BOWMAN'S HILL WILDFLOWER PRESERVE

PO BOX 685
NEW HOPE, PA 18938
(215) 862-2924 • FAX (215) 862-1846
psi@bhwp.org • www.bhwp.org

Bowman's Hill Wildflower Preserve's Plant Stewardship Index

Aggregate Site Report

This list is an aggregate report for several plots, compilied into one report yeilding single PSI/FQAI and CC's

Site Information

Name: SMWMA All Stands Combined

BHWP List #: 8701

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand17

BHWP List #: 8696

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand16

BHWP List #: 8691

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand15

BHWP List #: 8686

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand14

BHWP List #: 8681

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand13

BHWP List #: 8676

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand12

BHWP List #: 8671

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand11

BHWP List #: 8666

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand10

BHWP List #: 8661

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand9

BHWP List #: 8656

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand8

BHWP List #: 8651

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand7

BHWP List #: 8646

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand6

BHWP List #: 8641

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand5

BHWP List #: 8636

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand33

BHWP List #: 8631

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand32

BHWP List #: 8626

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand31

BHWP List #: 8621

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand30

BHWP List #: 8616

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand29

BHWP List #: 8611

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand28

BHWP List #: 8606

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand27

BHWP List #: 8601

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand26

BHWP List #: 8596

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand25

BHWP List #: 8591

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand24

BHWP List #: 8586

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand23

BHWP List #: 8581

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand22

BHWP List #: 8576

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand21

BHWP List #: 8571

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand20

BHWP List #: 8566

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand19

BHWP List #: 8561

State: New Jersey

Zip code:

Restoration: No

Name: SpartaWMAStand4

BHWP List #: 8556

State: New Jersey

Zip code: 07871

Restoration: No

Name: SpartaWMAStand3

BHWP List #: 8551

State: New Jersey

Zip code: 07871

Restoration: No

Name: SpartaWMAStand2

BHWP List #: 8546

State: New Jersey

Zip code: 07871

Restoration: No

Name: SpartaWMAStand1

BHWP List #: 8541

State: New Jersey

Zip code: 07871

Restoration: No

Name: SpartaWMAStand18

BHWP List #: 8536

State: New Jersey

Zip code:

Restoration: No

Site Summary

This list contains 127 plants, of which 86% (109) are native to New Jersey

Average statistics

Plant Stewardship Index	Total Mean C	Native Mean C	Floristic Quality Index
27.04	5.31	5.51	28.15

Aggregate statistics

Plant Stewardship Index	Total Mean C	Native Mean C	Floristic Quality Index
47.10	4.51	5.26	54.88

Bowman's Hill Wildflower Preserve is extremely grateful to the following persons for contributing their time and expertise so generously in assigning the Coefficients of Conservatism, producing the checklist of species in the database, and other expert assistance. Pennsylvania: Janet Ebert, Jack Holt and Anne Rhoads New Jersey: Karl Anderson, Emile De Vito, Ted Gordon, Tom Halliwell, Linda Kelly, Mary Leck, Bill Olson, Bill Rawlyk and Kathleen Strakosch Walz And of course for the invaluable guidance and experienced advice of Dr. Gerould Wilhelm and Leslie Jones Sauer.

Key to Index Header

PA CC	Pennsylvania Piedmont Coefficient of Conservatism
NJ CC	New Jersey Coefficient of Conservatism
N	Native
I	Introduced
na	Not on state list
*	Under consideration, or may not be enough specimen data

Wetland Indicator Definitions (Rhoads and Block)

OBL	Obligate Wetland Species	99%
FACW	Facultative Wetland Species	67-99%
FAC	Facultative Species	34-66%
FACU	Facultative Upload Species	1-33%
UPL	Obligate Upland Species	1%

Rank

	NJ Rank		**PA Rank**
SX	Extirpated	PE	Endangered
S1	Critically imperiled	PT	Threatened
S2	Imperiled	PR	Rare
S3	Vulnerable	PX	Extirpated
SH	Historic	PV	Vulnerable
.1	Elements documented from a single location	TU	Tentatively Undertermined

Assignment of Coefficients

0 to 3	Plants with a high range of ecological tolerances/found in a variety of plant communities
4 to 6	Plants with an intermediate range of ecological tolerances/associated with a specific plant community
7 to 8	Plants with a poor range of ecological tolerances/associated with advanced successional state
9 to 10	Plants with a high degree of fidelity to a narrow range of habitats

Methodology

1) Compile a plant list of the species within the assessment area.

2) Assign the Coefficient of Conservatism (CC) to each plant documented on the plant list.

3) Calculate the Native Mean Coefficient value by totaling the CCs and divide the sum by the number of native plant species within the assessed area.

4) **OR** Calculate the Total Mean Coefficient value by totaling the CCs and divide by the sum of the total number of plants (native and introduced) within the assessed area.

5) Multiply the Native Mean Coefficient OR the Total Mean Coefficient by the square root of the total of the number of native plant species

FQI = Native Mean C x Sqrt N

PSI = Total Mean C x Sqrt N

FQI =	Floristic Quality Index
PSI =	Plant Stewardship Index
N =	Number of native species
I =	Number of introduced species
Native Mean C =	Sum of Coefficients / N
Total Mean C =	Sum of Coefficients / N + I

*[* = Exists in more than one source plot]*

Genus	Epithet	Common Name	NJ List	NJ CC	NJ Rank	Wetlands	Comments	# Plots
Acer*	platanoides	Maple, Norway	I	0		UPL	Cultivated and frequently escaped to disturbed woods, roadsides and edges.	13
Acer*	rubrum var. rubrum	Red maple	N	3		FAC	Dry to moist woods, swamps and bogs. NJ: throughout.	32
Acer*	saccharum	Maple, sugar						27
Achillea*	millefolium	Yarrow	I	0		FACU	Fields, roadsides and waste ground.	4
Aconitum*	uncinatum	Monkshood, blue wild						2
Ailanthus*	altissima	Tree of heaven	I	0		FACU-	Disturbed woods, roadsides, fencerows, vacant lots and railroad banks.	2
Alliaria*	petiolata	Mustard, garlic	I	0		FACU-	Disturbed woods, floodplains and waste ground.	3
Alnus*	incana	Speckled alder	N	6				3
Alnus	serrulata	Alder, smooth	N	4		OBL	Low, wet woods and swamps.	1
Ambrosia*	artemisiifolia	Ragweed, common	N	0		FACU	Fields, meadows, cultivated areas, roadsides and waste ground.	3
Amelanchier*	species	Shadbush; Serviceberry						26
Amphicarpaea*	bracteata	Hog peanut	N	4		FAC	Moist woods and alluvium.	4
Anthemis*	tinctoria	Yellow chamomile	I	0		N	Abandoned fields and roadsides.	2
Aralia*	nudicaulis	Sarsaparilla, wild	N	5		FACU	Dry to moist woods.NJ: fields.	24
Arisaema*	triphyllum ssp. triphyllum	Jack-in-the-pulpit	N	5		FACW-	Moist woods, swamps and bogs.	5
Artemisia	vulgaris	Common mugwort	I	0		N	Gardens, lawns, roadsides, thickets, waste ground and rubbish dumps.	1
Aster*	divaricatus	Aster, white wood						14
Berberis*	thunbergii	Barberry, Japanese	I	0		N	Disturbed woods, roadsides and hedgerows.	4
Betula*	alleghaniensis	Birch, yellow	N	10		FAC	Cool, moist, northern woods.	21
Betula*	lenta	Birch, sweet	N	6		FACU	Woods and stream banks.	30
Betula	papyrifera	Birch, paper	N	10				1
Betula*	populifolia	Birch, gray	N	2		FAC	Old fields, open woods and disturbed areas, especially on dry, sterile soils.	4
Brickellia*	eupatorioides	False boneset	N	10		N	Shale barrens, wooded slopes and dry, rocky, limestone slopes.	2
Carex*	blanda	Sedge; woodland sedge	N	6		FAC	Dry to moist woods, thickets and meadows.	12
Carex*	pensylvanica	Sedge, Pennsylvania	N	5		N	Open woods and wooded slopes.	25
Carpinus*	caroliniana	Hornbeam; Ironwood	N	7		FAC	Rich, moist woods and stream edges.NJ: Floodplains.	15
Carya*	glabra	Pignut hickory	N	7		FACU-	Upland woods, dry ridge tops and slopes.	22
Carya*	ovata	Hickory, shagbark	N	7		FACU	Low, moist woods and slopes, in rich soil.	14
Carya*	tomentosa	Hickory, mockernut	N	5		FACU	Moist, open woods and slopes.	22
Chimaphila*	maculata	Wintergreen, spotted ; Pipsissewa	N	5		N	Woods.	14
Cichorium	intybus	Chicory	I	0		N	Fields, roadsides and waste ground.	1

Genus	Epithet	Common Name	NJ List	NJ CC	NJ Rank	Wetlands	Comments	# Plots
Comptonia	peregrina	Sweet-fern	N	3		N	Dry, sterile soils of open woods and barrens.	1
Cornus*	florida	Dogwood, flowering	N	5		FACU-	Rich, moist woods and woods edges.	2
Cornus*	racemosa	Dogwood, gray; swamp	N	3		FAC-	Swampy meadows, wet woods and thickets.	3
Corylus*	americana	Hazelnut; Filbert	N	5		FACU-	Rich woods and edges.	5
Crataegus*	monogyna	Hawthorn, English	I	0		N	Escaped from cultivation to roadsides and waste ground.	3
Cypripedium	acaule	Lady's-slipper, pink	N	8		FACU-	Moist to dry acidic woods.	1
Cypripedium	calceolus var. parviflorum	Lady's-slipper, small yellow	S	0		FACW-	Moist woods and bogs, often on limestone.	1
Daucus*	carota	Queen-Anne's-lace	I	0		N	Roadsides, old fields, gardens and waste ground.	2
Dennstaedtia*	punctilobula	Fern, hay-scented	N	4		N	Open woods, meadows and slopes, in acidic soils.NJ: Banks.	13
Desmodium*	glutinosum	Sticky tick-clover	N	7		N	Rich woods.	2
Desmodium*	paniculatum	Tick-trefoil, panicled	N	4		UPL	Clearings and edges of moist or dry woods.	2
Dichanthelium*	clandestinum	Panic grass, hidden	N	3				12
Dioscorea*	villosa	Wild yam	N	7		FAC+	Woods, thickets and rocky slopes.	4
Euonymus*	alatus	Burning-bush; Winged euonymus	I	0		N	Cultivated and occasionally naturalized in disturbed woods, stream banks, fencerows and edges.	2
Eutrochium*	purpureum	Joe-pye-weed	N	7		N	Open woods, fields and floodplains.	2
Fagus*	grandifolia	Beech, american	N	8		FACU	A dominant tree of mature forests on moist, rich soils.	15
Fragaria*	virginiana	Strawberry, wild						5
Fraxinus*	americana var. americana	White ash	N	7		FACU	Woods, fencerows and old fields.	25
Galium*	boreale	Northern bedstraw	N	10		FACU	Rocky slopes on limestone or serpentine, low fields, fens and roadside banks.	6
Gaylussacia*	baccata	Huckleberry, black	N	8		FACU	Dry to moist, acidic woods and bogs.	26
Geranium*	maculatum	Geranium, wood	N	4		FACU	Rich woods, roadsides and fields.	5
Glyceria*	grandis	American mannagrass	N	8	S2	OBL	Shallow water or wet meadows.	11
Goodyera*	pubescens	Plantain, downy rattlesnake	N	9		FACU-	Dry to moist, deciduous or coniferous woods.	2
Hamamelis*	virginiana	Witchhazel	N	7		FACU+	Rich, rocky woods.	24
Helianthus*	divaricatus	Sunflower, woodland	N	6		N	Dry, wooded slopes, shale barrens and roadsides.	2
Hypoxis*	hirsuta	Star-grass, yellow	N	6		FAC	Dry, open woods and meadows.	6
Ilex*	verticillata	Winterberry	N	5		FACW+	Swamps, bogs, moist woods and wet shores.	2
Impatiens*	capensis	Jewelweed; Touch-me-not	N	2		FACW	Moist meadows, swamps and stream banks.	6
Juncus	effusus	Rush, soft	N	1				1
Juniperus*	virginiana	Eastern red-cedar	N	2		FACU	Old fields, serpentine barrens and other moist to dry, sterile soils.	2
Kalmia*	latifolia	Laurel, mountain	N	7		FACU	Dry to moist, acidic woods and slopes.	22
Lactuca*	canadensis var. canadensis	Wild lettuce	N	2		FACU-	Meadows, fields, rocky hillsides and roadside banks.	2
Lindera*	benzoin	Spicebush	N	5		FACW-	A common component of moist, rich woods.	16
Linnaea*	borealis	Twinflower	N	10	SH			2
Liquidambar*	styraciflua	Sweet-gum	N	1		FAC	Low, wet, coastal plain woods.	2

Genus	Epithet	Common Name	NJ List	NJ CC	NJ Rank	Wetlands	Comments	# Plots
Liriodendron*	tulipifera	Tuliptree; Yellow poplar	N	5		FACU	A common forest tree of rich woods.	16
Lobelia	cardinalis	Cardinal-flower	N	5		FACW+	Wet meadows, swamps, ditches, stream banks and lake shores.	1
Lycopodium	dendroideum	Round-branch ground-pine/ Northern Tree clubmoss	N	8		FACU	Bogs and barrens, in moist, acidic soils.	1
Lycopus*	uniflorus	Bugleweed, northern	N	4		OBL	Swampy meadows, bogs, lake margins and floodplains.	2
Maianthemum*	canadensis var canadensis	Canada mayflower	N	4		FAC-	NJ: Moist woods, beech forests, mesic marshes.	18
Maianthemum*	racemosum	False Solomon's Seal	N	5				17
Malus*	coronaria var. coronaria	Crabapple, American	N	4		N	Woods, old fields and thickets.	2
Medeola*	virginiana	Indian cucumber-root	N	8		N	Moist woods.	3
Melampyrum	lineare	Cow Wheat	N	5				1
Mitchella*	repens	Partridge-berry	N	5		FACU	Woods.	9
Monarda	fistulosa	Bergamot, lavender						1
Monotropa*	uniflora	Indian-pipe	N	8		FACU-	Dry to moist woods, in humus.	2
Nyssa*	sylvatica	Black gum; Tupelo	N	4		FAC	Dry to moist woods, rocky slopes and ridge tops.	12
Onoclea*	sensibilis	Fern, sensitive	N	2		FACW	Marshes, swamps, moist open woods and wet meadows, in subacidic soils.	7
Osmunda*	cinnamomea	Fern, cinnamon	N	4		FACW	Swamps, bog margins and stream banks, in wet acidic soils.	11
Osmunda*	regalis	Fern, royal						3
Ostrya*	virginiana	Hop-hornbeam	N	7		FACU-	Dry, wooded slopes, often on calcareous soils.	17
Oxalis	dillenii ssp. filipes	Southern yellow wood-sorrel	N	0		N	Rich woods, diabase cliffs, roadsides, waste ground, and woodland edges.	1
Panicum	virgatum	Grass, switch	N	3		FAC	Sandy shores, alluvium, fields and banks.NJ: Garden State Parkway.	1
Parthenocissus*	quinquefolia	Virginia-creeper	N	1		FACU	Woods, fields and edges.	13
Picea*	abies	Norway spruce	I	0		N	Forest plantations.	2
Pinus*	resinosa	Pine, Norway; red	N	10	S1.1	FACU	Native on dry slopes in Luzerne, Wyoming, Tioga and Centre Cos.NJ: Sussex.	3
Pinus*	rigida	Pine, pitch	N	6		FACU	Moist to dry, sterile soils including serpentine barrens. NJ: Throughout Pine Barrens	2
Pinus*	strobus	Pine, Eastern white	N	3		FACU	Moist to dry woodlands and forested slopes.NJ: North jersey.	4
Polygonatum*	biflorum var. biflorum	Solomon's-seal	N	8		FACU	Deciduous woods, rocky slopes and roadside banks.	4
Polygonum*	hydropiperoides	Mild water-pepper						2
Polygonum*	sagittatum	Tearthumb, arrow-leaved	N	5		OBL	Low moist ground, vernal ponds, bogs, swamps or marshes.	2
Polystichum*	acrostichoides	Fern, Christmas	N	7		N	Shaded slopes and well-drained flats, in subacidic to circumneutral soils.	5
Populus*	grandidentata	Aspen, large-toothed	N	4		FACU-	Early successional woods and floodplains.	10
Populus	tremuloides	Quaking aspen	N	2		N	Old fields, open woods or barrens, usually on sandy or gravelly soils.	1
Potentilla*	simplex	Cinquefoil, common	N	2		FACU-	Dry woods, fields, meadows and roadsides.	7
Prunella	vulgaris	Selfheal; Heal-all	n/a	0				1
Prunus*	serotina	Cherry, wild black	N	1		FACU	Woods and fencerows.	12

Genus	Epithet	Common Name	NJ List	NJ CC	NJ Rank	Wetlands	Comments	# Plots
Pteridium*	aquilinum var. latiusculum	Northern bracken fern	N	2		FACU	Open woods and barrens, in sandy acidic soils.	2
Quercus*	alba	Oak, white	N	4		FACU	A dominant forest tree on dry to moist sites.	24
Quercus*	coccinea	Oak, scarlet	N	6		N	Dry upper slopes and ridges, in poor soil.	20
Quercus*	palustris	Oak, pin	N	3		FACW	Low, moist or seasonally wet woods or swamps.	2
Quercus*	prinus	Oak, chestnut	N	4				30
Quercus*	rubra	Oak, northern red	N	7		FACU-	A dominant forest tree on moist to dry sites.	31
Quercus*	velutina	Oak, black	N	6		N	A dominant forest tree on moist to dry soils.	14
Ranunculus*	hispidus	Hairy buttercup	n/a	0		FAC	Dry rocky to rich moist oak and oak-hickory woods.	2
Rhododendron*	maximum	Rosebay	N	8		FAC	Moist woods, swamps and ravines.	3
Rhododendron*	periclymenoides	Pinxter-flower	N	5		FAC	Dry to moist, acidic woods.	7
Rhododendron*	viscosum	Azalea, swamp	N	6		FACW+	Swamps, bogs and wet woods.	2
Rhus*	glabra	Sumac, smooth	N	2		N	Shale barrens, old fields and dry, open slopes.	3
Rosa	multiflora	Rose, multiflora	I	0		FACU	Disturbed woods, pastures, old fields, roadsides and thickets.	1
Rosa*	rugosa	Rugosa rose	I	0		FACU-	Cultivated and occasionally escaped.	2
Rubus*	allegheniensis	Blackberry, common	N	3		FACU-	Old fields, open woods and clearings.	6
Rudbeckia	hirta	Black-eyed-Susan						1
Rumex	acetosella	Sorrel, sheep	I	0		UPL	Fields, lawns, waste places and shale barrens, in acidic soils.	1
Sarracenia	purpurea	Pitcher-plant, purple	N	10		OBL	Sphagnum bogs.	1
Sassafras*	albidum	Sassafras	N	2		FACU-	Old fields, hedgerows and woods edges.	16
Saxifraga*	micranthidifolia	Lettuce saxifrage	n/a	0		OBL	Among mossy rocks of shaded streambeds and seepage areas.	3
Silene	vulgaris	Bladder campion	I	0		N	Old fields, roadsides, railroad banks and waste ground.	1
Smilax*	rotundifolia	Catbrier/ Common Greenbrier	N	2		FAC	Moist to dry woods, thickets, roadsides, old fields and serpentine barrens.	3
Solidago*	altissima	Goldenrod, tall	S	2		FACU	Wooded slopes, fields, river banks and roadsides.	12
Symplocarpus*	foetidus	Skunk-cabbage	N	5		OBL	Moist woods, swamps and bogs.	7
Tilia*	americana var. americana	Basswood	N	7		FACU	Rich woods.	3
Toxicodendron*	radicans	Ivy, poison	N	1		FAC	Open woods, roadside thickets, fencerows and edges.	11
Trientalis*	borealis	Star-flower	N	7		FAC	Moist woods and bogs.	9
Trifolium*	repens	Clover, white	I	0		FACU-	Roadsides, meadows, old fields and lawns.	2
Tsuga*	canadensis	Hemlock, Canada	N	8		FACU	Cool, moist woods and shaded slopes.	19
Ulmus*	americana	Elm, american	N	6		FACW-	Stream banks and floodplains, in rich, alluvial soil.	5
Uvularia*	perfoliata	Bellwort, perfoliate	N	8		FACU	Moist, rich woods and slopes.	8
Vaccinium*	angustifolium	Blueberry, low sweet	N	8		FACU-	Dry, open woods and barrens.	7
Vaccinium*	corymbosum	Blueberry, highbush	N	5		FACW-	Moist woods, bogs and swamps.NJ: Weedy edges.	29
Vaccinium*	stamineum	Deerberry	N	7		FACU-	Dry, open, acidic woods and slopes.	4

Genus	Epithet	Common Name	NJ List	NJ CC	NJ Rank	Wetlands	Comments	# Plots
Veratrum	viride	Hellebore, false	N	7		FACW+	Wet woods and swamps.	1
Verbascum*	thapsus	Common mullein	I	0		N	Fields, roadsides, shale barrens, railroad embankments and waste ground.	3
Viburnum*	acerifolium	Viburnum, maple-leaved	N	8		N	Woods and thickets.	21
Viburnum*	prunifolium	Viburnum, blackhaw	N	5		FACU	Woods, old fields, thickets and roadsides.	2
Viola*	sororia var. sororia	Violet, common blue	N	2		FAC-	Meadows and woods.	6
Woodwardia	areolata	Netted chain fern	N	7		FACW+	Moist woods; in humus-rich, strongly acidic soils.	1
Osmunda	claytoniana	Fern, Interrupted	N	7		FAC	Moist woodlands, bog edges and hummocks, in subacidic to neutral soilsNJ: Wetland edges..	1
Eurybia	divaricata	White wood aster	N	4		N	Woods.	1