Dallas Township Park Master Plan

Completed April 2018

BARRY ISETT & associates INC
MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS

Figure 1, aerial view of park. Title Page, view of baseball field.

DALLAS TOWNSHIP PARK MASTER PLAN

Prepared For

Dallas Township
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Dallas, Pennsylvania 18612
Luzerne County, Pennsylvania

Prepared By

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Table of Contents 1
Introduction 3
Planning Process 5
Public Participation
Inventory of Existing Conditions 7
Introduction
Vegetation and Natural Areas
Pedestrian Circulation
Parking and Vehicular Circulation
Sago Street and Southside Avenue
Baseball Field and Courts
Playground
Site Utilities and Infrastructure
Site Drainage
Site Furnishings
Signage
Needs Assessment 13
Introduction
Back Mountain Area Council of Governments
Back Mountain Trail Feasibility Study
Dallas Township Master Plan
Luzerne/Lackawanna Open Space, Greenways, and Outdoor Recreation Plan
Common Recreation Goals
Dallas Township Park Steering Committee
Conceptual Design Alternatives 17
Concept Plan One
Concept Plan Two
Concept Plan Three
Mapping 24
Existing Features Plan
Inventory and Analysis of Natural Features
Inventory and Analysis of Circulation Patterns
Inventory and Analysis of Regional Recreation Connections
Master Plan Recommendations
Underlying Design Concept
Design Element

Phased Tasks and Opinions of Probable Costs **42**
Cost Opinion
Applicable Regulations
Phasing Plan
Phased Areas 1-6
Operations and Management **61**
Background
Management Plan Updates
Maintenance Challenges and Opportunities
Maintenance Standards
Grant Sources **66**
Federal Grants
State Grants
Foundations
Non-Government Grants
Appendix

Introduction

Figure 2, view of playground.

Nestled in the heart of the Back Mountain, Dallas Township Park encompasses nearly 6 acres of unique and ecologically diverse land within Dallas Township, Luzerne County, Pennsylvania. The site provides for an array of landscapes ranging from open areas to woodland to riparian woodland. Toby Creek flows through the park and bisects it creating both an opportunity and a challenge.

The recommendations and findings contained within the Dallas Township Park Master Plan result from a collaborative public participation process. These findings may change as different components of the master plan are implemented and the program for the park expands.

The initial goals of the master plan sought to address the following:

1. Evaluate the park's existing resources
2. Create a plan for future improvements
3. Protect the creek and adjacent natural features
4. Review the park's connectivity to surrounding neighborhoods

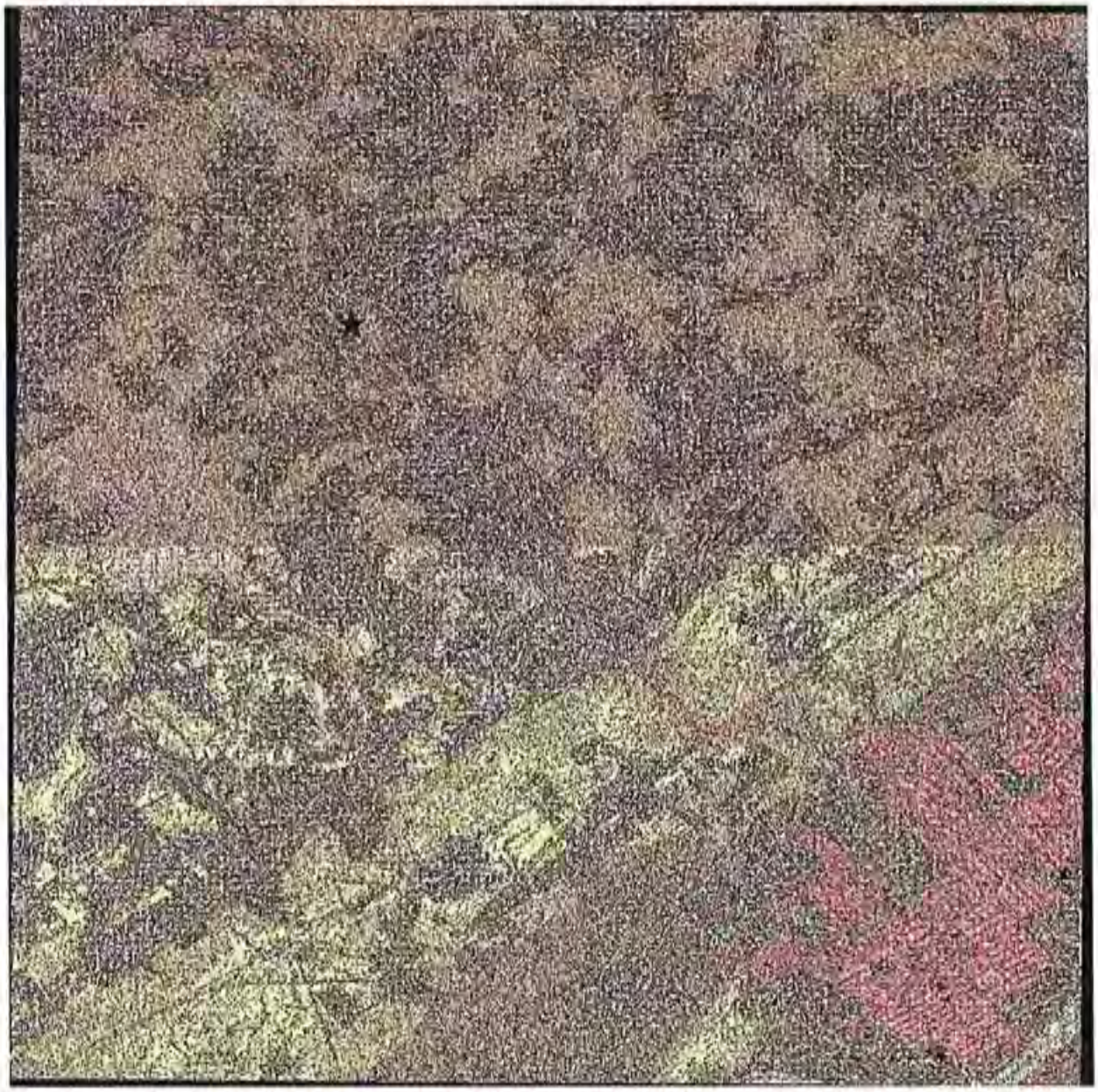


Figure 3, map showing location of park within Township. Source: USGS Topographical Map.

Planning Process

Figure 4, view of baseball field backstop.

The Dallas Township Park Master Plan began as a response to the growing community needs for improved recreational facilities. The Township supervisors saw the park as a "diamond in the rough" due to its secluded setting but availability to provide varied recreational opportunities within a short distance of many users. The Township applied for and received a grant from the Pennsylvania Department of Conservation of Natural Resources to complete a park master plan process for Dallas Township Park in conjunction with Kunkle Park, a second park in Dallas Township.

Following a competitive selection process, Dallas Township retained Barry Isett & Associates, Inc. (Isett) to prepare the master plan. A single planning process was conducted for both park plans, to create a more comprehensive recreational program for the Township. Throughout the planning process, Isett utilized information and feedback provided by the park committee and Township supervisors. The committee involved members of the Township Board of Supervisors, Dallas School District, and residents of the Township.

In December 2015, Isett began its field investigation of the site and adjacent properties. The work included an inventory of existing site conditions, identification of natural resources, an assessment of existing structures and site amenities, and verification of base map data. Existing documentation on the site was gathered and reviewed to complement background information.

As part of the analysis phase, the committee reviewed the following:

- Existing park amenities, their condition and need
- Opportunities for expanded or new recreational offerings
- Site improvements within and connecting to the park
- Programming, phased development, and maintenance

Public Participation

No master plan can be complete without input from members of the community. The public had several opportunities to provide input on the plan. Three public meetings were held, the first of which was on August 2016; the second on April 2017; and the third on September 2017. In addition to these meetings, a survey was available to the public both online and in paper form. The survey contained questions designed to collect data on demographics, usage of the existing park, and proposed amenities and activities. Over 300 people responded to this survey and data collected helped drive design goals. The results of the survey can be found in the appendix.

In addition to these meetings and survey, several committee meetings were held. The first meeting was held in January 2016; the second on May 2016; the third on August 2016; and the fourth on August 2017. Key person interviews included members of the Township Board of Supervisors, Police Department, Township Road Department, Dallas School District, and Township residents. Meeting notes can be found in the appendix.

Based on the field reconnaissance and advisory committee discussions, the planning team developed conceptual designs to meet the community's needs. Public presentations and committee input on the concept plans resulted in a draft master plan which outlines improvements to the park. Further public, supervisor, and committee input resulted in the finalized report contained herein.

Inventory of Existing Conditions

Figure 5, view of asphalt courts.

Introduction

The triangular shaped Dallas Township Park (Park) is bound by residential properties to the southwest and northwest and by State Route 309 to the east. Topographically, the park sits down in a valley between the highway and the residential neighborhood to the northwest. Toby Creek bisects the park from north to south and serves as the division line between the eastern and western halves of the park.

There are two park entrances; a west entrance off Sago Street serves the western side of the park, and an east entrance off Southside Avenue serves the eastern side of the park.

The western half of the park contains a small baseball field, basketball court, another paved court, walking trail, and gravel parking area. The eastern half primarily features old play equipment, a roof covered picnic table, and stormwater infrastructure within a wooded setting.

Vegetation and Natural Areas

Approximately 80% of the site is wooded. The two main woodland areas are lowland woodlands that border Toby Creek and upland woodlands on the steep slopes that border the park. The lowland woodlands contain mostly birch (Betula), oak (Quercus), maple (Acer) and shrubs like alder (Alnus) along with grasses and ferns. The upland woodlands contain primarily red and white oaks (Quercus), ash (Fraxinus), maples (Acer), and shrubs such as sumac (Rhus) and witch-hazel (Hamamelis).

Figure 6, view of access road and streambank.

There is a large colony of Japanese Knotweed located along the access road, which goes into the park near the stream, and continues along the streambank on both sides. This Knotweed colony is highly invasive and is choking out the native plant species that would normally populate the streambank. As such, this colony negatively impacts the health of the streambank and the food and shelter for animals.

Toby Creek is a designated Cold-Water Fishery (CWF) and is a prime feature of the park. The streambed sits several feet below the bank. The water flow is shallow enough during the summer for people to walk over to get from one side of the park to the other. During heavy rain events, the creek erodes the steep banks, washing sediment downstream.

Figure 7, view of wooded trail on west side.

Pedestrian Circulation

Two trails exist in the park currently. On the western side, one defined trail that runs from the park entrance off Sago Street along the western boundary of the park, until it meets the creek towards the northern point of the park. The first half of this trail lies within woodland and has a wood mulch surface with the last half being open with a grass surface. This trail is about six feet wide and follows the existing contours.

A second less defined trail exists on the eastern half off the park. This twenty-four-foot wide trail lies entirely within woodland and used to be an old logging road. It starts at Southside Avenue and continues parallel to SR 309 northward before terminating near a stormpipe discharge channel.

Other than the open woodland floor and open lawn areas, no other trails exist in the park.

Parking and Vehicular Circulation

There are two parking areas, each serving one half of the park. The first is accessed off Sago Street and accommodates 20-25 cars. During heavy use, motorists often park along the side of the access road further accommodating another 5-6 cars. This parking area has a gravel surface with spaces unmarked.

The parking area serving the eastern half of the park including the playground is small and can only provide enough space for 5-8 cars. This parking area is unimproved as a compacted dirt surface.

Other than the access road that comes off Sago Street and continues into the park around the baseball field, there is no other vehicular circulation or access into the interior of the park. On average, either parking area only contains a few cars at any one time. However, Little League baseball teams occasionally use the baseball field for practice, in which case, the western parking area can be filled. Neither parking area is lit for evening use.

Figure 8, view of playground parking lot and Southside Ave.

Sago Street and Southside Avenue

Along the park's western border, Sago Street is a narrow two-lane residential street with portions of it being left unpaved as lots are still being constructed. The park's main western entrance is from this street which connects to Church Street to the south and SR 309 to the north. Stormwater runoff from Sago Street is an issue with heavy sheet flows eroding deep channels on the edge of the access drive.

Southside Avenue is a dead-end residential street that terminates at the eastern side of the park. It runs parallel to SR 309 and is paved to approx. 24' in width. Stormwater from SR 309 is piped along the north side of Southside Avenue before its outfall near Toby Creek. The resulting volume of water has eroded the stream bank away in this area.

There is no signage on either street orienting visitors to the park, so most folks had issues finding the park on their first trip.

Baseball Field and Courts

A small non-regulation baseball field occupies most of the open space on the western side of the park. This field is mainly used for pick-up games and occasionally used as a practice field by neighboring Little League teams. The backstop is tucked into the corner of the park, with the chainlink backstop and home plate in front of a steep wooded slope. An 80' section of old 4' high chainlink fence delineates the outfield. A timber guardrail runs along the first base line for approx. 120'. Several trees also line the first base line for about 50'. The steep wooded slope continues along the third base line the entire length of the field and creeps in slightly which pushes the baselines out into the field more. The field slopes at a gentle 2.0% towards the creek and is covered in thick turfgrass. A low area near home plate collects runoff from the hillside behind the backstop and drains very slowly. The field is not lit.

Figure 9, view of baseball field from parking lot.

Figure 10, view of basketball court.

Adjacent to the baseball field is a non-regulation basketball court with an uneven asphalt surface caused by tree roots. The court is approx. 75' by 40' and features old hoops. A second asphalt court is roughly that same size but doesn't have any equipment on it, so it gets used as a makeshift skating area.

Site Utilities and Infrastructure

Water – There are no known water lines that run through the park.

Sanitary – There are no known sanitary lines that run through the park.

Electric – Power to the park is supplied by overhead electrical lines from utility poles near the park's entrances. There is no known underground conduit running into the interior of the park. A utility line easement runs along the eastern boundary of the park along SR 309.

Lighting – There are very few lights in the park and those that are existing are located near the park's two entrances illuminating parking areas and signage.

Gas – A post marking the location for an underground gas line is found near the entrance off Southside Avenue. The line likely runs along the street and into the park. It is unknown if the line splits off in a different direction from this post.

Figure 11, view of gas pipeline.

Stormwater – An 18" concrete pipe runs along Southside Avenue and continues into the park for about 150' before it outfalls into an eroded deep channel that drains into Toby Creek. This pipe carries stormwater from SR 309.

Miscellaneous – There are a few old structures existing within the park. An old, small concrete foundation is located just off the park entrance off Southside Avenue. The size is approx. 10'x6' and sticks out 6" above grade. An old concrete retaining wall is found on the western streambank near the basketball courts. This area is very steep and a footpath to cross the creek, as it is narrow through here, is also found here.

Figure 12, view of stormpipe outfall and eroded streambank.

Site Drainage

The park is within the Toby Creek watershed which empties into the Susquehanna River. Toby Creek flows through the site and is designated as a cold-water fishery (CWF) stream. Since the creek flows through the park and the park itself is situated in a valley between residential neighborhoods, stormwater from these neighborhoods flows into the park and into the stream. There are three discharge points for the stormwater. One point is at the very northern end of the park. A stormwater outfall discharges into an area to the east of the creek and during heavy rainfall events, floods this area creating a temporary wet condition. The second point is a stormpipe the runs along Southside Avenue and into the park for approx. 150' before discharging into a channel that is heavily eroded and in need of being restored. The third point is sheetflow from Sago Street at the park's western entrance. Stormwater exits the roadway and enters the park creating eroded channels along the edge of the access road and continues until it reaches the creek about 300' away.

Figure 13, view of Toby Creek streambed.

The stream channel widens as it continues towards the southern boundary of the park. It is a few feet wide with shallow banks towards the northern boundary and widens to approx. 10-12' in width with steep banks roughly 6-8' in height near the southern boundary. The northern end of the park is more wooded and flatter and as such infiltrates water more efficiently than the more developed southern portion of the park. Improvements to the park will need to address stormwater runoff and erosion mitigation to the streambank.

Site Furnishings

Trash Receptacles – One receptacle is located at the park entrance off Sago Street on the eastern half of the park. The bin is a 30 gal. stainless steel with the chained lid. It was in like-new condition at the time of the field work. There is no separate bin for recycling.

Pet Waste Station – There is a dog waste station located next to the refuse bin. The pet waste bin is attached to signage for pet waste removal. Both the signage and station are new and in good condition. The station contains a bin and container for litter bags.

Picnic Tables – There is one picnic table located on the eastern portion of the park near the entrance with Southside Avenue. It is covered with a roof and is located near the playground. The deteriorated wood table is littered with graffiti. The table is six feet wide and is attached to two 6x6 timber posts which are cemented into the ground.

Figure 14, view of pet waste station.

Signage

Entrance Signs – There is no signage welcoming visitors to the park.

Regulatory/Warning Signs – There are several signs at both entrances warning visitors of rules and regulations. Both entrances contain signage pertaining to: no motorized vehicles in park, no dumping, no smoking, pet waste removal, and premises being monitored by video camera. In addition to these, the Sago Street entrance contains park hours and Land & Water Conservation Fund sign. The signage is consistent between both entrances but not with each sign. The signs are visible and clear of any brush or other obstructions.

Interpretive/Directional/Wayfinding – There are no signs pertaining to interpretation or education, direction, or wayfinding. The opportunities exist to install some of these types of signs.

Figure 15, view of park signage.

NEEDS ASSESSMENT

Figure 16, view of old swing set.

Introduction

The needs assessment phase of any park master planning process determines the public's recreational wants and interests while balancing the need to conserve natural and historical features unique to the area. To obtain this information, Isett relied upon a variety of sources including information obtained from the study committee, existing reports, public survey, and public meetings. This section provides a summary of the information gathered during the process.

The following were the most common programming and recreational needs identified from the public survey:

Nature Playground – A nature playground is one that features natural elements instead of man-made play structures. Amenities such as logs, stumps, rocks, plantings, natural terrain, etc., are used to allow children to invent their own forms of play. Some of the material will be reused during the construction process to shape the play area.

Skating Area – A sizeable portion of respondents stated that they would like to see a designated area for skating. This area would provide unique obstacles, ramps, grinding rails, and bowls for users. A key focus would be to provide an area that would include skateboarders, long boarders, inline skaters, and BMX riders.

Back Mountain Area Council of Governments Comprehensive Plan

The Back Mountain Area Council of Governments Comprehensive Plan was completed in 2006 to guide the Back Mountain area, which includes Dallas Township, in future development. Volume 3 is an Open Space Greenways Outdoor Recreation Master Plan that focuses on outlining the Back Mountain area's natural, cultural, and social resources and developing an overall plan to utilize and improve upon these resources. The plan calls for the conservation and preservation of open space, establishing connections with existing greenways and plan for future ones, and provide for outdoor recreational services and facilities. The plan listed Dallas Borough as a hub for eco-tourism. Dallas Township Park's proximity to the borough will play an important part in the goals and objectives outlined in this plan.

Dallas Township Comprehensive Plan

The Dallas Township Comprehensive Plan was adopted in 2013 and outlined plans for future development in the Township. The plan called for the preservation of existing open space especially regarding improving water quality. In this regard, Dallas Township Park will be a priority for the vision of this plan to restore Toby Creek and conserve the area for stormwater management.

Back Mountain Trail Feasibility Study

The Back Mountain Trail Feasibility Study was completed in 2014 to examine possible expansion of the Back Mountain Trail. The existing trail uses abandoned railroad lines and public rights-of-way to provide a four mile trail from Dallas Township to Luzerne Borough. The Study determined the routing of an abandoned railroad line and its present ownership and identified possible routes for new sections of trail. The Study identified Dallas Township Park as a node and proposed connecting with it.

Open Space, Greenways, and Outdoor Recreation Master Plan for Luzerne and Lackawanna Counties

The Open Space, Greenways, and Outdoor Recreation Master Plan for Luzerne and Lackawanna Counties (OSGORMP) was completed in 2004 and identified existing recreational areas and potential opportunities for growth. The plan outlined existing locations for preservation, identified possible linkages to recreational facilities, and defined various recreational activities to address the growing needs of an increasingly diverse population. Improvements to Dallas Township Park will meet the goals of this plan.

Common Recreational Goals

While reviewing the Back Mountain Area Council of Governments Comprehensive Plan, Dallas Township Comprehensive Plan, Back Mountain Trail Feasibility Study, and the Luzerne/Lackawanna OSGORMP,

Isett found recreational goals that overlapped with each other, the public survey, and public meetings conducted for the Dallas Township Park Master Plan. Similar recreational goals included the following:

- Preserve open space from development
- Conserve and improve areas along waterways to improve water quality and prevent damaging flooding and erosion
- Establish links and close gaps in trails to create a network of greenways connecting municipalities
- Expand recreational opportunities through offering varied activities within parks
- Promote the health and well-being of individuals through outdoor recreation

Dallas Township Park Steering Committee

The park steering committee provided valuable insight throughout the planning process. Members offered information on recreational needs, visitor trends, operation and maintenance of facilities, issues and requests from adjacent property owners, and current and future park programs. The committee members included representatives of the Township Board of Supervisors, Dallas School District, local business owners, Township residents, the Anthracite Scenic Trails Association, and the DCNR Bureau of Recreation Conservation Regional Advisor. The following section summarizes the key issues and themes discussed during these meetings:

New Playground - The existing playground in the park has been reduced to one swing set and a covered picnic table. The swing set is old and in need of replacement. The picnic table is aging and covered in vandalism. There is no safety surface or defined edging. A priority of the committee, and supported by the public survey and meetings, was to build a new playground. The committee would like to see a natural playground be built; one that incorporates the surrounding environment in its design and play elements. The committee would like to see a designated parking lot and walkway to support the playground.

Trails - The park features a nicely maintained walking trail on the western side of the park. This trail is often utilized and enjoyed. The committee would like to see additional trails be built creating the possibility of a loop for users to view the entire park and to lengthen stays in the park.

Additional Activities - Presently, the park supports baseball and basketball among its sporting facilities. The walking trail, swing set, and picnic table are the other amenities available to users. The committee would like to see a variety of activities developed to meet the needs of all age groups and increase park usage and enjoyment. Such amenities and activities would include:

- Sporting fields/courts
- Playground
- Trails
- Pavilion
- Restrooms
- Skate Park
- Parking

The following were the most common programming and recreational needs identified in the public survey and during public meetings:

- Nature Playground – A nature playground differs from a traditional playground in that it utilizes the natural elements of the site for play rather than relying on man-made structures. A nature playground uses logs, stumps, rocks, and the site's natural terrain to allow children to use their imaginations for play. Many of the materials for the park would be sourced from the site and surrounding area.
- Trails – The walking trail is frequently utilized by users and was one of the top requested amenities in the public survey. Respondents of the survey and attendees of the public meeting requested more trails and connections to be made into a loop trail.
- Skate Park – A sizable contingent requested a designated area for skating in the park. Skateboarders reported in the survey and voiced at meetings a need for a place to skate within

the community and would like to see one in the park. The skating area would likely be constructed of concrete and feature different ramps, jumps, and other things to accommodate skateboarders, longboarders, inline skaters, and BMX riders.

- Pavilion – A large pavilion was requested by respondents and attendees. A place to host events, picnics, outdoor programs, etc. was high on people's lists. The pavilion would be sized to accommodate a school group at a minimum. A concrete pad would be constructed as a base with the pavilion, picnic tables, and other supporting structures built on top.
- Restrooms – Restrooms was another highly desired amenity. With the expected increase in park amenities, restrooms will be a priority. Restrooms could be incorporated in the construction of a pavilion or become their own separate structure. Contracting for temporary portable restroom may be needed to meet the need until a restroom facility is built.
- Dog Park – A specified unleash area for dogs was another highly requested amenity. A sizable portion of survey respondents stated that they visit the park with their dog(s). Issues arise with owners allowing their dog to be off-leash in the park. Currently, there is no dog park within reasonable distance from the Township. Owners who wish to take their pets to a dog park must drive well outside of the area. This off-leash area would be fenced-in and feature play items for the dogs and amenities to service them. Noise from the park could be an issue since the park is near residential neighborhoods. During public meetings, some attendees raised concerns that the dog park could conflict with other activities in the park and deter visitors.
- Parking Lot – There is currently no defined parking areas on either side of the park. Visitors park in undefined gravel areas. Survey respondents and meeting attendees specified that they would like to see defined parking lots, preferably paved. Expected increases in park usage would dictate that the parking lot will need to house many more vehicles that than park currently does. Stormwater management will need to be incorporated into the design due to the proximity to Toby Creek.

Strengthen Connections to Surrounding Neighborhoods - Residential neighborhoods surround the park and for the most part, do not have sidewalks. Several streets are dead end, so vehicular use is light, but the need for safe pedestrian access will reduce the need for parking and increase use by those closest to the park. Creating a safe connection to these neighborhoods will be important.

Dallas Borough – The park is located near the center of Dallas Borough. Sidewalks exist along Church Street which connects to Lakeside Drive which runs to the park. However, these sidewalks need repair and completed connection. Establishing a stronger connection to the borough can help increase usage in the park with people walking from town.

Misericordia University – The university is located on Lake Street which terminates at the center of Dallas Borough in a 5-way intersection. Students walk, jog, and bike along this street to town. Establishing a connection to Lake Street would allow students to travel from campus to the park. Presently, road work is underway for the demolition of this 5-way intersection to construct a roundabout. Connections can be made through signage, additional sidewalks to the park, and branding.

CONCEPTUAL DESIGN ALTERNATIVES

Figure 17, view of footpath along creek.

Overview

Based on the ideas and recommendations generated throughout the existing conditions assessment and needs assessment, three conceptual alternatives were developed to depict possible development scenarios. The differences between the design concepts are based upon different amenities and activities called out in the public survey and public meetings. There were some recreational needs that were constant among all alternatives, so participants could see how they will work in conjunction with other proposed improvements.

Concept Plan One

Concept Plan One proposes an intense mix of uses. The baseball field would feature new fencing, corrected drainage issues, new infield, and expanded baselines, all complying with Little League regulations. A small skate park is located adjacent to the baseball field. The parking lot is sandwiched between the baseball field and the creek. A sitting area overlooks the creek between two large trees. A bandshell, pavilion, horseshoe pit, and shaded lawn seating is situated on the north end of the park along with the dog park.

On the eastern side of the park, an enlarged playground, picnic area, new restroom facility, and parking area were proposed. Two pedestrian bridges link both sides of the park, one at each end. Trails weave their way between amenities on both sides of the park. The streambank stabilization project along with a stormwater/MS4 project addresses erosion and sedimentation concerns.

A copy of Concept Plan One is provided on the following page.

Proposed Items:

- Baseball field improvements
- New parking lots
- Skating area
- Band shell
- Pavilion
- Dog park
- Walking trails
- Horseshoe pit
- Playground
- Restrooms
- Stormwater demonstration area
- Pedestrian bridges

During the public meeting, attendees generally approved of the layout including the skating area, dog park, playground, restrooms, and pavilion. Concern was expressed over the addition of the baseball field. Several attendees stated that this area could be used for something else. There is an abundance of baseball fields located near the park and many felt that those that want to play baseball can utilize other fields in the Township.

Other points discussed at the public meeting:

- Residents said that they would like to improve visibility into the park to deter potential vandalism or other potential activity.
- The park abuts several residential properties and residents raised concerns over dogs barking and other noise from the park. Residents stated that placing the dog park in the interior of the park away from other amenities would be the best.
- The horseshoe pit, band shell, and sitting area weren't as favorable as the other features.

DALLAS TOWNSHIP
PARKS MASTER PLAN

Dallas Township
Luzerne County, Pennsylvania

Concept Plan One
February 21, 2017

BARRY ISETT & associates

Concept Plan Two

Concept Plan Two focuses on providing more sporting activities for users. The existing baseball field was replaced by a multi-purpose athletic field. The existing basketball court would be improved, and community gardens and a dog park complete the western half of the park. A playground, pavilion and additional parking lot would be featured on the eastern half of the park.

A copy of Concept Plan Two is provided on the following page.

Proposed Items:

- Multi-purpose athletic field
- New parking lots
- Basketball court improvements
- Community gardens
- Pavilion
- Dog park
- Walking trails
- Playground
- Stormwater demonstration area
- Pedestrian bridges

During the public meeting, attendees liked this plan less than the other two. Attendees felt that some of the features proposed did not meet their most important needs. A focus on including amenities and features not found in other parks in the area was expressed.

DALLAS TOWNSHIP
PARKS MASTER PLAN
Dallas Township
Luzerne County, Pennsylvania

Concept Plan Two
February 21, 2017

BARRY ISETT & ASSOCIATES

Concept Plan Three

Concept Plan Three placed the playground on the western half of the park and enlarged the parking lot in place of the existing baseball field. The existing basketball court would be improved, and a splash pad would be placed next to the playground. A dog park is included as well as a skating area and a pump track.

On the eastern side of the creek, a pavilion, outdoor classroom, community garden, restrooms, and additional parking lot would be located. One pedestrian bridge would connect both sides of the park.

A copy of Concept Plan Three is provided on the following page.

Proposed Items:

- Large paved parking lot
- Playground
- Skating area
- Splash pad
- Pavilion
- Dog park
- Walking trails
- Pump track
- Outdoor classroom
- Restrooms
- Basketball court improvements
- Community gardens
- Pedestrian bridge

During the public meeting, attendees also liked this plan. The large parking lot and playground were viewed favorably as well as the inclusion of the splash pad. Some attendees liked the inclusion of the pump track along with the skating area.

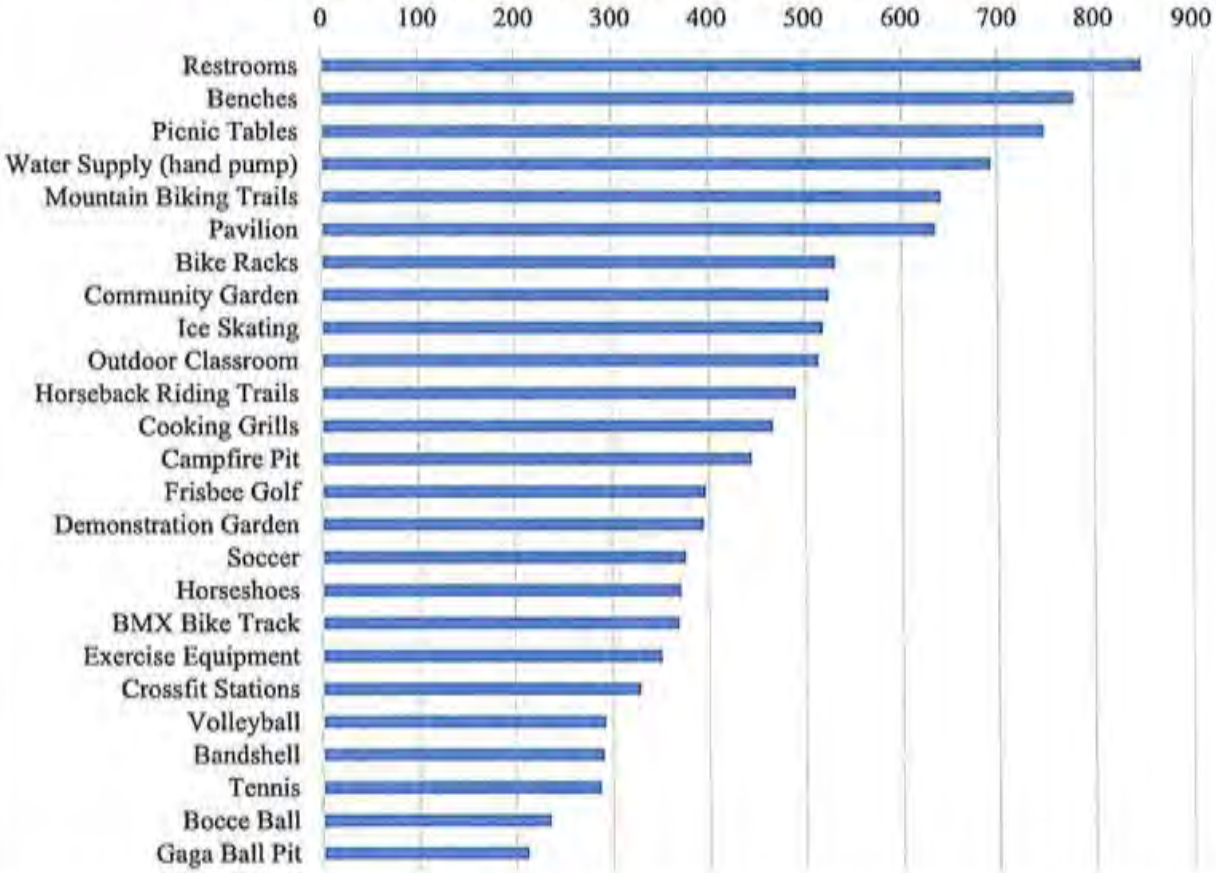
With the concentration of most uses on one side of the park, residents expressed concern with increased vehicular use of Sago Street.

DALLAS TOWNSHIP
PARKS MASTER PLAN
Dallas Township
Luzerne County, Pennsylvania

Concept Plan Three
February 24, 2017

BARRY ISETT & associates

Figure 22: Question 21, Please indicate which of the following amenities you would like to see offered at Kunkle Park.



Amenities that improve site experience were top ranked in both parks. Restrooms, benches, and picnic tables were all highly rated. A pavilion was also highly ranked as well suggesting that users would like to use either park as a group outing. Traditional activities such as volleyball, tennis, and bocce ball were all lowly ranked. In comparison with existing activities, ones that allow for unstructured usage such as a playground and multi-use trail were ranked higher than the more traditional ones. Sporting activities are supported in other parks and complexes in the area and households responded that they would like different amenities added to the parks that aren't available elsewhere.

DALLAS TOWNSHIP PARK & KUNKLE PARK – MASTER SITE PLAN 01/14/2016
MEETING MINUTES *Kick off Meeting*

Attendees

Liz Martin – Dallas Township Supervisor
Sherry Hogan – Township Resident
Grant Palfey – Township Resident, Youth Baseball Coach, and Dallas Area School District CFO
Christine Dettore – DCNR Regional Advisor, Northeast Region
Ellen Ferretti – Isett & Township Resident
Scott Grundowski – Isett & Township Resident
Steph Milewski – Isett

Overview of Planning Process / Scope of Work and Project Timeline

- Proposed timeline was handed out (attached) and reviewed.
- Project Scope of Work was summarized.
- Project maps were distributed (attached) and reviewed.
- Committee meetings will be approximately every two months. Total of 5 meetings.

Meeting Space / Logistics

- Steering Committee meetings can be held at the Township Building
- We will have a Site Visit to the parks during Steering Committee Meeting 2 or 3, pending weather conditions.
- Public meeting can be held at the school district. Middle school cafeteria and high school Commons have areas with tables for working sessions. Auditorium also available for traditional presentations.

Steering Committee Members / Stakeholder Interviewees / Focus Groups Participants

- Current Committee
  - Liz Martin, Supervisor
  - Bill Grant, Supervisor
  - Martin Barry, Roadmaster
  - Ellen Ferretti, Resident
  - Judy Rimple, Anthracite Scenic Trails and Resident
  - Sherry Hogan, Resident
  - Amy Harriger, Resident
  - Jenn Williams, Resident
  - Grant Palfey, Resident, Youth Baseball Coach, and Dallas Area School District CFO
  - Ben Hardy, DCNR Forester
  - Christine Dettore, DCNR Regional Advisor
- Isett suggests adding 2 to 3 people to the Steering Committee. Possible additions to steering committee were discussed. If they cannot be on the Committee, they should be part of the Focus Group or Key Person Interviews.
  - Dallas Township Police Chief
  - Dallas Borough representative
  - Sean Robbins, Director, Anthracite Scenic Trails Association
  - Paul Lumia, Director, North Branch Land Trust
  - College Misericordia Environmental Education representative
  - Back Mountain Library representative
  - Dave Sutton, Back Mountain Recreation
  - Center for Independent Living representative

- Suggested Key Person Interviews
  - Harvey's Lake Borough representative
  - Monroe Township representative
  - DASD Woodshop instructor
  - Representative Karen Boback
  - Senator Lisa Baker
- Suggested Focus Groups:
  - Organized youth athletics (school district physical education teachers and coaches, Little League, BM Youth Soccer Association)

Vision of the Parks in 20 Years

When the planning and construction of the park are complete and the park has been a staple to the community, describe how you envision each park in 20 years.

- Dallas Township Park
  - Active recreation in natural setting
  - Accessible for all abilities
  - Routine police presence and camera monitoring
  - Sports fields, multi-purpose
  - Natural or nature-based playground
  - Bridge over Toby Creek providing pedestrian access to both sides of park
  - Picnic pavilion for gatherings and programming
  - Campfire pits
  - Kids and families can walk to the park from their neighborhood, other local parks, and the school. Walkable/bikeable routes between all local parks and schools
  - Park offers programming opportunities as part of the Dallas Borough Summer Rec Program.
  - Streambank stabilization of the Toby Creek banks through the park
  - Creek access for environmental education and splashing in the creek
  - Safe crossing of 309 either with traffic light or under the road
  - Programming with library (outdoor readings)
  - Regular public programming – educational events, festivals, readings in the park, etc.
- Kunkle Park
  - Natural park for passive creation
  - Remain forested park in honor of the donor's request
  - No ballfields
  - Picnic pavilion for programming and gatherings
  - Basic amenities
  - Rustic / natural hiking trail for non-motorized uses, including equestrian trails
  - Encourage hunting to control deer population. Cooperative agreement with game commission to patrol / handle hunting.
  - Timber demonstration plots
  - College outdoor research lab
  - Educational programming for schools and colleges
  - Institute sustainable forest stewardship/management plan. Perhaps coordinate timbering activities and opportunities with new Wood Shop at DAHS.

DALLAS TOWNSHIP PARK & KUNKLE PARK – MASTER SITE PLAN 05/13/2016

MEETING NOTES *Client Meeting*

Attendees

Bill Grant – Dallas Township Supervisor
Nancy Balutis – Dallas Township Secretary/Treasurer
Bryan Smith – Chief Landscape Architect, completed 15 DCNR-funded Master Site Development Plans, Engineer for Hellertown Borough
Steph Milewski – RLA, nearly 20 years of experience in outdoor recreation
Scott Grundowski – BLA, resident of Dallas Township, worked on Back Mountain Trail Feasibility Study to Harvey's Lake
Ellen Ferretti – Senior Project Manager, resident of Dallas Township

Update on the Status of the Project

Isett reviewed the following tasks from the proposal that have been completed or started to date. Associated maps were handed out and reviewed during the meeting. Tasks and associated maps are as follows:

Task 1 – Master Plan Goals and Objectives
A. Kick off meeting
B. Steering committee meeting #1
Task 2 – Background Information and Data
A. Park system analysis and document review
Task 3 – Site Information and Analysis
A. Field reconnaissance

Handouts:
Natural Features Inventory and Analysis of Dallas Township Park
Natural Features Inventory and Analysis of Dallas Township Park
Circulation and Man-made Features of Dallas Township Park
Natural Features Inventory and Analysis of Kunkle Park (2)
Circulation and Man-made Features of Kunkle Park (2)

Task 4 – Activities and Facilities Analysis
Task 9 – Security Analysis
A. Evaluation of existing conditions
Task 13 – Grantsmanship (ongoing)
A. Matrix of grant options

An additional task was completed that is not in the project proposal: mapping of regional parks. The maps were handed out and reviewed.

Handouts:
Recreational Connections Map of Dallas Township Park
Recreational Connections Map of Kunkle Park
Community Connections Map of Dallas Township Park

Action items:

- *Township to review the maps and provide any changes or comments*

Schedule / Timeline

Dates for meetings need to be set. Goal is to have a committee meeting in 2 to 4 weeks at Township building. Public workshop needs to be scheduled and should occur within 4 week. Suggested location for public workshop is at the Dallas Area School District.

Action items:

- *Township to suggest meeting dates for committee meeting and public workshop.*

Funding of Future Phases of the Project

The following grants are potential sources of funding:
Act 13 – Greenways, Trails Recreation Program is due June 30. Potential project is the natural playground. Maximum grant ask is $250,000. 15% match required.

Action items for Act 13 Grant

- *Township Supervisor Bill Grant to provide list of items he suggests for the natural playground and any associated costs from previous projects.*
- *Isett to meet with Supervisor Grant in 2 weeks to review the plan so that Isett can prepare cost estimate for grant.*
- *Isett to start working on the grant application.*
- *Isett to provide list of grant requirements.*

The 2016 round of DEP Growing Greener has not opened. Isett anticipates it will be announced in 4 to 6 weeks. Potential projects need to be discussed with DEP Watershed Manager Ron Yablonsky so that the project has been defined and will be ready for the grant application when the grant round is announced.

Action Items for DEP Growing Greener Grant

- *Township to set up meeting with Ron Yablonsky at Dallas Township Park to discuss potential grant projects.*
- *Isett to provide contact information for Ron:*

  Ron Yablonsky | Watershed Manager
  Department of Environmental Protection | Bureau of Waterways and Wetlands
  Northeast Regional Office
  2 Public Square | Wilkes-Barre, PA 18701-1915
  Phone: 570.826.2509 | Fax: 570.830.3017
- *Isett to attend meeting.*

The Dirt & Gravel Roads Program administered by the Conservation District may be a funding source to repair the entrances to the park. Need to determine if the entrances are eligible for the program. Upon online search by Isett, it appears the Township meets the training requirement for the program. Township confirmed they use the program on a regular basis. Township will have to determine if the entrances to the parks would be a priority application, since there are several dirt and gravel roads in the Township that must be addressed.

Action Items for Dirt & Gravel Roads Program

- *Township to confirm they meet the training requirements.*
- *Township to confirm that Parsons Lane (entrance to Kunkle Park) is private road.*
- *Township to confirm who is responsible for maintenance of Parsons Lane, especially winter plowing.*
- *Isett to contact Conservation District to determine if park entrances are eligible for program.*

DEP Environmental Education Grants can be used for programming at the parks. Isett suggests the Township develop relationships with partners regarding park programming. The partners are best suited to apply for the grant. Potential partners include Dallas Area School District, local colleges and universities, conservation district, DCNR Forestry, and conservancies. Grants are up to $3,000; match is not required but encouraged (cash or in kind). The 2016 grant round has not been announced. Last year the grant was due in December. Isett suggests that the Township seek out potential partners and begin discussions about programming at the parks so that the Township and partners have a project outlined for the anticipated grant round.

Action Items for DEP Environmental Education Grants

- *Township to seek partners and start discussion about programming for the parks.*

Williams Atlantic Sunrise Grant is a potential match for Act 13 grant. The grant can be used for environmental, economic development, or community benefiting projects that directly benefit the communities in which the proposed Atlantic Sunrise project would be constructed/operated. Grants are up to $10,000 per funding cycle and due 3/1 and 9/1 annually.

Action Items for Williams Atlantic Sunrise Grant

- *Isett to prepare budget for Act 13 Grant that can also be used for Williams Atlantic Sunrise Grant.*

Penn East Community Connector Grant is a potential match for Act 13. Grants are $5,000 or less and support community safety and environment projects OR workforce development for education/energy. Precedent shows that non-profits are funded but one area in the guidelines does list "local governments". ONLY for communities on the proposed pipeline route. They are awarded quarterly but applicants can only get one per year.

Action Items for Penn East Community Connector Grant

- *Isett to prepare budget for Act 13 Grant that can also be used for Penn East Community Connector Grant.*

Public Survey / Questionnaire

Isett prepared a draft survey/questionnaire for Township to review. The questionnaire will be prepared in both an electronic format and paper form. Survey to be live for 4 to 6 weeks starting in June.

Handout:
Draft Questionnaire

Action items:

- *Township to review draft questionnaire and provide Isett with feedback.*
- *Township to confirm zip codes within the Township from the tax bills.*

Steering Committee Members

Supervisor Liz Martin was in the process of adding several people to the committee. Unfortunately, Supervisor Martin was not present at the meeting due to a medical emergency. Below is the list of committee members. Supervisor Martin will need to confirm status of members.

Liz Martin, Supervisor
Bill Grant, Supervisor
Martin Barry, Roadmaster
Ellen Ferretti, Resident
Sherry Hogan, Resident
Amy Harriger, Resident
Jenn Williams, Resident

Grant Palfey, Youth BB Coach/ Dallas Area School District CFO
Sean Robbins, ASTA
Mike Williams, Outreach Coordinator, Center for Independent Living
Ben Hardy, DCNR Forester
Christine Dettore, DCNR Regional Advisor

Suggested members from the Steering Committee kick off meeting included:
1 additional Dallas Borough representative
Paul Lumia, North Branch Land Trust
Misericordia University Enviro Ed representative
Back Mountain Library representative
Dave Sutton, Back Mtn. Recreation

Action items:

- *Township to confirm committee members.*

Draft Key Person Interview Template & Focus Group Interview Template

Isett prepared a draft template to use at key person interviews. The draft template includes a list of potential questions. Isett suggests reducing the number of questions on the template to no more than 10. The template for the focus group meetings will be based on the key person interview template.

Handout:
Draft Key Person Interview Questionnaire Template

Action items:

- *Township to review template and provide feedback by Friday, May 27th.*

Key Person Interviewees / Focus Groups Participants

The following individuals and groups were identified for interviews and focus group sessions. The goal is to complete the template so that it can be distributed to Back Mountain Community Partnership members at the June meeting.

Suggested Key Person Interviews:
Dallas Township Police Chief
Dallas Township Roadmaster
Dallas Borough representative [1]
Kingston Borough representative [1]
Harveys Lake Borough representative [1]
Monroe Township representative [1]
DASD Woodshop instructor
Back Mountain Community Partnership members [1]

[1] Representatives from surrounding municipalities may be represented by Back Mountain Community Partnership members

Suggested Focus Groups:
8 to 10 Scouts (mixed boys & girls)
6 to 8 DASD elementary school students [2]
6 to 8 Young children (3-5 year old's)
Organized youth athletics:
- DASD physical education teachers
- DASD coaches
- Little League
- BM Youth Soccer League
- BM Bandits (lacrosse)
- BM Bobcats (football)

[2] The focus group with elementary school students will need to occur before school ends for the year.

Action items:

- *Township to confirm Back Mountain Community Partnership meeting date in June.*
- *Township to contact elementary school and schedule focus group with 6 to 8 students before end of school year, if possible.*

Forest Stewardship Plan vs. Forest Management Plan

Need to confer with DCNR Bureau of Recreation and Conservation representative Cindy Dunlap and DCNR Service Forester Ben Hardy for clarification. Will Dallas Township need to pursue a Stewardship Forest Designation Plan or a Forest Management Plan? The Scope of Work is different.

Action Items:

- *Township needs to contact DCNR BRC and Forestry to confirm the type of plan that needs to be completed.*

DALLAS TOWNSHIP PARK & KUNKLE PARK – MASTER SITE PLAN 08/17/2016

MEETING MINTUES *Committee Meeting*

Attendees

Bill Grant – Dallas Township Supervisor
Elizabeth Martin – Dallas Township Supervisor
Bryan Smith – Chief Landscape Architect, Isett
Steph Milewski – RLA, Project Manager, Isett
Scott Grundowski – BLA, Project Support Specialist, Isett

Update on Status of Project

- Discussed upcoming grant to be announced in November and how funds could be used
- Township bi-centennial celebration to take place in July 2017
    - Possibility of playground being done by then?
    - Possibility of playground construction going out to bid by Feb. 2017
    - Discussion of grand opening of playground pushed back to Harvest Days in Sept. 2017
- Discussed which political representatives to contact to garner support for project to receive funding
    - Bill Grant to reach out to contact in Harrisburg and Senator Lisa Baker
    - Liz Martin to contact Representative Karen Boback, for letter of support for project
- Public survey distributed (attached) and reviewed.
    - Approved by supervisors
    - Discussion of online survey and how it works
    - There are 3200 households in township
        - Will need 10% response rate for project purposes
        - 1800 likes on Facebook page
    - Dallas School District may partner with the Township to distribute survey via hardcopies or other communication
    - Provide Back Mtn. Library with the survey link for patrons to use the library's public computers to take the survey
    - Township elected to go with a 30-day period for survey responses
- Public Meeting/Survey press release sent to Dallas Post and Citizen's Voice Back Mtn. Edition by Liz Martin
- Overview of idea cards for use in public meeting

Items distributed:

- *11x17 base maps of parks, three (3) in total to each attendee*
- *Meeting agenda*
- *Public survey*

Programming Ideas for Parks

Kunkle Park

- Existing trail loop improved and extended into western portion of park
- Cross-country ski trail
- Bird blinds
- Horseback riding trails and support facilities
- Multi-purpose field
- Honor deed grantor with a Veteran's Memorial

- Need for parking lot, pavilion, restrooms
    - Liz's hope is that it would become a nature reserve with facilities for education
    - "Simplicity" was used to describe park and goal for design
- Discussion of potential sponsor for park to support funding for project
    - Veterans of Foreign Wars (VFW) and American Legion along with Cub and Boy Scout troops listed as potential sponsors
- Desire to maintain open space for informal recreational purposes
- Dog Park
- Using park for pavilion rental for school groups, summer rec program
    - Township currently partners with Dallas Borough in their Summer Rec Program
    - Mentioned possibility of having their own program
- Williams Grant and Penn East Grant money to fund construction of project

Dallas Twp. Park

- Nature playground
- Improvements to existing baseball field
- Discussion of whether basketball court should remain
- Pedestrian bridge to cross Toby Creek
- Pavilion
- Discussion of park security and safety
    - Install lighting and cameras particularly around potential pavilion
    - Install gates at park entrances to be closed at night to prevent parking
    - Neighboring residents keep watchful eye on park and its users
    - Have police patrol area periodically
- Parking lot
    - Vehicular parking a must
    - Possibility of reclaiming overgrown area off Southside Avenue
        - Previously was used as parking lot until DEP told township to remove section of stormwater pipe that was directly discharging into creek
        - Area overgrown with Japanese Knotweed and area around storm pipe heavily eroded
        - Will need to repair area around pipe before construction of parking lot in this area
    - Discussed street parking along Southside Ave.
        - Steep embankment located in this area
        - Retaining wall will need to be constructed for street parking
    - Vehicular bridge crossing creek connecting both entrances and parking lot
- Back Mtn. Trail support facility
- Summer recreation program
- Vehicular bridge for internal connectivity
- Former Township building on adjacent parcel located off Route 309
- PennDOT to re-do culvert under 309 soon but hope to not lose wildlife corridor

Action items:

- *Liz Martin to ask Bob Martin about potential foresters*
- *Liz Martin to contact Rep. Karen Boback for letter of support*
- *Bill Grant to reach out to contact in Harrisburg for potential support*
- *Bill Grant to contact Sen. Lisa Baker for potential support*
- *Bill Grant to contact Back Mtn. Library for assistance in public survey*
- *Liz Martin to contact Dallas School District for assistance in public survey*
- *Township to clarify several easements relating to Parsons Lane entrance to Kunkle Park*

DALLAS TOWNSHIP PARK & KUNKLE PARK – MASTER SITE PLAN 04/05/2017

MEETING MINTUES *Committee Meeting*

Attendees

Bill Grant – Dallas Township Supervisor
Elizabeth Martin – Dallas Township Supervisor
Bryan Smith – Chief Landscape Architect, Isett
Steph Milewski – RLA, Project Manager, Isett
Scott Grundowski – BLA, Project Support Specialist, Isett
Various members of the community, see sign in sheet

Introductions of project committee members

Overview of project background by Bill Grant

- Reasons for project
- Impetus of project
- Funds received to date
- Goals of project

Introduction of project by Bryan

- Brief overview of project history and current status
- Open discussion about Kunkle Park to residents who were there specifically for that park
    - A group of people attended to advocate for the implementation of a disc golf course in park
    - There is no official group or league but rather a loosely organized group of several people who get together to play at various course around area
    - Dynamic Discs is custom disc company out of Emporia, KS
    - Eric McCabe is a former world champion of disc golf and a course designer
        - Dynamic Course Design is his company
        - $13,000 design fee for a PDGA (Professional Disc Golf Association) level course
        - A lower end course can be designed for approx. $5,000
    - Hickory Run and Francis E. Walter Dam have good courses to study
    - Holes typically range from 300-500 feet in length
    - Mike Solt is a member of the PDGA and is a tournament director
        - He has a company called Mr. Disc Golf out of Jim Thorpe, PA
    - Bloomsburg Recreation Park has a disc golf course as well as a skate park
    - Group said they would like to get an elementary and middle school group together to introduce kids to the game
    - It takes about 1.5 – 2.5 hrs. for a round
    - Parking lot, pavilion, and other supporting structures (storage shed) would be beneficial
- Gary Taroli, lawyer and legal counsel for SPCA and Blue Chip Animal Refuge, spoke advocating implementation of dog park and skate park
    - Very few dog parks in county and the ones that are available are very basic
    - Cited RULWA for liability concerns
    - Mention his son lived in Liverpool, NY which had dog parks and they were utilized and there were no outstanding concerns
    - A pavilion is not included in RULWA so there would liability with its inclusion in a dog park
    - Mentioned Act 41 for municipal liability

Background of project progress to date, Bryan and Steph

- Reviewed background of planning process
- Reviewed results of public survey – Steph
- Went over list of ideas generated from first public meeting in August

Concepts – Bryan

- Overview of concepts
- Opened discussion to attendees

Comments of concept designs

- A question was raised about how often the basketball court is used
- Remove basketball courts and enlarge skate park in concept three
- Dog park located in back of park would make for best location
- Several attendees voiced support that athletic fields are redundant in area and would like to different amenities in their place
- One woman voice support of keeping a multi-purpose athletic field as her granddaughter plays soccer
- A question was asked of attendees on how often they use the field/courts in the park
    - Very little use them
- A man stated that the baseball field is not worth putting the money into and replacing it would be best for the community
- Several attendees stated that the baseball is booked only to hold it in case another field is taken
    - The field is nicknamed the "hidden field"
- One attendee stated she lives on Southside Ave and that people speed on that road
- Another stated that he lives near park and that people speed and drift onto Hilldonia Ave which is a road leading to Sago St and park
- Several attendees advocated traffic calming projects such as speed bumps or tables
    - Speed boxes aren't affective as people slow down just long enough before box then speed up again
- Many stated that they would like to see the park be well lit and visible from highway
    - Would involve cutting down many trees to create a line of sight into park
- A strongly defined parking lot was also a feature many would like to see
- A teen brought in a long board to describe the differences in skate parks
    - A skate park is an encompassing term to represent a designated area where people can skateboard, long board, "cruisers", roller blade, and bmx ride
    - Teen would like to see a long board specific ramp which would be built on a downhill slope
    - There is a "bad" skate park in Drums where they tucked it away and made it non-visible which invites bad behavior
    - Plains park apparently has a good skate park
    - Owner of Plains Bike Shop (N Main St) said that he has 30 kids in his driveway every Saturday skating around using temp ramps
    - A pre-fab park is cheapest but not as durable so depending on usage it may be damaged and destroyed rather quickly
    - Concrete is costlier but is far more durable
    - Skateway in Carbondale
    - Bloomsburg built their skate park out of wood originally and it failed, redid it in concrete
    - Overall mantra was keep it visible, keep it lit, and don't hide it

- Playground/splash pad was very much liked
    - A covered area if implemented in an open area would be beneficial
- Band shell, basketball/baseball, traditional park things were not well received
- Teen advocated for implementation for gaga ball pit
    - Popular in scouts
- Attendees said that they would like to see the trails paved
    - Stroller accessible
    - Bike accessible for small children
- A man raised concerns over the entrance to the park asking if there was another way to access it
- A suggestion was raised to use adjacent parcels along highway for parking
    - These parcels are steep and would require extensive construction
- John Lavitsky, Luzerne Conservation District, talked about streambank restoration and MS4 requirements as well as possibility of education program with schools
- Township Engineer is Tom Doughton of Douglas Trombower & Associates
- Establish internet connection with police station for monitoring
- Mile 7 of Back Mtn. Trail is expected to be completed sometime this year
    - Future phase of trail would be connection with park

Brief overview of playground design – Bryan

Outline next phase of project – Bryan

- Site draft plan for Dallas Twp. Park
- Concept plans for Kunkle Park
- Public meeting #3 to discuss Kunkle Park concepts and draft plan for Dallas Twp. Park
- Comment raised about possible fundraising for project construction

DALLAS TOWNSHIP PARK & KUNKLE PARK – MASTER SITE PLAN 09/13/2017

MEETING MINTUES *Committee Meeting*

Attendees

Bill Grant – Dallas Township Supervisor
Elizabeth Martin – Dallas Township Supervisor
Bryan Smith – Chief Landscape Architect, Isett
Scott Grundowski – BLA, Project Support Specialist, Isett
Various members of the community, see sign in sheet

Welcome and introduction by Supervisor Martin

Overview of project by Bryan

- Overview of Forest Stewardship Plan by Forester, George Boesze
  - Described forest stand areas
    - Stand A: Lower hardwoods
    - Stand B: Planted evergreens
    - Stand C: Upland hardwoods
- Overview of Concept One for Kunkle Park
  - Described overall theme, access to park, parking lot, stormwater retention basin, pavilion, amphitheater, and trail routing
- Overview of Concept Two for Kunkle Park
  - Described overall theme, access to park, parking lot, stormwater retention basin, pavilion, disc golf course, and trail routing

Comments of concept designs for Kunkle Park

- Supervisor Grant opened question to disc golf club in attendance about size needed for course
  - Proposed area of course in concept is 10-20 acres
  - Size was deemed to be sufficient
  - Peter Sickler of disc golf group asked about length of holes
    - Holes range from 95'-300'
    - Desired length would be 300'-600'
    - Stated that they would like to see the routing extend farther into center of park and loop back down to parking lot rather than be centered around existing baseball field
    - Stated that they would like to utilize the dense evergreens for some holes as they would like the challenge of the narrowness of them
- Discussion about usage and maintenance of course
  - Group stated that most likely a club would form around the course and members would post when they would like to play and schedule tournaments
  - Tournaments usually attract 50-70 people but can get as large as 90-100 people
  - There are over 300 members on the Nesbitt Park Disc Golf Course Facebook page
  - Nesbitt Park course group sold bag tags for leagues and tournaments and sold out initial run of 30. They have ordered an additional 30 tags to sell. Tags are $4 on the Dynamic Discs website.
  - Supervisor Grant asked how long it takes to play a round
    - 1.5-2 hrs. usually
  - Question was asked about how design and installation of course would go
    - Bryan stated that we would designate the general area and then a disc golf course designer would lay out the final course.

        - Mr. Sickler provided a cost estimate for a course
    - Bryan asked about support facilities
        - Pavilion and restrooms would be good along with an area for overflow parking for tournaments
- A man asked about renting the pavilion
    - Township does not have a pavilion rental policy currently but would like to allow people to rent them for private events
- Question about the length of proposed trails
    - Approx. 1 mile of proposed trail
    - Mountain biking would not be permitted at this time
- Question about restrooms
    - They would be incorporated into the pavilion
- Supervisor Grant asked if there is an initial cost estimate for the concepts
    - No estimate at this time, will be provided in next stage of plan
- Discussion about current legislation to rescind awarded grants to fill budget gaps. Supervisors urged attendees to call Rep. Karen Boback to voice their opinion on the matter

Overview of Draft Plan for Dallas Township Park

- Overall theme of design, access to playground from Southside Ave., playground and its features, trail loops, pedestrian bridges across creek, skate park, parking lot, access to park from Lakeside Dr., pavilion, open space, and dog park

Comments on Draft Plan for Dallas Township Park

- Owners of home at end of Southside Ave. next to park were in attendance and had some questions
    - Where is the parking lot off Southside Ave. to be located and how large will it be?
        - Parking lot is set back approx. 10-15 from end of street
        - Lot will accommodate 14-15 cars including two accessible spaces
    - Where are the restrooms located?
        - Located on opposite side of creek
    - Concerns about security and vandalism
        - Lighting will be installed around parking lot and playground
        - Swing gate will be installed to close park access after dark
        - Bryan mentioned that they have spoken to police dept. about setting up a closed loop camera system for them to monitor
        - To alleviate speeding concerns on roadway, Supervisors mentioned that they talked about installing speed bumps
        - Several attendees spoke about how increased usage of park will increase security and harbor policing of park by its users
- Dr. Ross Spencer spoke in favor of skate park, stated that nearest parks are in Danville, Bloomsburg, and Williamsport
- One company that designs and builds skate parks is 5th Pocket in Philadelphia
- Question about length of trails in park
    - Approx. ½ mile total
- Comment about Dallas High School student raising funds for park

General Comments

- Disc golf group would like to begin fundraising for construction of course
    - Group approached supervisors about possibility of hole sponsorships
    - Group would like to host a tournament to raise funds to course

  - Group is very gung-ho about constructing course as soon as possible
- Kevin Czekalsky of Plains Bike talked about need for skate park
  - Mentioned Reed Mensler skate park in York, PA
    - Named after 14 yr. old who was killed skateboarding
    - City decided they needed a designated place for skateboarding
  - Supervisor Martin said that Township has passed ordinance banning skateboarding on Township-owned roads to prevent a tragedy like the one above
  - Stated that Plains Township is looking to install skatepark on unused tennis courts in municipal park
- Supervisor Martin stated that Township has received signatures to assume ownership of Parsons Lane
  - There is one holdout, the Parsons Family
    - They want confirmation of stormwater measures to be incorporated to prevent runoff from entering their property
  - Township would like to assume ownership and maintain road for park

<u>Outline next phase of project</u>

- Site draft plan for Kunkle Park
- Prepare reports for both parks
- Public meeting #4 to present final proposals for park and findings in report

1. PROJECT INFORMATION

Project Name: **Dallas Twp Park**
Date of review: **4/15/2014 1:55:27 PM**
Project Category: **Recreation,Other**
Project Area: **8.5** acres
County: **Luzerne** Township/Municipality: **Dallas Twp,Dallas Boro**
Quadrangle Name: **KINGSTON** ~ ZIP Code: **18612**
Decimal Degrees: **41.339281 N, -75.963116 W**
Degrees Minutes Seconds: **41° 20' 21 N, W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate no known impacts to threatened and endangered species and/or special concern species and resources within the project area. Therefore, based on the information you provided, no further coordination is required with the jurisdictional agencies. This response does not reflect potential agency concerns regarding impacts to other ecological resources, such as wetlands.

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jursidictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission

RESPONSE: No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Department of Conservation and Natural Resources

RESPONSE: No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Fish and Boat Commission

RESPONSE: No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

U.S. Fish and Wildlife Service

RESPONSE: No impacts to **federally** listed or proposed species are anticipated. Therefore, no further consultation/coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.* is required. Because no take of federally listed species is anticipated, none is authorized. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. For cases where a "Potential Impact" to threatened and endangered species has been identified before the application has been submitted to DEP, the application should not be submitted until the impact has been resolved. For cases where "Potential Impact" to special concern species and resources has been identified before the application has been submitted, the application should be submitted to DEP along with the PNDI receipt. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. DEP and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at http://www.naturalheritage.state.pa.us.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a **preliminary** screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources

Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552, Harrisburg, PA. 17105-8552
Fax:(717) 772-0271

U.S. Fish and Wildlife Service

Endangered Species Section
315 South Allen Street, Suite 322, State College, PA. 16801-4851
NO Faxes Please.

PA Fish and Boat Commission

Division of Environmental Services
450 Robinson Lane, Bellefonte, PA. 16823-7437
NO Faxes Please

PA Game Commission

Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA. 17110-9797
Fax:(717) 787-6957

7. PROJECT CONTACT INFORMATION

Name:_____
Company/Business Name:_____
Address:_____
City, State, Zip:_____
Phone:(_____)_____ Fax:(_____)_____
Email:_____

8. CERTIFICATION

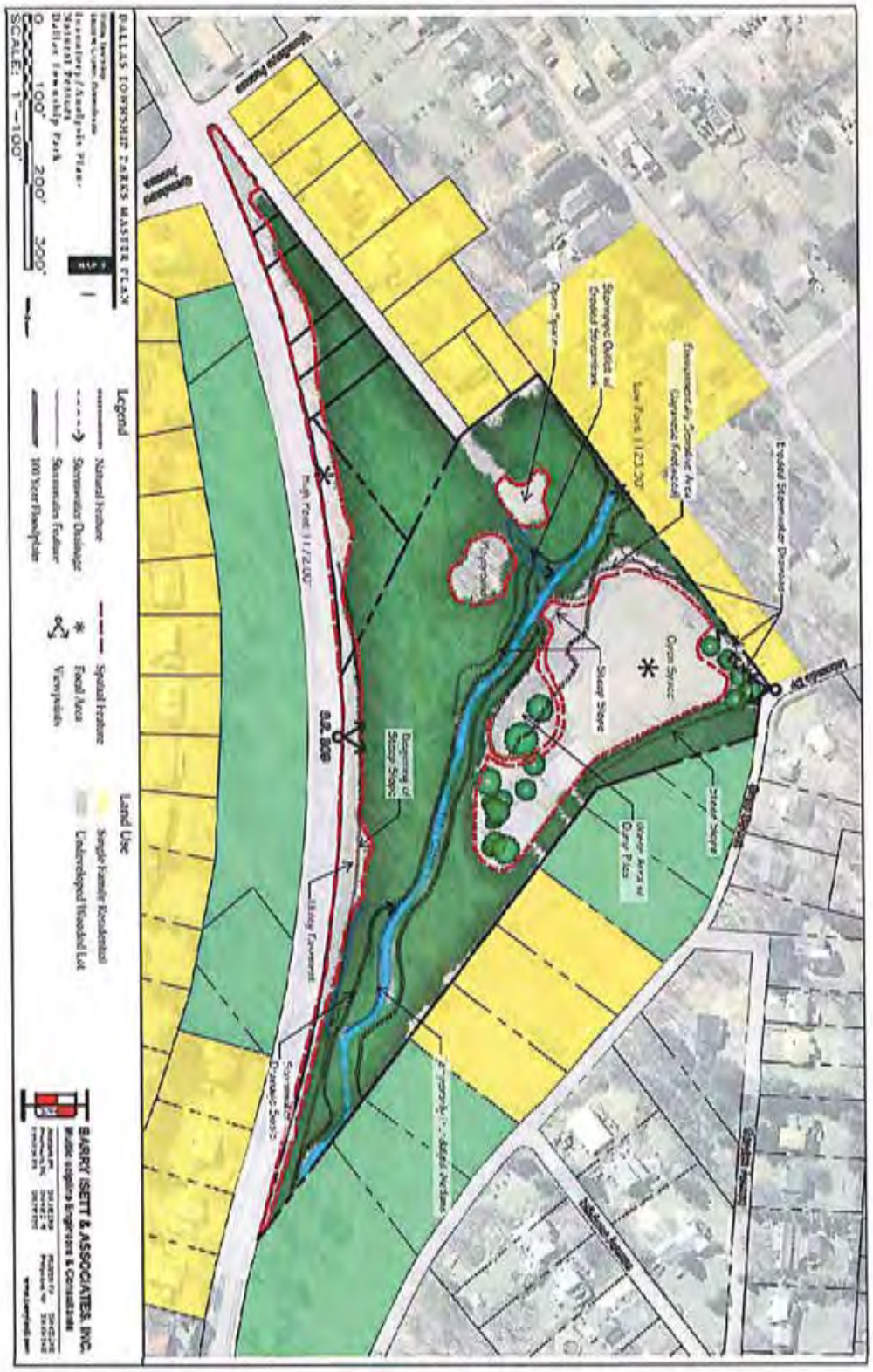
I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

_____ _____
applicant/project proponent signature date

Mapping

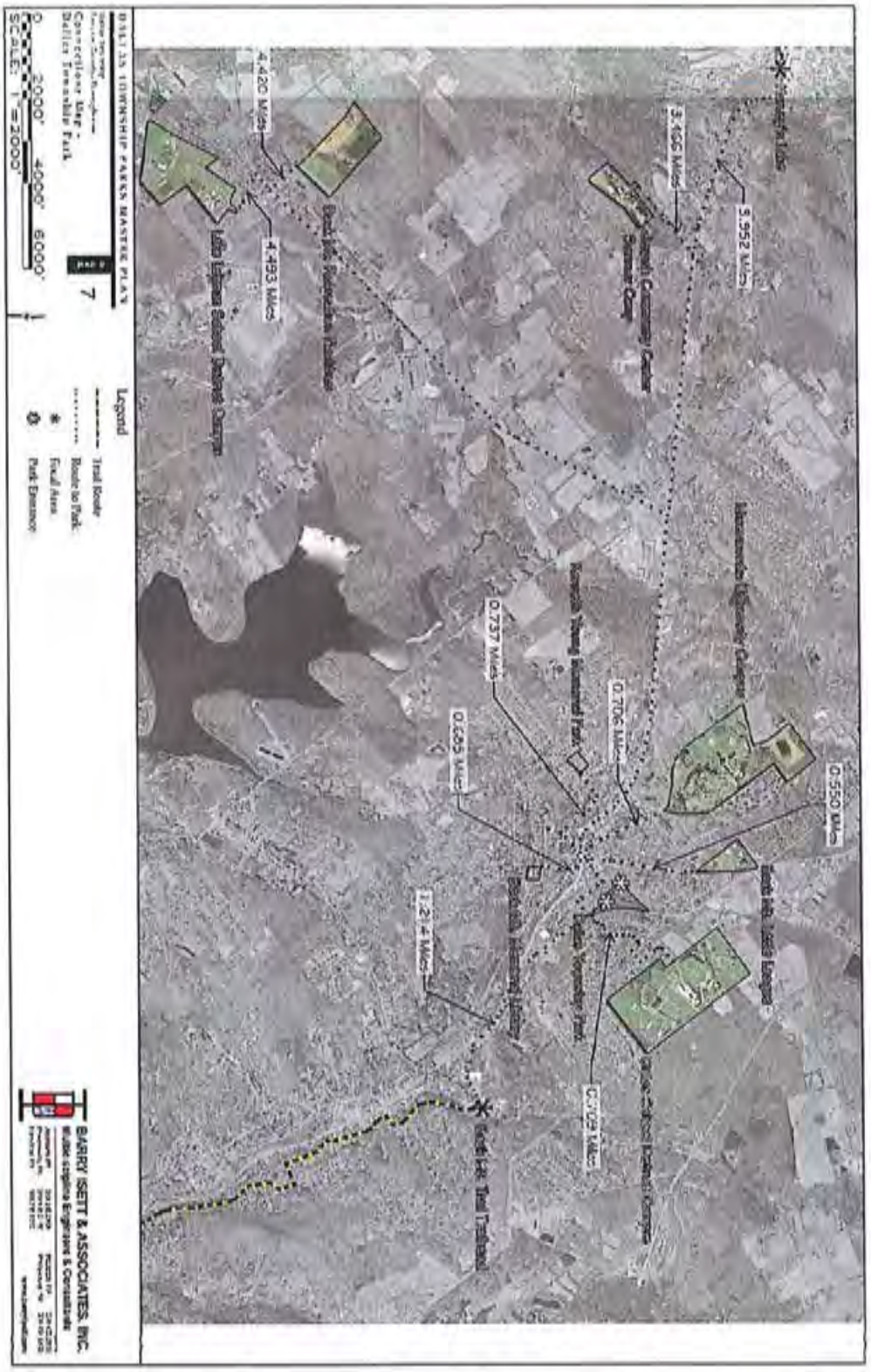
Figure 18, view of grass trail on west side.

Existing Features Plan



Inventory and Analysis Plan – Natural Features

Inventory and Analysis Plan - Circulation



Inventory and Analysis Plan – Regional Recreation Connections

Master Plan Recommendations

Introduction

Community and committee discussions guided the final master plan and project phasing recommendations. In general, this plan combines desirable concepts and features from each of the alternatives presented in the previous section.

Underlying Design Concept

The master plan seeks to address several major themes that became evident throughout the planning process by public and committee input. These are as follows:

- Expand trail network within the park by constructing new trails which connect the existing ones
- Develop a playground
- Provide features and amenities not readily found in other parks in area
- Create a skate park
- Work in conjunction with the Pennsylvania Department of Environmental Protection for streambank restoration and erosion mitigation
- Strengthen connections with adjacent residential neighborhoods
- Provide a safe and enjoyable atmosphere for users of all ages and abilities

Design Element

In addition to the elements described above, the following development options should be considered to create an enjoyable experience for users and increase the likelihood of them returning. Utilizing common design themes, signage, and vocabulary for trail elements, will help unify the park and strengthen its connection with neighboring residents.

Circulation

Park Entrances – The two park entrances are recommended to remain. For the west side, the entrance is at the intersection of Sago Street and Lakeside Drive. For the east side, the entrance is at the terminus of Southside Avenue. Both entrances will need to be paved with adequate space to accommodate two passing vehicles. Park identification signs with park hours should be posted at each location for orientation. Metal gates are recommended to restrict after hour use, permit temporary closing when the lot requires maintenance, or in the winter when the park is not plowed. If the gates are locked and opened daily, police, public works staff, volunteers, or a combination of these groups can be used to handle this task. Neighboring residents often appreciate a park being physically closed from cars at night and will often assist in operating the gate. Mechanically operated gates by remote is an alternative but have an increased capital expense and ongoing operation expense.

Figure 19, asphalt paved trail.

Park Access – The existing main entrance to the park is a dirt road and is heavily eroded from stormwater runoff. Improve this entrance through paving the entrance drive and installing stormwater controls. Install welcoming park signage to match the secondary park entrance on the opposite side of the park. Remove aging timber guardrail and install concrete curbing. Remove dead or dying trees and replace with native species. Remove damaged chainlink fencing separating park from neighboring property and replace with new fencing or with coniferous landscaping.

Trails – One of the most frequently requested park improvements residents desire is trails. Trails shall be ADA accessible, where possible, and allow for different uses such as walking, jogging, running, cycling, stroller usage, and roller blading. New trails will be paved with asphalt for ease of use, long-term

durability, and reduced maintenance. Trails shall be a minimum five feet wide with a maximum longitudinal slope of 5% slope and cross slope of 2%. The existing dirt and grass trail on western boundary of park will be paved and connect with newly constructed trails via timber pedestrian bridges spanning Toby Creek. Trails shall connect primary parking areas with other park improvements.

Back Mountain Trail Connector – At the time of this writing, the existing Back Mountain Trail is planned to connect to Dallas Township park with an expansion of the existing trail continuing into town and up to Misericordia University. The proposed trail would cross SR 309 at Grandview Avenue to Southside Avenue. Establishing this regional trail connection will increase visitors to the park, provide a trail head for trail users, and strengthen support for the park.

Parking Lots - Two proposed parking lots address the vehicular needs for each half of the park on a regular basis. The smaller gravel lot shall be located at the end of Southside Avenue. This 15 car parking lot, will primarily meet the needs for visitors going to the playground. Two spaces shall be paved and marked for ADA, one of which shall be van accessible. The spaces should be no smaller than 9' wide x 18' long with a minimum 24' wide drive aisle between. Adjust grades to comply with 2% slope requirements within accessible parking stalls. The dead end parking area shall have a small area at the end for turning around. Additional on-street parking should be considered along the entrance of the park along the north side of Southside Avenue. When the Township seeks to repave this street, widening the road an additional 8' will provide an additional 6 on street parking spaces. The parking lot shall be either surrounded by curb or have car stops installed to prevent vehicles from driving off the gravel lot.

Figure 20, asphalt paved parking lot.

A larger parking lot will be located on the west side of the park. This lot shall accommodate 21 parking spaces, two for ADA parking. Dimensions shall be the same as the smaller lot described above. This lot shall be either surrounded by curbing or have car stops installed to prevent vehicles from driving off the lot. If the park is not used at night, then the lots do not need to be lit. Install new accessible concrete sidewalk connecting parking lot with other features in the park. Install lighting in parking lot for evening use with full cut-off to minimize disturbance with adjacent residential properties. Since the park is adjacent to residential properties, lighting is not recommended, unless low level security lighting is desired.

Paved parking lots will require stormwater management improvements to capture, control and clean the rainwater which flows off them. Final design of these paved areas shall take care to prevent direct discharge into the Toby Creek. Dust, salt, and oils from cars which are then carried from rainwater runoff, shall be directed to an area where it can precipitate out and be filtered. Detention basin forebays, raingardens and vegetative swales all facilitate this cleaning process.

Figure 21, decorative outdoor lighting along walkway.

Lighting - Generally, the park shall be utilized during daylight hours of dawn to dusk. The need for site lighting shall only be installed for security and surveillance needs. A light at each gated park entrance shall be limited to that area with care taken to prevent glare onto adjacent residential properties. Security lighting at the parking lots, pavilion, and playground, can be considered, if so warranted by the police department. All lights shall be set to operate using photocell. With new technology, these LED lights can be configured to operate at a lower level unless motion is detected. LED lighting works well with

security cameras, providing good image quality. In addition, LED lights can be fully controlled to eliminate glare and light pollution on surrounding natural areas and surrounding residences.

Signage

Directional Signage – Since the park is in a valley between two wooded hillsides, it is not well-known, even among Township residents. Increasing awareness and ease of access will require directional signage along roadways surrounding the park. Signage on SR 309 and 415 will be critical as these are heavily traveled roadways and are near the park. Signage will need to be placed on Church Street and along several roads in adjacent residential neighborhoods.

The following can be made to improve directional signage outside of the park:

- Place Dallas Township Park directional sign at intersection of Church Street and SR 415
- Place directional sign at intersection of Lakeside Drive and Church Street
- Place directional sign at intersection of Southside Avenue and SR 309
- Place directional sign at intersection of East Center Hill Road, Hildebrandt Road, and SR 309
- Place directional sign at intersection of Sago Street and SR 309

Figure 22, directional street signage.

Entrance Signage – Both entrances of the park shall include signage welcoming visitors to the park. A detailed plan should be put together to include, decorative signage, landscaping, lighting, and other site improvements. Township ordinances shall be reviewed to determine what is permitted and if any zoning variances might be needed. If any improvements involve Lakeside Drive, Sago Street or Southside Avenue, the Township may need to review the plan and issue permits.

Figure 23, park entrance signage.

Orientation/Interpretive Signage – At each parking lot, an information sign/map shall be provided to orient visitors to the different amenities in the park and their locations. All proposed signs shall match each other to create a unified and coherent design language to make it easier for visitors to understand.

Interpretive signage is critical to explain the many features the park offers. However, the cost to design, install, and maintain can be costly. Thus, it is recommended that the main orientation signs contain the information for visitors to use to enhance their experience. The use of a website, web links, and digital media is recommended for additional information. Signage can be utilized throughout the park in specific locations to call out any outstanding natural, cultural, or educational opportunities.

Figure 24, interpretive signage.

Trail Wayfinding – Using the proposed trail network, visitors have access to the entire park and the proposed amenities. The proposed trail is paved, so visitors know when they are on the right path, but wayfinding markers help direct to various park amenities. Also, a uniform, consistent signing system orients visitors as they make their way through the park and confirm they are on the right path. Runners, joggers and walkers, appreciate distance markers along the trail to track their distances.

Figure 25, wayfinding signage.

Environmental

Tree Inventory – A comprehensive tree inventory should be conducted for the entire site. This information can be used to develop a long-term woodland management plan. Data gathered from the inventory can aid in the management and maintenance of the park and determine which trees, if any, pose a threat to visitors so that they can be removed. The tree inventory can assist in assessing the impacts of pests, such as the emerald ash borer, which attacks ash trees. The plan will facilitate budgets for annual park maintenance and for the installation of new plantings. An initial inventory should be focused on areas of high usage such as the playground, dog park, skating area, and trails. The goal of this inventory is to

maintain a healthy and valuable tree canopy, one that provides numerous benefits for the park and its users.

Stormwater Management – The Pennsylvania Department of Environmental Protection (DEP) has labeled Toby Creek as a Cold Water Fishery (CWF) stream. The stream support, on a year-round basis, a sizable population of wild and stocked fish such as Brook Trout. The park also lies within the Chesapeake Bay Watershed which has a pollution reduction plan in place. This plan requires municipalities to address local stormwater quantity and quality issues. The Township's Municipal Separate Storm Sewer Systems (MS4) requirements are to reduce nutrients siltation. Collectively, these requirements direct the Township to reduce erosion and runoff entering waterways.

Sections of Toby Creek through the park exhibit deep erosion cuts along its banks, which need to be addressed. Streambank stabilization projects to repair the banks and to reduce erosion and siltation in the creek should be undertaken in connection with larger, watershed reductions. As the park develops, stormwater runoff shall be integrated into the design, so nutrient loading is reduced and water quality improved. Best Management Practices (BMPs) shall be incorporated into the planning and construction of the parks features to reduce erosion and runoff. These solutions may involve combinations of structural and non-structural installations such as:

- Rain Barrels – Rain barrels are an easy and low-cost solution for addressing runoff from any roofed structure. They are installed at building downspouts and are designed to intercept and store water. Rain water shall be directed to a single or multi-barrel connection system to retain at least the first inch or rain during a storm event. Water collected can be used for supplemental watering of landscaped areas. The barrels can also be used for workshop demonstrations for the public.

Figure 26, rain barrel.

- Rain Gardens – The construction of a paved parking lot as well as the other features to be built in the park will alter the current drainage patterns in the park. The opportunity exists to include a large raingarden off the parking lot before the creek. This raingarden will collect runoff and the outfalls for any storm inlets to be installed in the parking lot and infiltrate it into the ground instead of discharging the stormwater into the creek. Site analysis has identified areas of erosion due to runoff in this area. By installing a raingarden, the amount of runoff discharging directly into Toby Creek will be greatly reduced, helping to meet MS4 requirements. Also, the location of the raingarden will be seen by everyone who enters the park through the main entrance helping to increase awareness for raingardens and serve as a demonstration for such a device.

Figure 27, rain garden.

- Meadows – Aside from a reduction in maintenance costs, areas of no-mown grass allowed to grow freely provide numerous benefits. The tall grasses and wildflowers soak up more water than low-mown turfgrass reducing the amount of surface runoff and increasing infiltration. The grass's roots are longer than turfgrass which improves soil stabilization reducing erosion. The various wildflowers not only look attractive but attract birds, bees, and other insects and animals that use meadows for food and shelter.

Figure 28, managed meadow.

- Revegetation/Reforestation – Dallas Township Park has a high percentage of tree canopy cover. Many trees and understory will be removed to allow for the construction of the proposed improvements outlined in this report. Restoring portions of the woods that were removed for construction will improve user experience and reestablish wildlife habitat. Shade cover will return lowering temperatures around the playground and reduce UV radiation. Stormwater runoff will be lessened as well as soil erosion.
- Sub-surface Infiltration Beds – A sub-surface infiltration bed is a layer of storage media (typically stone) beneath the proposed surface grade. They can be vegetated which aids in the amount of evapotranspiration. A network of perforated pipes carries water and infiltrates it into the media where it is infiltrated into the groundwater supply. They can be connected to roof leaders or inlets or placed under recreational fields or open space.

Figure 29, sub-surface infiltration bed with vegetation.

- Vegetative Swale/Filter Strip – A vegetated swale is a channel designed to capture runoff and slow it to allow for infiltration to take place. This reduces soil erosion caused by fast moving water. Vegetation not only beautifies the area but serves to increase evapotranspiration and stabilized the soils in the swale. A filter strip is a gently sloping area of dense vegetation designed to filter and slow large amounts of sheet flowing stormwater. Filter strips cleanse stormwater runoff of salts, metals, oils, sediment, and other pollutants.

Figure 30, vegetated swale.

Figure 31, filter strip.

- Riparian Buffer Restoration – Riparian buffers are permanent areas of trees and shrubs along bodies of water. These buffers stabilize soils along the streambanks, reducing soil erosion; reduce stormwater runoff, improving infiltration, and cleanse runoff before it gets to the stream, improving water quality. Buffers also improve water quality and improve aquatic wildlife habitat through reducing water temperatures. This reduces the likelihood of algae growth and improves breeding habitats for cold water fish.

Figure 32, riparian buffer.

- Soil Amendments – Construction often negatively impacts soil quality through compaction and reducing nutrients and water levels. Adding organic material (compost) to the impacted soil restores it. Impacted soil is tilled and organic material is added. Physical properties such as compaction and soil make up are improved. These actions improve water retention and infiltration, nutrient quantity, and rooting space for trees, shrubs, and other vegetation.

- Streambank Stabilization – Portions of the streambank to Toby Creek are damaged and eroding increasing nutrient loads, siltation and reducing water quality. To correct these issues, the streambank will need to be restored in the areas where erosion is occurring. A combination of hard and soft practices may be utilized. Hard practices involve use of boulders, rip rap, or gabions to slow the water and to reduce the damage to the earthen banks. Soft practices involve new plantings such as grasses, perennials, shrubs, and trees to cover earthen banks and to stabilize the soil with their roots. Areas where the stream turns are ideal for hard practices and areas where the stream straightens and relaxes are ideal for soft practices. A stabilized and restored streambank will not only address the issues described above but also beautify the area and improve enjoyment for the parks visitors.

Figure 33, streambank stabilization.

Constructed Features

Playground – Resident's top desired feature centered on a new playground. During the planning stages, direction was given to design the playground as a nature playground, one that uses natural elements such as logs, rocks, and the natural terrain, to allow children to invent their own play. This playground will offer separate areas for children 2-5 and 5-12 years old, as well as feature a variety of play options to appeal to all ages and abilities. The playground and connecting walkways shall be ADA accessible. Some specific amenities include:

- Amphitheater – A raised stage with terraced seating will allow school groups to gather for outdoor classroom or for children to perform stage shows of their own.
- Tree House – Allowing for children to climb and play outside of installed play equipment.
- Artificial Stream Bed – A pump would allow for water to flow through a constructed stream bed to allow for children to play in water and provide for educational opportunities. A small raingarden would collect excess runoff from the bed in storm events.
- Overlook – A small elevated platform would allow for adults to view the entire playground and supervise.
- Exploration Tables – Tables of various heights to accommodate exploration of examination of items found in the playground.
- Undulating Ground – mounded piles of soil.
- Sand Pit – Shallow area of sand for play to manipulate and build temporary works of art.
- Logs, stumps, and bounders – Items arranged to provide "steps" and balance beams to move from one side of the playground to the other.
- Trellis – At the entrance and over the picnic area, a vine covered trellis will provide shade and seasonal interest
- The nest – a manmade "birds nest" of enormous scale will provide an enclosed space for children to play.

- Equipment – shovels, sieves, colanders, spoons, ladles, buckets, bowls and the like will be provided.
- Loose branches/timber cookies – materials from the surrounding landscape will be used to provide building blocks for children to move and create new spaces within the play area.

Required support facilities for the playground include:

- Secondary parking lot – A gravel parking lot would be built just off Southside Avenue and serve as a lot for those who only wish to use the playground or serve as overflow parking. Two ADA accessible spaces would be paved and located closely to the playground. A concrete walkway would connect the lot with the playground.
- Paved path – A five-foot-wide paved path would encircle the playground connecting the various play areas to the parking lot and rest of the park's trail system. This path would feature a mix of asphalt, concrete, and unit pavers to create a sensory experience.
- Fence enclosure – With the playground being near SR 309 and the parking area, the playground shall be fence enclosed with a 4' high fence. Gated access will provide Township control of the facility when repairs are being made and permit parents to better observe their children within a confined space.
- Storage shed with covered breezeway – A shed would be constructed to house loose play equipment and feature a covered breezeway on the path connecting to the other side of the park.

Skate/BMX Park– Residents of all ages provided support for a skate/BMX park. The region lacks locations where people can use their skateboard or be challenged with a skateboard, longboard, in-line skate and BMX bike. This area would be constructed of concrete and feature ramps, jumps, rails, and other obstacles to provide challenge and enjoyment for users. There is no designated area for skating in the entire county, so providing an official, high-quality skating area will attract many visitors who might not otherwise use the park. The area will be constructed into the hillside, near the park's Sago Street entrance, so it can take advantage of the sloped terrain. A perimeter fence defines the space, provides the Township opportunity to control use/access when repairs are being made and prevents spectators from wandering into the park unknowingly.

Figure 34, concrete skate park.

Pavilion – A timber or steel pavilion built on a frost proof concrete pad offers space for park users to picnic, folks to gather, and groups to organize. Constructed just off the parking lot, the addition of open lawn space to the south and west accommodates impromptu games and overflow seating during good weather. The Township should manage the pavilion, permitting it for specific events and resident rentals. A fee structure for resident and non-resident use is often set by the Township supervisors.

The pavilion will need to include water and electric service. Unless the Township decides to open the park after dust, the lighting at the pavilion shall operate from dust to dawn for security. The addition of security cameras in and around the pavilion are recommended to deter vandalism and unwanted use after dusk. The use of solar panels or a green roof should be considered to reduce operation costs and utilize green

Figure 35, multi-purpose pavilion with integrated restrooms.

technology. A rain barrel at the base of a downspout can be directed to a demonstration rain garden. The addition of some interpretive signage, will explain the fundamentals of rainwater reuse to park users. Materials for the construction of the pavilion should be recycled or recyclable where feasible. The addition of picnic tables, trash receptacles with removable liners and counter space should be integrated with the final design. The concrete pad shall be sloped no greater than 1% in any direction and the entire facility should be ADA accessible, including access from the parking lot to the pavilion. At least 2 picnic tables shall accommodate wheelchair use.

The Township will need to allocate resources for maintenance of the pavilion, particularly after a rental or event. Cleaning of the tables and concrete surface of any spills and removal of trash are typical tasks.

WIFI - The Township may consider providing free WIFI during park hours to park users. People like to stay connected and as the development of technology expands, users frequently request it. A security system/monitoring system will likely require WIFI service anyhow, so discussion with the local provider on how to offer this, should be considered. In addition, the setup of "power stations" at the skate park, pavilion, playground, and dog park could be installed, especially if a solar panel power supply is constructed to offset the usage costs.

Security

Protecting the Township's investment in the park warrants the addition of a security system. A standalone system or a more complicated monitored system can be installed to deter unwanted activity and vandalism. The use of "wildlife" cameras strategically placed around the park, can provide police surveillance of the park, should an event occur, which will aid in the apprehension of the vandals. A more sophisticated system, can provide recording as well as live surveillance of the site remotely. Police officers, public works staff, and supervisors can have access via the internet to monitor the park at any hour. This can aid staff in monitoring events and overall park condition.

A police presence and overall park activity are the two greatest deterrents to vandalism and unwanted activity in the park. The more users in the park, the less desirable the park is to those seeking isolation for illegal activities. The development of a "friends of the park" group will provide a volunteer effort to not only maintain the park, but also a second set of eyes on the park to alert Township staff and Police should any issues arise. Pride and "ownership" of the park by residents and park users, often reduce vandalism and theft. So, it is critical to engage the community throughout the park development phases and ongoing operations. Specific park areas, like the skate park, dog park, and playground, could each be managed by a small group of volunteers. These folks will likely be interested in also holding events specific to their interests and create greater community awareness and participation in the park's growth and maintenance.

Restrooms – With the development of various park amenities, public restrooms will be needed. Initially, the use of portable restrooms or similar can be used and maintained under contract with a local service provider. Should temporary facilities be used for several years, the installation of a roofed structure to secure them and provide shade, should be considered. This can be a simple structure to make them more attractive and less likely to be vandalized or tipped.

As part of the pavilion development, the inclusion of two permanent ADA accessible restrooms and a maintenance/utility closet is recommended. The restrooms can be heated, should the Township anticipate the park being heavily used in the late fall, winter, and early spring. Restrooms will require daily maintenance and monitoring. Durable fixtures and washdown wall and floor systems are recommended. The use of hand dryers will reduce paper usage and waste. Lighting by occupant sensors will keep

electric usage to a minimum. The restrooms will require water and sewer connections. The sewer will need to be investigated further but will likely require a small grinder pump to elevate the sewage from the park to the system off Lakeside Drive.

Figure 36, dog park.

Dog Park – Residents expressed desire for an unleash dog park. This area would be situated farther back from the other features to alleviate noise concerns expressed during public meetings. A six-foot-tall chainlink fence would enclose two areas, one for large dogs and one for small dogs. An enclosed entrance area would allow for owners to enter, unleash their dogs, then allow them to enter the large fence enclosures. Upon exiting the park, they can re-leash their dogs, and re-enter the park in this same area. The entrance area should be paved, as maintaining this high traffic area in grass will be difficult. The larger enclosures typically are maintained as lawn, with the need to seed those areas of heavy foot traffic. The use of mulch or similar is not recommended. A section of asphalt trail would connect the dog park with the main parking lot. Waste receptacles and frost free drinking fountain with dog bowl or hose bib should be installed just outside the enclosure where dogs would have access only when on leash.

Pedestrian Bridges – To accommodate a larger looped trail network in the park, two bridges will span Toby Creek. At the southern end of the park, the bridge will connect the playground on the east side with the parking lot, pavilion, and restrooms on the west side. The bridge should be no less than 6' wide to accommodate folks in wheel chairs and those pushing strollers. The northern bridge could be slightly narrower at 5' as it primarily completes the looped trail, near the dog park. Both bridges should be of similar materials of either all timber beam or a combination of steel and timber. Since vehicular access over the creek is not needed, the structures do not need to carry heavy loads. A bollard placed on either end of the bridge would restrict motorized ATVs or similar. Each bridge will require a DEP Chapter 105 stream crossing permit. We recommend they be permitted at the same time, to reduce this cost, even if both bridges are not built at the same time. A hydrologic and hydraulic (H&H) study will be needed of the upstream watershed to ensure the structures do not impact flow or be susceptible to flooding during a large rainfall event. Each structure will require the installation of concrete abutments and stream channel stabilization. Railings should be no less than 42" high.

Figure 37, timber pedestrian bridge.

SITE IMPROVEMENTS COST OPINION				Date: February 2018 Revised:		
PROJECT Dallas Township Parks Master Plan - Phase Six				BARRY ISETT & associates INC MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS		
LOCATION Dallas Township, Luzerne County, PA						
CLIENT Dallas Township						
DRAWING TITLE Master Plan	PROJECT NO. 1063515	ESTIMATOR SMG		CHECKED BY BNS		SHEET
		UNITS	QUANTITY	UNIT PRICE	TOTAL PRICE	SUBTOTALS
MOBILIZATION						**$2,500.00**
1. Mobilization/Demobilization		LS	1	$2,500.00	$2,500.00	
EROSION & SEDIMENTATION CONTROLS						**$3,600.00**
1. Silt Soxx protection		LF	300	$12.00	$3,600.00	
DEMOLITION						**$7,100.00**
1. Excavate for stormwater forebay		CY	220	$30.00	$6,600.00	
2. Excavate for boulders/creek access		LS	1	$500.00	$500.00	
CONSTRUCTION						
Streambank Restoration						**$52,600.00**
1. Rough grading		SY	200	$2.50	$500.00	
2. Boulders		LS	1	$10,000.00	$10,000.00	
3. Final grading		SY	200	$4.00	$800.00	
4. Seed, mulch		SY	200	$4.00	$800.00	
5. Signage		LS	1	$500.00	$500.00	
6. Riparian plantings		LS	1	$15,000.00	$15,000.00	
7. Woodland restoration		LS	1	$25,000.00	$25,000.00	
LANDSCAPING						**$33,700.00**
1. Amended Topsoil (Rain Gardens, 12" depth)		CY	220	$125.00	$27,500.00	
2. Rain garden seed mix		SY	650	$8.00	$5,200.00	
3. Seed mulch open areas		SY	250	$4.00	$1,000.00	
					SUBTOTAL:	**$99,500.00**
Contingency (10%)						$9,950.00
Survey and Design						$11,940.00
Engineering and Permitting						$14,925.00
Inspection (5%)						$4,975.00
TOTAL COST OPINION						**$141,290.00**

Operations and Management

Figure 39, view of trail on west side of park.

Background

In Dallas Township, the Road Department, maintains the Township's parks. Periodic maintenance of the current park is relegated to mostly mowing and trash removal. With planned improvements to the park, additional maintenance will be needed to ensure that the park is clean, safe, and welcoming.

Maintenance is the single largest recurring expense in parks and recreation and the key to a parks success and on-going use. An operations and maintenance plan will provide written guidelines for specific maintenance activities and the parties responsible for each of the tasks. The following will outline the management activities, work zone areas, and anticipated budgets so officials can plan accordingly.

Management Plan Updates

As phases of the Dallas Township Park Master Plan are developed, the Management Plan will need to be reviewed and updated. The plan shall serve as a working document for the Township staff, supervisors, and volunteers. The following items shall be considered for incorporation into the management plan:

- Review and update task items as improvements to the Park are constructed
- Provide ongoing proactive and preventative maintenance
- List prohibited chemicals and/or cleaning products not to be used within the park buildings or limits
- List prohibited chemicals and/or herbicide products that cannot be used within the floodplain, along the streambank or in stormwater management areas
- Add work zone areas and update the boundary limits of existing work zones as they get expanded with the phased developments
- Offer annual training to the Township's staff to review and discuss alternative, sustainable maintenance practices in lieu of traditional techniques that have higher, long term environmental impacts
- Prioritize level of maintenance for park facilities and recreational elements according to their intended level of use ranging from heavy to light. Each of these areas should be assigned a set of maintenance standards including the recommended frequency and level of quality
- Conduct routine inspections to assess condition and the schedule repair work needed
- Follow manufacturer's recommendations for inspections to maintain manufacturer warranty
- Review playground areas, pedestrian pathways, building infrastructure, and other high impact assets regularly to confirm maintenance tasks are meeting needs
- Inspect and clean post construction stormwater management facilities

Maintenance Challenges and Opportunities

Visitors to Dallas Township Park expect a clean, inviting park with an attractive managed appearance. The Township's experienced maintenance crews and hard work, shall uphold this standard of care.

User safety on trails starts by maintaining a consistence surface and responding to emergency work in a rapid manner—for example, clearing obstacles quickly to prevent users from making rogue paths. By pulling together resources and prioritizing the workload, the Township can lay a foundation for an affective maintenance strategy.

A well designed and maintained park attracts users, which can be a double-edged sword. Higher attendance typically results in less vandalism and greater stewardship from the community. Conversely, increased users place greater demand on park elements and requires more frequent monitoring and maintenance.

Establishing protocols in which residents/park users can report issues about park maintenance should be clearly noted at the park. Users can make the Township aware of issues otherwise not necessarily easily noticed on a pass-through inspection.

When park improvements are constructed, design shall consider using quality, durable materials to reduce long-term maintenance costs. High labor maintenance items should be evaluated for opportunities to reduce the time required to complete the item while maintaining user expectations. For example,

converting large, seldom used mowed lawn areas to short meadow can cut time and fuel expense from a budget. Incorporating volunteers for general maintenance activities is also a great way to reduce staff labor hours and helps to facilitate community involvement and stewardship in the park.

Dallas Township Park could educate the public on a nature focused approach to park maintenance. Some residents may see naturalized landscapes as "weedy" areas and criticize the park for being poorly maintained. The goal of park maintenance should be to promote a healthy environment between the park's water, wildlife, vegetation, and its users. The Master Plan presents an opportunity to connect park users with the natural environment and provide educational resources for encouraging residents to replicate the park's sustainability ideas at their own homes. The use of temporary and permanent signage educates residents as the park develops. Often these signs require few words, but then links to more information could be provided should the reader be interested in learning more.

Maintenance Standards

A single document that establishes the maintenance standards for Dallas Township Park institutes a level of care created for the natural areas as well as its active recreational facilities.

The Township has guidelines for property maintenance related to housing codes and quality of life. Establishing maintenance standards for the park will enable all parties to refer to a common resource document that can assist in public volunteer requests, public outreach and budget discussions. The maintenance record can direct specific resources to more sensitive, natural areas of the park in efforts to preserve the balance between public recreational use and the park's natural resources. The document can establish policies on park uses, fees, volunteer requirements, and other issues that may emerge over time.

Township maintenance crews shall have a list of standard tasks to complete over multiple Township-owned properties. With limited labor and equipment resources, tasks don't always get completed, especially if training is reduced to verbal instruction to save time. Coordinating with outside entities such as the Dallas Area School District, Back Mountain Recreation, youth sports organizations within the Back Mountain, Dallas Borough, and volunteers, the cost to establish and convey a standard to which the park is maintained can be reduced to the Township. The goal of establishing maintenance standards is to document the basic standard of care needed throughout the park. The document assures a level of care shall be consistent year after year ensuring that visitors will enjoy the park for years to come.

Example of Park Use Areas		
Maintenance	**Usage**	**Location**
Level 1	High Use / Active Area	• Nature Playground • Dog Park • Trails • Pavilion • Restrooms • Skate Park
Level 2	Moderate Use	• Open Space • Parking Areas • Stream Corridor
Level 3	Low Use	• Creek Access • Stormwater management systems • Woodland/Natural Areas

Example of Routine Park Management Tasks		
Maintenance	**Frequency**	**Tasks**
Pavilion	After each rental and 2-3 times a week	• Pick up trash • Clean trash cans • Re-set tables
	Weekly (spring – fall)	• Wash down tables and paving
Restrooms	Daily	• Clean • Replace supplies • Check operation
Skate Park	Daily	• Check for broken glass • Pick up trash
	Weekly	• Power wash, as needed • Check for broken/damage items, repair
Playground	Daily	• Clean trash • Check play areas for broken glass
	Weekly	• Clean safety surface • Blow off walks • Clean picnic tables
	Monthly	• Safety check play equipment • Inventory supplies/replenish • Rake mulch surfaces
Trails	Weekly	• Safety check surface • Clean up trash • Blow surface clear
	Annually	• Check surface condition/repair as needed • Check trail signage/repaint

Dog Park	Weekly	• Empty litter/waste can • Check fence and gate operation • Wash down entrance area • Mow and trim lawn area
	Monthly	• Re-seed or sod heavy use areas • Apply powder lime prior to rainfall event
Lawns	Weekly	• Mow and trim
	Annually	• Remove leaves • Weed control, if needed • Lime/Fertilize, if needed • Repair bare areas/overseed, if needed • Aerate and top-dress to reduce compaction
PCSM	Rainfall Event	• Inspect system • Remove trash/debris
	Annually	• Follow PCSM plan requirements • Inspect and repair, as needed • Remove weeds/invasive plants • Mow in late fall/winter meadows and rain gardens • Remove sediment/debris
Bridges	Rainfall Event	• Inspect bridge/structure
	Weekly	• Blow/clean surface
	Annually	• Inspect entire structure • Remove debris/clear waterway below • Provide maintenance as required by manufacturer

Grant Sources

Figure 40, view of trailhead on west side of park.

There are numerous State and Federal Agencies which offer grant and/or low interest rate loans to fund park improvement projects. The following is a list of several possible sources:

Federal Grants

U.S. Fish and Wildlife Service

The North American Wetlands Conservation Act

Provides matching grants for the acquisition, restoration, and enhancement of wetland ecosystems for the benefit of waterfowl and other wetland dependent migratory species.
www.fws.gov/birds/grants/north-American-wetland-conservation-act.php

U.S. Environmental Protection Agency (EPA)

Environmental Education Grants

Supports environmental education projects that enhance the public's awareness, knowledge, and skills to make informed, responsible decisions that affect environmental quality.
www.epa.gov/education

U.S. Department of Education

Provides information on grants that institutions of higher education are eligible applicants.
www.ed.gov/funding.html

U.S. Department of Housing and Urban Development (HUD)

Community Development Block Grant

Grants for neighborhood revitalization, economic development, and improvement of community facilities and services, especially in low and moderate income areas.
portportal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs

National Park Service (NPS)

Rivers, Trails and Conservation Assistance (RTCA)

Offers in-depth staff assistance and consultation for locally led conservation projects such as developing trails and greenway networks or protecting rivers and open space.
www.nps.gov/orgs/rtca/index.htm

State Grants

Pennsylvania Department of Conservation and Natural Resources (DCNR)

Community Conservation Partnership Programs (C2P2)

The C2P2 Grant program is a tool for DCNR to partner with communities, nonprofit groups, and the private sector to conserve Pennsylvania's valuable natural and cultural resources and support community recreation and park initiatives. DCNR's funding sources are combined into one annual application cycle (deadline in April).
www.grants.dcnr.state.pa.us

Environmental Education Grants

Grants can fund several educational topics and projects, with the goal to have an environmentally literate culture, prepared to make wise, informed decisions, and take positive action on behalf of the environment. Focus should be on local and regional issues. All awards are announced around Earth Day and the grantees have one year to complete the project awarded. Up to $3,000 grant; match money not required although some cash or in-kind value are encouraged.

Pennsylvania Department of Community and Economic Development (DCED)

Greenways, Trails and Recreation Program (GTRP)

Act 13 of 2012 establishes the Marcellus Legacy Fund and allocates funds to the Commonwealth Financing Authority (the "Authority") for planning, acquisition, development, rehabilitation and repair of greenways, recreational trails, open space, parks and beautification projects. Institution of Higher Education are eligible to apply. $250,000 grant maximum; 15% match required.
community.newpa.com/programs/greenways-trails-and-recreation-program-gtrp/

Multimodal Transportation Fund (MTF)
Development, rehabilitation and enhancement of transportation assets to enhance communities, pedestrian safety and transit revitalization: streetscape, lighting, sidewalk enhancement, pedestrian safety, connectivity of transportation assets, transit-oriented development. Note that the CFA Multimodal Transportation Fund is separate from PennDOT. $100,000 project cost minimum; $3 million maximum grant request; 30% match required.
http://community.newpa.com/programs/multimodal-transportation-fund/

Watershed Restoration Protection Program
The program is for the construction, improvement, expansion, repair, maintenance and rehabilitation of watershed best management practices (BMPs). The ultimate goal being to remove streams from DEP's impairment list $300,000 maximum grant request; 15% match required.

Pennsylvania Department of Transportation (PENNDOT)
Multimodal Transportation Fund (MTF)
The program is intended to provide financial assistance to municipalities, councils of governments, businesses, economic development organizations, public transportation agencies, rail freight, passenger rail, and ports in order to improve transportation assets that enhance communities, pedestrian safety and transit revitalization. Please note that PennDOT's multimodal program is separate from the Multimodal Transportation Fund administered by the Commonwealth Financing Authority through DCED.
www.penndot.gov/ProjectAndPrograms/MultimodalProgram

Transportation Alternatives Program (TAP)
TAP projects build pedestrian and bicycle facilities, improve access to public transportation, create safe routes to school, preserve historic transportation structures, provide environmental mitigation, create trails projects that serve a transportation purpose, while promoting safety and mobility; there are 10 eligible categories. These grants can be very competitive, so regional support and backing of the community is important. Most funded projects are considered regional priorities. Note: this is not actually a grant program but worthy of investigation for the Dallas Township Park Master Plan. Funds all construction costs (minimum of $50,000/maximum of $1 million) and the project sponsor funds all pre-construction costs.
www.penndot.gov/ProjectAndPrograms/Planning/Pages/Transportation-AlternativesProgram.aspx#.VmeTA7grKM8

Pennsylvania Department of Environmental Protection Growing Greener
Main of the program is to clean up non-point sources of pollution. Typically project lists include work related to abandoned mines and oil/gas wells; however, this grant also funds other local watershed based conservation projects. Average grant amount is $150,000 and it requires a match of 15% (non-DEP funds)

TreeVitalize
TreeVitalize is a private-public partnership established by DCNR to restore tree cover in Pennsylvania urban areas. They offer grants for tree planting, purchasing, pruning and training staff in tree care.
www.treevitalize.net

Pennsylvania Council on the Arts (PCA)
Provides funding support for arts projects through PCA regional partner organizations
www.arts.pa.gov/WHAT%20WE%20DO/FUNDING/Pages/default.aspx

Pennsylvania Humanities Council (PHC)
Civic Engagement Grant
PHC offers civic engagement grants to groups in Pennsylvania that use a "Heart & Soul" approach to community development and planning.
www.pahumanities.org/resources/grants.php

Foundations

National Fish and Wildlife Foundation

National Fish and Wildlife Foundation Grants
NFWF provides funding on a competitive basis to projects that sustain, restore and enhance our nation's fish, wildlife, plants and their habitats.
www.nfwf.org

Pew Charitable Trust
Provides grants in many program areas, including environment, culture, health and human services.
www.pewtruStreetcom/grants

Non-Government Grants

National Gardening Association
Youth Garden Grants
Provides grants for seeds, tools, and gardening supplies for children to learn and work in outdoor gardens.
www.kidsgardening.com/grants.asp

U.S. Fish and Wildlife Service

National Wetlands Inventory

Dallas Park NWI Report

December 12, 2016

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Luzerne County, Pennsylvania

December 12, 2016

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

Preface.....2
How Soil Surveys Are Made.....5
Soil Map.....7
Soil Map.....8
Legend.....9
Map Unit Legend.....10
Map Unit Descriptions.....10
Luzerne County, Pennsylvania.....12
LEF—Lackawanna and Bath soils, steep, extremely stony.....12
MoB—Morris channery silt loam, 0 to 8 percent slopes.....14
MoC—Morris channery silt loam, 8 to 15 percent slopes.....15
WIC—Wellsboro channery silt loam, 8 to 15 percent slopes.....17
WID—Wellsboro channery silt loam, 15 to 25 percent slopes.....18
References.....21

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

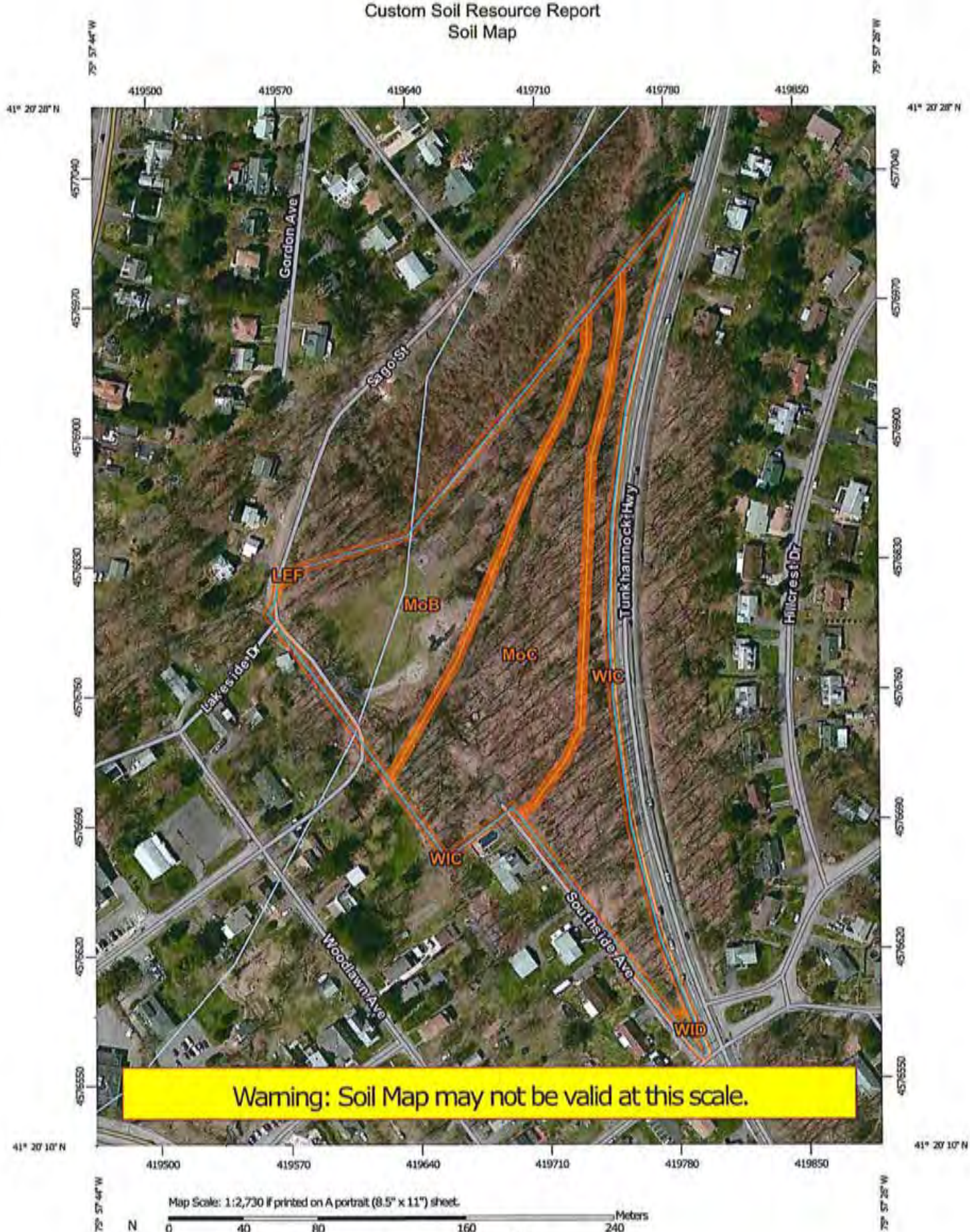
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Luzerne County, Pennsylvania
Survey Area Data: Version 9, Sep 19, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 14, 2011—May 10, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Luzerne County, Pennsylvania (PA079)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LEF	Lackawanna and Bath soils, steep, extremely stony	0.0	0.1%
MoB	Morris channery silt loam, 0 to 8 percent slopes	3.2	35.4%
MoC	Morris channery silt loam, 8 to 15 percent slopes	3.5	38.8%
WlC	Wellsboro channery silt loam, 8 to 15 percent slopes	2.3	25.2%
WlD	Wellsboro channery silt loam, 15 to 25 percent slopes	0.0	0.5%
Totals for Area of Interest		**9.1**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series.* Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases.* Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas.* Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Luzerne County, Pennsylvania

LEF—Lackawanna and Bath soils, steep, extremely stony

Map Unit Setting

National map unit symbol: 2v31t
Elevation: 330 to 2,460 feet
Mean annual precipitation: 31 to 70 inches
Mean annual air temperature: 39 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Lackawanna, extremely stony, and similar soils: 60 percent
Bath, extremely stony, and similar soils: 20 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lackawanna, Extremely Stony

Setting

Landform: Hills, mountains
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till derived mainly from reddish sandstone, siltstone, and shale

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: channery silt loam
Bw1 - 3 to 17 inches: channery silt loam
Bw2 - 17 to 26 inches: channery loam
Bx - 26 to 60 inches: channery loam
C - 60 to 72 inches: very channery loam

Properties and qualities

Slope: 25 to 50 percent
Percent of area covered with surface fragments: 7.0 percent
Depth to restrictive feature: 17 to 36 inches to fragipan
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 16 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Bath, Extremely Stony

Setting

Landform: Hills, mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy till derived mainly from gray and brown siltstone, sandstone, and shale

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: channery silt loam
Bw1 - 3 to 15 inches: channery silt loam
Bw2 - 15 to 25 inches: channery loam
E - 25 to 29 inches: channery loam
Bx - 29 to 52 inches: very channery silt loam
C - 52 to 72 inches: very channery silt loam

Properties and qualities

Slope: 25 to 45 percent
Percent of area covered with surface fragments: 7.0 percent
Depth to restrictive feature: 26 to 38 inches to fragipan
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Oquaga, extremely stony

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Wellsboro, extremely stony

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear

Across-slope shape: Linear
Hydric soil rating: No

Lordstown, very stony

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank, nose slope, free face, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Arnot, extremely stony

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountaintop, mountainflank, free face, nose slope, side slope, free face
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

MoB—Morris channery silt loam, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2vclq
Elevation: 330 to 2,460 feet
Mean annual precipitation: 31 to 70 inches
Mean annual air temperature: 39 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Morris and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Morris

Setting

Landform: Hills, mountains
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Interfluve, base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till from reddish sandstone, siltstone, and shale

Typical profile

Ap - 0 to 8 inches: channery silt loam

Bw - 8 to 12 inches: channery silt loam
Eg - 12 to 16 inches: channery silt loam
Bx - 16 to 60 inches: channery silt loam
C - 60 to 72 inches: channery loam

Properties and qualities

Slope: 0 to 8 percent
Percent of area covered with surface fragments: 0.0 percent
Depth to restrictive feature: 10 to 22 inches to fragipan
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Wellsboro

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Norwich

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

MoC—Morris channery silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2vclv
Elevation: 330 to 2,460 feet
Mean annual precipitation: 31 to 70 inches
Mean annual air temperature: 39 to 52 degrees F
Frost-free period: 105 to 180 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Morris and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Morris

Setting

Landform: Hills, mountains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till from reddish sandstone, siltstone, and shale

Typical profile

Ap - 0 to 8 inches: channery silt loam
Bw - 8 to 12 inches: channery silt loam
Eg - 12 to 16 inches: channery silt loam
Bx - 16 to 60 inches: channery silt loam
C - 60 to 72 inches: channery loam

Properties and qualities

Slope: 8 to 15 percent
Percent of area covered with surface fragments: 0.0 percent
Depth to restrictive feature: 10 to 22 inches to fragipan
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Norwich

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Wellsboro

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope, head slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Oquaga

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

WIC—Wellsboro channery silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2vck6
Elevation: 330 to 2,460 feet
Mean annual precipitation: 31 to 70 inches
Mean annual air temperature: 39 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Wellsboro and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wellsboro

Setting

Landform: Hills, mountains
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy till from reddish sandstone, siltstone, and shale

Typical profile

Ap - 0 to 8 inches: channery silt loam
Bw - 8 to 22 inches: channery silt loam
Bx - 22 to 55 inches: channery loam
C - 55 to 72 inches: very channery loam

Properties and qualities

Slope: 8 to 15 percent
Percent of area covered with surface fragments: 0.0 percent
Depth to restrictive feature: 14 to 30 inches to fragipan
Natural drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 13 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Lackawanna

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Morris

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Interfluve, base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

WID—Wellsboro channery silt loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 2vck7
Elevation: 330 to 2,460 feet
Mean annual precipitation: 31 to 70 inches
Mean annual air temperature: 39 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Wellsboro and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wellsboro

Setting

Landform: Hills, mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope, head slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till from reddish sandstone, siltstone, and shale

Typical profile

Ap - 0 to 8 inches: channery silt loam
Bw - 8 to 22 inches: channery silt loam
Bx - 22 to 55 inches: channery loam
C - 55 to 72 inches: very channery loam

Properties and qualities

Slope: 15 to 25 percent
Percent of area covered with surface fragments: 0.0 percent
Depth to restrictive feature: 14 to 30 inches to fragipan
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 13 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Lackawanna

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Morris

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Oquaga

Percent of map unit: 5 percent
Landform: Hillslopes

Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

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Phased Tasks and Opinion of Probable Costs

Figure 38, view of park entrance on west side.

Cost Opinion

The final master plan identifies a significant number of proposed improvements to fulfill the recreational, educational, and environmental issues discussed by the committee, residents, and local authorities. Realizing funds will likely control the implementation of the plan, the proposed improvements are organized into phases. An opinion of probable cost was prepared for each phase, so the Township can budget planned improvements over multiple years and seek to secure outside funding (grants, donations, etc.) to complete the improvements.

The following suggested development phases focus on grouping similar Park needs and uses. The phases act in a sequence, building upon the improvements of the prior phase, however some sequences may need to shift as specific funding opportunities become available. The cost opinions provided in this report are 2017 estimates, so a percentage of inflation shall be added depending on when the work is to be completed. Design and engineering fees have been included as a percentage cost of the project.

The table below provides a quick summary of the proposed development phases and corresponding estimates of probable cost. On the following pages, the Master Site Plan provides graphic representation of the suggested development phases followed by a detailed breakdown of costs for each phase.

Dallas Township Park Master Plan Project Phasing		
Project Phase	**Description**	**Estimated Cost**
Phase One	Nature playground	$691,207.01
Phase Two	Skate park	$917,320.00
Phase Three	Paved driveway, parking lot, pavilion, pedestrian bridge	$1,162,933.14
Phase Four	Dog park	$113,756.20
Phase Five	Paved trails	$256,913.50
Phase Six	Streambank/woodland restoration	$141,290.00

Applicable Regulations

Located within Dallas Township, proposed improvements shall comply with Township ordinances in addition to other outside agencies. The following list has been provided as an outline of potential regulators to contact during the various planning stages of development. This is not a comprehensive list but rather highlights the most anticipated regulations based on the proposed improvements:

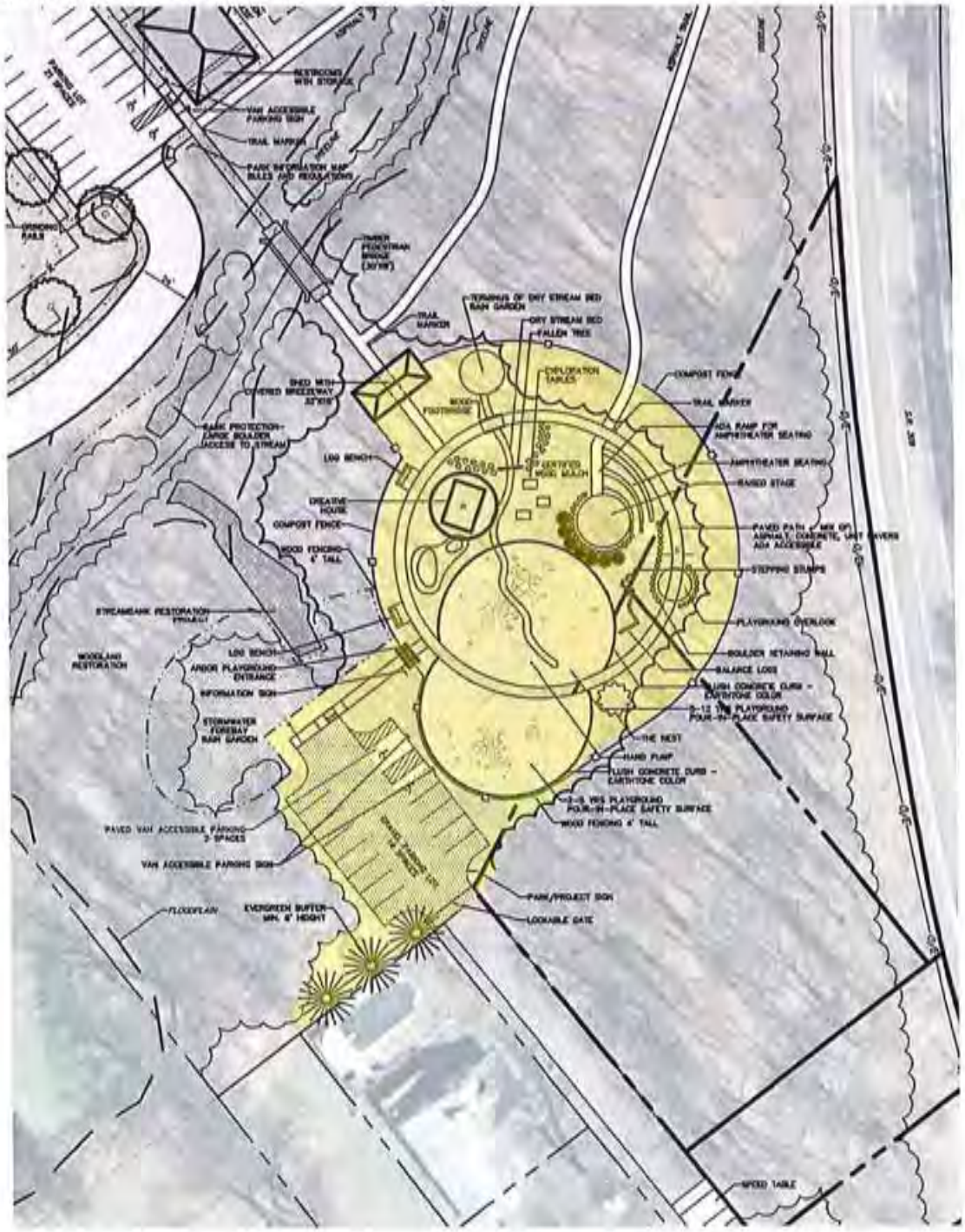
- DEP NPDES Permit – A permit for stormwater discharge associated with construction activities is required when earth disturbance is over one acre. The permit also requires a Post Construction Stormwater Management (PCSM) plan. The PCSM plan identifies the permanent water quality and quantity site improvements installed and their required maintenance. The PA Department of Environmental Protection (DEP) will begin issuing new MS4 NPDES permits in 2018, which will require provisions for reducing pollution entering the streams designated as impaired. Due to the creek's impairment and its discharge to the Susquehanna River, implementation of best management practices to address water quality will be required.

- Erosion & Sedimentation (E&S) Plan – Any construction activity, no matter how large or small of the area of disturbed, an erosion and sedimentation control measures shall be implemented to prevent the unwanted discharge of sediment from a disturbed site into Toby Creek or adjacent private property. The plan shall be submitted to the Township Engineer for review and if applicable, submitted to the Luzerne County Conservation District for review and approval as well.
- Stream Encroachment Permit – The PA Department of Environmental Protection (DEP) requires a permit to conduct work in, over or along the waters of the Commonwealth. Typical permitted activities include maintaining existing bridge structures, constructing new stream crossings, grading along streambanks or constructing or demolishing structures within the floodway. The permit shall require a prepared plan, construction details and project narrative detailing the scope of work in addition to a permit application.
- The construction of the pedestrian bridges will require a permit and if significant changes are made to the opening under the bridge, may require a HEC-RAS study as part of the Stream Encroachment Permit. The HEC-RAS study models the stream's flow and what impacts the proposed project will generate on the creeks flow. The study looks to avoid negative impacts to the greatest extent possible, such as redirected stream flows or accelerated erosion along streambanks.
- Pennsylvania Natural Diversity Inventory (PNDI) search – Facilitated through the Pennsylvania Natural Heritage Program (PNHP), the online tool conducts a search for potential impacts to endangered or threatened species within a project area. This environmental review is required when involving stream encroachment permits, NPDES permits and some funding sources.
- PennDOT – The park borders State Route 309 to the east. If the Township decides to install any signage along this road, a permit will be required.
- Pennsylvania One Call – PA requires three working days' notice before digging and excavation occurring on site for the construction phase.

Project Phasing Plan

Phase One

Phase One consists of the construction of a nature playground. The existing play equipment and miscellaneous structures will be demolished and removed along with clearing and grubbing of the site. Walkways, play areas, parking lot, sub-surface infrastructure, and other features will be excavated and graded. Gravel for the parking lot will be installed and ADA accessible spaces will be paved. Sub-surface infrastructure for the playground will be installed. Walkways, playground edging, safety surfacing, and stream bed will be installed. Forming of topographic features will occur followed by the installation of miscellaneous play equipment and construction of the storage shed. Installation of benches, signage, fencing, and landscaping will complete this phase.



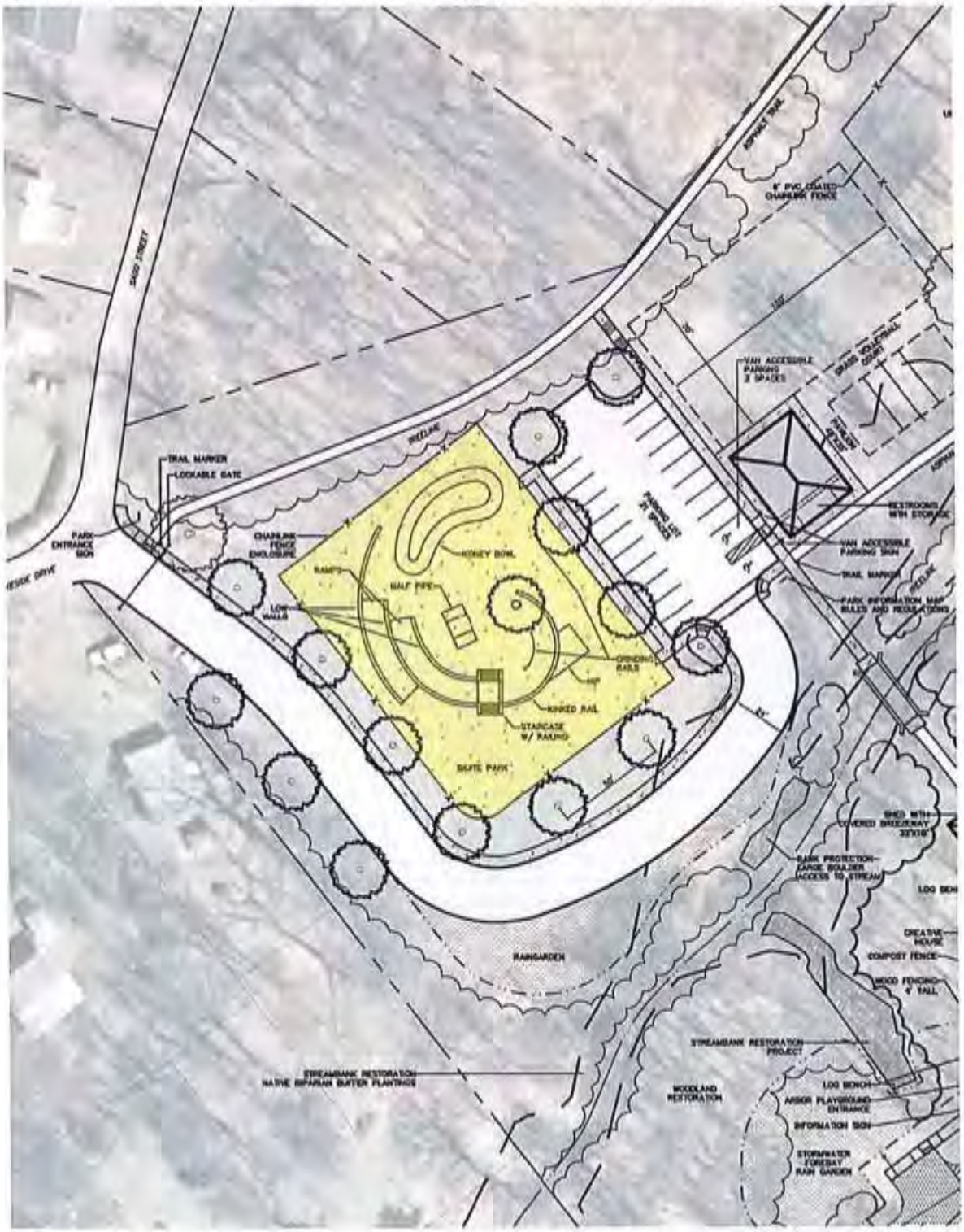
SITE IMPROVEMENTS COST OPINION				Date: February 2018 Revised:		
PROJECT Dallas Township Parks Master Plan - Phase One				BARRY ISETT & associates		
LOCATION Dallas Township, Luzerne County, PA						
CLIENT Dallas Township						
DRAWING TITLE Master Plan	PROJECT NO. 1063515	ESTIMATOR SMG		CHECKED BY BNS		SHEET
		UNITS	QUANTITY	UNIT PRICE	TOTAL PRICE	SUBTOTALS
MOBILIZATION						**$5,000.00**
1. Mobilization/Demobilization		LS	1	$5,000.00	$5,000.00	
EROSION & SEDIMENTATION CONTROLS						**$11,000.00**
1. Silt Soxx protection		LF	450	$12.00	$5,400.00	
2. Tree Protection Fencing		LF	400	$9.00	$3,600.00	
3. Rock Construction Entrance		LS	1	$2,000.00	$2,000.00	
DEMOLITION						**$33,290.00**
1. Excavate for walkways		CY	95	$30.00	$2,850.00	
2. Excavate for playground area		CY	540	$30.00	$16,200.00	
3. Excavate for playground curbing		CY	18	$30.00	$540.00	
4. Excavate for rain garden/stream		CY	50	$30.00	$1,500.00	
5. Excavate for gravel parking lot		CY	120	$30.00	$3,600.00	
6. Excavate for paved parking spaces		CY	20	$30.00	$600.00	
7. Demo existing concrete, picnic table		LS	1	$2,000.00	$2,000.00	
8. Demo existing play areas		LS	1	$1,000.00	$1,000.00	
9. Tree removal		LS	1	$5,000.00	$5,000.00	
CONSTRUCTION						
Parking Lot - Gravel						**$26,045.50**
1. Rough grading and compact sub-base		SY	575	$2.50	$1,437.50	
2. 6" aggregate base (2A stone)		CY	100	$60.00	$6,000.00	
3. Final grading		SY	575	$4.00	$2,300.00	
4. 2" stone chips (3/8", clean)		CY	30	$20.00	$600.00	
5. 4" Superpave 25 mm base course		SY	60	$50.00	$3,000.00	
6. 1.5" Superpave 9 mm wearing course		SY	60	$33.00	$1,980.00	
7. Striping (4" wide, white)		LF	216	$1.75	$378.00	
8. Striping (ADA diagonal, blue)		SF	90	$5.00	$450.00	
9. ADA symbols		EA	2	$125.00	$250.00	
10. Stop sign		EA	1	$150.00	$150.00	
11. Accessible parking sign		EA	2	$250.00	$500.00	
12. Concrete wheel stops		EA	15	$600.00	$9,000.00	
Walkways						**$27,335.00**
1. Concrete Sidewalk (4" depth)		SY	115	$145.00	$16,675.00	
2. Paver walk		SY	40	$85.00	$3,400.00	
3. 3" Aggregate Base (#57 stone, trail path)		CY	22	$45.00	$990.00	
4. 1.5" Superpave wearing course (trail path)		SY	190	$33.00	$6,270.00	

Playground					$275,780.00
1. Grading	SY	1610	$4.00	$6,440.00	
2. Surfacing (8" depth, certified wood mulch)	CY	150	$125.00	$18,750.00	
3. Surfacing (8" depth, pour-in-place rubber come	CY	975	$60.00	$58,500.00	
4. Concrete Curb (18" depth)	LF	310	$40.00	$12,400.00	
5. Equipment (Ages 5-12)	LS	1	$60,000.00	$60,000.00	
6. Equipment (Ages 2-5)	LS	1	$32,000.00	$32,000.00	
7. Geotextile Fabric layer	SY	810	$9.00	$7,290.00	
8. Aggregate Stone layer (18" min.)	CY	200	$60.00	$12,000.00	
9. Underdrain Pipe (6" perforated @ 10' o.c.)	LF	300	$18.00	$5,400.00	
10. Underdrain Pipe (8" PVC, outlet)	LF	50	$25.00	$1,250.00	
11. Installation storm pipe (8" HDPE, w. backfill)	LF	10	$30.00	$300.00	
12. Storm pipe flared end	EA	1	$500.00	$500.00	
13. Log Benches	EA	5	$500.00	$2,500.00	
14. Stepping Stones	EA	20	$100.00	$2,000.00	
15. Stepping Stumps	EA	20	$100.00	$2,000.00	
16. Exploration Table	EA	2	$1,500.00	$3,000.00	
17. Loose Equipment	LS	1	$2,000.00	$2,000.00	
18. Dry Streambed	LS	1	$12,000.00	$12,000.00	
21. Water supply	LS	1	$20,000.00	$20,000.00	
22. Security camera system	LS	1	$15,000.00	$15,000.00	
23. Shrubs (evergreen, min. 6')	EA	7	$350.00	$2,450.00	
Amphitheater					$23,900.00
1. Elevated stage (stone slab pavers)	SY	55	$100.00	$5,500.00	
2. Seating walls (concrete)	LF	100	$100.00	$10,000.00	
3. Landscape boulders	EA	20	$400.00	$8,000.00	
4. Landscape steps (wood)	EA	2	$200.00	$400.00	
Playground Overlook					$15,200.00
1. Platform (stone slab pavers)	SY	20	$100.00	$2,000.00	
2. Landscape boulders	EA	23	$400.00	$9,200.00	
3. Bench	LS	1	$3,000.00	$3,000.00	
4. Trash recepticle	LS	1	$1,000.00	$1,000.00	
Storage Shed					$38,040.00
1. Foundation	SY	60	$145.00	$8,700.00	
2. Structure	LS	1	$20,000.00	$20,000.00	
3. Underground electrical line	LF	180	$13.00	$2,340.00	
4. Conduit	LF	180	$25.00	$4,500.00	
5. Electrical connections	LS	1	$2,000.00	$2,000.00	
6. Signage	LS	1	$500.00	$500.00	
Other Items					$20,500.00
1. Arbor	LS	1	$2,500.00	$2,500.00	
2. Footbridge	LS	1	$1,500.00	$1,500.00	
3. Fencing	LF	550	$30.00	$16,500.00	

LANDSCAPING					**$10,675.00**
1. Amended Topsoil (Rain Garden, 12" depth)	CY	15	$125.00	$1,875.00	
2. Rain Garden Plugs (playground, basin floor)	EA	300	$4.00	$1,200.00	
3. Trees (evergreen, 12' min.)	EA	3	$600.00	$1,800.00	
4. Seed mulch open areas	SY	1,450	$4.00	$5,800.00	
				SUBTOTAL:	**$486,765.50**
Contingency (10%)					**$48,676.55**
Survey and Design					**$58,411.86**
Engineering and Permitting					**$73,014.83**
Inspection (5%)					**$24,338.28**
TOTAL COST OPINION					**$691,207.01**

Phase Two

Phase Two consists of the construction of a concrete skate park. The skate park will be built on the existing baseball field on the west side of the park. The existing chainlink fencing will be removed and the site will be graded and excavated for the concrete pad. The obstacles will be constructed comprising concrete ramps, half pipe, bowl, walls, and railings. Chainlink fencing will be installed to enclose the space. Installation of benches, trash receptacles, signage, and landscaping will complete this phase.



SITE IMPROVEMENTS COST OPINION				Date: February 2018 Revised:		
PROJECT Dallas Township Parks Master Plan - Phase Two				BARRY ISETT & associates INC MULTI DISCIPLINE ENGINEERS AND CONSULTANTS		
LOCATION Dallas Township, Luzerne County, PA						
CLIENT Dallas Township						
DRAWING TITLE Master Plan	PROJECT NO. 1063515	ESTIMATOR SMG		CHECKED BY BNS		SHEET
		UNITS	QUANTITY	UNIT PRICE	TOTAL PRICE	SUBTOTALS
MOBILIZATION						**$5,000.00**
1. Mobilization/Demobilization		LS	1	$5,000.00	$5,000.00	
EROSION & SEDIMENTATION CONTROLS						**$6,800.00**
1. Silt Soxx protection		LF	250	$12.00	$3,000.00	
2. Tree Protection Fencing		LF	200	$9.00	$1,800.00	
3. Rock Construction Entrance		LS	1	$2,000.00	$2,000.00	
DEMOLITION						**$18,300.00**
1. Excavate for skate park		CY	610	$30.00	$18,300.00	
CONSTRUCTION						
Skate Park						$607,900.00
1. Pad (6" depth, Class A concrete)		SY	1820	$145.00	$263,900.00	
2. Obstacles (concrete)		SY	2500	$125.00	$312,500.00	
3. Fencing (4', pvc coated chainlink)		LF	500	$25.00	$12,500.00	
4. Gates (4', chainlink)		EA	2	$600.00	$1,200.00	
5. Railings		LF	180	$50.00	$9,000.00	
6. Signage		LS	1	$1,000.00	$1,000.00	
7. Benches		EA	2	$3,000.00	$6,000.00	
8. Trash receptacle		EA	2	$900.00	$1,800.00	
LANDSCAPING						$8,000.00
1. Trees deciduous		EA	1	$600.00	$600.00	
2. Seed mulch open areas		SY	1,850	$4.00	$7,400.00	
					SUBTOTAL:	$646,000.00
Contingency (10%)						$64,600.00
Survey and Design						$77,520.00
Engineering and Permitting						$96,900.00
Inspection (5%)						$32,300.00
TOTAL COST OPINION						$917,320.00

Phase Three

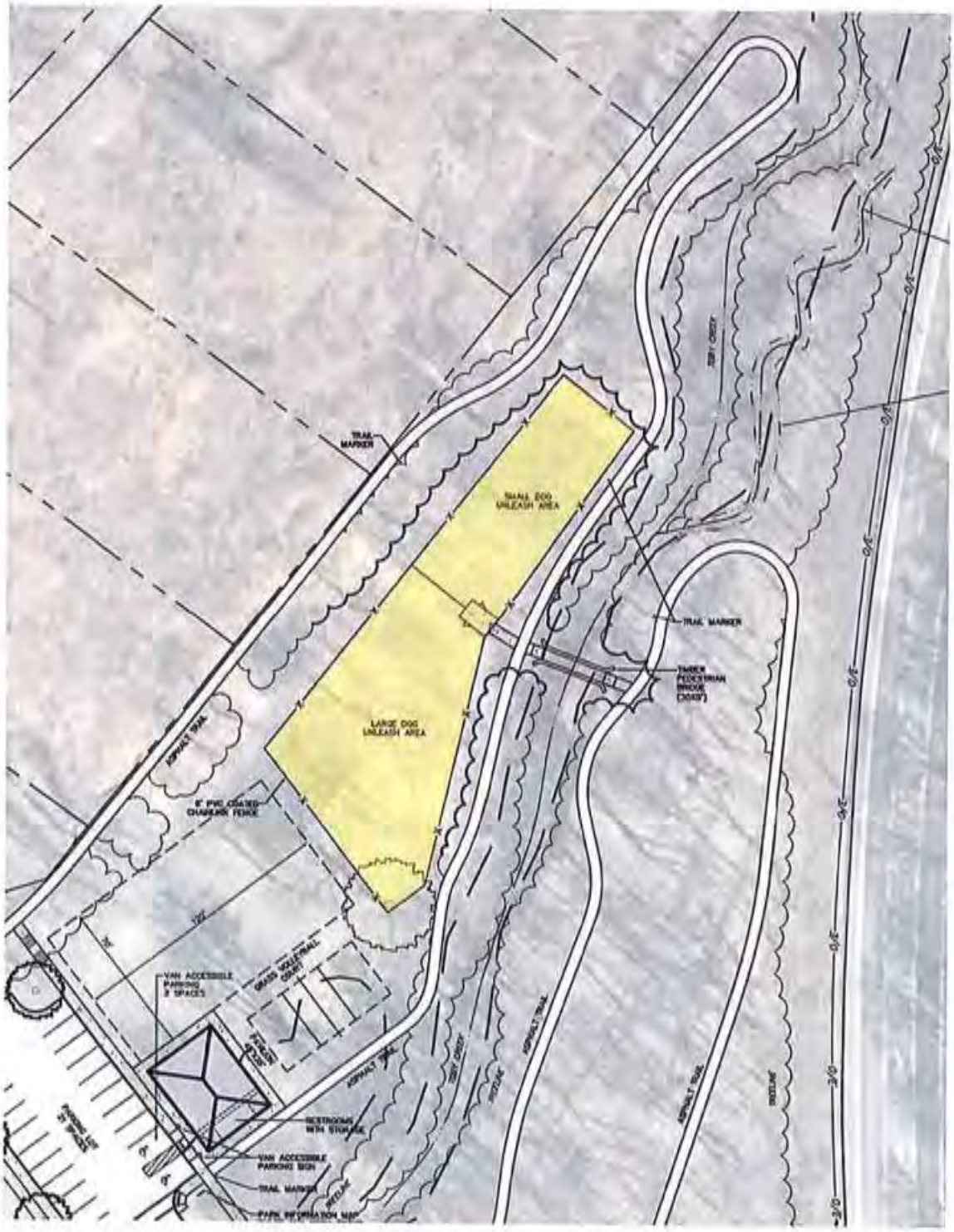
Phase Three will consist of the construction of a paved asphalt parking lot, multi-purpose pavilion, pedestrian bridge, rain garden, and paved walkways. Site preparation will entail removal of selected trees, removal of a material stockpile area, removal of Japanese Knotweed colony, grading and excavation for the driveway, pavilion, walkways, and pedestrian bridge. A new asphalt driveway will wrap around the skate park that will be completed in Phase Two and lead to a new asphalt parking lot with a capacity of 21 cars, including two accessible spaces. Concrete walkways border the drive and parking lot. A multi-purpose pavilion with integrated restrooms will be constructed adjacent to the parking lot. A timber pedestrian bridge will be constructed over Toby Creek linking the playground on the east side of the park with the west side. Deciduous trees will line the driveway and parking lot and a rain garden will be installed off the driveway to capture stormwater runoff. Installation of site furnishings, signage, and landscaping will complete this phase.

SITE IMPROVEMENTS COST OPINION				Date: February 2018 Revised:		
PROJECT Dallas Township Parks Master Plan - Phase Three				BARRY ISETT & associates		
LOCATION Dallas Township, Luzerne County, PA						
CLIENT Dallas Township						
DRAWING TITLE Master Plan	PROJECT NO. 1063515	ESTIMATOR SMG		CHECKED BY BNS		SHEET
		UNITS	QUANTITY	UNIT PRICE	TOTAL PRICE	SUBTOTALS
MOBILIZATION						**$10,000.00**
1. Mobilization/Demobilization		LS	1	$10,000.00	$10,000.00	
EROSION & SEDIMENTATION CONTROLS						**$10,575.00**
1. Silt Soxx protection		LF	750	$12.00	$9,000.00	
2. Tree Protection Fencing		LF	175	$9.00	$1,575.00	
DEMOLITION						**$55,750.00**
1. Excavate for paved parking lot		CY	680	$30.00	$20,400.00	
2. Excavate for curbing (18" depth)		LF	1220	$10.00	$12,200.00	
3. Excavate for rain garden (parking lot)		CY	155	$30.00	$4,650.00	
4. Excavate for pavilion		LS	1	$12,000.00	$12,000.00	
5. Excavate for walkways		CY	150	$30.00	$4,500.00	
6. Excavate for pedestrian bridge		LS	1	$2,000.00	$2,000.00	
CONSTRUCTION						
Pedestrian Bridge						**$30,000.00**
1. Timber bridge (8' wide)		LS	1	$30,000.00	$30,000.00	
Paved Parking Lot						**$246,667.00**
1. Rough grading and compact sub-base		SY	1920	$3.00	$5,760.00	
2. 6" aggregate base (2A stone)		CY	320	$60.00	$19,200.00	
3. Final grading		SY	1920	$4.00	$7,680.00	
4. 4" Superpave 25 mm base course		SY	1920	$50.00	$96,000.00	
5. 1.5" Superpave 9 mm wearing course		SY	1920	$33.00	$63,360.00	
6. Striping (4" wide, white)		LF	324	$1.75	$567.00	
7. Striping (ADA diagonal, blue)		SF	90	$5.00	$450.00	
9. ADA symbols		EA	2	$125.00	$250.00	
10. Stop sign		EA	1	$150.00	$150.00	
11. Accessible parking sign		EA	2	$250.00	$500.00	
12. Curb (18" depth, concrete)		LF	1220	$40.00	$48,800.00	
13. Joint Sealer		LF	70	$5.00	$350.00	
14. Raingarden (seed mix)		SY	450	$8.00	$3,600.00	

Pavilion					**$367,850.00**
1. Misc. site demo	LS	1	$4,000.00	$4,000.00	
2. Grading	LS	1	$3,000.00	$3,000.00	
3. Concrete slab, footers, piers	LS	1	$21,000.00	$21,000.00	
4. Parkaire Activity Center (68'x40')	LS	1	$145,000.00	$145,000.00	
5. Construction (labor)	LS	1	$60,000.00	$60,000.00	
6. Underground electrical wiring	LF	350	$13.00	$4,550.00	
7. Conduit	LF	350	$25.00	$8,750.00	
8. Electrical connections	LS	1	$4,000.00	$4,000.00	
9. Water line (Copper, 1")	LF	350	$40.00	$14,000.00	
10. Water line (Ductile iron, 6")	LF	350	$90.00	$31,500.00	
11. Sanitary line (PVC, 6")	LF	450	$65.00	$29,250.00	
12. Plumbing connections	LS	1	$3,000.00	$3,000.00	
13. Toilet accessories/compartments		1	$10,000.00	$10,000.00	
14. Doors hardware	LS	1	$6,000.00	$6,000.00	
15. Windows	LS	1	$10,000.00	$10,000.00	
16. Picnic tables	EA	8	$1,200.00	$9,600.00	
17. Trash receptacles	EA	2	$900.00	$1,800.00	
18. Cooking grills	EA	3	$400.00	$1,200.00	
19. Campfire pits	EA	2	$600.00	$1,200.00	
Walkways					**$61,750.00**
1. Paved walkway, (bituminous, 5' wide)	SY	50	$75.00	$3,750.00	
2. Walkways, (Class A concrete, 5" depth)	SY	400	$145.00	$58,000.00	
LANDSCAPING					**$36,375.00**
1. Trees (deciduous, 2.5" cal. Min.)	EA	14	$600.00	$8,400.00	
2. Amended Topsoil (Rain Gardens, 12" depth)	CY	155	$125.00	$19,375.00	
3. Seed mulch open areas	SY	2,150	$4.00	$8,600.00	
				SUBTOTAL:	**$818,967.00**
Contingency (10%)					$81,896.70
Survey and Design					$98,276.04
Engineering and Permitting					$122,845.05
Inspection (5%)					$40,948.35
TOTAL COST OPINION					**$1,162,933.14**

Phase Four

Phase Four consists of the construction of an off-leash fenced-in dog park. The dog park will be located where the existing basketball courts are on the west side of the park. Clearing and grubbing of trees and shrubs will take place and the site will be graded and excavation for the concrete pad will take place. The site will be seeded and six-foot tall chainlink fencing will be installed. Benches, waste receptacles, hose bib and drinking fountain, play equipment, signage, and landscaping will be installed completing the phase.



SITE IMPROVEMENTS COST OPINION				Date: February 2018 Revised:		
PROJECT Dallas Township Parks Master Plan - Phase Four				BARRY ISETT & associates inc MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS		
LOCATION Dallas Township, Luzerne County, PA						
CLIENT Dallas Township						
DRAWING TITLE Master Plan	PROJECT NO. 1063515	ESTIMATOR SMG		CHECKED BY BNS		SHEET
		UNITS	QUANTITY	UNIT PRICE	TOTAL PRICE	SUBTOTALS
MOBILIZATION						**$2,500.00**
1. Mobilization/Demobilization		LS	1	$2,500.00	$2,500.00	
EROSION & SEDIMENTATION CONTROLS						**$5,985.00**
1. Silt Soxx protection		LF	285	$12.00	$3,420.00	
2. Tree Protection Fencing		LF	285	$9.00	$2,565.00	
DEMOLITION						**$8,000.00**
1. Clear and grub		LS	1	$5,000.00	$5,000.00	
2. Trenching for water line		LF	250	$10.00	$2,500.00	
3. Excavate for concrete pad (dog park)		LS	1	$500.00	$500.00	
CONSTRUCTION						
Dog Park						**$73,275.00**
1. Grading		SY	1500	$4.00	$6,000.00	
2. Seed, mulch		SY	1500	$4.00	$6,000.00	
3. Entry pad (Class A concrete, 6" depth)		SY	25	$145.00	$3,625.00	
4. Fencing (6', chainlink)		LF	680	$45.00	$30,600.00	
5. Gate (6', chainlink)		EA	3	$1,000.00	$3,000.00	
6. Water line (1", copper)		LF	250	$25.00	$6,250.00	
7. Water valve		LS	1	$1,250.00	$1,250.00	
8. Hose bib		LS	1	$250.00	$250.00	
9. Drinking fountain		LS	1	$2,500.00	$2,500.00	
10. Waste disposal receptacles		EA	2	$900.00	$1,800.00	
11. Benches		EA	2	$3,000.00	$6,000.00	
12. Play equipment		LS	1	$5,000.00	$5,000.00	
13. Signage		LS	1	$1,000.00	$1,000.00	
LANDSCAPING						**$3,100.00**
1. Seed mulch open areas		SY	775	$4.00	$3,100.00	
					SUBTOTAL:	**$92,860.00**
Contingency (10%)						$9,286.00
Survey and Design						$11,143.20
Engineering and Permitting						$13,929.00
Inspection (5%)						$4,643.00
TOTAL COST OPINION						**$131,861.20**

Phase Five

Phase Five consists of the construction of paved trails and a pedestrian bridge. There will be two loops, one on each side of the park. A timber pedestrian bridge will connect the trails at the north end of the park near the dog park. The trails will be paved with asphalt and be ADA accessible where possible. Timber steps will be installed near the parking lot walkway to connect the trail with the parking lot and pavilion. The installation of benches, trail markers, signage, and landscaping will complete this phase.

SITE IMPROVEMENTS COST OPINION				Date: February 2018 Revised:		
PROJECT Dallas Township Parks Master Plan - Phase Five				BARRY ISETT & associates INC		
LOCATION Dallas Township, Luzerne County, PA						
CLIENT Dallas Township						
DRAWING TITLE Master Plan	PROJECT NO. 1063515	ESTIMATOR SMG		CHECKED BY BNS		SHEET
		UNITS	QUANTITY	UNIT PRICE	TOTAL PRICE	SUBTOTALS
MOBILIZATION						**$5,000.00**
1. Mobilization/Demobilization		LS	1	$5,000.00	$5,000.00	
EROSION & SEDIMENTATION CONTROLS						**$12,600.00**
1. Silt Soxx protection		LF	1,050	$12.00	$12,600.00	
DEMOLITION						**$16,950.00**
1. Excavate for paved trails		CY	465	$30.00	$13,950.00	
2. Excavate for pedestrian bridge		LS	1	$2,000.00	$2,000.00	
3. Excavate for steps		LS	1	$1,000.00	$1,000.00	
CONSTRUCTION						
Trails/Walkways						**$124,375.00**
1. Paved trails, (bituminous, 5' wide)		SY	1310	$75.00	$98,250.00	
2. Walkways, (Class A concrete, 5" depth)		SY	25	$145.00	$3,625.00	
3. Steps, (wood)		EA	10	$500.00	$5,000.00	
4. Trail markers		EA	7	$500.00	$3,500.00	
5. Benches		EA	4	$3,000.00	$12,000.00	
6. Interpretive signage		EA	4	$500.00	$2,000.00	
Pedestrian Bridge						**$20,000.00**
1. Bridge, (timber, 5' wide)		LS	1	$20,000.00	$20,000.00	
LANDSCAPING						**$2,000.00**
1. Seed mulch open areas		SY	500	$4.00	$2,000.00	
					SUBTOTAL:	**$180,925.00**
Contingency (10%)						$18,092.50
Survey and Design						$21,711.00
Engineering and Permitting						$27,138.75
Inspection (5%)						$9,046.25
TOTAL COST OPINION						**$256,913.50**

Phase Six

That last phase of the master plan will be streambank restoration, woodland restoration, and stormwater forebay near the playground. An eroded section of the Toby Creek streambank will be repaired with boulders and riparian plantings. Additional riparian plantings will be installed along the bank. An eroded stormwater channel will also be repaired with boulders and riparian plantings. The woodland adjacent to the creek on the east side of the park will be restored with native plantings. A stormwater forebay will be installed adjacent to the gravel parking lot on the east side of the park to capture runoff. The installation of signage and miscellaneous landscaping will complete the phase and the master plan.

SITE IMPROVEMENTS COST OPINION				Date: February 2018 Revised:		
PROJECT Dallas Township Parks Master Plan - Phase Six				BARRY ISETT & associates INC MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS		
LOCATION Dallas Township, Luzerne County, PA						
CLIENT Dallas Township						
DRAWING TITLE Master Plan	PROJECT NO. 1063515	ESTIMATOR SMG		CHECKED BY BNS		SHEET
		UNITS	QUANTITY	UNIT PRICE	TOTAL PRICE	SUBTOTALS
MOBILIZATION						**$2,500.00**
1. Mobilization/Demobilization		LS	1	$2,500.00	$2,500.00	
EROSION & SEDIMENTATION CONTROLS						**$3,600.00**
1. Silt Soxx protection		LF	300	$12.00	$3,600.00	
DEMOLITION						**$7,100.00**
1. Excavate for stormwater forebay		CY	220	$30.00	$6,600.00	
2. Excavate for boulders/creek access		LS	1	$500.00	$500.00	
CONSTRUCTION						
Streambank Restoration						**$52,600.00**
1. Rough grading		SY	200	$2.50	$500.00	
2. Boulders		LS	1	$10,000.00	$10,000.00	
3. Final grading		SY	200	$4.00	$800.00	
4. Seed, mulch		SY	200	$4.00	$800.00	
5. Signage		LS	1	$500.00	$500.00	
6. Riparian plantings		LS	1	$15,000.00	$15,000.00	
7. Woodland restoration		LS	1	$25,000.00	$25,000.00	
LANDSCAPING						**$33,700.00**
1. Amended Topsoil (Rain Gardens, 12" depth)		CY	220	$125.00	$27,500.00	
2. Rain garden seed mix		SY	650	$8.00	$5,200.00	
3. Seed mulch open areas		SY	250	$4.00	$1,000.00	
					SUBTOTAL:	**$99,500.00**
Contingency (10%)						$9,950.00
Survey and Design						$11,940.00
Engineering and Permitting						$14,925.00
Inspection (5%)						$4,975.00
TOTAL COST OPINION						**$141,290.00**

Operations and Management

Figure 39, view of trail on west side of park.

Appendix

Figure 41, view of old logging road trail on east side of park.

Dallas Township Parks Public Survey Questionnaire Results Summary

The Dallas Township Master Planning Project for Dallas Township Park and Kunkle Park is a master plan aimed at the revitalization of two of the township's public parks. An aspect of the planning process is a survey questionnaire to gain input from the public on the existing conditions of the park, which amenities and features of the park they use and would like to see continued to be offered at the parks, which amenities and features they would like to see included in the park, and additional comments on the direction they would like to see the parks take. The goal of this part of the planning process is to ensure that the plan is technically sound, meets the needs of the community, and is implementable.

The questionnaire was available online from September 1, 2016 through September 30, 2016. The questionnaire is a key tool for broadening participation and generating interest and awareness for the master plan by the public. The questionnaire is a valuable tool for planners providing the most flexible of public participation options. This summary describes the results of the questionnaire which can be used for comparison to similar planning projects completed in the township and neighboring community to provide a broader picture of the needs of the residents. The questionnaire was available both digitally on SurveyMonkey.com (https://www.surveymonkey.com/r/DallasTownshipParkSurvey) and via hardcopies in the township office. Township officials advertised the survey through email, newspaper articles, and on the township's Facebook page. A total of 355 households responded to the survey. All surveys were received electronically, there were no paper surveys received. Thirty-five (35) surveys were completed by households that resided outside of the accepted project area of the Back Mountain area which included zip codes, 18612 (Dallas Township, Dallas Borough), 18618 (Harveys Lake Borough), and 18708 (Kingston Township, Shavertown Borough). Because of this, the total responses received was 320 households. This was done to fact check the surveys and ensure that the data was accurate and applicable to the project area. The data on the following pages has been adjusted to reflect this revised total.

Respondents were asked to respond on behalf of their households. A goal for the survey was to receive a response rate of 10% of the township's households. There are 2,917 households within the township and the goal was to receive at least 300. This goal was met within the one month and exceeded the goal. This was a testament to the township's active social media accounts and interest in the project by the community.

Data Limitations

This questionnaire is self-selecting and therefore not random. The results cannot be generalized to the entire population of Dallas Township with any statistical validity. There were different public participation activities used to develop this project. A steering committee was put together that was open to any individuals to join. Public meetings were held encouraging people to attend and voice their opinions. No one public participation activity is intended to drive forward goals for the plan but rather be used in conjunction with other activities as a guide for the direction of the plan.

Percentages

All percentages in the tables below are based on the total number of households who answered the question. Respondents who did not complete the survey or skipped questions do not factor into the calculated percentages. Therefore, several questions will appear with only a portion of the total responses to the survey. Further, in the case of questions allowing multiple responses, the percentages are calculated based on the number of responses and not the sum of the answers indicated. In these cases, the sum of the percentages will exceed 100%.

Key Findings

Parks

- *Parks and recreational activities are important and valuable to households.* Over 63% of respondents stated that parks are either "very important" or "extremely important" to them or members of their household.
- *Nearly half of all households do not participate in organized sporting activities.* This places an importance on providing recreational space for residents that participate in activities solo or ones that are not organized.
- *Nearly half of households visit Dallas Township Park but only a quarter visit Kunkle Park.* This may be a result of residents are not aware of the parks or the condition of the park amenities.

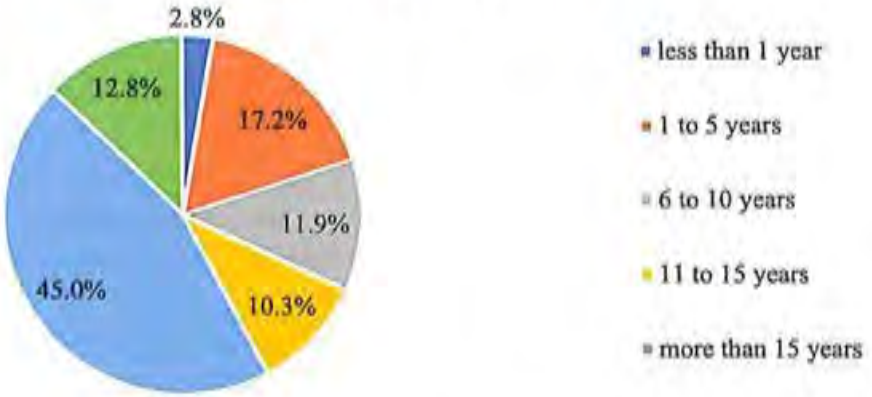
Recreation Facilities and Trails

- *Walking trails are very important to households.* In both parks, the walking trails were the most-used feature.
- *Playgrounds are also a highly used and desire feature.* A common response to several questions was the usage of the existing playground in Dallas Township Park and a desire to make improvements to it.
- *Respondents desire pavilions.* In responses to questions pertaining to proposed amenities for both parks, a pavilion was one of the top responses.
- *Alternative recreation facilities wanted over traditional athletics fields.* Many respondents expressed a desire for a place to practice alternative recreation events. Traditional athletics fields and courts rated in the bottom half of several questions. This trend in results is supported by the athletic fields available in the Dallas area at Back Mountain Recreation Complex and the Back Mountain Little League Fields.

I. Respondent Demographics

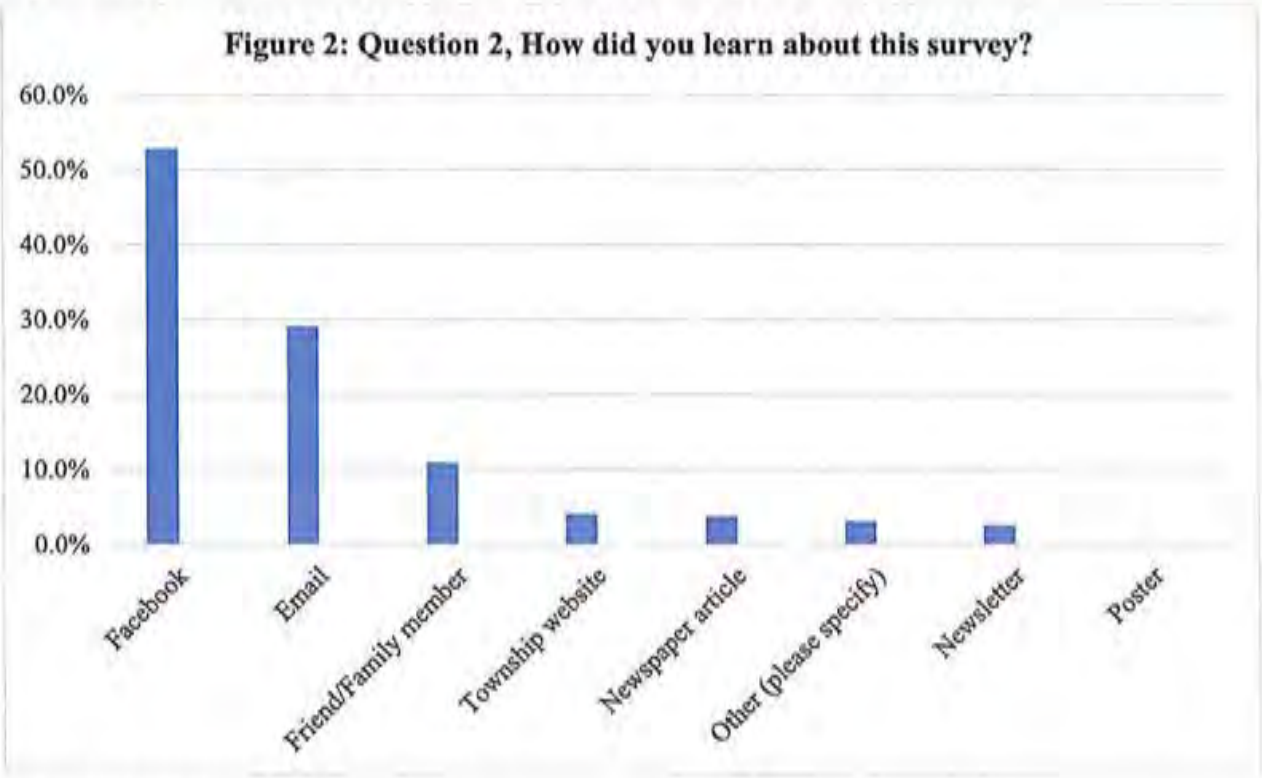
Figure 1: Question 1, How long have you been a resident of Dallas Township?

Figure 1: Question 1, How long have you been a resident of Dallas Township?



Nearly half of the respondents have been a resident of Dallas Township for more than 15 years. Over a quarter of the respondents have a been a resident for less than 10 years with the majority of this group having lived here for less than 5 years.

Figure 2: Question 2, How did you learn about this survey?



Other responses:

- Township supervisor
- Township
- At tax collection office
- Housing development's Facebook page
- Workplace

Figure 3: Question 3, How many members of your household are within each of the age groups listed below?

Figure 3: Question 3, How many members of your household are within each of the age groups listed below?

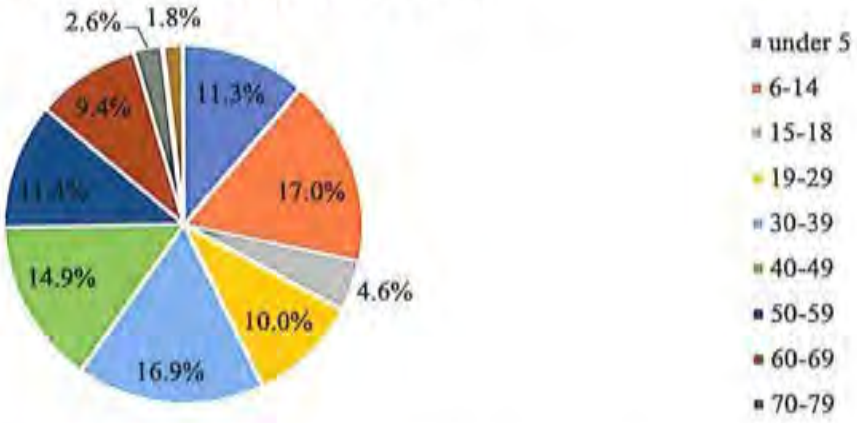
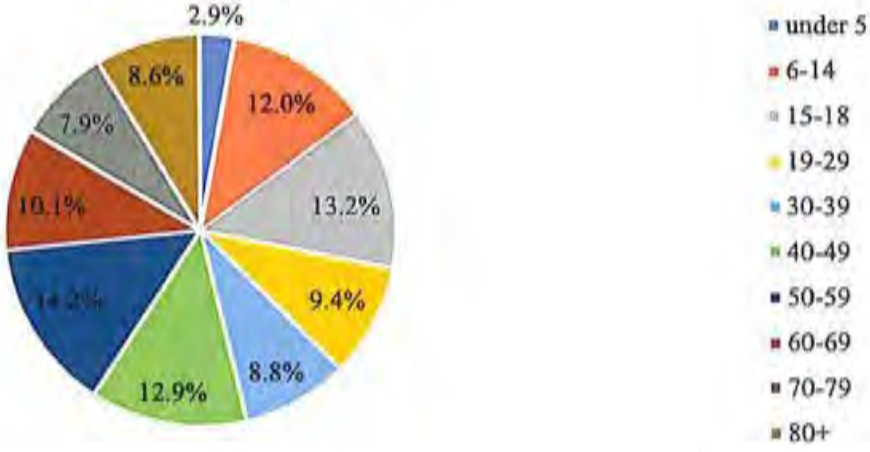


Figure 4: US Census %



[1] Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates

Of the 320 households who responded to the questionnaire, a total of 1,112 persons were listed in the respondent's households. This represents over 12% of the total population of the township based on the 2010 Census.[2]

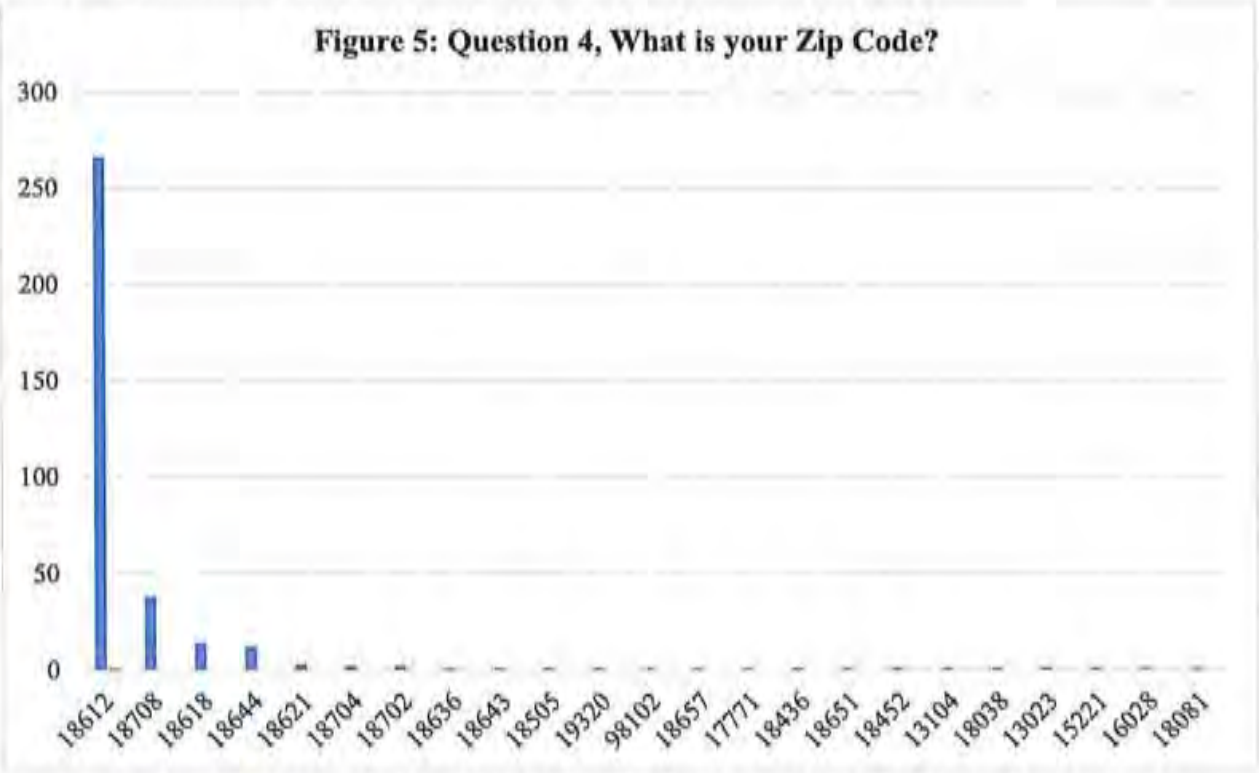
Of the 1,112 persons, 189 were listed as between the ages of 6-14, representing the largest age group. And additional 126 persons were listed as being under 5 years old, the fourth largest

[2] http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml?src=bkmk

group. This coincides with the second largest age group (30-39, 188 individuals) and third largest (40-49, 166 individuals).

In comparison with U.S. Census data, the township has a larger percentage of children up to 14 years of age. The township also has a larger percentage of persons aged 30-39. This suggests that there are many families with young children who would benefit from park improvements.

Figure 5: Question 4, What is your Zip Code?

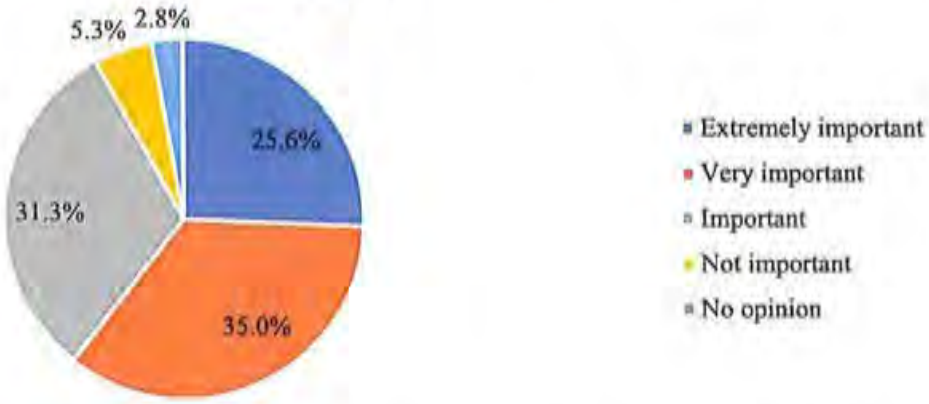


Three quarters of the households reside within the 18612 (Dallas) zip code. The second largest grouping resided in the 18708 (Shavertown) zip code.

II. Parks

Figure 6: Question 5, On average, how often do you or members of your household visit a park?

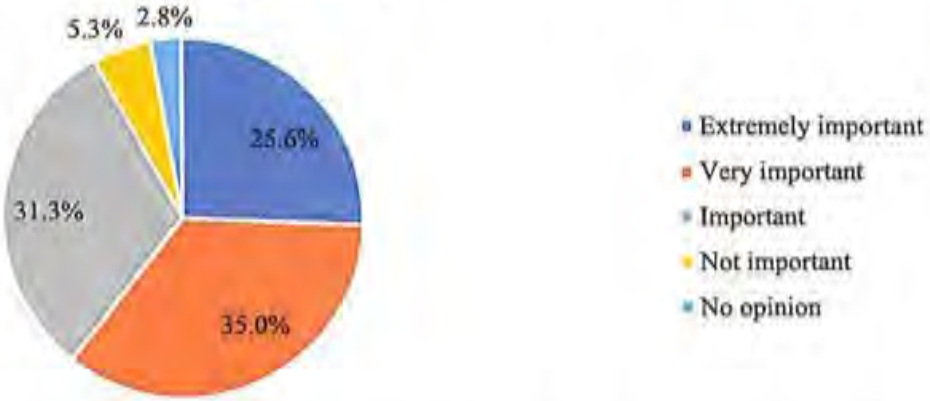
Figure 6: Question 5, How important are parks to you and your family (household)?



Twenty five percent of households visit parks on a routine basis either daily or several times per week. An additional one-thirds of households said that they visit a park at least several times per month.

Figure 7: Question 6, How important are parks to you and your family (household)?

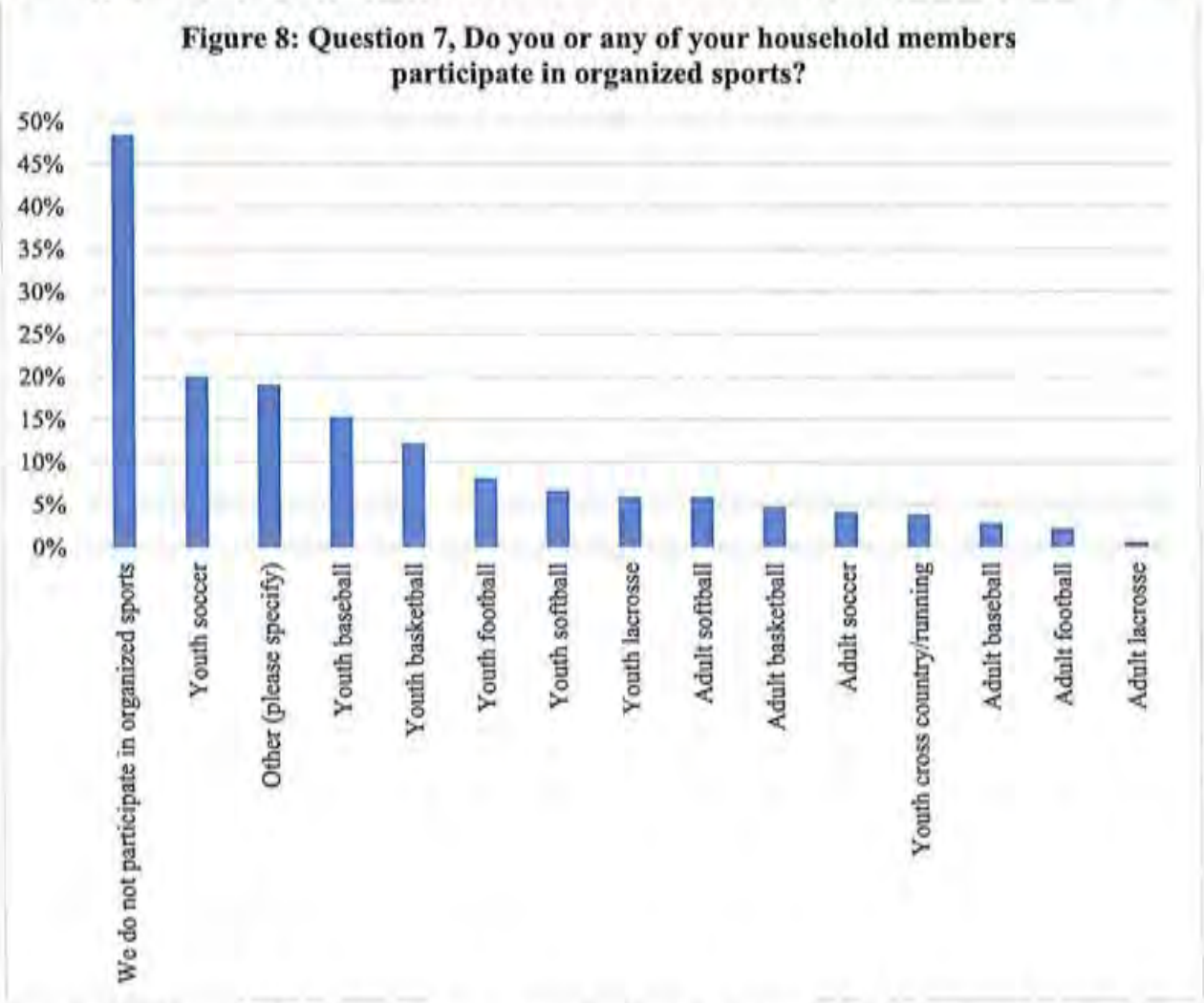
Figure 7: Question 6, How important are parks to you and your family (household)?



Over a quarter of respondents said that parks are "extremely important" to them. Nearly 93% said that parks are at least "important" to them or their households. Parks generally improve the quality of life of residents of the community. Parks provide gathering spaces for people of all socio-economic status and are often cited as an important factor in determining positive outlooks on communities. They also provide numerous physical and mental health benefits for users.[3] Based on usage data provided by the survey, improvements to the parks will only serve to increase usage and sense of community of among its residents.

[3] http://recreation.eku.edu/importance-parks-and-recreation

Figure 8: Question 7, Do you or any of your household members participate in organized sports?



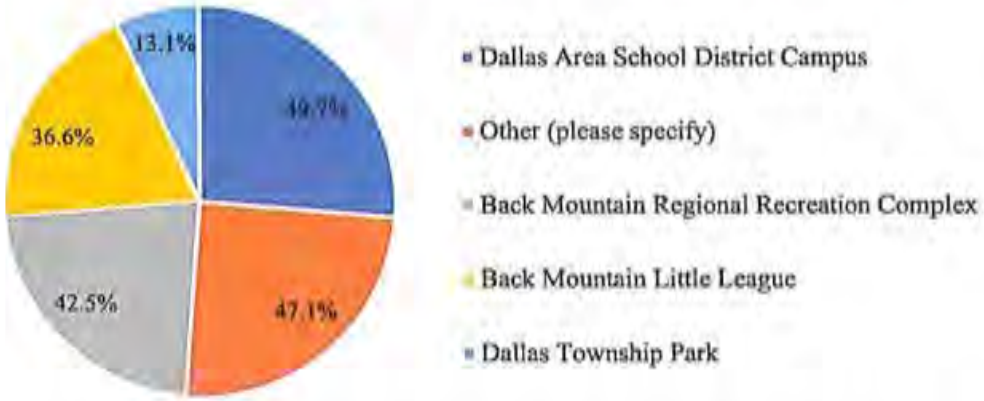
Over half of households participate in an organized sport of some kind. In contrast, nearly half do not participate in any organized sporting activities. said that they or members of their household do not participate in organized sports. Many households said that they participate in solo athletic activities. A list of 'other' responses are as follows:

- Cheerleading (4)
- Kayaking
- Sailing
- Fishing
- Hiking (3)
- Youth bowling
- Dance
- Wrestling
- Running (7)
- Biking/Cycling (3)
- PIAA
- Tennis
- Cross-training
- Walking (2)
- Wiffle-ball league
- Ice hockey
- Skateboarding (4)
- Gymnastics (2)

- Horseback riding (7)
- Equestrian sports
- Swimming (3)
- Disc golf (2)
- Mountain biking
- Dog walking (2)
- Adult volleyball
- Youth fencing
- Extreme sports
- Adult rugby
- Bowling
- Diving
- Youth swimming
- Field hockey (2)
- Ultimate Frisbee (2)
- Golf

Figure 9: Question 8, Where do you participate in organized sports?

Figure 9: Question 8, Where do you participate in organized sports?

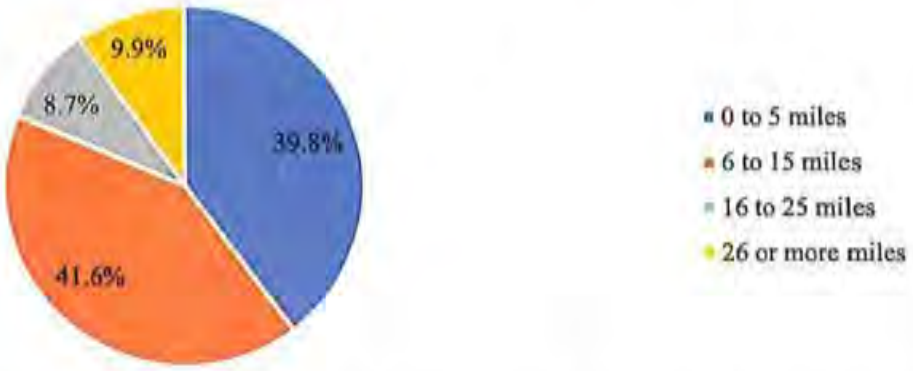


Nearly 45% of households use the Dallas School District campus as the place where they participate in organized sports. This is likely through school athletics. The multi-sport Back Mountain Regional Recreation complex is also heavily used. Other parks in the area are also used. A list of 'other' responses are as follows:

- Lehigh Valley
- Center Street Park, Kingston Township (8)
- The Rock Recreation Center, Shavertown (5)
- Coal Street Park, Wilkes-Barre (4)
- Harveys Lake (4)
- Kirby Park, Kingston (3)
- Forty Fort Sports Complex, Forty Fort (6)
- Chacko's Bowling, Wilkes-Barre
- Back Mountain Little League, Dallas (2)
- YMCA, Wilkes-Barre
- Lake-Lehman School District Campus (2)
- PIAA
- Jackson Township Park
- Travel league
- Francis Slocum State Park, Wyoming
- Moon Lake State Park, Plymouth Township
- Harvest Church, Trucksville
- Fellowship Church, Dallas
- Church
- Home
- Hickory Run State Park, White Haven
- Beaumont Little League Field (2)
- State Forest
- Horse farms (private)
- Private
- Wyoming Valley Sports Dome, Wilkes-Barre (3)
- Misericordia University, Dallas
- Back Mountain Bowl, Dallas
- Wyoming Valley West pool
- Wyoming Seminary
- East Stroudsburg
- Various (6)

Figure 10: Question 9, On average, how far do you travel to participate in an organized sporting activity?

Figure 10: Question 9, On average, how far do you travel to participate in an organized sporting activity?

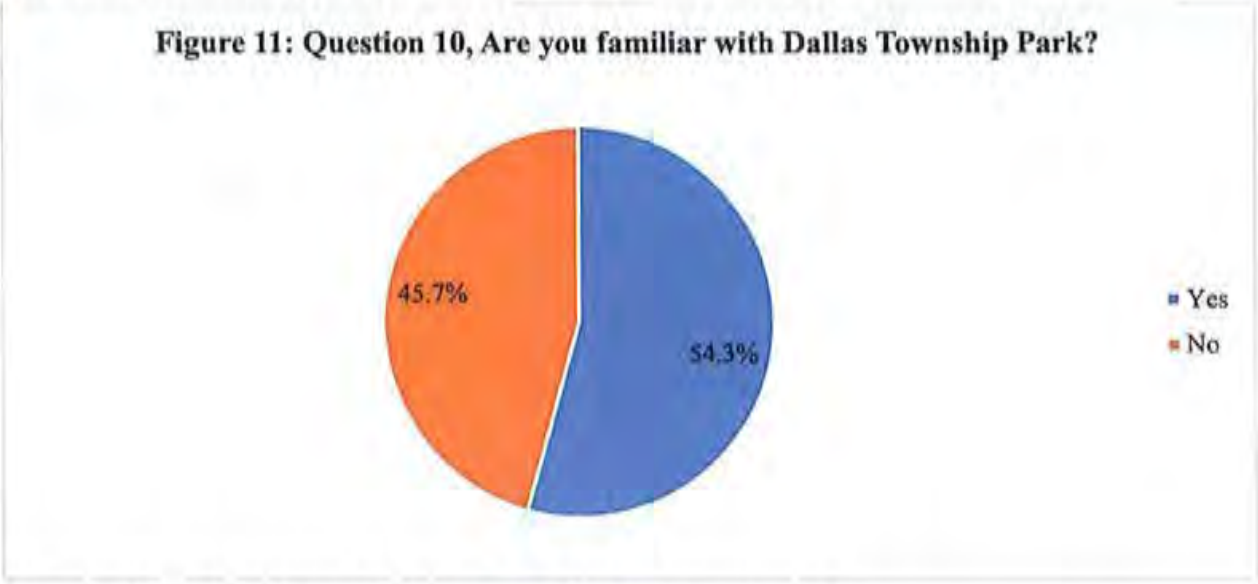


Nearly 20% stated that they travel more than 16 miles to participate in an organized sporting activity. This can be attributed to the sports complexes in the area that are built for specific organized sports activities. Back Mountain Little League Complex is the main facility for baseball and softball.

The top organized sporting activities were youth soccer, primarily played at either Dallas School District campus or Back Mountain Regional Recreation complex, youth baseball played at Back Mountain Little League complex, and youth basketball played at the Dallas School District campus or other parks in the area. This coincides with the over four in five households responding that they travel between 0-15 miles.

Figure 11: Question 10, Are you familiar with Dallas Township Park?

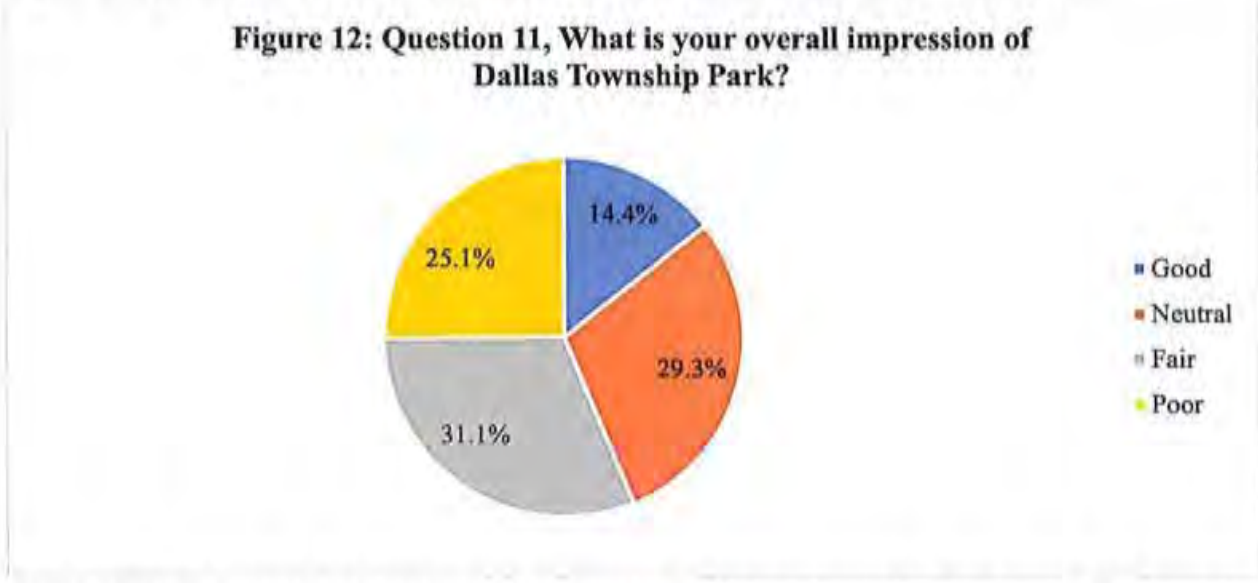
Figure 11: Question 10, Are you familiar with Dallas Township Park?



Nearly 55% said that they are familiar with Dallas Township Park

Figure 12: Question 11, What is your overall impression of Dallas Township Park?

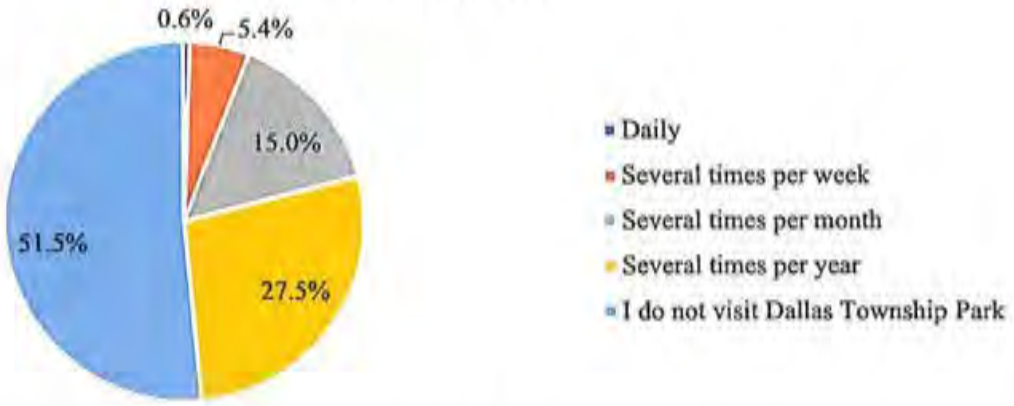
Figure 12: Question 11, What is your overall impression of Dallas Township Park?



Nearly 44% responded that their overall impression of Dallas Township Park was either "good" or "neutral". One quarter responded "poor".

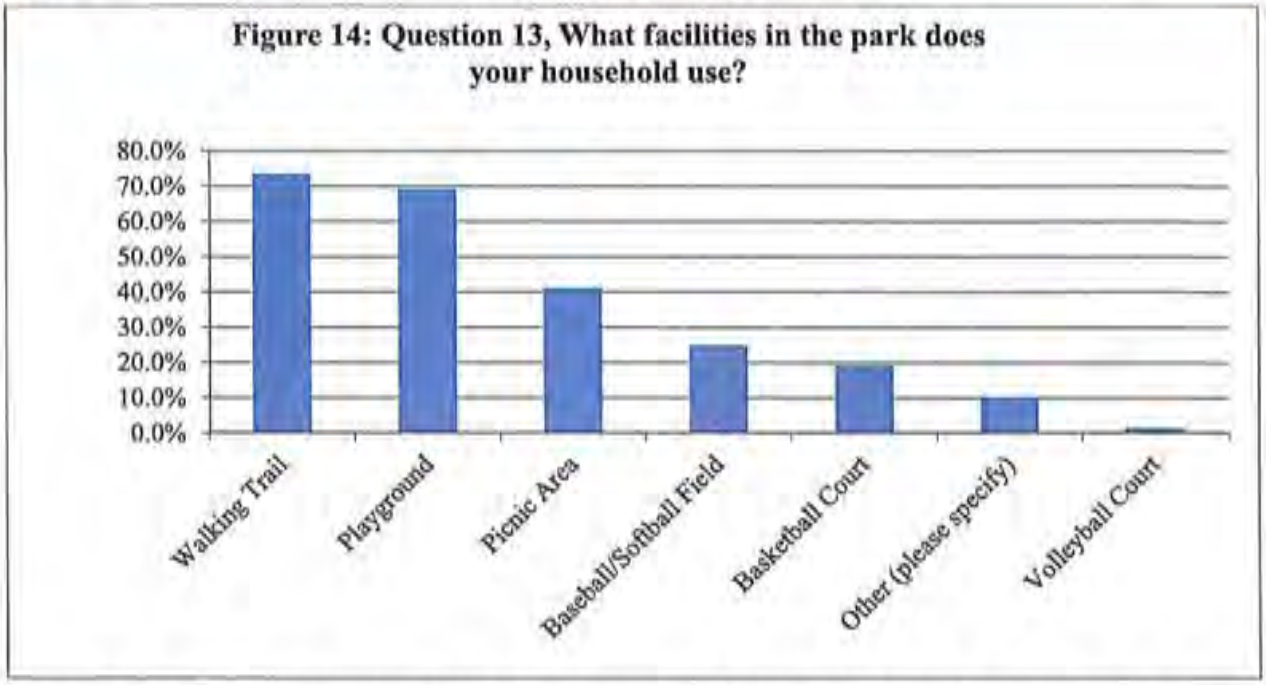
Figure 13: Question 12, How often do members of your household use Dallas Township Park?

Figure 13: Question 12, How often do members of your household use Dallas Township Park?



Over 20% of households stated that they use the park at least several times per month. Conversely, over half of all households said that they do not visit Dallas Township Park.

Figure 14: Question 13, What facilities in the park does your household use?

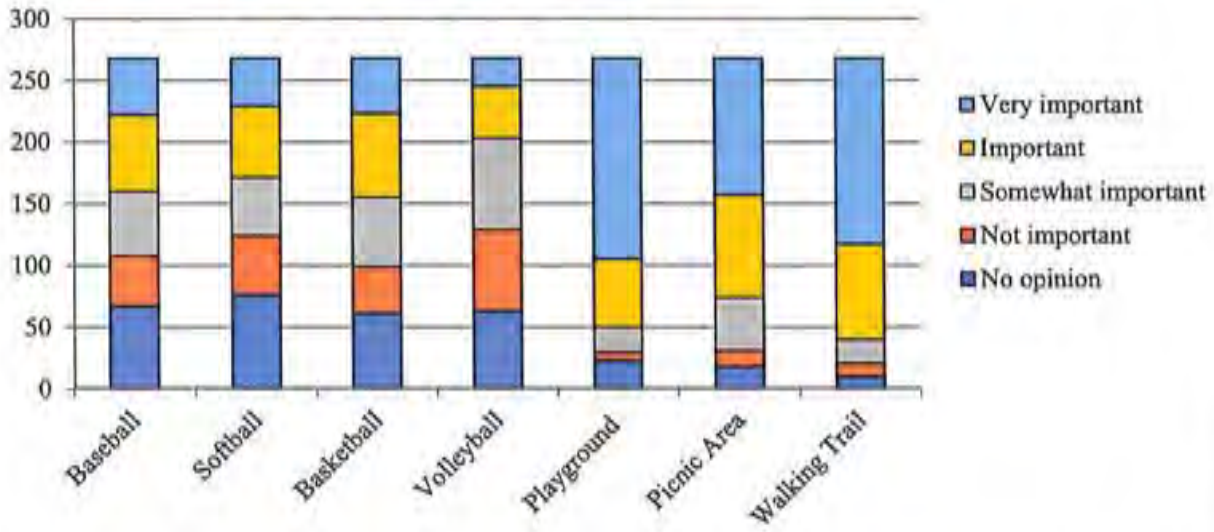


The walking trail and playground are the most popular facilities in the park garnering at least 60% of the respondent's answers. The athletic facilities do not receive much usage. This supports the assumption that the baseball needs within the area are mostly provided by the Back Mountain Little League complex. Similarly, there are basketball courts in good condition at Center Street Park, Kenneth Young Memorial Park, and the school district. A list of "other" responses are as follows:

- Skateboarding and cycling
- Walk with dogs
- Dallas Middle School field hockey
- Horseback riding
- We have taken our grandchildren to Dallas park where they used the swings and merry-go-round in years passed. We have also used the ball field and basketball court and walked around the area. Since we are all getting older, my husband and I prefer a smoother area for walking. At this point, there isn't even an ideal picnic area to use.
- Dog friendly
- I walk my dog, used to take my grandson to the playground

Figure 15: Question 14, Please indicate which of the following existing activities you would like to continue to be offered at Dallas Township Park.

Figure 15: Question 14, Please indicate which of the following existing activities you would like to continue to be offered at the Dallas Township Park. Rank the level of importance.

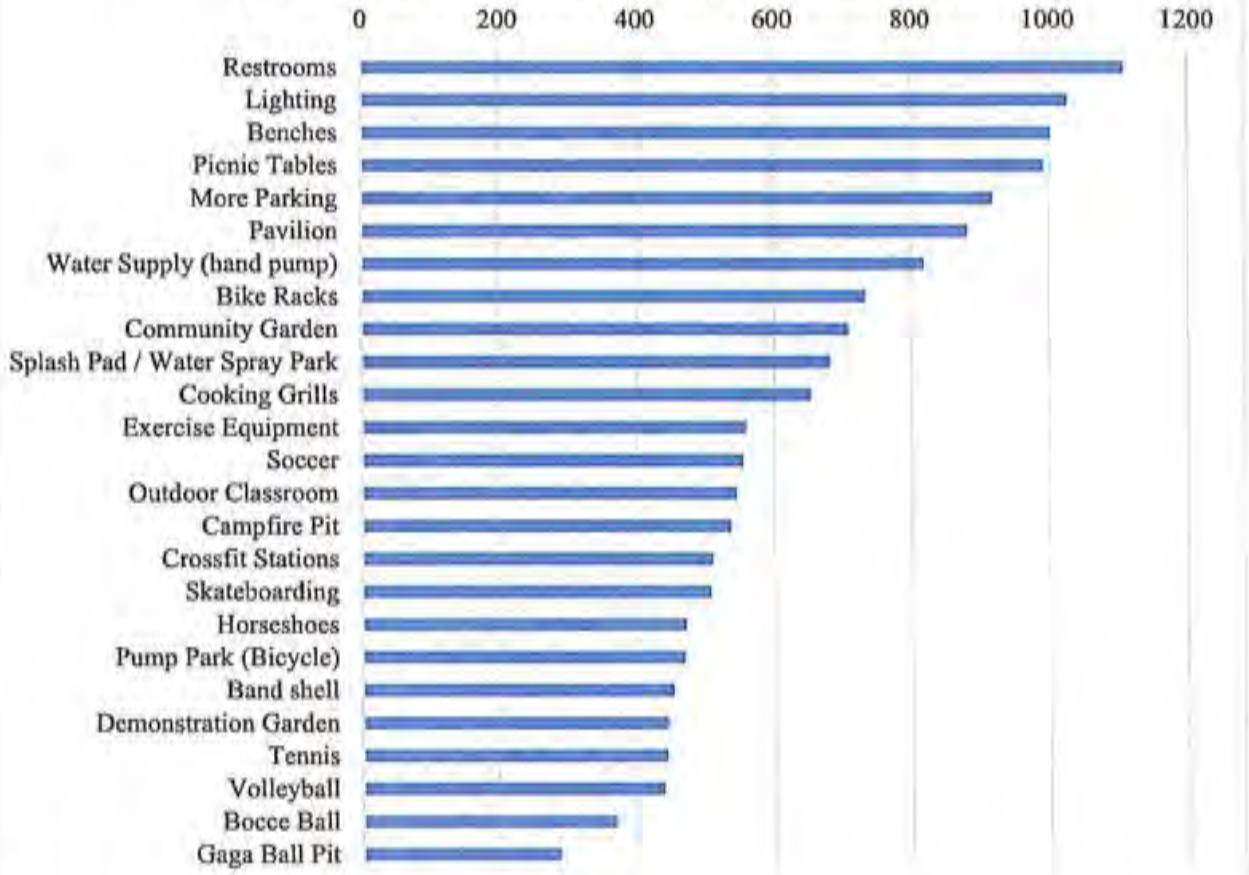


In this graph, you can see which activities households would like to see continued to be offered at the park. There is a strong need for a playground, walking trails, and picnic area. Athletics facilities were deemed not as important to maintain in the new park. A list of "other" responses are as follows:

- Skate park (5)
- Dog park (5)
- Biking (2)
- Horseback riding (2)
- Disc golf (2)
- Walking trail (3)
- Soccer
- Field hockey
- Lacrosse
- Wall ball

Figure 16: Question 15, Please indicate which of the following amenities you would like to see added to Dallas Township Park.

Figure 16: Question 15, Please indicate which of the following amenities you would like to see offered at Dallas Township Park.

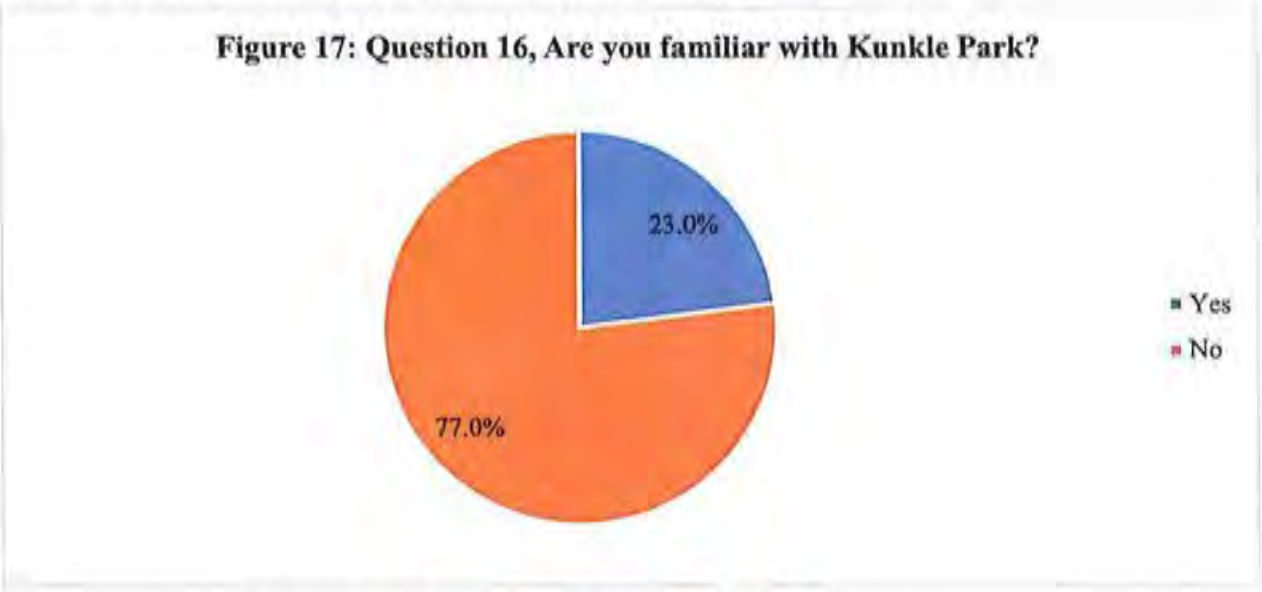


This graph shows all responses ranked from "very important" to "no opinion" displayed through a points scale to determine the most desired amenity. To determine a score for the listed amenity, answers that were given a "very important" ranking were given 5 points. An "important" ranking was given 4 points. A "somewhat important" ranking was given 2 points. "Not important" was given 1 point and "no opinion" was given 0 points. Afterwards, the totals were calculated and ranked based on these new totals. The top ranked facility for usage was a pavilion followed by a community garden, splash pad, soccer field, and outdoor classroom. In general, amenities that improve the visitor experience (restrooms, lighting, benches, etc.) ranked higher than amenities that add new activities to the park (garden, exercise equipment, campfire pit). A list of "other" responses are as follows:

- Skate park (4)
- Dog park (10)
- Bike trail (4)
- New playground (2)

- Rock climbing wall
- Horseback trails (3)
- Perimeter fence
- Pedestrian bridge
- Disc golf
- Special needs area
- Walking trails (2)
- Lacrosse
- Wall ball
- Swimming pool

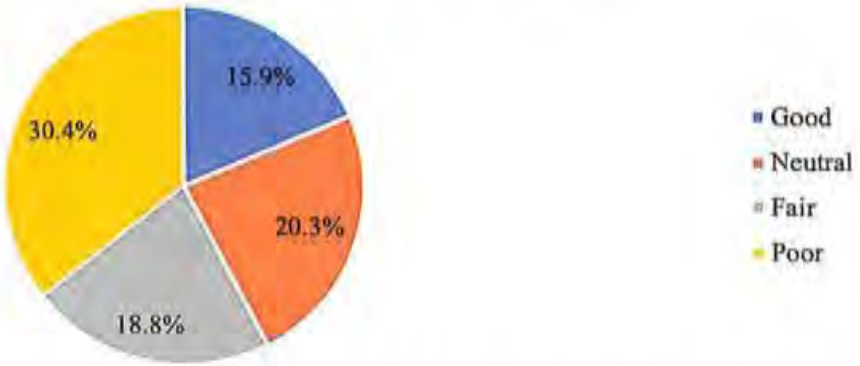
Figure 17: Question 16, Are you familiar with Kunkle Park?



Nearly one-quarter of households are familiar with Kunkle Park.

Figure 18: Question 17, What is your overall impression of Kunkle Park?

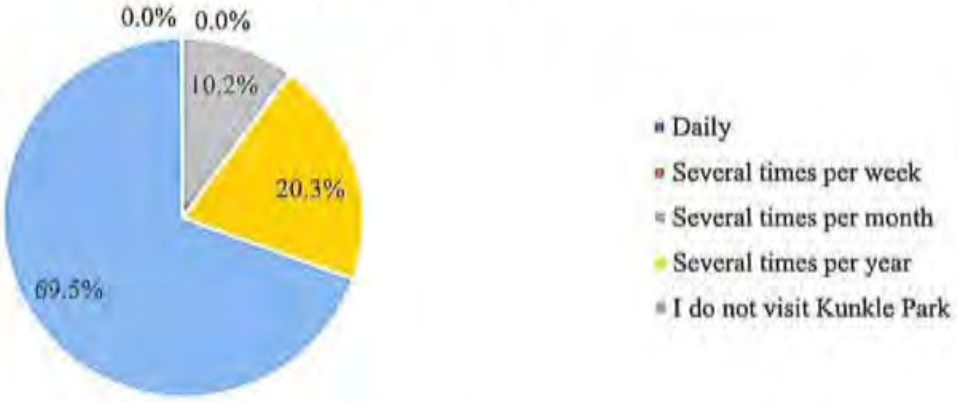
Figure 18: Question 17, What is your overall impression of Kunkle Park?



Of those that were familiar with Kunkle Park, over 40% said that their impression of the park is fair to good.

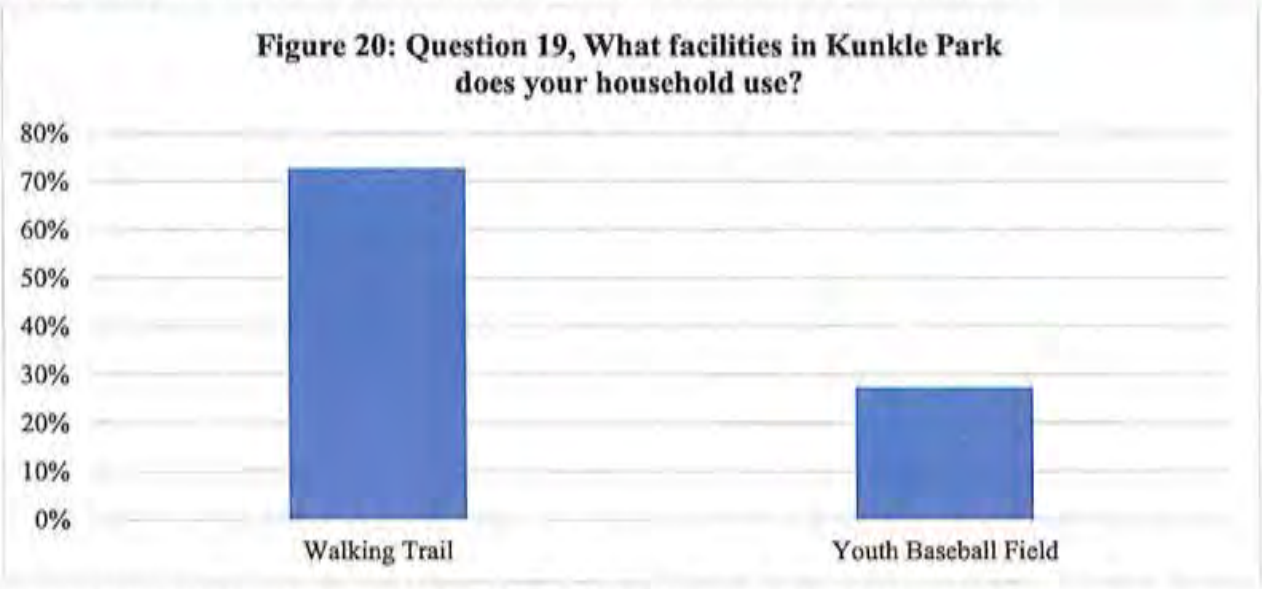
Figure 19: Question 18, How often do members of your household use Kunkle Park?

Figure 19: Question 18, How often do members of your household use Kunkle Park?



Of those households that were familiar with Kunkle Park, over a quarter stated that they visit the park at least several times per year. Nearly two-thirds said that they do not visit the park.

Figure 20: Question 19, What facilities in Kunkle Park does your household use?

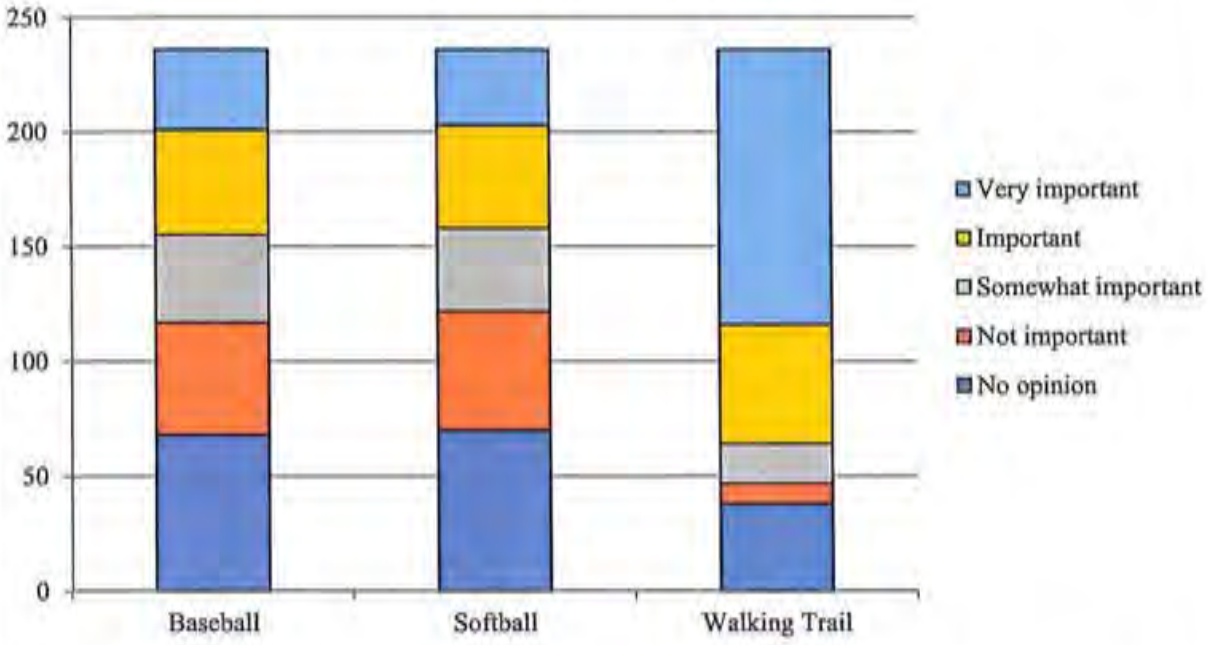


Nearly 90% said that they use the walking trail in the park. A list of "other" responses are as follows:

- Play area
- Bike riding

Figure 21: Question 20, Please indicate which of the following existing activities you would like to continue to be offered at Kunkle Park.

Figure 21: Question 20, Please indicate which of the following existing activities you would like to continue to be offered at the Kunkle Park. Rank the level of importance.

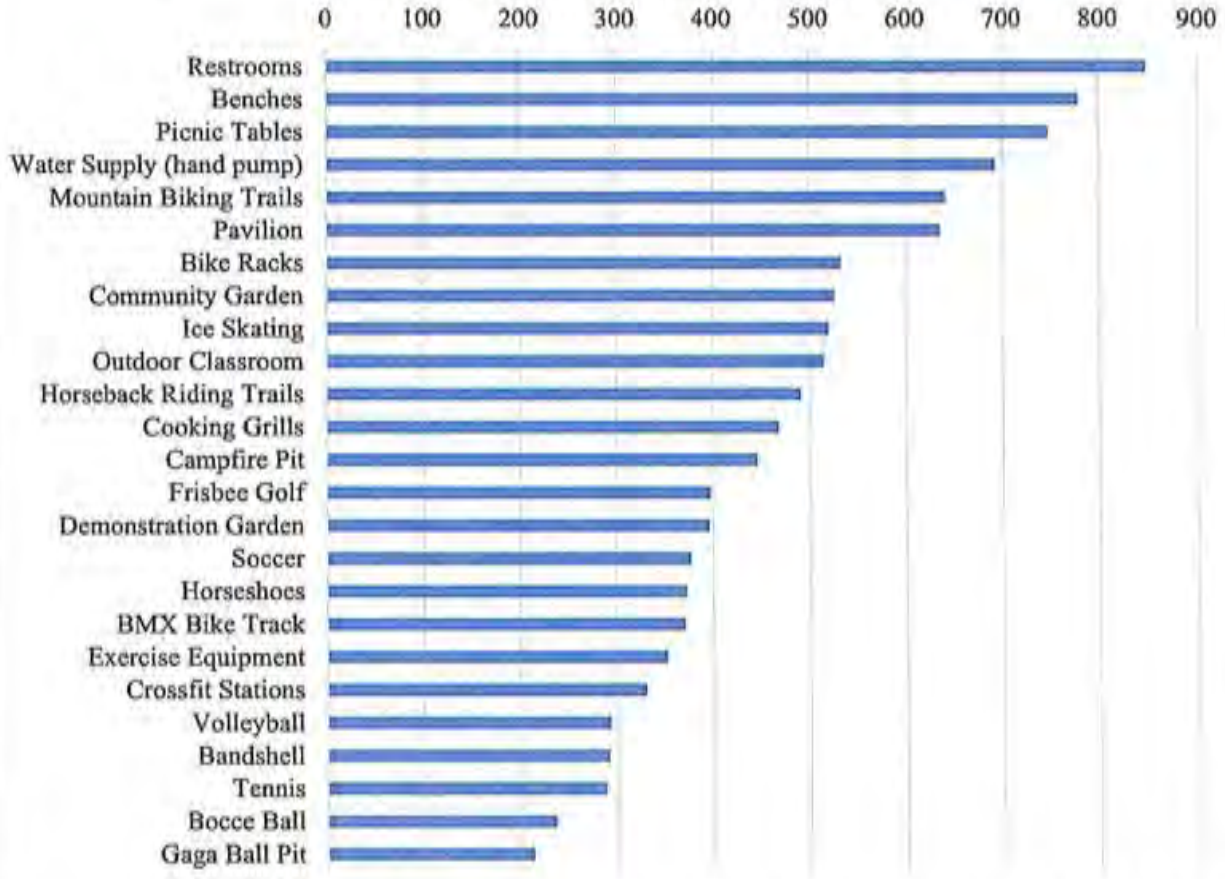


The walking trail was deemed a feature of the park that households would like to see continued to be offered at the park with nearly three-quarters of respondents ranking it either "important" or "very important". The baseball field was not deemed a feature that they would like to see continued. A list of "other" responses are as follows:

- Skate park (3)
- Dog park (2)
- Horseback trails
- Handicap access
- Biking trails (2)
- Walking trails (2)
- Place for parties/cook outs

Figure 22: Question 21, Please indicate which of the following activities you would like see offered at Kunkle Park.

Figure 22: Question 21, Please indicate which of the following amenities you would like to see offered at Kunkle Park.



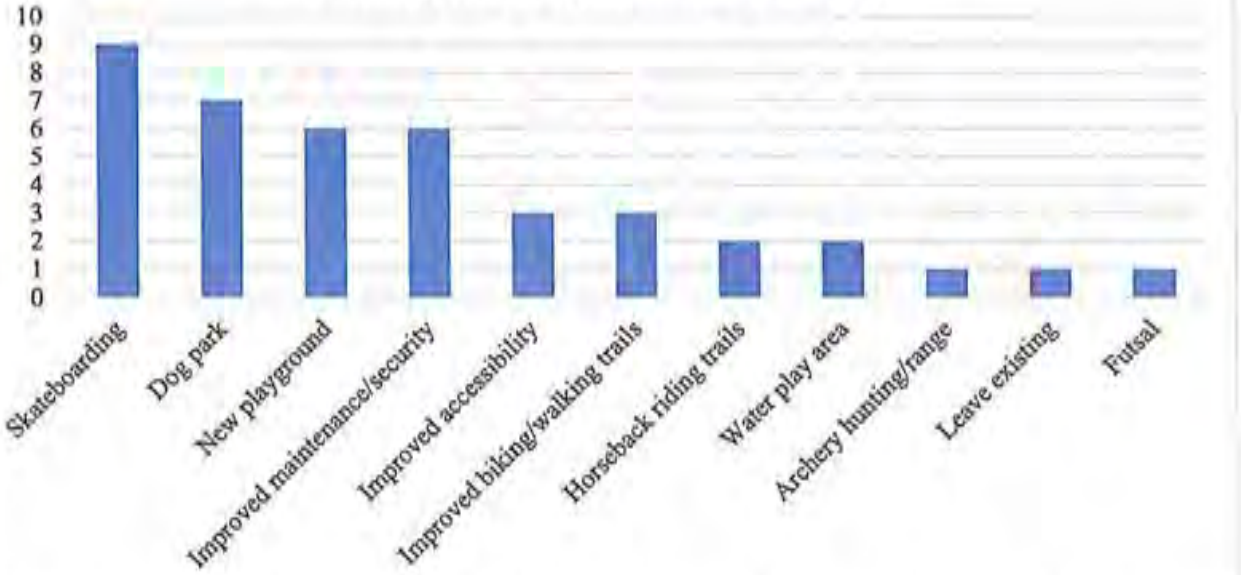
This graph shows all responses ranked from "very important" to "no opinion" displayed through a points scale to determine the most desired amenity. Like Figure 16, to determine a score for the listed amenity, answers that were given a "very important" ranking were given 5 points. An "important" ranking was given 4 points. A "somewhat important" ranking was given 2 points. "Not important" was given 1 point and "no opinion" was given 0 points. Afterwards, the totals were calculated and ranked based on these new totals. Amenities that improve the visitor experience (restrooms, benches, and picnic table) ranked higher than amenities that add new activities to the park (pavilion, garden, ice skating). Mountain biking trails was also a popular choice among respondents as well as a pavilion, community garden, ice skating in winter, and an outdoor classroom. A list of "other" responses is as follows:

- Skate park (3)
- Dog park (8)
- Playground (2)
- Lacrosse

- Wall ball
- Bike paths
- Forest going to include a management plan to control invasives? Will parts of the forest be fenced off to prevent deer browsing and allow the forest understory to return over time?
- If the Donor's requirement was a "managed forest" how could you even suggest doing otherwise with this land? Doesn't seem ethical at all.

Figure 23: Question 22, Is there something we missed? Please provide any additional comments.

Figure 23: Question 22, Is there something we missed? Please provide any additional comments.



The questionnaire allowed for respondents to provide any additional comments. Figure 23 depicts the comments grouped into a category. An area for skateboarding was a common one repeated throughout the survey. There is a strong demand for a new playground at either park. A dog park was also a commonly repeated comment throughout the survey. Maintenance and security issues were raised by several individuals. Horseback riding trails was also a common one. A list of all responses is as follows:

- The kids have nowhere to safely ride bikes or skate boards. We travel an hour to a skate park. So many would love to have one closer.
- Is Kunkle park large enough to allow archery hunting or an archery range?
- A dog park with amenities would be great water and trails
- The Dallas Twp park is isolated which is a safety concern
- Concern for the access & parking to Dallas Twp park... your site says access from Southside Ave, but that road is so small & very little room to park without disrupting the residents. Why would you not have main access & parking on the Sago St side?

- Dog park we need area for a dog park nowhere to walk our dogs ....need a dog park
- Teenagers of the Back Mt. Need a safe place that is monitored to skateboard and bike ride. Let's get these kids off the streets and into somewhere safe to get some exercise. Lewisburg has a great public skate park.
- The dog area is really necessary. People are going to bring their dogs to such a park and having a secure, fenced area would be a tremendous benefit to Dallas taxpayers.
- Police protection
- As with any public park or facility, there needs to be maintenance and staffing. How will either of these parks be funded and maintained? If sports equipment is made available, who will be responsible for the return of the equipment (horseshoes, bocci balls, volley balls, etc.) and making sure that items are not damaged?
- Leave the woods alone.
- Horseback riding trails would be wonderful.
- New/update playground equipment. Add a rock/climbing wall or even American ninja warrior style activities
- I just want to express my appreciation to the Township for developing this effort, recognizing the importance of these parks and trying to promote them as a community asset. They have the potential to really contribute to the quality of life in the Back Mountain.
- Dallas needs an inexpensive water park or splash pad!
- Dallas needs better parks!!!! The Forty Fort and Jackson townships parks are great and the only ones we visit.
- We have four kids and moved to Dallas two years ago from Kingston Pa. Dallas is a wonderful town and has quickly felt like home. However, we miss the parks in Kingston and Forty Fort. Parks are necessary for young families, and Dallas has some work to do in that department. It is wonderful to see that this is being addressed.
- Build a skate park please and thank you
- The addition of a Futsal field would be a great addition to the Back Mtn. community. Currently only local field available is in Hazleton and Abington parks. Small field with sides like an ice rink with two goals permanently fixed on each end.
- Big parking lots for horse trailers
- I would appreciate a fence around the playground area and consider of the special needs children in the area. Additionally, someone mentioned a dog park at the Kunkle location and we would be interested in that also.
- Very excited and happy to see Dallas Township being active within the park atmosphere. Horseback riding trails would be totally awesome!
- I would love to see a dog park in the back mountain area

- Parks are important. Maintenance, security and lighting is important for safety. Our township benefits by beauty and recreation. Thank you for asking for our input!
- Would love a park with adaptations for special needs kids! Easier walking terrain (i.e. No wood chips) for little ones who using walking AIDS and chairs
- Proper adult supervision should be available at all programs involving children along with proper safety and security.
- It would be logical to insure the use of bike racks if there were bike/walking trails that would safely permit people to get to the parks. If you don't encourage this means of getting to the parks, then you will need really large parking lots.
- Safe biking and walking trails are sorely needed in this community. Taxes are already too high. If the Twp. can implement and maintain this with no additional costs to taxpayers you have our blessings. If not, we can't afford it.
- Playground equipment for children with disabilities would be great. And the adult/child swings are great too.
- Please consider a skatepark.
- It would be very nice to see ice skating, splash pads and more playground equipment geared toward small children and not necessarily just organized sports.
- Thanks!
- great idea for survey!!!!
- We have plenty of areas for baseball, soccer, tennis, football. It's the extreme sports like skate boarding we do not have. Teens have been trying for years to get a skateboarding park in our county. There is nothing in the whole county.
- Go to Hatfield Township in Montgomery County if you want to see how a well-organized park should look like. One park has baseball fields, soccer fields, amphitheater, walking trails, bike trails, and a playground. It was a centerpiece and meeting place for the community.
- Although it is nice to say that our community has this or that, it would be more important for the supervisors to look into plowing snow on roads that are not or helping find ways to fix the streets and roads. dallas township has people, and particularly senior citizens that pay FULL TAXES and receive no benefits from paying those taxes. God forbid that an emergency occurs that requires an ambulance or fire truck and they cannot get to the house because the road is not taking care of. in this case we're only looking at 300 feet or less. it would be nice if dallas township would look into this and change some of their practices.
- Park with playground equipment should be enclosed with fence
- Any improvements would be a welcome to both these fine parks. I, personally, am interested in a fenced dog park for off leash. If it's possible to find some area in either park, that would be an asset to the back mountain.

- Keeping the Twp. clean and up to date is quite important. I am particularly upset by the way the owner of the property below mine has allowed Japanese Knotweed to grow and spread badly. I've contacted the Dept. of Environmental Safety and the Township but nothing has been done to remove it so it continues to spread badly.
- The parks are not appreciated enough as they are. I think the money could be better spent somewhere else.
- Please seriously consider a skatepark. Currently, Luzerne county boasts a population of roughly 300,000 and lacks any public skateparks. Please give the community a safe and legal place for us to skateboard.
- As a new owner of a dog, it would be nice to have a place to meet up with other dogs (owners), with waste disposal stations and a water area for them.
- This community drastically needs a skate park. It is a shame that there is nowhere for kids to go who skateboard, bike, roller blade, and engage in other extreme sports. These are good kids who are just trying to do something they love and instead they are treated like criminals and outsiders and end up giving up on an activity that is healthy, challenging, and character building. There are many places that kids can play baseball, basketball, etc. but there is nowhere kids can skateboard. I think a skate park would have the most profoundly great impact on our community and would increase tourism and the quality of life in the Dallas Township area.
- As mentioned above...a skatepark is a necessity for Luzerne County and we need to take advantage of this opportunity to make it happen! So many kids and adults love to skateboard, rollerblade, scooter, ect. and there is literally not one single place to do this (legally) under a 1-2 hour drive for folks in Luzerne County. Please, this would be a dream come true for so many individuals and will be such a good use of a small area of the Dallas Park. Thank you!!
- Dallas township parks needs more security. I live near there and see people and cars in there late at night. Security in Kunkle is very important also. Vandalism is a problem at both.
- First, I believe it is very important to add children's playground equipment in an enclosed area for safety! Then, hopefully you can add a few fun extras and/or trails with any remaining funds. Ask for volunteers from the community too! I'm sure you will get a lot of support. I am very excited about this project. Thank you. :-) - a mother of 3 young children in Dallas Township
- So excited to see developments and hopefully bring more activities to the back mountain. I've never even been to either of these parks!
- I don't think it's necessary to repeat facilities readily available in the area; ie: tennis, soccer, baseball/softball..... use these grounds for alternatives. I also believe it's difficult to choose options when we are unaware of the maintenance & management/security plans. The Township park has been neglected for years & destroyed by kids because they know there is no supervision or patrolling in the area. Knowing the management plan could sway choosing an option if you know whether or not it will be destroyed.

- Empty field space for frisbee, playground with shaded area for parents.
- I really feel that a dog park or a fenced in area for walking dogs would be great. Water stations and dog waste removal bags would be a kindness for pet owners.
- I think it's great to renovate and keep the kids in this area active and out of trouble. We also like Jackson Twp park. A lot of people we know go there since they have a soccer field, port o johns, pavilion etc. We need something like this in our community along with something new... Bmx bike park or skate park. Something great for the kids. Thank you for the survey and for being able to offer my opinion.
- We need bike/running paths or trails.

Figure 24: Question 23, Interested in future information about the project? There are several ways to stay up to date on the project. Select how you would like to stay informed about the project

Figure 24: Question 23, Interested in future information about the project? There are several ways to stay up to date on the project. Select how you would like to stay informed about the project.

III. Park Comparison

Figure 11: Question 10, Are you familiar with Dallas Township Park?

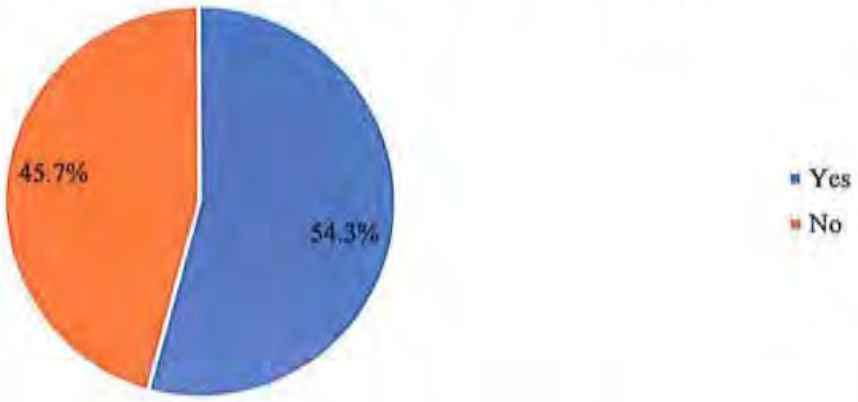
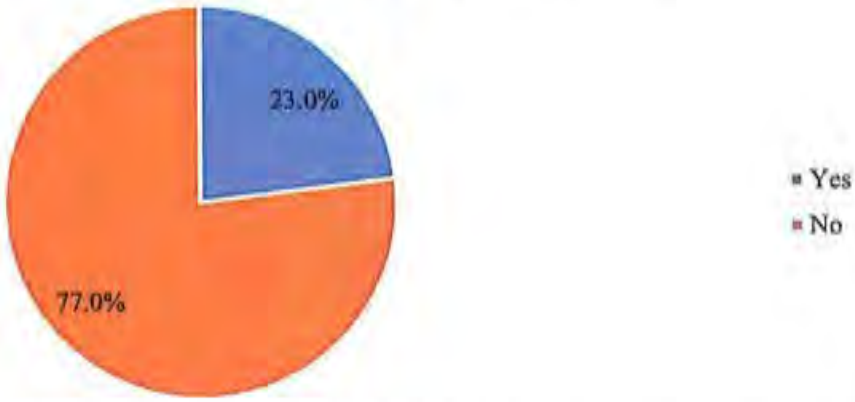


Figure 17: Question 16, Are you familiar with Kunkle Park?



Households are much more familiar with Dallas Township Park than they are with Kunkle Park. This is chiefly due to the park's locations. Dallas Township Park is located within populated residential neighborhoods and within walking distance of downtown Dallas Borough. Kunkle Park is in undeveloped woodland and is isolated from traffic flow. Both parks have distinct identities and currently serve the community in different ways with Dallas Township Park providing for more active recreation activities and Kunkle Park allowing for more passive ones.

Figure 12: Question 11, What is your overall impression of Dallas Township Park?

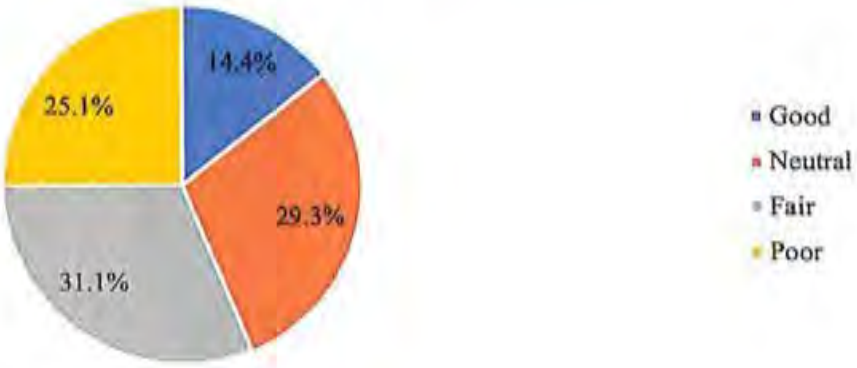
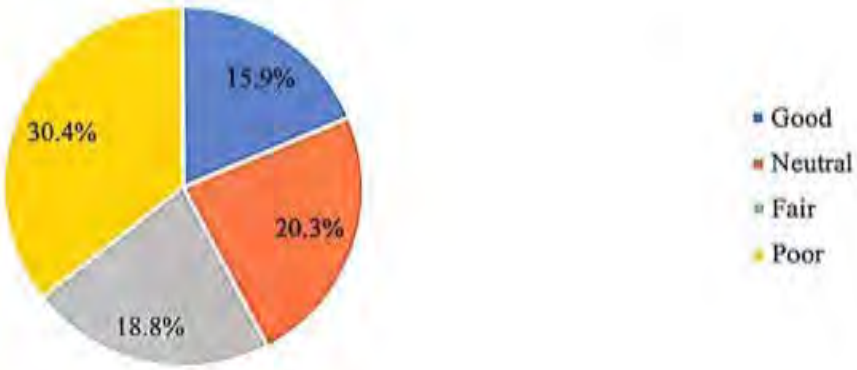


Figure 18: Question 17, What is your overall impression of Kunkle Park?



Both parks varied in how the respondents viewed them with Dallas Township Park being viewed more favorably than Kunkle Park. This is not surprising considering that many people are more familiar with Dallas Township Park. Still, there is much that can be made in improving the impression of the parks in user's minds.

Figure 13: Question 12, How often do members of your household use Dallas Township Park?

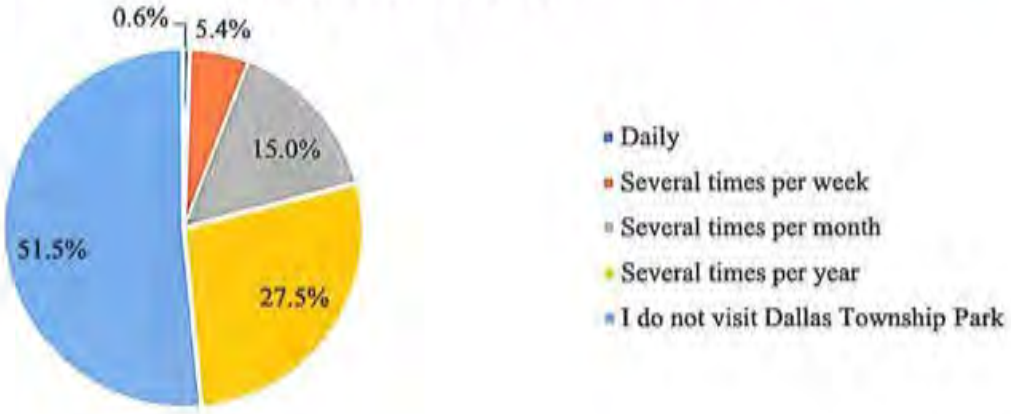
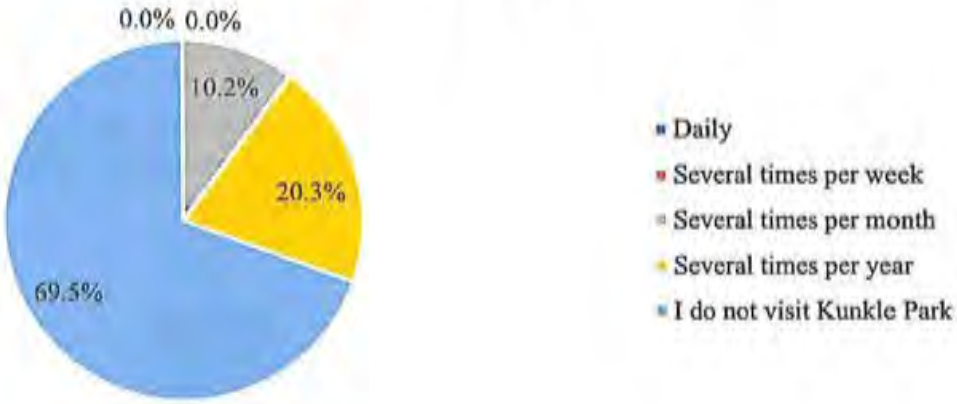


Figure 19: Question 18, How often do members of your household use Kunkle Park?



The familiarity of the parks also plays into their usage. Many more households said that they used Dallas Township Park versus Kunkle Park. What is interesting is that there are similar percentages of usage of at least several times per year in both parks.

Figure 15: Question 14, Please indicate which of the following existing activities you would like to continue to be offered at the Dallas Township Park. Rank the level of importance.

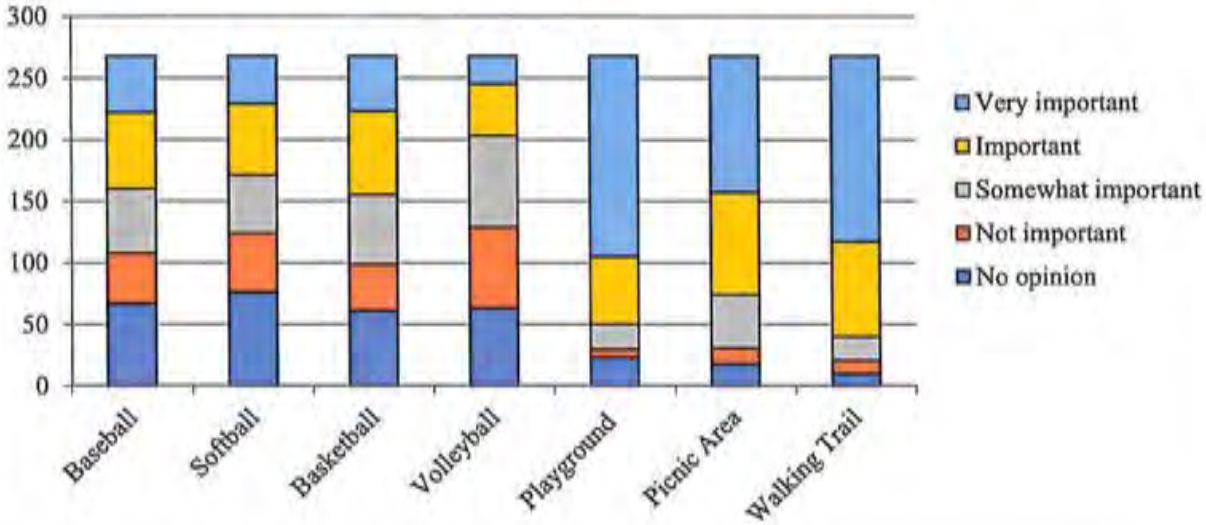
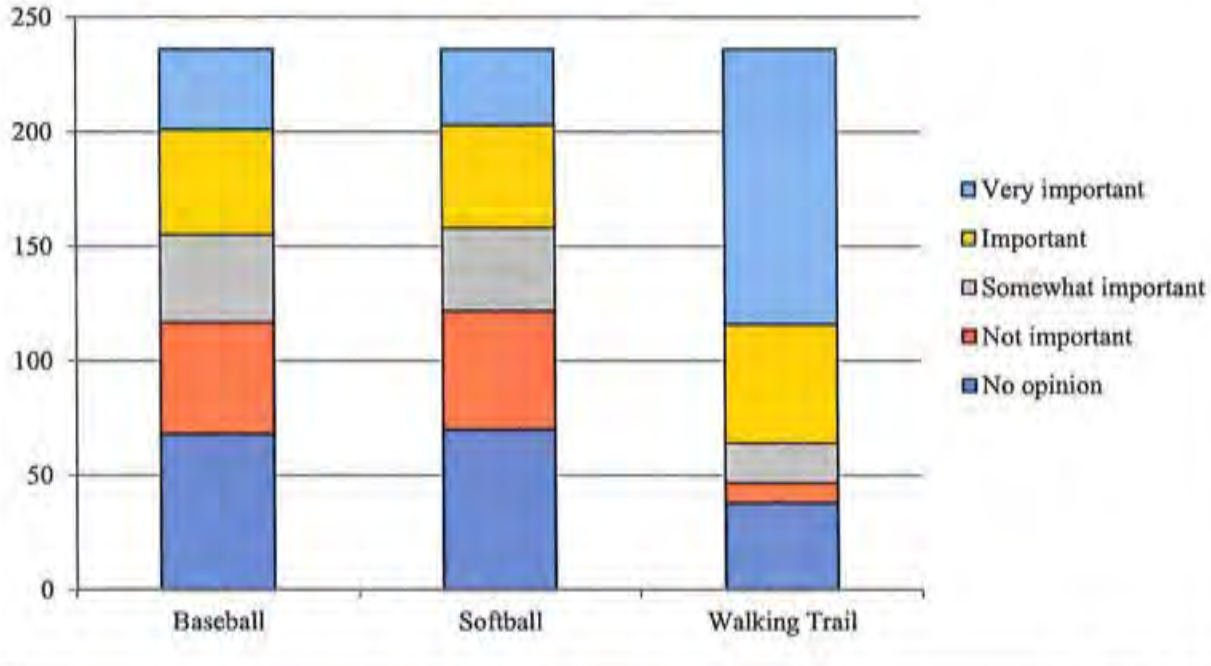
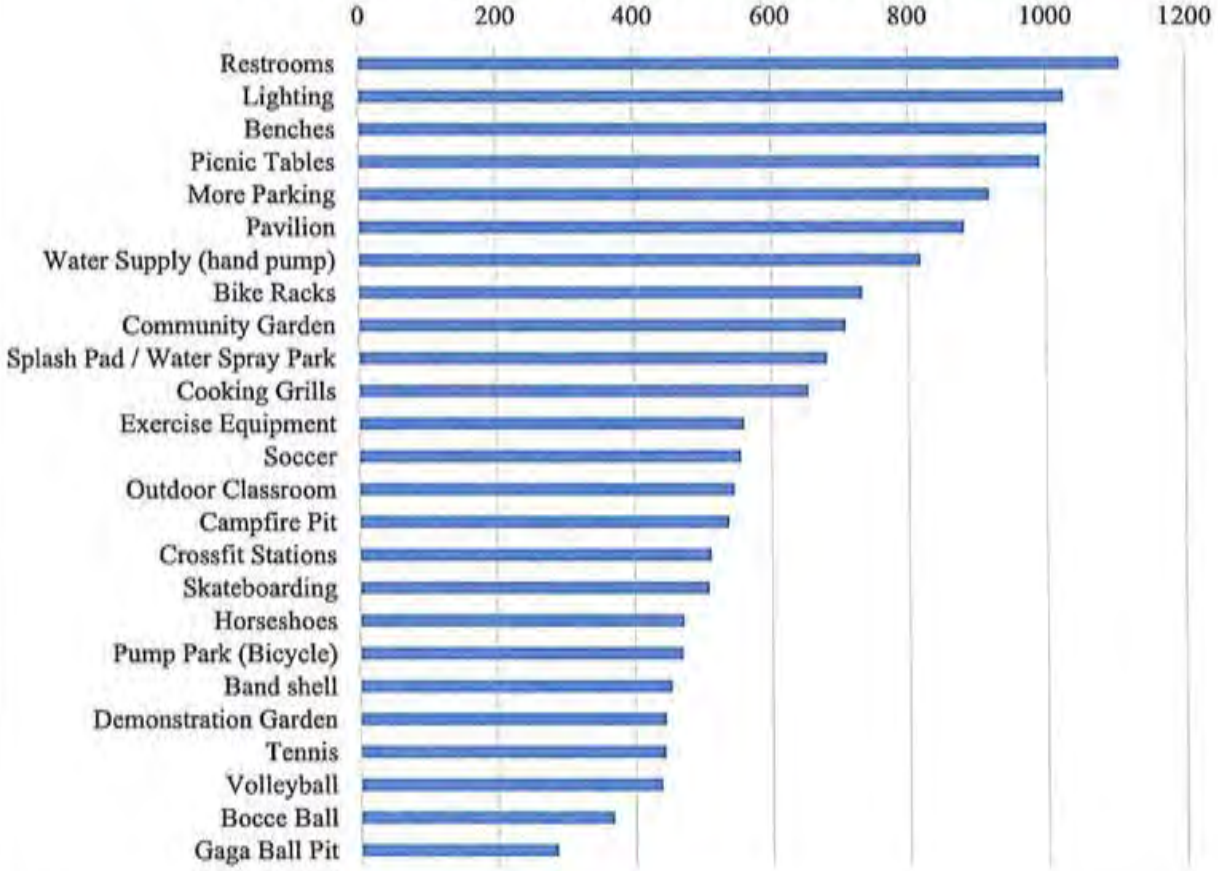


Figure 21: Question 20, Please indicate which of the following existing activities you would like to continue to be offered at the Kunkle Park. Rank the level of importance.



Walking trails are ranked very important in both parks. This suggest a strong desire among households for increased trail routes. Also, of note, organized sporting fields such as the baseball fields at both parks weren't ranked as highly. This is due to the other facilities in the area and a desire for different activities.

Figure 16: Question 15, Please indicate which of the following amenities you would like to see offered at Dallas Township Park.



PROPOSED

DALLAS TOWNSHIP RECREATIONAL PARK

SAGO STREET

DALLAS TOWNSHIP

LUZERNE COUNTY, PENNSYLVANIA

SCALE: 1"=30'

DATE: JULY 10, 1980

PREPARED BY:
SWEINBERG ASSOCIATES
ENGINEERS & LAND SURVEYORS
DES-WYOMING AVENUE
WYOMISSING, PA. 19644