



AGENDA ITEM

Open Space Task Force Report/Recommendations, Wendy Mager

ATTACHMENTS:

- POSAC Report 11-18-15 (PDF)
- POSAC Report Exhibits 11-23-15 (PDF)

REPORT OF THE PASSIVE OPEN SPACE ADVISORY COMMITTEE
October 23, 2015

INTRODUCTION

On February 10, 2015, the Mayor and Council passed a resolution establishing the “Passive Open Space Advisory Committee” to “aid with advising on the development of annual budget priorities for passive open [space] maintenance activities.” The Committee elected Wendy Mager, president of Friends of Princeton Open Space, as its Chair. The other designated members were the Director of Recreation, the Director of Infrastructure and Operations, the Chair of the Environmental Commission, the Chair of the Recreation Commission, the Chair of the Shade Tree Commission, the Chair of the Pedestrian and Bicycle Advisory Committee, the Director of New Jersey Conservation Foundation¹, the Director of D&R Greenway, a liaison from Council (Jo Butler), the “Municipal Arborist” (Lorraine Konopka)² and a citizen representative (Stephen Hiltner).³ The Committee has met monthly with the exception of August. Two of the meetings were attended by non-member citizens.

SCOPE OF REPORT

The Committee considered the passive open space listed on the attached Matrix (Exhibit A), totaling slightly less than 1,100 acres. With the exception of portions of Marquand Park⁴, the Pettoranello Gardens section of Community Park North and the native-plant-garden portions of Harrison Street Park and Farmview Fields, these are natural areas rather than designed landscapes. With the noted exceptions, the Committee focused on these natural areas. We concluded after discussion that we would not consider small “pocket parks” with playgrounds/playing fields or other small designed gardens that total about 10 acres, of which Quarry Park/Playground is the largest at 4.54 acres,⁵ and the smallest is “Paul Robeson Place/Wiggins Street” at .02 acres. Playgrounds/playing fields and small designed gardens are appropriately under the jurisdiction of the Recreation Department/Department of Public Works, as at present.

¹ NJCF was represented by its Stewardship Director, Tim Morris.

² Ms. Konopka is also the designated “Open Space Manager,” but it is difficult to glean that information from the municipal website. A citizen who attended a Committee meeting and is active on open space matters expressed surprise on being advised of this role.

³ Stony Brook-Millstone Watershed Foundation was designated a member but was not able to participate.

⁴ The Committee included areas other than the baseball field, playground and parking lot. Most of the included areas are a designed landscape, i.e., an arboretum.

⁵ One of the citizens who attended a Committee meeting expressed the view that the municipality has not taken adequate measures to address storm damage that occurred in Quarry Park. Concern was also expressed about neglect of flower gardens at Barbara Sigmund Park since a citizen volunteer moved away. Prior to consolidation, the “pocket parks” were maintained under the supervision of a former employee in the Department of Public Works.

CURRENT CONDITIONS/VOLUNTEERS

Many of Princeton's most-frequented passive open space areas are currently largely maintained by volunteers. The following areas were formally "adopted" under the former Township's Adopt-A-Park program: the Pettoranello Gardens portion of Community Park North (Princeton/Pettoranello Sister City Foundation); and The Billy Johnson Mountain Lakes Nature Preserve, Mountain Lakes North and John Witherspoon Woods (Friends of Princeton Open Space). In addition to trails maintenance, FOPOS has been performing invasives removal/planting natives in the parks it adopted. Friends of Princeton Open Space also perform trails maintenance at Tusculum and in the natural areas of Community Park North, although they are not "adopted." FOPOS volunteers maintain certain trails along the Stony Brook, and occasionally do trail work at Woodfield Reservation. The Friends of Rogers Wildlife Refuge, with occasional assistance from FOPOS and NJ Trails Association, have been maintaining trails there.⁶

The Friends of Herrontown Woods have been performing trail and other maintenance in that park (which the County owns, but which the municipality maintains by agreement) and at Autumn Hill Reservation. They are cutting down invasive shrubs in these areas, including the emerging invasive Japanese Angelica Tree, and maintain the kiosk at Herrontown Woods. At Smoyer Park, FOHW is planning to manage a detention basin being converted to native meadow with funding from the federal agency, Partners for Fish and Wildlife.

At Greenway Meadows Park, D&R Greenway advises the municipality regarding the need for management of invasives, restored a 1-acre area (with the Garden Club) with native plants, maintains benches and "poetry path" signs, and will do spot planting in a rain garden to be established, using federal funding, in the detention basin area.⁷ A group calling itself Friends of Gulick Preserve has built three footbridges and maintains trails there.

Volunteers also frequently perform tasks at Marquand Park. The Marquand Park Foundation has an endowment from which it can spend approximately \$25,000 annually to preserve the vision of the donor. The Foundation's proposed expenditures for 2015-2016 are reflected on Exhibit C to this report (as is the funding it is requesting from the municipality of Princeton).

While FOPOS will definitely continue to maintain those areas it has formally adopted and will work in other areas as resources permit, and while other volunteer stewards did not express reservations about doing so, the ability to perform maintenance through volunteers is not certain. The nature of volunteer work is that it is optional and requires constant recruiting, as well as supervision and coordination. Woodfield Reservation, a large park at 107 acres, does not have a volunteer support group of its own, and some trails there are in danger of being lost. Other areas that could provide trails

⁶ It is not clear that the municipality is responsible to do maintenance at Rogers Wildlife Refuge other than of the pump that creates the marsh area, although it holds a conservation easement on this privately-owned property. The Committee does not have a copy of the agreement regarding the Refuge in its current form.

⁷ The six-acre lot surrounding Mountain Lakes House within Mountain Lakes Preserve is maintained by Mountain Lakes Holding Corporation, a non-profit corporation that is a sister entity to Friends of Princeton Open Space, pursuant to its lease of the house. The municipality is responsible for the gravel parking area (excluding snow plowing) and garbage pickup.

for passive recreation (e.g. Fieldwood, 35.5 acres, and lands along River Road identified to include portions of the Eastern Ridge trail loop) do not have them.

CURRENT CONDITIONS, MUNICIPAL EXPENDITURES

The principal costs currently incurred by the municipality to maintain passive open space are for mowing and for pick-up of garbage and recycling – both at a limited number of locations as shown on the attached exhibits. Staff reporting to the Director of Infrastructure and Operations created a chart reflecting the mowing costs for properties in the matrix, which totaled \$22,050 annually (Exhibit B). This includes \$3,600 for mowing the sewage treatment plant site and the landfill area on River Road that is slated to become a solar power facility, which should probably not be included. The costs of trash pickup were not quantified. Man-hours for pickup of trash and recycling at passive AND active parks were quantified as 25-40 man-hours/week between April and November, and 0-15 man-hours/week from November through March.

There are gravel parking areas at other parks that are not associated with active recreation; the recent costs – if any – of maintaining these are not known, but presumably are already built in to the budgets of the Public Works and/or Engineering Departments. The Community Park North parking lot serves passive recreation areas; its landscaping was recently upgraded, paid for by an anonymous donor. The ponds at Community Park North and Smoyer Park are maintained by the municipality as needed, as are macadam paths in Pettoranello Gardens, Smoyer Park, Greenway Meadows, Marquand Park and the Van Dyke-Wight tract. The municipality also owns two ponds adjacent to Cradle Rock Road but, so far as the Committee is aware, has not spent funds on “maintaining” them.

At Turning Basin Park, the municipality maintains the picnic pavilion and portable bathrooms as well as the parking lot (gravel). One possible project identified by staff was replacing the wooden steps at this location, which lead down to the D&R towpath.

There are kiosks at Mountain Lakes Preserve (maintained by FOPOS) and Herrontown Woods, as well as large maps and other signage at the Community Park North parking lot that require some maintenance. There is a kiosk with a trails map at Woodfield Reservation. The principal other “structures” in passive open space areas are footbridges and benches, whose locations are reflected in the matrix. The footbridges that the municipality has maintained in the past are located primarily in Woodfield Reservation plus four (one of which is on the driveway) at Mountain Lakes Preserve. Some maintenance of wooden footbridges has been done by FOPOS. The municipality owns a large steel-supported footbridge that crosses the Stony Brook near Jasna Polana and the Hun School, as well as two new small footbridges with steel supports and wooden decking that were recently constructed at Mountain Lakes Preserve. The latter were funded by a foundation grant and the wooden parts constructed by FOPOS volunteers, although substantial Engineering Department time was invested in permitting and contracting/supervising the entity that installed the steel supports.

The Marquand Park Foundation has developed proposed 2015-2016 maintenance and capital budgets for that park. (Attached as Exhibit C.) The budget requests to the municipality for maintenance (\$80,605) include amounts for trash pickup and mowing that presumably overlap with the data

prepared for the Director of Infrastructure and Operations.⁸ The Foundation's requests to the municipality also include amounts related to maintaining the baseball field and playground areas and for upgrading the parking lot, which serves both passive and active portions of Marquand Park.

Current use of the municipal Open Space Tax trust fund is reflected on Exhibits D and E. Exhibit D shows that projected revenues for 2015 were \$1,168,529.34, plus \$8,849 of interest, in addition to a prior balance of \$1,392,916. Of this, \$892,854.41 was to be directed to a combination of debt service on prior open space acquisitions and \$300,000 for acquisition of the Lytle Street property next to Mary Moss Playground. \$540,913.00 was appropriated for "Park Maintenance (Estimated)", and \$75,000.00 for "Park Development" (presumably for the then-contemplated enlargement of Mary Moss Playground), leaving a projected balance on 12/31/15 of \$1,052,678. The breakdown of the "Park Maintenance" figure is shown on Exhibit E. This reflects a general item of \$80,000.00 for park maintenance, which according to the Recreation Director is for the hire of seasonal workers who work at active recreation parks and areas around municipal buildings. The remainder of the \$540,913.00 is primarily allocated to salary, overtime and fringe benefits for "Arborist/Maintenance Crew," and "Shade Tree," the bulk of whose time is apparently devoted to maintenance of street trees, tree permitting issues and leaf/brush pickup from residences rather than maintenance of passive open space.

NEEDS

Apart from the question of maintenance per se, a need identified by the Committee members and members of the public is for **a Parks Director in charge of passive open space who has adequate time and support to devote to this role**, just as the municipality has a Recreation Director supervising the recreation and playground facilities. The current Arborist/Open Space Manager has shown great energy and dedication in her relatively short time on the job, and has excellent credentials to manage open space/passive parks. However, the other duties assigned to her – managing over 25,000 street trees; dealing with all permitting for tree removal both by developers, residential owners and gas pipelines; and generally responding to all Access Princeton inquiries that relate to growing things – can easily consume all of her time and more. That is especially true since the anticipated effects of the Emerald Ash Borer will probably have a devastating effect on street trees. If the Open Space Manager could devote more time to that function she could, for example, coordinate volunteer citizens, corporate and school groups,⁹ survey each passive open space area regularly for invasive species management issues and other maintenance needs, and interact with citizen groups regarding trails

⁸ The Foundation projected mowing costs to be \$14,040 versus the \$3,750 figure used by I&O/DPW staff. The staff did not assign a dollar amount to trash pickup; the Foundation included this with other expenses related to active recreation at an amount of \$7,200.

⁹ Friends of Princeton Open Space and Friends of Herrontown Woods each have access to a trained biologist who, in the case of FOPOS, is its employee/Natural Resources Manager. However, some volunteer groups obviously require supervision. The form of adopt-a-park agreement that was used by the Township required work to be performed in accordance with plans, specifications and management guidelines developed by the Township.

location, extension, bike access and the like. As it is, it is not realistic to expect that she will be able to devote a significant amount of time to such tasks.¹⁰

The principal specific maintenance needs identified by the Committee for natural areas is for **management of invasive species and for municipal assistance with trails maintenance** in parks that do not have any or adequate volunteer support. The Director of Infrastructure and Operations has suggested that the trails maintenance need could be met by hiring crews of 2-3 people with landscape management experience in the spring and fall, and having them go through the parks that have existing trails seriatim. The Committee would like to see such a program initiated in 2016 and then its level of success and the amount that could be accomplished by this level of support would be evaluated. Such a program would be most efficient with some level of supervision regarding removal of invasive plants, shrubs and trees, or at a minimum adequate guidelines. Removal of encroaching invasives is an integral part of trails maintenance. Of course, it would be desirable to attack areas beyond the immediate borders of trails.¹¹

Maintaining the arboretum at Marquand Park, Pettoranello Gardens in Community Park North, and the native plant gardens at Harrison Street Park are tasks of a different character. There is clearly a desire for additional resources to be devoted to Marquand and Harrison Street, although the latter has not been quantified. Marquand Park is heavily used, with annual visitors estimated at over 16,000. The Marquand Park Foundation appears to have adequate professional advice/knowledge about maintenance regimes, but maintaining or rejuvenating the gardens installed at Harrison Street Park would require not only labor but supervision.

Among the requests of the municipality in Exhibit B, a representative of the Foundation identified the following as its top priorities:

1. Repairing the fence along the Guernsey Hall property and the wisteria pergola.
2. Maintaining the mulching program around the specimen trees in the arboretum.
3. Repairing potholes in the parking lot (which serves both passive and active uses).
4. Reimbursement for the experimental ash borer prevention program.

Management of the Pettoranello landscaped gardens appears to be adequately handled by volunteers, as is maintenance of the macadam trails, dam, footbridges and outdoor amphitheater.

A need was identified to perform two tasks in **Community Park North: (i) remove large numbers of trees that were downed in severe storms**. FOPOS did sufficient clearing to retain basic trail circulation, but the removal of these trees, which some perceive as a fire hazard, is beyond its

¹⁰ The Committee was advised at its September meeting that the municipality has recently hired two additional people to work for the Recreation Department and two additional laborers who will be assigned to Public Works. It is not presently known whether, if at all, these hires would reduce the current workload of the Arborist/Open Space Manager.

¹¹ Areas of invasives and their types have been mapped in the management plans for the Eastern Ridge and Mountain Lakes Preserve/Mountain Lakes North/John Witherspoon Woods.

capabilities; and (ii) **remove wooden structures that were installed many years ago as “exercise stations.”** These are deteriorating and perceived by some to be potentially hazardous.

A member of the Friends of Gulick Farm indicated that they request (i) installation of trail markers; and (ii) removal of barbed wire and metal post materials that have already been de-installed.

In May of 2014, the Princeton Ridge East Conservation Area Stewardship Plan was completed. This Plan, funded by the County, was prepared for a partnership of governmental and non-profit organizations that included the municipality. It recommended the creation of a loop trail that would link Herrontown Woods and Autumn Hill Reservation, through Princeton Sewer Operating Committee lands, to Gulick Park, Smoyer Park, Van Dyke-Wight and the All Saints property (managed by D&R Greenway), as well as other properties such as Ricciardi and the active-recreation Hilltop Park. **The loop trail segment along the western and southern boundaries of the PSOC land should be implemented, with the assistance of volunteers.**

The Plan also identified emerging invasive species in several properties on the attached matrix: Herrontown Woods, Autumn Hill Reservation, Gulick, Smoyer Park and Ricciardi. Emerging invasive species are species that have not yet become well-established, and presumably can be controlled if eradicated before they are widespread. Thus far, virtually no action has been taken to address this issue except for some volunteer work in Herrontown Woods Preserve.

In John Witherspoon Woods, considerable painting of graffiti has occurred on the rocks that are part of or near the feature known as “Devil’s Cave.” Although FOPOS volunteers have made efforts to remove it, they have not been successful. Municipal assistance is needed to **remove the graffiti** and catch the perpetrators.

RECOMMENDATIONS

1. Plan for and fund the position of Parks Director for passive open space.
2. Include monies in the budget for the other actions identified in the Needs section.
3. Increase community awareness of the Open Space Manager and her role so there is a better channel of communication regarding passive open space issues.
4. Finalize/adopt a new adopt-a-park form and enter into adopt-a-park agreements with groups currently working in passive open space parks.
5. Advisory Committee evaluate success of trails maintenance/invasives removal program and other funded actions during next cycle.
6. Municipality publicize contacts/activities of park adopters/volunteer partners on municipal website and otherwise to encourage participation.
7. Over time, shift high level of open space tax funds being used for maintenance of street trees to maintenance of passive open space parks.

EXHIBIT A

Comm. Pk. North	71	Note ²	Yes	.8 mi. - unimproved	Parking lot, bathrooms, large map displays, storage buildings	Yes
Petronello Gardens		Yes (Petronello)	Yes	Yes - combination	Benches, pond, footbridges, amphitheater	Yes
Greenway Meadows (non-active)	48	D&R Greenway ³	Yes	2.3 mi. - combination mowed and macadam paths,	Benches, gravel parking area, detention basin	No
Herrontown Woods	142	FOHW	Yes	1.9 mi. - unimproved	Parking lot, kiosk	Yes
Marquand Park (non-active)	13	Foundation	Yes	.65 mi., primarily macadam	Fence, parking lot, stone structure, wisteria pergola	Yes
Mtn. Lk. North	25	FOPoS	No	.4 mi. - unimproved	Stepping stone bridges	Yes
Mtn. Lk. Preserve	75	FOPoS	Yes	.8 mi. - unimproved ⁴	Footbridges (stone, wood, steel/wood), benches, dams, boardwalks, gravel parking area, driveway, kiosk	Yes
Ricciardi ⁵	14	?	No	Yes - unimproved	None	Yes
Tusculum	35	Note	No	1 mi. - unimproved	Stepping stone footbridges	Yes
Van Dyke – Wight	33.5	-		Yes	Macadam paths	
John Witherspoon Woods	40	FOPoS	Yes	1.1 mi. - unimproved	Stone steps/bridges, "railroaded" trails, parking area	
Woodfield Reservation	107	Note ²	Yes	4 mi. - unimproved	Wooden footbridges, plank bridges, "railroaded" trails, parking area	
Lots abutting Cherry Valley Rd.	6.8	-	No			
Fieldwood	35.5	-	No			

1 Friends of Herrontown Woods
2 FOPoS does some work in this park, has not "adopted". Town is responsible for management.
3 D&R Greenway will do "spot" planting in future rain garden around detention basin and advise re: need for invasives control.
4 Includes greater Mountain Lakes recreation area
5 Maintains poetry path signs and benches.

Millstone River	34	-	No			
Smyth Woods	9	-	No	No		
Lands along Stony Brook	84.72	-	No	Yes		
Farview Fields – rain garden	9	-	No	-	Detention area with native plantings	
Harrison St. – native garden only	.58	-	No	-	Native plant gardens	No
Washington Oaks Historic Overlook	19		No	?		
Turning Basin Park	10		Yes	-	Picnic area, canoe rental facility, portable bathrooms	
Rogers Wildlife Refuge ⁶	39	Friends of Rogers W.R.	Yes		Pump to maintain swamp area	
Two ponds adjacent to Cradle Rock Road	4			-	Dams	
TOTAL	1,094.7					

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Joint ownership; not clear what entity will manage.
Town holds conservation easement, is responsible to maintain pump.

EXHIBIT B

Proposed	Task
	Trash pickup and cleaning, includes insp and port-a-potty. Maintain baseball area workers at 1 hr each.
	Rental of port-a-potty
	Tree removal of
	Lawn care; contract should include protective mowing equipment
	Tree/shrub pruning arborist area; should include arborist
	Tree/shrub pruning wooded area; should include arborist
	Mulch ring maintenance in arborist area; they should be organic based and know arborist trees
	Woodchips and sand replacement playground
	Upkeep of trail, benches, picnic tables, baseball area, and parking lot repair
	Removal of debris from work done by volunteers

Y e a r l y M a i n t e n a n c e

plastic materials exposed

New support for Wisteria Pergola (urgent)
Replacement of Rhododendrons in woode
Fix pot holes in parking lot and install bun
plants (urgent)
Drainage system to extend open pipe near
Year)
Renovate and rebuild toolshed as storage
equipment (within next year)

Plant health care program (yearly contract)
Inventory update, risk assessment of tree trees and shrubs, signage, and volunteer arborist/park curator.
Replacement and accession of (sometimes) arboretum area of the park. Some work v
Education
Two scholarships to Mercer county stude
Maintenance of bulletin board and websi
presentations for community; press relea
Replace or provide new signage for trees a
Fund Raising
Fundraising postage, printing of flyer, new
Admin. Costs
Accountant fee
State filing fee

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Mulch rings around trees in arboretum pa
rings installed in 2014 and 2015 by the Fc

Pilot program to protect ash trees from th
been completed.

*assume \$40 per hour for contractual tras

**assume \$65 per hour for contractual la

***assume \$90 per hour for contractual ti

EXHIBIT C

Property	Area	Acres	Notes
Smoyer non-active (barns & garden)	15 mows @ \$70 each	\$	
CP North/Petroranello/Burn/Misc. areas	30 mows @ \$60 each	\$	
Greenway non-active (basin & barn areas)	30 mows @ \$70 each	\$	
Greenway non-active (walking trails area)	30 mows @ \$40 each	\$	
Herrontown Woods	No Rec mowing	\$	
Marquand Park (field/grass areas/playground)	30 mows @ \$125 each	\$	
Fieldwood/Griggs	30 mows @ \$115 each	\$	
Mountain lakes (Lower Earthen Dam area)	6 mows @ \$100 each	\$	
Ricciardi	No Rec mowing	\$	
Tusculum	No Rec mowing	\$	
Van-Dyke Wight	No Rec mowing	\$	
John Witherspoon Woods	No Rec mowing	\$	
Woodfield Reservation	No Rec mowing	\$	
Lots abutting Cherry Valley Road	No Rec mowing	\$	
Fieldwood/Griggs	No Rec mowing	\$	
Gullick	No Rec mowing	\$	
River Road - SOC (plant site & shooting range)	30 mows @ \$60 each	\$	
River Road - SOC (landfill)	15 mows @ \$120 each	\$	
Millstone River	No Rec mowing	\$	
Smith Woods	No Rec mowing	\$	
Lands along Stony Brook	No Rec mowing	\$	
Farmview Fields rain garden	No Rec mowing (DPW)	\$	
Washington Oaks Historic Outlook	No Rec mowing	\$	
Turning Basin Park	30 mows @ \$75 each	\$	
Rogers Wildlife Refuge	No Rec mowing	\$	

EXHIBIT D

Balance 1/1/XX	Increased by:
Amounts Raised by Taxation	Amounts Raised by Taxation-A
Interest Earned	Donations, Repayments, Etc.
Total Revenues	
Appropriations/Expenditures:	
Smoyer Park Completion	
R.W. Johnson Purchase	
R.W. Johnson Down Payment	
Coventry Farm Down Payment	
Coventry Farm Down Payment	
Gulick Farm Down Payment	
Debt Service:	
Acquisition / Spec Projects	
Open Space Purchase Assista	
Park Maintenance (Estimated)	
Park Development	
Miscellaneous	
Total Expenditures	
Balance Available 12/31/XX	

EXHIBIT E

Overtime - Shade Tree	\$12,000.00	
Total Salary & Wage	\$287,497.00	
<u>Other Expense:</u>		
Fringe Benefits	147,616.00	
Hardware & Minor Tools	1,000.00	
Equipment & Machinery Parts	2,000.00	
Horticultural Materials	10,000.00	
Membership Dues	300.00	
Equipment Repairs & Maintenance	2,500.00	
Other Contracted Services	8,000.00	
Miscellaneous Expenses	2,000.00	
Park maintenance	80,000.00	
Total Other Expense	\$253,416.00	
Total Open Space /Park expense	\$540,913.00	