**

Students will identify the three plants commonly used in the Cherokee Three Sisters companion planting method

**Materials:** dried corn, artificial squash, dried beans, ID cards

Although many Native American games were competitive, like Stickball and Chunkey, the basket game was more of a social pastime. Men, women, and children enjoyed playing. It could be played individually or in teams. Beans or painted pebbles were placed in a flat basket, and participants take turns gently tossing.

### **Native Medicines**

Students will examine common plants found in the area used by Native Americans for medicinal purposes.

**Materials:** Brock Scopes, Cherokee Medicinal Plant ID cards, small clippings from seven to eight of the following that are available seasonally – Eastern Redbud, American Beech, American Holly, Virginia Pine, Sweetgum, Tulip Poplar, White Oak, Red Oak, Horsetail, Dog Fennel, Sumac, moss, Christmas Fern, cattails, dandelions, Sassafras Tree

Native Americans have had a rich ethnobotanical heritage for treating diseases, ailments, and injuries. Cherokee traditional medicine has provided numerous aromatic and medicinal plants that not only were used by the Cherokee people but were also adopted for use by European settlers in North America. Like numerous other Native American tribes, the knowledge of Cherokee medicine was handed down from generation to generation to the "chosen" healers.

## **Activity 4: Native American Knowledge Hike and Storytelling** (30 minutes)

### **Overview:**

During their rotation students will explore the outdoor environment and look for trees, plants, and other items that native people used in their everyday lives. Students will hear a Native American legend retold. Location for the hike may be Overlook and Fern Loop. The hike will include storytelling of "Why the Possum's Tail is Bare".

**Materials:** Possum story; possum with ribbon

### **Storytelling**

Telling stories in Native American cultures is the way that members passed on their culture to the next generation. Anthropologists call this process enculturation. Some of the important stories focused on creation, or explained the stars, moon, plants, animals and other traditions that made up an important part of their beliefs. These stories also contained a lesson or important concept that was being taught to children or to explain something that they saw happening in nature. The story we are sharing with the students is "How the Possum Lost His Tail". The possum story teaches a lesson in that it advises children not to be vain about their looks. Act out story and compare and contrast how it might be different from other stories children have heard.

### **"Why the Possum's Tail is Bare"**

The Possum used to have a long, bushy tail, and was so proud of it that he combed it out every morning and sang about it at the dance, until the Rabbit, who had had no tail since the Bear pulled it out, became very jealous and made up his mind to play the Possum a trick.

There was to be a great council and a dance at which all the animals were to be present. It was the Rabbit's business to send out the news, so he was passing the Possum's place he stopped to ask him if he intended to be there. The Possum said he would come if he could have a special seat, "because I have such a handsome tail that I ought to sit where everybody can see me." The Rabbit promised to tend to it and to send someone to comb and dress the Possum's tail for the dance, so the Possum was very pleased and agreed to come.

Then the Rabbit went over to Cricket, who is was such an expert hair cutter that the Indians called him the barber, and told him to go the next morning and dress the Possum's tail for the dance that night. He told Cricket just what to do and then went on about some other mischief.

In the morning, Cricket went to Possum's house and said he had come to get him ready for the dance. So, the Possum stretched himself out and shut his eyes while the Cricket combed out his tail and wrapped a red string around it to keep it smooth until night. But all this time, as he wound the string around, he was clipping off the hair close to the roots, and the Possum never knew it.

When it was night the Possum went to where the dance was to be and found the best seat ready for him, just as the Rabbit had promised. When his turn came into the dance he loosened the string from his tail and stepped into the middle of the floor. The drummers began to drum and Possum began to sing, "See my beautiful tail." Everybody shouted and he danced around the circle and sang again, "See what a fine color it has." They shouted again and he danced around another time, singing, "See how it sweeps the ground." The animals shouted more loudly than ever, and the Possum was delighted. He danced around again and sang, "See how fine the fun is." Then everybody laughed for so long that the Possum wondered what they meant. He looked around the circle of animals, and they were laughing at him. Then he looked down at his beautiful tail and saw that there was not a hair left on it, but that it was a bare as a lizard. He was so ashamed that he could not say a word, but rolled over helplessly on the ground and grinned, as the Possum does to this day when taken by surprise.

*\*Remind students of the type of relationship that the native people had with the environment*

### **Native Knowledge Hike**

#### **Look for and discuss the following:**

Information cards are provided to assist with this hike and may be distributed to students to allow them the opportunity to help locate native plants and trees along the hike.

#### Pippsesawa

#### Sassafras

- Distinguished by 3 different shaped leaves – 1-lobed, 2-lobed (looks like mitten), 3-lobed
- Can live 1000 years

- Roots exported by colonists in 1600s-oil extracted from roots used to ornate soaps and as medicinal infusion

#### Eastern Redbud

- Pink buds appear before leaves – one of first trees to blossom
- Heart shaped leaves – leaves turn yellow in fall
- Seed pods will stay on tree throughout winter – food source for deer, squirrels, and birds
- Related to the pea family and Native Americans use to eat the pods by boiling
- The inner bark was used to make tea for treating whooping cough and to help break up chest congestion

#### Tulip Poplar

- Not related to tulip or poplars, but called “tulip poplar” because of showy spring flowers
- Easy to identify – leaf in the shape of a Cat’s head
- Very straight trunk – used by Native Americans to make canoes
- Host plant for Tiger Swallowtail butterfly who lay their eggs on the leaves late in the year where they hatch in the spring

#### Cattails

- Reaching heights of nine feet, cattails are freshwater plants which are found in marshlands, ditches, and slow-moving shorelines.
- Most of the cattail plant is edible; the roots are very starchy, and many Native American cultures would grind the dry root up into meal. The young, leafy shoots that emerge during the spring can be cut off and cooked, and the young pollen spikes can be harvested and boiled like corn on the cob.

#### White Oak

- White Oak leaves have rounded lobes (smoother bark), Red Oak lobes are pointy (and long ridges in bark like ski slopes)
- Valuable food source – acorns eaten by squirrels, turkeys, Blue Jays
- White Oak acorns sweeter than Red – Red has tannins
- Native Americans use to eat acorns – boil to remove bitter taste and then grind into flour

#### Grey Squirrel Dray

- Multiple drays – easier to see in winter -made of twigs, leaves and bark and lined with moss and feathers
- Gather food, especially in the fall – will lick or rub a nut to apply a scent so that it can be found easily after it is buried
- Do not hibernate – though during cold weather or storms they may not leave nest for days
- Most active in morning and evening
- Squirrels were hunted by Cherokee and Creek using blow guns and darts.

#### Dogwood

- Characteristic checkerboard bark with showy early spring flowers, red fruit, and scarlet foliage in the autumn
- A hardwood with extremely shock-resistant wood, useful for making weaving shuttles, spools, small pulleys, mallet heads and jeweler’s blocks
- Native Americans used the bark and roots as a remedy for malaria and extracted a red dye from the roots

### American Chestnuts:

- The American Chestnut tree once ranged along the East coast from Main to Florida, encompassing over 200 million acres and provided food for Native cultures and wild game.
- Reaching a height of up to eighty feet\* and ten feet in diameter
- Related to the beech tree, the American Chestnut was considered by many historians and naturalist to be one of the most import forest trees within their range
- Cherokee used the American Chestnut's hard wood to make dugout canoes, their dried leaves for aiding in sore throats or colds, even making healing poultice for treating burns or cuts - when used as a flour, the Cherokee would crush the dried Chestnuts into a powder, baking it into a Chestnut cornbread.
- Beginning in the early 1900's (1904), the Chestnut Blight began to rapidly spread throughout the American Chestnut, wiping out nearly every American Chestnut tree. If you see a Chestnut Tree today, it is likely of the Chinese or Japanese variety, both of which are resistant to the blight. Within the last forty years, restoration of the American Chestnut has reestablished small, but vulnerable pockets of the American Chestnut and the Chestnut Blight remains closely monitored. Many new trees are genetically modified - cross bread with the Chinese or Japanese varieties to make them resistant

### Walnuts:

- The Black Walnut tree, or "sa-di" for walnuts, was another important resource for the Cherokee.
- The Black Walnut tree can reach a height of seventy feet and ten feet in diameter, with round green to black nuts the size of a ping-pong ball.
- Like chestnuts, the Black Walnut tree provided wood for tools, like handles for fishing gigs, or timber for dugout canoes.
- The casings for the walnuts, or the hulls, were used by Native Americans and early colonist as a brown dye
- Walnuts offered an equally tasty substitute for Kanuchi, a traditional Cherokee delicacy served as a stew made by pulverizing the nut and boiling with hominy

### **Activity 6: Model of Wattle and Daub**

**Overview:** Students will create a model of a Native American home using local and natural resources.

**Materials:** Educator made small bucket with 'daub' to show the texture; dowels, round bottoms, twine, raffia (grasses), vines (muscadine), green strips (river cane) and roof

**Daub:** include black dirt with twigs, clay, sawdust, water (for display only)

- The Cherokee and Creek did not live-in teepees - the Cherokee lived in permanent structures (point to picture above) called Wattle and Daub houses, or as the Cherokee called them "asi" - the Cherokee were agriculturalist, farming and gathering, so a permanent structure were needed
- Wattle and Daub refer to the construction method of creating a wattle, weaving stripped river cane, wood, and vines into a frame structure made with river cane, and then adding the daub, a natural, plaster-like substance comprised of mud, plant materials, and even animal dung.
- Roofs were made of stripped bark or thatched with native grass.
- In the center of a Wattle and Daub home would be a central fire pit, woven mats for sleeping, and baskets for storage and would include an extended family of parents, grandparents, and children living in the structure.

### **Model of Wattle and Daub:**

- Show photo of a wattle and daub along with the two models we have and explain the process.
- On the board list: Roof-stripped bark and thatched with native grasses
- Wattle and daub-constructed with stripped river cane, wood, vines into framed structure around river cane. Then, add daub-mud, animal dung, and plant material.

Working in a small group, students will experiment with the materials they are provided and decide which one works best. Allow time to put the roof on and see what the final product might look like. Encourage the teacher to take photos since these models will not be taken back to school with them.

**Rain plan: Cornhusk Dolls** (30 minutes)

Corn husks were used to make dolls for young children. These were items that were created by the leftover corn husks from the harvest period. These were local and natural resources and would also give the children a toy to play with.

**Prep beforehand:** Tie four cornhusks together with string (about 1 inch from the top) and then soak for about 20 minutes and pre-cut string. Ask one adult to assist with tying the string at a table. Write directions on the board.

**Directions:**

1. Gather a pre-bundled group of cornhusks (four husks) and point the bundle end down.
2. Fold down the corn husks to make a head. Peeling a banana
3. Next pinch the cornhusk below the head and tie a string to give the doll a neck.
4. Make sure the thread is pulled tightly. One effective method is to work with a partner – one person holds the doll while the other ties the string. Be careful not to pull too hard, as the thread may break. Trim long threads as needed.
5. Using a single corn husk. Roll it into a log shape (or pencil) and lift the other corn husks and place the rolled-up husk here, chest area. Using thread tie crisscross the arms and body (chest) area. It will look like an X. Your teacher will need to use a piece of tape to write students’ names on and then tape to corner of corn husk doll for identification purposes.
6. If time permits, and depending on your group, you can pinch the middle (to form a waist) and then tie again with thread.

Note: It is helpful to have a volunteer assist in handling out the corn husks and cutting more thread (as needed). Remember to soak the cornhusks for a few minutes to make them flexible.

**Additional Background Information**

Corn, beans, and squash are called the “three sisters.” Native Americans always inter-planted these three because they thrive together, much like three inseparable sisters. Each of the three sisters contributes something to the planting.

Native Americans farmed and grew crops for their food. They also understood and practiced farming techniques to preserve their soil. Growing food requires nutrients in the soil. Growing a variety of crops helps maintain soil nutrients. Various plants benefit one another. The Cherokee Nation existed for many years prior to the arrival of the white European/pioneers. Over time treaties were made which involved the loss of native lands. Some of the native people moved out west and relocated, others did not. The Cherokee were challenged to seek survival in this very different world. Under the leadership of Major Ridge and John Ross they established the Cherokee capital-New Echota in north Georgia (present day Calhoun). They made changes to their culture to assimilate and be more like the European settlers. This is evident in the constitution they wrote (modeling it after the US Constitution), the bicameral government and Supreme Court entities, and they established plantations, and a printing press.

With the discovery of gold in 1828 in Dahlonega there were many additional changes that were to come. As the Cherokee culture continued to live in parts of northern Georgia they sought to maintain their sovereign nation. This was challenged by the Indian Removal Act of 1830. There were two very different views on how to survive those who sought to maintain

their culture and another that sought to adapt and accept some of white men's way (assimilation). By making changes to their style of government, clothing, and economics they hope this would discourage further land acquisition by the US government.

John Ross was the principal chief of the Cherokee nation and friends with Major Ridge. He had a plantation and ferry business. He and Ridge established the capital of New Echota and worked tirelessly to support the Cherokee nation survival. However, they differed on how to do this. Major Ridge supported leaving and signing away lands through treaties whereas Ross sought to remain. Ross continued to fight for Cherokee sovereignty up until 1838 when it became impossible to stop the Trail of Tears.

Today the Cherokee Nation has a population of 300,000 citizens, the United Keetoowah Band of the Cherokee Indians, and the Eastern Band of the Cherokee Indians. The Eastern Band of the Cherokee Indians is located on the Qualla Boundary 57,000-acre tract of land in the mountains of North Carolina. One of the ways the Cherokee tried to assimilate is by developing their own written language. As a young man, Sequoyah had joined the Cherokee volunteers who fought under Andrew Jackson against the British in the War of 1812. In dealing with the Anglo soldiers and settlers, he became intrigued by their "talking leaves"-printed books that he realized somehow recorded human speech. In a brilliant leap of logic, Sequoyah comprehended the basic nature of symbolic representation of sounds and in 1809 began working on a similar system for the Cherokee language.

Ridiculed and misunderstood by most of the Cherokee, Sequoyah made slow progress (about 12 years) until he came up with the idea of representing each syllable in the language with a separate written character. By 1821, he had perfected his syllabary of 86 characters, a system that could be mastered in less than week. After obtaining the official endorsement of the Cherokee leadership, Sequoyah's invention was soon adopted throughout the Cherokee nation. This is the only example in history of a single person developing an entire written language. Where we have 26 letters in our alphabet the Cherokee language has 86. How many more letters is that than we have in our alphabet?

In 1827 the Cherokee Nation purchased a printing press to develop their own newspaper. The press was a union model, of a size called "small royal" made of cast iron and with spiral springs to hold up the plate. (Show video of union model and demonstrate printing process with Gutenberg model) Frames were placed on its flat bed and the type in them inked with wool-filled deerskin balls, because rollers had not then been put in general use. Because the Cherokee written language had just been invented, there were no stamps with the Cherokee letters, so they had to be specially cut, molded, and made. To the print shop of Baker and Greene, of Boston, went a sheet of paper bearing the strange symbols which comprised Sequoyah's alphabet. Punches were made and types cast. The Board also purchased a font of English type, and arrangements were made for the purchase of a press of "a very superior kind" (the printing press mentioned above).

The Cherokee Phoenix represented a milestone in the continuing transformation of the Cherokee Nation. In the mid-1820s the Cherokee Nation was under pressure from the surrounding states, primarily Georgia, to either relinquish their sovereignty or move to a territory west of the Mississippi River. The General Council established the Cherokee Phoenix newspaper as a tool for eliciting widespread public support and for keeping the Cherokee Nation united and informed during this crisis. As a result of a fund-raising and publicity tour, the Phoenix attracted subscribers in nearly all parts of the United States and in Europe.

The Cherokee Phoenix was the first Native American newspaper and the first bilingual publication in North America. The first issue of the newspaper was printed on Feb. 21, 1828, in New Echota, Cherokee Nation (now Georgia), and edited by Elias Boudinot. It was printed in English and Cherokee, using the Cherokee syllabary created by Sequoyah.

In the 1830s Boudinot and Principal Chief John Ross used the Cherokee Phoenix to editorialize against the Indian Removal Act of 1830 and the growing encroachment and harassment of settlers in Georgia. As pressure for the Cherokee to leave Georgia increased, Boudinot changed his stance and began to advocate for the removal of Cherokee to the west. At first, Chief Ross supported Boudinot's opposing view but by 1832 the two leaders' differences caused them to split and Boudinot resigned.

This technology was so powerful that in August 1835 a contingent of the Georgia Guard took the printing press to prevent any further publication.

While technology has changed, today the Cherokee Phoenix is still in print. In January 2007, the newspaper launched its first website. The current readership of the Cherokee Phoenix is approximately 40,000 and the paper is read nationally and internationally.

### **Potential Future Ideas for Programs**

Game where students sit on colored disks and become part of the seven different clans of the Cherokee. They will then disperse to tables where there will be items displayed that represent the importance of each tribe. These items will be modern day items and students will take a few mins to examine items and then share what they think their clan did to benefit the nation.

### **References:**

- The Old Beloved Path – William W. Winn (1992)
- [Qualla Arts and Crafts Mutual, Inc. – Bead working](#)
- [Sequoyah Early Life – Georgia Historical Society](#)

## 3<sup>rd</sup> Grade Adapting to Georgia's Habitats and Regions

Sandy Aceto, 2020

### **Website Description:**

Through hands-on activities students investigate the living and non-living elements unique to each region of Georgia. Students cooperatively research the physical features of a few Georgia animal residents and uncover how these traits allow them to survive and thrive in their region. A hands-in-mud/clay activity provides students with evidence on how animals' physical adaptations help them survive, and an exploratory hike in the Gwinnett Environmental and Heritage Center forest will give the class up-close observations of the physical makeup of a few species of the Piedmont flora which determines the region or regions they call home.

Gwinnett County Public Schools Academic Knowledge and Skills:

- Life Science: Obtain, evaluate, and communicate information about the similarities and differences between plants, animals, and habitats (mountains, piedmont, marsh/swamp, coast, ocean) found within Georgia's geographic regions (Blue Ridge, Appalachian Plateau, Valley and Ridge, Piedmont, Coastal Plains).
- Enrich: Construct and explanation of features/adaptations of animals that help them to survive.

Four 30-minute activities:

- Regions Sorting Map Activity
- Piedmont Region: Build a Beaver Dam
- Habitat Hike
- Birds of a Feather & Migration Headache activities

### **Activity 1: Regions Sorting Map Activity**

Students will break into 5 groups and discover the unique living and non-living features of the five regions of Georgia.

### **Supplies:**

- Large Georgia floor map
- Plastic colored discs, five colors, one per student (in bin)
- Five clipboards
- Classroom set up with six tables in u-shape
- Five Georgia regions soil jars

Break class into five groups by having students stand on plastic-colored circles when they arrive at the map (same colors as the regions on the map: red, purple, yellow, blue, and green). Groups of students will then go to their region color area and study the data on one of the 5 regions of Georgia, collect items that represent that region from the collection on nearby tables, place the items on the large floor map, then return to the colored discs. The final learning point on these individual region clipboards is to discover a few of the animals in their region. To do this they need to work together to stack the four wood blocks in a way that identifies the five animals in their region. Once they identify the five animals they go collect their photos off the animal table.

Once all students have collected all items and placed them in their region and have returned to their discs, the GEHC Educator will quiz the class about unique features of their regions of Georgia.

### **Appalachian Plateau**

- Soil – silty loam
- Rocks – Sandstone & Limestone
- Visit – Lake Winnepesaukah Amusement park photo

- Fact – The Appalachian Plateau valley runs from Alabama to New York
- Fact – smallest region of Georgia
- Animals – hellbender salamander, black bear, red fox, opossum, coyote

### **Valley & Ridge**

- Soil – reddish brown loam
- Rocks – marble, sandstone, shale
- Crops – corn, soybeans, wheat, cotton
- Visit – Etowah Mounds
- Fact – Coosa River Basin: home to 80 species of snails
- Fact – Amicalola Falls, tallest waterfall in GA spilling at 720 feet
- Animals – black bear, red fox, opossum, coyote, squirrel

### **Blue Ridge**

- Soil – brown loam
- Rocks – Schist, granite
- Visit – Brasstown Bald, the highest mountain/elevation in Georgia
- Fact – Chattahoochee River begins here
- Fact – Springer Mountain, the beginning of the Appalachian Trail
- Crops – Perfect climate for growing apples
- Animals – black bear, red fox, opossum, coyote, squirrel

### **Piedmont**

- Soil – red clay (iron oxide)
- Rocks – granite gneiss
- Visit – World of Coca-Cola in Atlanta
- Fact – Has greatest population in Georgia
- Fact – Poultry Capitol of the World = Gainesville
- Animals – black bear, red fox, opossum, coyote, squirrel

### **Coastal Plain**

- Soil – sand
- Rocks – limestone, sand & gravel
- Crops – peaches, peanuts & pecans
- Plants – magnolia trees & longleaf pines
- Visit – Okefenokee Swamp
- Fact – 100 miles of coastline
- Fact – Georgia's largest region
- Animals – alligator, black bear, red fox, opossum, coyote

## **Activity 2: Piedmont Region: Build a Beaver Dam**

Through an outside, in the forest, hands-in-mud activity, students reveal evidence of how the American Beaver uses his physical and behavioral adaptations to survive in the Piedmont Region of Georgia.

### **Indoor Rain Plan: “Build a Skull”**

Students make a take-home skull out of clay and discover skull features of nocturnal and diurnal animals as well as the carnivores and herbivores.

#### **Supplies:**

- Pre-collect sticks at each site (need a lot)
- Prep/dig some soil before class
- Trays (one per two students)
- Buckets of water to make mud at each site
- Cup(s) to test the dams after they are built
- Water or hose and paper towels at each site to clean hands
- Plastic garbage bags for paper towels
- Picture cards: Animals who come to the water after dam is built
- Beaver box

### **Activity 3: Habitat Hike**

Students hike the trails and take an up-close look at a few of the plants found in the Piedmont Region, investigate their physical features, and hypothesize how some plants here might not survive in other regions of Georgia! Then discuss a few plants in other regions that are not here (longleaf pine; mountain laurel). Hike to forest, meadow, and stream, comparing habitats. Discuss which animals live in each habitat. Bring an animal skin to include in your forest interpretation experience.

### **Activity 4: Birds of a Feather & Migration Headache Activities**

#### **Supplies:**

- Clipboards for bird picture cards
- Plastic colored discs (4<sup>th</sup> grade black cabinet)

#### **Birds of a Feather Activity**

The student will read and learn about 1 of 3 specific adaptations of different species of birds: the wing, the beak and the foot. Wings and beaks are almost completely unique to birds. What might be some exceptions? (e.g., bats have wings, turtles have beaks). They will also discover the type of ecosystem that their bird is adapted to thrive in, and how birds can coexist in a niche.

Place the 10 bird pictures on clipboards in a large ring outdoors. Arrange the birds adjacent to each other by category (there are three water birds, two birds of prey, and five perching birds). Place a container with the 30 bird part cards just outside the ring (Adapt based on expected class size; e.g., if the group will have 27 students, remove one bird picture and its respective three bird part cards).

To begin the game, line the students up outside the bird ring. As they enter the ring, each must grab one bird part card (a beak, wing, or foot). Once inside, they must try to find the bird that their part belongs to. Allow time for all students to find their bird and help those who are struggling as several birds have similar parts. Check to make sure all birds have their appropriate parts (the cards are all color-coded for easy identification).

When everybody is properly matched with their bird, have them look at their neighboring birds. Do they share anything in common such as particular adaptations or a shared food or ecosystem type? Let the students share what they notice they

have in common with their neighbors, and then what they have that is different that allows each bird to occupy its own niche in a shared habitat so that they are not all fighting for the exact same resources.

If time allows, let the students use their imagination. Instruct them to randomly find a new group with a beak, wing, and foot belonging to different birds. If their new group were a real bird, what would it be adapted for? Where would it live? What would it eat? Would this bird be able to survive in real life, or would that particular combination of adaptations lead to extinction?

### **Migration Headache Activity (Project WET adaptation)**

Animals migrate at different times of day. Shorebirds, hawks, ducks, geese, and some songbirds migrate during daylight hours. The majority of songbirds, however, migrate at night. These birds (including warblers, vireos, thrushes, and sparrows) start migrating just after the sun set and then fly for eight to ten hours. Around sunrise, birds find a resting place along the route and spend the next day or two eating and resting. Each animal species has its own route and strategy for how and when they migrate, but two important things must be included in their migration to be successful – food and rest.

Think of migration like this: Suppose your family is taking a car trip from Georgia to New York and you'll be traveling along the east coast. Along the way, you'll need to stop for gas, eat, and rest. Looking at a map, your family decides to travel along Interstate 95 the entire trip so that there will be lots of gas stations, restaurants, and hotels. However, if your dad decides to take a back road instead, it may be harder to find a gas station, McDonald's, or Holiday Inn and you might have to travel longer distances to find those things. Birds must find appropriate habitats that have food and safe places to rest along their chosen route. (Adapted from [New Jersey Audubon](#).)

### **Procedure:**

Students will become songbirds that are migrating south for the winter. Have students stand on a colored disc on the first batch of discs and explain that this is their warm season home. As you discussed prior to this game, birds need to have food and rest along their migratory route. To have a successful migration, students must travel from the warm season habitat to their winter nesting habitat and back to the warm season habitat. The students should notice that the disc they are standing behind has a color, as do all the other plates in the play area. Since not all birds travel the same route, the students are free to land on any plate that is the same color as their starting plate when they migrate. However, be warned that not all plates are suitable habitats for the birds to land at during their migration!

Give the signal for the students to migrate to the stopover habitat in between. Students should all be standing on a plate that is the same color as what they started out on (one student per plate). Now comes the fun part: read a few migration scenarios – some safe and some unsafe – then ask the students to turn over their plate and see what it says. Depending on what the plate says, students will either stay in the game or sit down on their disc. Next, give the signal to migrate again and let students travel to the winter nesting habitat. Once they have all arrived, read a few more scenarios and then have the students turn over the plates at the winter nesting habitat to see if they arrived safely. Unsafe birds sit on discs, and the remaining students now must prepare to travel all the way back to their warm season habitat, flying safely by their friends that didn't make it. Here, you can choose to add some birds (students) that didn't make the initial journey to the nesting habitat and have them become young birds that are ready to fly back with their parents. Tell the students to beware because these young birds need the same things (food and rest) as the adults when migrating. There is a chance that they may not survive the entire migration back. If you end up with zero or only one bird surviving for one of the species, then that species has gone extinct.

### **Migration Scenarios:**

- Skyscrapers left lights on at night and some migrating birds flew into them and died. (Solution: turn lights off or use blinds to block nighttime lighting)
- Each year millions of cats are left outside and have attacked resting migratory birds. (Solution: bring cats inside at night)
- Wetlands that were scheduled to be destroyed and their land developed on are now protected by law to remain wetlands.

- Climate Change has increased the intensity and duration of storms. High speed winds have made the migratory flight across the Gulf of Mexico almost impossible for some bird species. (Solution: make better decisions that slow down climate change)
- Fertilizers and pesticides are available for farmers that have safer ingredients that don't harm birds who accidentally ingest them.
- A swamp has been dug out and built into a boat marina. (Solution: keep wetlands as safe rest areas for migrating birds!)
- A large hotel was built along an empty one-mile stretch of coastal beach. (Solution: build hotels across the street and people can walk to the beach)
- Several years of rain and snow have refilled the water supply, thus increasing the food supply for migratory birds.
- A timber company has agreed to not cut down a forested wetland in exchange for a tax credit!
- The owners of a fragile wetland area agree to place their land in a wetland conservation program, keeping builders out.
- A golf course replaces a 200-acre grassland that was a regular migration stopover, and "confused" migratory birds land to rest. Some are eaten by predators, while others ingest grasses loaded with fertilizers and become ill.

Rain Plan: Adaptations Theater, Alligator Adaptations, and Skins & Skulls

### **Adaptations Theater**

Students work in teams of three to act out either a physical or behavioral adaptation (that they have been secretly assigned with a card), and the rest of the class try to figure out which adaptation they are performing. Groups then share with the class the animals and plants that use their adaptation to survive.

### **Supplies:**

- White paper
- Crayons
- Scissors
- Paper towel rolls

**Opossums:** Lie down and play dead to avoid getting eaten by predators Viceroy Butterfly and Monarch Butterfly – viceroy has copied the design of the monarch over time to avoid being eaten, this is called mimicry

**Rabbits:** Can change their fur color in the winter to hide, called camouflage

**Owls:** Special feathers give them silent flight hunting

**Frogs and pine trees:** Can make their own anti-freeze to avoid freezing in the winter

**Deer:** Grow thicker fur in the winter (with air inside each of the hairs) to keep them warm

**Beaver:** Have sharp, wedged teeth that allow them to cut through wood

**Hummingbirds:** Fly all the way to Mexico to find their food during the winter, called migration

**Bears:** Slow down their hearts and breathe and sleep during colder months when there is less food available, called hibernation

**Striped skunks:** Have a defensive spray to keep their predators away Snakes have a split tongue that helps them smell in two directions

**Alligator:** Can hold their breath a long time so they can wait underwater for food to pass by

### **Alligator Adaptations**

Discuss the many physical adaptations of the alligator, who has survived from the days of the dinosaur.

#### **Supplies:**

- Alligator skull and claw
- Protective coating on the eyes
- Bumpy back to hide at the top of the water
- Can close his ears and throat when underwater
- Holds it breath a long time under water to wait for prey
- Webbed feet for swimming and standing in mucky mud
- Sharp claws help with digging nest and new alligator hole
- Powerful jaw or teeth to capture and hold prey
- Strong tail that steers and holds fat and extra calories in winter
- Waterproof skin

#### **Skins & Skulls**

Give students time to go around and touch the skins and skulls collection.