

Appendix 1. Contacts during the preparation of the Cedar Creek and Belle Grove National Historical Park (CEBE) Data Review and Synthesis of Natural Resources Information.

Name	Result	e-mail	Phone	Agency	Title	Area of Assistance
Matthew Logan	Did not reply	<a href="mailto:logan@potomac.org">logan@potomac.org</a>		Potomac Conservancy		Water resources
Thomas Jennings	Did not reply	<a href="mailto:tfjennings@deq.virginia.gov">tfjennings@deq.virginia.gov</a>		Virginia Department of Environmental Quality		Water resources
Gerald Crowell	Replied	<a href="mailto:gerald.crowell@dof.virginia.gov">gerald.crowell@dof.virginia.gov</a>	540-722-3496	Virginia Department of Forestry	Area Forester - Frederick and Clarke Counties	Tree species list and booklet
Joe Lehnen	Replied	<a href="mailto:joe.lehnen@dof.virginia.gov">joe.lehnen@dof.virginia.gov</a>		Virginia Department of Forestry	Area Forester	Provided general contacts
Gene Powell	Replied	<a href="mailto:edpowell@deq.virginia.gov">edpowell@deq.virginia.gov</a>		Virginia Department of Environmental Quality		Water resources
George Harlow	Replied	<a href="mailto:geharlow@usgs.gov">geharlow@usgs.gov</a>	804-261-2631	U.S. Geological Survey		Provided a geology bibliography
Gary Flory	Replied	<a href="mailto:gafory@deq.virginia.gov">gafory@deq.virginia.gov</a>	540-574-7840	Virginia Department of Environmental Quality		Natural resources data sources
Chris Bruce	Replied	<a href="mailto:cbruce@tnc.org">cbruce@tnc.org</a>		The Nature Conservancy		Nature Conservancy lands
Patti Dienna	Replied	<a href="mailto:patti_dienna@nps.gov">patti_dienna@nps.gov</a>		National Park Service		Aerial photographs
Chris Ludwig	Replied	<a href="mailto:chris.ludwig@dcr.virginia.gov">chris.ludwig@dcr.virginia.gov</a>	804-371-6206	VA Department of Conservation and Recreation		Natural resources data sources
Fred Frenzel	Replied	<a href="mailto:frenzel@dgif.virginia.gov">frenzel@dgif.virginia.gov</a>		Virginia Department of Game and Inland Fisheries		Wildlife species web service
Jennifer Krstolic	Replied	<a href="mailto:jkrstoli@usgs.gov">jkrstoli@usgs.gov</a>		U.S. Geological Survey		Natural resources data sources
Dave Morton	Replied	<a href="mailto:Dave.Morton@dgif.virginia.gov">Dave.Morton@dgif.virginia.gov</a>	804-367-6772	Virginia Department of Game and Inland Fisheries	GIS Coordinator	Wildlife species web service
Gordon Olson	Replied	<a href="mailto:Gordon_Olson@nps.gov">Gordon_Olson@nps.gov</a>	540-999-3497	National Park Service - Shenandoah	Natural Resources Branch Chief	Air quality
Rene Hypes	Replied		804-371-2708	VA Department of Conservation and Recreation	Project Review Coordinator	Natural Heritage resources - threatened and endangered species list
Wil Orndorff	Did not reply	<a href="mailto:Wil.Orndorff@dcr.virginia.gov">Wil.Orndorff@dcr.virginia.gov</a>	540-831-4056	Virginia Karst Program	Karst Protection Coordinator	Impacts on caves, cave locations. Did not provide me with info but perhaps he would provide an NPS employee with info.
Eric Davis	Replied		804-693-6694 ext.104	U.S. Fish and Wildlife Service		Threatened and endangered species list
Pat Donovan	Replied		540-231-9795	Virginia Tech	GIS Coordinator	SSURGO data use with GIS and Microsoft Access



Appendix 2. Bibliography of acquired documentation and digital data sets utilized in the creation of the Cedar Creek and Belle Grove National Historical Park (CEBE) Data Review and Synthesis of Natural Resources Information.

### **Hard Copy Publications**

National Park Service and U.S. Fish and Wildlife Service. Plant Invaders of Mid-Atlantic Natural Areas.

Orndorff, Randall C. et al. Geologic map of the Middletown quadrangle, Frederick, Shenandoah, and Warren Counties, Virginia. U.S. Geological Survey. 1999.

Rader, E.K. and T.H. Biggs. 1976. Commonwealth of Virginia Division of Mineral Resources. Geology of the Strasburg and Toms Brook Quadrangles, Virginia. Report of Investigations 45. Charlottesville, Virginia.

United States Department of Agriculture, Virginia Polytechnic Institute and State University. 1987. Soil Survey of Frederick County Virginia.

United States Department of Agriculture, Virginia Polytechnic Institute and State University. 1991. Soil Survey of Shenandoah County, Virginia.

Virginia Department of Forestry. 2001. Common Forest Trees of Virginia: How to Know Them.

### **Digital Data**

Steeves, P. and D. Nebert. 1994. 1:250,000-scale Hydrologic Units of the United States.

Topozone. 1999. Middletown, Virginia Quadrangle DRG. [www.topozone.com](http://www.topozone.com) .

Topozone. 1994. Strasburg, Virginia Quadrangle DRG. [www.topozone.com](http://www.topozone.com) .

United States Department of Agriculture. 2004. Soil Survey Geographic (SSURGO) Database for Frederick County, Virginia.

United States Department of Agriculture. 2004. Soil Survey Geographic (SSURGO) Database for Shenandoah County, Virginia.

United States Department of Agriculture. 2004. Soil Survey Geographic (SSURGO) Database for Warren County, Virginia.

United States Department of Agriculture Forest Service. 2004. United States Ecoregions.

United States Fish and Wildlife Service. 2004. Wetland Polygons.

Appendix 2. Bibliography of acquired documentation and digital data sets utilized in the creation of the Cedar Creek and Belle Grove National Historical Park (CEBE) Data Review and Synthesis of Natural Resources Information (continued).

United States Geological Survey. 1999. National Hydrography Dataset.

Virginia Department of Environmental Quality. 2004. Monitoring Stations used for the 2004 Virginia 305b/303d Water Quality.

Virginia Department of Environmental Quality. 2004. Waters identified as impaired during the 2004 Virginia 305b/303d Water Quality Assessment.

Virginia Department of Forestry. 2002. Virginia Forest Cover – VAFOREST.

Virginia Department of Forestry. 2002. Fall 2002 Cankerworm.

Virginia Department of Forestry. 2002. Gypsy Moth Defoliation 2002.

Virginia Department of Forestry. 2003. Gypsy Moth Defoliation 2003.

Virginia Department of Forestry. 2003. Wildfire Risk Assessment.

Virginia Department of Mines Minerals and Energy. 2003. Raster Images of the Geologic Map of the Virginia Portion of the Winchester 30 x 60 Minute Quadrangle and Digital Geospatial Data for the Geologic Map of the Virginia Portion of the Winchester 30 x 60 Minute Quadrangle. Publication 171.

Virginia Department of Transportation. 2001. Virginia County Map Series CD.

Virginia Department of Transportation. 2001. Network Level Basemap Data Sets.

Virginia Economic Development Partnership. 2000 . MIDDLETOWN SE - Color DOQQ: MrSID DOQQs Calendar Date 1997. Virginia Economic Development Partnership, Richmond, Virginia.

Virginia Economic Development Partnership. 2000. MIDDLETOWN SW - Color DOQQ: MrSID DOQQs Calendar Date 1997. Virginia Economic Development Partnership, Richmond, Virginia.

Virginia Economic Development Partnership. 2000. STRASBURG NW - Color DOQQ: MrSID DOQQs Calendar Date 1997. Virginia Economic Development Partnership, Richmond, Virginia.

Appendix 2. Bibliography of acquired documentation and digital data sets utilized in the creation of the Cedar Creek and Belle Grove National Historical Park (CEBE) Data Review and Synthesis of Natural Resources Information (continued).

Virginia Economic Development Partnership. 2000. STRASBURG NE - Color DOQQ: MrSID DOQQs Calendar Date 1997. Virginia Economic Development Partnership, Richmond, Virginia.



### Appendix 3. Definitions of geologic terms.

**Alluvial deposits** - Sand, gravel, and silt deposited by rivers and streams in a valley bottom

**Aphanic** – A rock texture in which individual mineral grains are too small to be distinguished with the naked eye

**Argillaceous** – Clay-rich rocks

**Bentonite** – A type of clay

**Bioclastic** - Rocks consisting of fragmental organic remains

**Bioherm** - A moundlike or circumscribed mass of rock built up by sedentary organisms such as corals, mollusks, and algae

**Bioturbated** - The mixing of sediments by living organisms such as worms, clams, or arthropods that make burrows in soft sediment

**Brecciated** - Rock made up of angular fragments of other rocks held together by mineral cement or a fine-grained matrix

**Calcareous** - A descriptive term used for rocks and other earth materials that have an abundance of calcium carbonate ( $\text{CaCO}_3$ )

**Cenezoic Era** - The time span between 66.4 million years ago to the present.

**Chert** - A very fine-grained sedimentary rock made of quartz. Usually made of millions of globular siliceous skeletons of tiny marine plankton called radiolarians. Black chert is called flint

**Clastic** - A sedimentary rock composed of fragments (clasts) of pre-existing rock or fossils

**Dolostone** - A sedimentary rock composed primarily of dolomite, a mineral made up of calcium, magnesium, carbon, and oxygen ( $\text{CaMgCO}_3$ ). Dolostone is thought to form when magnesium ions replace some of the calcium ions in limestone, to which dolostone is similar in both appearance and chemical structure

**Foreland basin** - Forms by down-bending of the lithosphere, as a response to the load created by the vertical stacking and thickening of rocks during thrust faulting and folding

**Iapetus Ocean** - A relatively small ocean that existed between the continents of Laurentia, Baltica, and Avalonia from the Late Precambrian to the Devonian

Appendix 3. Definitions of geologic terms (continued).

**Intraformational conglomerates** - Derived by eroding, transporting, and depositing material from within the depositional basin itself

**Karst** - A distinctive landscape (topography) that can develop where the underlying bedrock, often limestone or marble, is partially dissolved by surface or ground water

**Mottle** - Irregular pattern of patches or spots of different colors

**Ordovician** - A Period in the Paleozoic Era that includes the time interval from about 505 to 438 million years ago

**Orogeny** - An episode of mountain building and/or intense rock deformation

**Paleokarst** - A karstified rock or area that has been buried by later sediments; in some places, ancient caves have been completely filled by the later sediments

**Paleozoic Era** - Includes the time from about 570-245 million years ago

**Peritidal** - Adjective implying that the rocks were deposited in an area associated with a tidal flat

**Quaternary Period** - The most recent Period of the Cenozoic Era. Encompasses the time interval of 1.6 million years ago through today

**Sparry calcite** – Crystalline calcite

**Subduction** - Process of one crustal plate sliding down and below another crustal plate as the two converge. The subduction zone is the area between the two plates, somewhat like a giant reverse fault

**Subtidal** - Adjective implying that the rocks were deposited in water deeper than the normal low-tide level

**Synclorium** - A mountain range owing its origin to the progress of a geosynclinal, and ending in a catastrophe of displacement and upturning

**Terrace** - Level or near-level area of land, generally above a river or ocean and separated from it by a steeper slope. A river terrace is made by the river at some time in the past when the river flowed at a higher level. A terrace may be made of river deposits such as gravel or sand, or it could be cut by the river on bedrock

**Turbidites** - Sediments that are transported down the continental slope as turbidity currents extending the sedimentary (accretionary) wedge even farther outward from the continent

Appendix 3. Definitions of geologic terms (continued).

**Unconformity** - The contact between older rocks and younger sedimentary rocks in which at least some erosion has removed some of the older rocks before deposition of the younger. An angular unconformity shows that the older rocks have been deformed and eroded before the younger sedimentary rocks were deposited; there is an angle between the beds of the older and the younger

Definitions obtained from:

Encyclopædia Britannica. 2004. Encyclopædia Britannica Premium Service.  
<http://www.britannica.com/eb/article?tocId=80267> .

National Park Service and U.S. Geological Survey. 2000. Geologic Glossary.  
<http://www2.nature.nps.gov/geology/usgsnps/misc/glossaryStoZ.html> .

University of Nebraska, Lincoln, Conservation and Survey Division. 2004. Glossary of Selected Geologic Terms.  
<http://csd.unl.edu/general/glossary-letter.asp?Definition=B> .



#### Appendix 4. U.S. EPA and Virginia defined categories of impairment and the definition of “Aquatic Life Use.”

Obtained from:

Virginia Department of Environmental Quality. 2004. Virginia Water Quality Assessment 305(b)/303(d) Integrated Report.  
<http://www.deq.state.va.us/wqa/pdf/2004ir/ir2004.pdf>.

US EPA defined categories followed by associated Virginia defined subcategories:

Impaired – Waters are impaired or threatened but a Total Maximum Daily Load (TMDL) is not needed.

- EPA Category 4A: impaired or threatened for one or more designated uses but does not require a TMDL because the TMDL for specific pollutant(s) is complete and US EPA approved.
- EPA Category 4B: impaired or threatened for one or more designated uses but does not require the development of a TMDL because other pollution control requirements (such as National Pollutant Discharge Elimination System (NPDES) limits under a compliance schedule) are reasonably expected to result in attainment of the Water Quality Standard (WQS) by the next reporting period or permit cycle.
- EPA Category 4C: impaired or threatened for one or more designated uses but does not require a TMDL because the impairment is not caused by a pollutant and/or is determined to be caused by natural conditions.

Impaired – requires a TMDL

- EPA Category 5: Waters are impaired or threatened and a TMDL is needed.
  - Va. Category 5A - the WQS is not attained. The assessment unit (AU) is impaired for one or more designated uses by a pollutant(s) and requires a TMDL (303d list).
  - Va. Category 5B –the WQS for shellfish use is not attained. One or more pollutants remain requiring TMDL development.
  - Va. Category 5C – the WQS is not attained due to suspected natural conditions. The AU is impaired for one or more designated uses by a pollutant(s) and may require a TMDL (303d list). Standards for these waters may be re-evaluated due to the effects of natural conditions.
  - Va. Category 5D - the WQS is not attained where TMDL’s for a pollutant(s) have been developed but one or more pollutants remain requiring TMDL development.
  - Va. Category 5E – effluent limited waters are not expected to meet compliance schedules by next permit cycle or reporting period.

Aquatic Life Use:

Aquatic life use includes the propagation, growth, and protection of a balanced indigenous population of aquatic life (including game and marketable fish) which may be expected to inhabit the waters. Support of aquatic life use can be determined by the assessment of conventional parameters (dissolved oxygen, pH and temperature, toxic

Appendix 4. U.S. EPA and Virginia defined categories of impairment and the definition of “Aquatic Life Use” (continued).

pollutants in the water column (relative to the acute WQS), toxic pollutant analysis of sediments, toxicity testing, nutrient analysis and/or the biological assessment of benthic communities). All available data relative to aquatic life use shall be considered to determine if the aquatic life use is being met. The maximum temperature will not be assessed for aquatic life in tidal waters as no maximum temperature standard is applicable.

Appendix 5. Mean of daily mean streamflow statistics for the Cedar Creek USGS gaging station near Winchester, Virginia. Provided by USGS <http://va.water.usgs.gov/> 2004.

Day of month	Mean of daily mean values for this day for 66 years of record <sup>1</sup> , in ft <sup>3</sup> /s											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	159	112	171	196	125	97.1	40.2	49.7	29.4	41.1	41.7	86.4
2	125	124	141	204	123	149	34.8	30.9	21.2	40.3	68.7	91.6
3	104	152	150	173	122	113	42.5	34.1	18.4	59.9	70.9	71.9
4	101	158	214	176	138	105	42.1	48.4	22.6	30.7	104	109
5	102	145	210	243	130	106	40.0	34.9	23.0	46.3	113	110
6	95.3	119	207	179	187	84.3	33.0	82.6	166	42.6	65.7	76.7
7	85.7	132	212	189	158	72.0	31.4	91.1	67.7	32.5	92.6	77.5
8	98.8	113	187	173	166	87.8	29.1	31.3	32.2	26.6	82.4	84.8
9	103	103	175	187	144	70.5	33.7	28.7	24.3	91.8	56.1	85.1
10	100.0	106	159	197	143	70.3	33.4	23.3	24.7	68.5	52.2	87.2
11	89.0	108	152	173	135	73.5	34.1	23.8	23.1	41.2	54.5	105
12	89.3	126	168	152	135	93.8	26.6	31.7	21.3	32.5	60.6	88.3
13	84.2	139	205	168	133	156	26.9	81.0	30.8	42.2	67.5	103
14	88.5	183	225	171	143	112	27.5	34.8	29.0	54.3	67.0	99.0
15	122	133	231	172	124	78.3	26.3	26.1	38.5	244	65.8	87.8
16	120	110	202	206	171	64.4	32.1	25.0	26.6	99.3	52.5	91.9
17	96.1	123	219	218	141	61.0	44.4	34.2	40.4	43.5	51.1	87.4
18	88.9	143	185	155	137	63.9	35.9	124	78.0	54.9	46.9	88.7
19	180	176	274	148	122	58.1	29.5	47.8	82.5	50.5	42.9	80.9
20	129	157	272	152	117	55.8	26.1	32.8	47.5	52.2	62.5	76.5
21	118	150	303	145	144	71.4	29.8	29.4	45.1	60.6	71.1	81.9
22	114	154	246	184	126	198	32.1	23.8	32.8	40.3	62.4	96.5
23	101	162	255	147	108	123	31.3	22.1	38.5	84.3	61.3	78.4
24	137	211	242	162	114	70.7	24.2	25.3	34.6	55.8	50.1	81.1
25	125	183	212	164	105	62.1	23.5	27.0	61.4	59.0	61.7	89.4
26	131	202	197	150	87.8	48.7	23.9	25.4	55.6	63.5	69.1	102
27	132	151	189	178	100	67.8	32.4	26.3	34.0	60.4	58.7	94.0
28	140	143	216	188	108	63.3	37.8	22.7	29.7	78.5	114	77.1
29	127	128	238	144	102	57.2	32.0	22.5	29.6	57.6	119	82.2
30	129		214	142	112	46.7	31.5	19.7	46.6	44.2	84.4	122
31	112		189		118		49.7	30.5		41.2		108

1 -- Available period of record may be less than value shown for certain days of the year.



Appendix 6. Mean of daily mean streamflow statistics for the Cedar Creek USGS gaging station near Middletown, Virginia. Provided by USGS <http://va.water.usgs.gov/> 2004.

Day of month	Mean of daily mean values for this day for 3 years of record <sup>1</sup> , in ft <sup>3</sup> /s											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	566	108	134	334	154	141	72.7	60.0	36.3	26.0	82.5	56.7
2	955	89.3	166	307	203	119	67.3	55.7	40.3	22.5	68.5	51.0
3	279	77.0	249	250	175	107	81.7	61.3	232	20.5	60.5	47.3
4	210	69.7	189	216	143	239	75.7	82.7	200	19.0	54.5	40.0
5	149	72.3	289	189	135	225	60.7	80.0	63.7	19.0	50.5	42.0
6	125	68.0	710	170	135	209	55.7	66.0	42.0	18.0	95.5	46.7
7	108	64.0	475	273	118	227	151	54.7	35.7	17.5	89.5	36.0
8	103	58.7	333	307	129	227	71.7	48.0	33.3	16.5	72.0	43.3
9	114	55.7	470	415	158	189	102	42.3	32.7	16.0	63.5	42.3
10	103	56.3	384	432	422	145	113	38.7	33.3	18.0	58.0	38.3
11	96.0	54.7	242	717	412	121	142	66.3	33.0	24.0	96.0	91.3
12	87.3	52.0	202	610	240	128	81.3	64.7	32.0	43.5	193	179
13	80.7	48.7	199	390	187	772	70.3	68.0	37.0	36.5	279	237
14	77.0	49.7	254	294	175	673	76.7	58.7	44.0	32.5	151	415
15	72.7	52.0	192	247	139	337	73.3	47.7	43.3	31.5	89.0	283
16	64.0	55.3	176	245	366	235	57.0	41.3	41.3	144	78.0	196
17	62.3	65.3	162	208	282	215	49.3	45.0	39.3	179	189	177
18	57.0	69.7	147	180	383	249	51.3	45.7	47.7	84.5	208	157
19	59.0	74.3	134	207	365	201	67.0	41.3	1055	58.0	127	127
20	119	70.3	807	191	270	298	56.0	65.7	200	49.0	104	132
21	109	85.3	1652	186	208	297	47.3	48.0	110	42.5	94.7	137
22	86.3	501	1040	467	198	243	44.0	37.7	90.7	39.0	129	121
23	80.0	680	491	308	266	274	42.0	36.3	185	36.5	101	108
24	74.7	385	339	228	197	173	46.3	41.7	104	34.5	87.3	99.3
25	73.0	272	263	194	176	133	44.7	38.3	80.7	33.0	80.3	97.3
26	67.7	209	226	177	160	112	58.0	33.7	77.7	39.0	93.0	92.7
27	69.7	171	234	154	731	99.3	75.3	36.3	116	43.5	80.0	82.0
28	63.0	149	192	264	400	88.7	60.7	36.7	88.7	37.0	69.0	75.7
29	61.0		178	288	252	79.3	83.0	36.7	67.3	42.0	61.3	74.0
30	135		681	186	186	74.0	101	39.3	56.0	160	59.3	74.0
31	150		367		149		73.0	36.7		110		72.7

1 -- Available period of record may be less than value shown for certain days of the year.



Appendix 7. Mean of daily mean streamflow statistics for the North Fork of the Shenandoah River USGS gaging station near Strasburg, Virginia. Provided by USGS <http://va.water.usgs.gov/> 2004.

Day of month	Mean of daily mean values for this day for 79 years of record <sup>1</sup> , in ft <sup>3</sup> /s											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	709	689	932	978	957	642	353	293	256	363	289	531
2	686	757	1012	1063	851	590	313	320	258	321	282	608
3	638	829	966	983	827	776	294	292	218	407	339	450
4	625	880	997	920	762	669	298	360	225	351	413	493
5	575	878	1145	1024	823	562	318	333	243	287	723	581
6	618	781	1171	1134	791	547	328	337	443	493	523	495
7	579	739	1152	932	923	502	298	407	1132	498	380	448
8	585	777	1146	936	905	456	288	311	419	309	475	541
9	673	689	1000	925	952	462	306	301	324	343	472	532
10	665	684	970	1051	786	462	333	305	266	455	416	489
11	610	690	887	1034	768	474	324	299	256	311	359	530
12	571	721	924	983	809	443	299	337	255	297	328	529
13	580	753	1033	1028	858	450	347	500	284	324	360	571
14	546	895	1144	984	820	534	290	432	303	318	388	545
15	550	951	1237	965	757	485	312	333	252	504	391	499
16	644	809	1143	1009	740	448	289	314	268	1052	355	505
17	619	746	1050	1339	831	417	259	382	290	387	439	505
18	539	850	1754	1110	733	418	295	729	408	386	443	517
19	704	877	1231	870	720	473	244	628	542	394	455	505
20	1000	949	1519	889	706	437	241	351	439	387	465	479
21	713	829	1429	923	730	431	262	296	296	409	493	495
22	754	892	1412	1004	816	572	304	269	292	415	519	550
23	714	970	1261	975	830	636	289	286	298	444	383	545
24	709	1142	1305	850	678	522	277	329	321	399	370	484
25	859	1091	1201	839	645	394	296	358	333	385	350	465
26	881	1148	1095	933	609	401	270	426	334	347	375	491
27	902	1126	1061	963	542	328	281	355	299	324	434	704
28	833	1000	1055	998	584	336	274	319	286	356	434	593
29	790	924	1256	960	676	429	297	282	276	396	458	547
30	703		1188	885	609	428	358	274	262	327	472	614
31	737		1112		657		335	255		310		708

1 -- Available period of record may be less than value shown for certain days of the year.



Appendix 8. Forest trees most common in the Cedar Creek and Belle Grove National Historical Park (CEBE) area. Provided by Gerald Crowell, Virginia Department of Forestry.

<b>Common Name</b>	<b>Scientific Name</b>
Ailanthus*	<i>Ailanthus altissima</i> *
Aspen, bigtooth	<i>Populus grandidentata</i>
Beech	<i>Fagus grandifolia</i>
Birch, black	<i>Betula lenta</i>
Black cherry	<i>Prunus serotina</i>
Boxelder	<i>Acer negundo</i>
Cedar, eastern red	<i>Juniperus virginiana</i>
Chestnut, American	<i>Castanea dentata</i>
Dogwood, flowering	<i>Cornus florida</i>
Elm, American	<i>Ulmus americana</i>
Elm, slippery	<i>Ulmus rubra</i>
Gum, black	<i>Nyssa sylvatica</i>
Hackberry	<i>Celtis occidentalis</i>
Hemlock, eastern	<i>Tsuga canadensis</i>
Hickory, bitternut	<i>Carya cordiformis</i>
Hickory, mockernut	<i>Carya tomentosa</i>
Hickory, pignut	<i>Carya glabra</i>
Hickory, shagbark	<i>Carya ovata</i>
Hophornbeam, Eastern	<i>Ostrya virginiana</i>
Hornbeam, American	<i>Carpinus caroliniana</i>
Locust, black	<i>Robinia pseudoacacia</i>
Locust, honey	<i>Gleditsia triacanthos</i>
Maple, red	<i>Acer rubrum</i>
Mulberry, red	<i>Morus rubra</i>
Oak, black	<i>Quercus velutina</i>
Oak, chestnut	<i>Quercus prinus</i>
Oak, northern red	<i>Quercus rubra</i>
Oak, pin	<i>Quercus palustris</i>
Oak, post	<i>Quercus stellata</i>
Oak, scarlet	<i>Quercus coccinea</i>
Oak, white	<i>Quercus alba</i>
Osage-orange	<i>Maclura pomifera</i>
Paulownia*	<i>Paulownia tomentosa</i> *
Pawpaw	<i>Asimina triloba</i>
Persimmon	<i>Diospyros virginiana</i>
Pine, eastern white	<i>Pinus strobus</i>
Pine, pitch	<i>Pinus rigida</i>
Pine, shortleaf	<i>Pinus echinata</i>
Pine, Table-mountain	<i>Pinus pungens</i>
Redbud, eastern	<i>Cercis canadensis</i>

Appendix 8. Forest trees most common in the Cedar Creek and Belle Grove National Historical Park (CEBE) area. Provided by Gerald Crowell, Virginia Department of Forestry (continued).

<b>Common Name</b>	<b>Scientific Name</b>
Sassafras	Sassafras albidium
Allegheny Serviceberry	Amelanchier laevis
Sycamore	Platanus occidentalis
Walnut, black	Juglans nigra
Willow, black	Salix nigra
Yellow (tulip) poplar	Liriodendron tulipifera

\*Invasive

Appendix 9. Invasive and alien plant species of Virginia. Provided by the Department of Conservation and Recreation.

September 2003		Key								
		M = Mountains			F = Full sun			H = Hydric		
		P = Piedmont			P = Part Sun			M = Mesic		
		C = Coastal			S = Shade			X = Xeric		
SCIENTIFIC NAME	COMMON NAME	REGION			LIGHT			MOISTURE		
		M	P	C	F	P	S	H	M	X
<b>Highly Invasive Species</b>										
<i>Ailanthus altissima</i>	Tree-of-heaven	•	•	•	•	•			•	
<i>Alliaria petiolata</i>	Garlic mustard	•	•		•	•	•		•	
<i>Alternanthera philoxeroides</i>	Alligator weed			•	•	•		•		
<i>Ampelopsis brevipedunculata</i>	Porcelain-berry		•		•	•	•		•	
<i>Carex kobomugi</i>	Asiatic sand sedge			•	•	•				•
<i>Celastrus orbiculata</i>	Oriental bittersweet	•	•	•		•	•		•	
<i>Centaurea dubia</i>	Short-fringed knapweed	•			•	•			•	•
<i>Centaurea biebersteinii</i>	Spotted knapweed	•	•	•	•	•				•
<i>Cirsium arvense</i>	Canada thistle	•	•	•	•				•	
<i>Dioscorea oppositifolia</i>	Chinese yam	•	•	•		•	•		•	
<i>Elaeagnus umbellata</i>	Autumn olive	•	•	•	•	•			•	
<i>Euonymus alata</i>	Winged burning bush		•			•	•		•	
<i>Hydrilla verticillata</i>	Hydrilla			•	•	•		•		
<i>Imperata cylindrica</i>	Cogon grass			•		•	•		•	
<i>Lespedeza cuneata</i>	Chinese lespedeza	•	•		•				•	
<i>Ligustrum sinense</i>	Chinese privet	•	•	•		•	•		•	
<i>Lonicera japonica</i>	Japanese honeysuckle	•	•	•	•	•	•		•	
<i>Lonicera morrowii</i>	Morrow's honeysuckle	•	•		•	•	•		•	
<i>Lonicera standishii</i>	Standish's honeysuckle	•	•			•	•		•	
<i>Lythrum salicaria</i>	Purple loosestrife	•	•	•	•			•	•	
<i>Microstegium vimineum</i>	Japanese stilt grass	•	•	•	•	•	•	•	•	

Appendix 9. Invasive and alien plant species of Virginia. Provided by the Department of Conservation and Recreation (continued).

September 2003		Key								
		M = Mountains	F = Full sun	H = Hydric						
		P = Piedmont	P = Part Sun	M = Mesic						
		C = Coastal	S = Shade	X = Xeric						
SCIENTIFIC NAME	COMMON NAME	REGION			LIGHT			MOISTURE		
		M	P	C	F	P	S	H	M	X
<b>Highly Invasive Species - continued</b>										
<i>Murdannia keisak</i>	Aneilema		•	•	•	•			•	
<i>Myriophyllum aquaticum</i>	Parrot feather	•	•	•	•				•	
<i>Myriophyllum spicatum</i>	European water-milfoil	•	•	•	•				•	
<i>Phragmites australis</i>	Common reed		•	•	•	•			•	•
<i>Polygonum cuspidatum</i>	Japanese knotweed	•	•	•	•	•				•
<i>Polygonum perfoliatum</i>	Mile-a-minute		•		•	•	•			•
<i>Pueraria montana</i>	Kudzu vine	•	•	•	•	•	•			•
<i>Ranunculus ficaria</i>	Lesser celandine			•		•	•			•
<i>Rosa multiflora</i>	Multiflora rose	•	•	•	•	•				•
<i>Rubus phoenicolasius</i>	Wineberry	•	•	•		•	•			•
<i>Sorghum halepense</i>	Johnson-grass	•	•	•	•	•				•
<b>Moderately Invasive Species</b>										
<i>Acer platanoides</i>	Norway maple	•	•	•	•	•				•
<i>Agropyron repens</i>	Quack grass	•	•	•	•	•				•
<i>Agrostis tenuis</i>	Rhode Island bent-grass	•	•		•	•				•
<i>Akebia quinata</i>	Five-leaf akebia		•	•	•	•	•			•
<i>Albizia julibrissin</i>	Mimosa	•	•	•	•	•				•
<i>Allium vineale</i>	Wild onion	•	•	•	•	•				•
<i>Artemisia vulgaris</i>	Mugwort	•	•	•	•	•				•
<i>Arthraxon hispidus</i>	Jointed grass	•	•	•	•	•	•	•	•	
<i>Arundo donax</i>	Giant reed		•	•	•	•			•	•
<i>Berberis thunbergii</i>	Japanese barberry	•	•	•	•	•	•			•
<i>Carduus nutans</i>	Musk thistle	•	•	•	•					•
<i>Cassia obtusifolia</i>	Sickle pod		•	•	•	•				•
<i>Centaurea jacea</i>	Brown knapweed	•	•		•	•				•
<i>Cirsium vulgare</i>	Bull-thistle	•	•	•	•					•
<i>Convolvulus arvensis</i>	Field-bindweed	•	•	•	•	•				•
<i>Dipsacus laciniatus</i>	Cut-leaf teasel	•			•					•
<i>Dipsacus sylvestris</i>	Common teasel	•	•	•	•				•	•
<i>Egeria densa</i>	Brazilian water-weed	•	•	•	•	•			•	
<i>Euonymus fortunei</i>	Wintercreeper			•		•	•	•	•	•

Appendix 9. Invasive and alien plant species of Virginia. Provided by the Department of Conservation and Recreation (continued).

September 2003		Key								
		M = Mountains	F = Full sun	H = Hydric						
		P = Piedmont	P = Part Sun	M = Mesic						
		C = Coastal	S = Shade	X = Xeric						
SCIENTIFIC NAME	COMMON NAME	REGION			LIGHT			MOISTURE		
		M	P	C	F	P	S	H	M	X
<b>Moderately Invasive Species - continued</b>										
<i>Festuca elatior</i> (F. pratensis)	Tall fescue	•	•	•	•	•				•
<i>Foeniculum vulgare</i>	Fennel		•	•	•				•	•
<i>Glechoma hederacea</i>	Gill-over-the-ground	•	•	•		•	•			•
<i>Hedera helix</i>	English ivy		•	•	•	•	•			•
<i>Holcus lanatus</i>	Velvet-grass	•	•	•	•	•			•	•
<i>Humulus japonicus</i>	Japanese hops	•	•	•	•	•	•		•	•
<i>Ipomoea hederacea</i>	Ivy-leaved morning-glory	•	•	•	•	•			•	•
<i>Ipomoea purpurea</i>	Common morning-glory	•	•	•	•					•
<i>Iris pseudacorus</i>	Yellow flag	•	•	•	•	•			•	
<i>Ligustrum obtusifolium</i>	Blunt-leaved privet		•	•				•		•
<i>Lonicera maackii</i>	Amur honeysuckle	•	•			•				•
<i>Lonicera tatarica</i>	Tartarian honeysuckle	•	•		•	•				•
<i>Lysimachia nummularia</i>	Moneywort	•	•	•	•	•	•	•	•	•
<i>Melia azedarach</i>	China-berry		•	•	•	•				•
<i>Paulownia tomentosa</i>	Princess tree	•	•	•	•	•				•
<i>Phleum pratense</i>	Timothy	•	•	•	•	•				•
<i>Phyllostachys aurea</i>	Golden bamboo		•	•	•	•				•
<i>Poa compressa</i>	Canada bluegrass	•	•	•	•	•	•			•
<i>Poa trivialis</i>	Rough bluegrass	•	•	•	•	•	•	•	•	
<i>Polygonum cespitosum</i>	Bristled knotweed	•	•	•	•	•	•	•	•	
<i>Populus alba</i>	White poplar	•	•	•	•	•				•
<i>Rumex acetosella</i>	Red sorrel	•	•	•	•	•				•
<i>Rumex crispus</i>	Curled dock	•	•		•					•
<i>Setaria faberi</i>	Giant foxtail		•	•	•	•				•
<i>Spiraea japonica</i>	Japanese spiraea	•	•			•	•	•	•	
<i>Stellaria media</i>	Common chickweed	•	•	•	•	•	•			•
<i>Veronica hederifolia</i>	Ivy-leaved speedwell	•	•	•	•	•	•			•
<i>Wisteria sinensis</i>	Chinese wisteria		•	•		•	•			•
<i>Xanthium strumarium</i>	Common cocklebur	•	•	•	•	•				•

Appendix 9. Invasive and alien plant species of Virginia. Provided by the Department of Conservation and Recreation (continued).

September 2003		Key								
		M = Mountains	F = Full sun	H = Hydric						
		P = Piedmont	P = Part Sun	M = Mesic						
		C = Coastal	S = Shade	X = Xeric						
SCIENTIFIC NAME	COMMON NAME	REGION			LIGHT			MOISTURE		
		M	P	C	F	P	S	H	M	X
<b>Occasionally Invasive Species</b>										
<i>Agrostis gigantea</i>	Redtop	•	•	•	•	•			•	
<i>Ajuga reptans</i>	Bugleweed	•	•	•	•	•			•	•
<i>Arthenatherum elatius</i>	Oatgrass	•	•	•	•	•			•	
<i>Commelina communis</i>	Common dayflower	•	•	•	•	•			•	
<i>Conium maculatum</i>	Poison hemlock	•	•	•	•	•			•	
<i>Coronilla varia</i>	Crown-vetch	•	•	•	•				•	•
<i>Dactylis glomerata</i>	Orchard grass	•	•	•	•	•			•	
<i>Elaeagnus angustifolia</i>	Russian olive	•	•	•	•	•			•	
<i>Elaeagnus pungens</i>	Thorny elaeagnus		•	•		•			•	
<i>Eragrostis curvula</i>	Weeping lovegrass	•	•	•	•				•	•
<i>Euphorbia esula</i>	Leafy spurge	•	•			•	•		•	
<i>Ipomoea coccinea</i>	Red morning-glory	•	•	•	•				•	
<i>Lapsana communis</i>	Nipplewort	•			•	•			•	
<i>Lespedeza bicolor</i>	Shrubby bushclover	•	•	•	•	•			•	
<i>Lonicera fragrantissima</i>	Sweet breath of spring		•		•	•			•	
<i>Lonicera x bella</i>	Bell's honeysuckle	•	•	•	•	•			•	
<i>Lotus corniculatus</i>	Birdsfoot trefoil	•	•	•	•	•			•	•
<i>Melilotus alba</i>	White sweet clover	•	•	•	•	•			•	
<i>Melilotus officinalis</i>	Yellow sweet clover	•	•	•	•	•			•	
<i>Miscanthus sinensis</i>	Silver grass	•	•	•	•	•			•	
<i>Morus alba</i>	White mulberry	•	•	•	•	•			•	
<i>Pastinaca sativa</i>	Wild parsnip	•	•	•	•	•			•	
<i>Perilla frutescens</i>	Beefsteak plant	•	•	•		•	•		•	
<i>Trapa natans</i>	Water chestnut			•	•			•	•	
<i>Ulmus pumila</i>	Siberian elm		•		•	•			•	
<i>Viburnum dilatatum</i>	Linden viburnum		•		•	•			•	
<i>Vinca minor &amp; V. major</i>	Periwinkle	•	•	•	•	•	•		•	
<i>Wisteria floribunda</i>	Japanese wisteria			•		•	•		•	

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix.

Native Ferns, Grasses and Vines																
Scientific Name	Common Name	Uses				Region			Light			Moisture				
		W	H	C	D	M	P	C	S	P	F	L	M	H		
<b>Ferns and Fern Allies</b>																
<i>Adiantum pedatum</i>	maidenhair fern		x	x			x	x	x	x				x		
<i>Asplenium platyneuron</i>	ebony spleenwort		x				x	x	x	x	x			x		
<i>Athyrium asplenioides</i> ( <i>A. filix-femina</i> )	Southern ladyfern		x	x			x	x	x	x				x	x	
<i>Botrychium virginianum</i>	Rattlesnake fern		x				x	x	x	x	x			x	x	
<i>Dennstaedtia punctilobula</i> <sup>+</sup>	hay-scented fern			x			x	x	x		x	x		x	x	
<i>Dryopteris intermedia</i>	evergreen wood-fern		x	x			x	x	x	x	x			x	x	x
<i>Dryopteris marginalis</i>	marginal shield-fern		x	x			x	x		x	x			x		
<i>Onoclea sensibilis</i> <sup>+</sup>	sensitive fern		x	x			x	x	x		x	x		x	x	
<i>Osmunda cinnamomea</i>	cinnamon fern		x	x			x	x	x	x	x			x	x	
<i>Osmunda regalis</i>	royal fern		x	x			x	x	x		x			x	x	
<i>Polystichium acrostichoides</i>	Christmas fern		x	x			x	x	x	x				x		
<i>Thelypteris palustris</i>	marsh fern		x				x	x	x		x	x		x	x	

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture		
		W	H	C	D	M	P	C	S	P	F	L	M	H
<i>Woodwardia virginica</i> +	Virginia chain fern		x	x				x	x	x			x	x
<b>Grasses, sedges, and reeds</b>														
<i>Agrostis perennans</i>	autumn bentgrass			x		x	x	x	x	x	x	x	x	x
<i>Andropogon gerardii</i>	big bluestem	x	x	x	x	x	x			x	x		x	x
<i>Andropogon glomeratus</i>	bushy bluestem		x	x		x	x	x		x	x		x	x
<i>Andropogon virginicus</i>	broomsedge		x	x		x	x	x		x	x		x	x
<i>Arundinaria gigantea</i>	wild cane, river cane	x		x		x	x	x	x	x	x		x	x
<i>Calamagrostis canadensis</i>	bluejoint reedgrass	x		x		x				x	x		x	x
<i>Carex crinita</i> var. <i>crinita</i>	long hair sedge	x	x	x		x	x	x		x	x		x	x
<i>Carex lurida</i>	sallow sedge	x		x		x	x	x		x	x		x	x
<i>Carex pensylvanica</i>	Pennsylvania sedge	x		x		x	x	x	x	x	x		x	x
<i>Carex plantaginea</i>	plantain-leaved sedge		x	x		x	x		x				x	
<i>Carex stricta</i>	tussock sedge	x		x		x	x	x		x	x		x	x
<i>Chasmanthium latifolium</i> ( <i>Uniola l.</i> )	river oats, spanglegrass		x	x		x	x	x	x	x	x		x	

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture			
		W	H	C	D	M	P	C	S	P	F	L	M	H	
<i>Danthonia sericea</i>	silky oatgrass	x		x		x	x	x		x	x		x	x	
<i>Danthonia spicata</i>	poverty oatgrass	x		x		x	x	x	x	x	x		x	x	
<i>Dichantherium clandestinum</i>	deer-tongue	x		x	x	x	x	x		x	x		x	x	x
<i>Dichantherium commutatum</i>	variable panicgrass	x	x	x	x	x	x	x	x	x			x	x	
<i>Dulichium arundinaceum</i>	dwarf bamboo	x		x	x	x	x	x		x	x			x	
<i>Elymus hystrix (Hystrix patula)</i>	bottlebrush grass	x	x			x	x	x	x	x	x		x	x	
<i>Elymus virginicus</i>	Virginia wild rye	x		x		x	x	x	x	x			x	x	
<i>Festuca rubra</i>	red fescue	x		x	x	x				x	x		x	x	
<i>Juncus canadensis</i>	Canada rush	x		x			x	x		x	x		x	x	
<i>Juncus effusus</i>	soft rush	x		x		x	x	x		x	x		x	x	
<i>Leersia oryzoides</i>	rice cutgrass	x		x		x	x	x		x	x		x	x	
<i>Panicum amarum</i>	coastal panic grass	x	x	x				x			x		x		
<i>Panicum virgatum</i>	switch grass	x	x	x		x	x	x		x	x		x	x	x
<i>Saccharum giganteum (Erianthus giganteus)</i>	giant plumegrass	x	x	x			x	x		x	x		x	x	

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture		
		W	H	C	D	M	P	C	S	P	F	L	M	H
<i>Schizachyrium scoparium</i>	little bluestem	x	x	x	x	x	x	x	x	x	x	x	x	
<i>Scirpus cyperinus</i>	woolgrass bulrush	x	x	x		x	x	x	x	x	x		x	x
<i>Sorghastrum nutans</i>	Indian grass	x	x	x	x	x	x	x	x	x	x	x	x	
<i>Sparganium americanum</i>	American bur-reed	x		x		x	x	x	x	x	x			x
<i>Tridens flavus</i>	redtop	x	x	x	x	x	x	x	x	x	x	x	x	
<i>Tripsacum dactyloides</i>	gama grass	x	x	x	x	x	x	x	x	x	x		x	x
<i>Typha latifolia</i>	broad-leaved cattail	x		x		x	x	x			x		x	x
<i>Zizania aquatica</i>	wild rice	x	x	x				x			x			x
<b>Vines</b>														
<i>Bignonia capreolata</i>	crossvine	x	x			x	x	x	x	x			x	x
<i>Celastrus scandens</i>	climbing bittersweet	x	x			x	x	x	x	x	x		x	
<i>Clematis virginiana</i>	virgin's bower		x			x	x	x	x	x			x	
<i>Decumaria barbara</i>	climbing hydrangea		x	x				x	x	x			x	x
<i>Gelsemium sempervirens</i>	Carolina jessamine	x	x					x	x	x	x	x	x	x

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture		
		W	H	C	D	M	P	C	S	P	F	L	M	H
<i>Lonicera sempervirens</i>	trumpet honeysuckle		x	x		x	x	x		x			x	
<i>Parthenocissus quinquefolia</i>	Virginia creeper	x	x	x		x	x	x		x	x		x	
<i>Wisteria frutescens</i>	Atlantic wisteria		x					x		x	x		x	x
+ May be aggressive in garden setting.														
* Due to the rarity and sensitivity of habitat in Virginia, these species are recommended for horticultural use only. Planting these species in natural areas could be detrimental to the survival of native populations.														

103

Native Grassland Plants														
Scientific Name	Common Name	Uses				Region			Light			Moisture		
		W	H	C	D	M	P	C	S	P	F	L	M	H
<b>Forbs</b>														
<i>Acorus americanus</i>	sweet flag		x	x		x	x	x		x	x			x
<i>Antennaria neglecta</i>	field pussytoes		x	x		x	x			x	x		x	x
<i>Asclepias incarnata</i>	swamp milkweed	x	x	x		x	x	x		x	x			x
<i>Asclepias syriaca</i> +	common milkweed	x	x	x		x	x	x			x		x	
<i>Asclepias tuberosa</i>	butterfly weed	x	x	x		x	x	x			x		x	
<i>Aster laevis</i>	smooth blue aster	x	x	x		x					x		x	

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture			
		W	H	C	D	M	P	C	S	P	F	L	M	H	
<i>Aster novae-angliae</i>	New England aster		X	X		X				X	X		X	X	
<i>Aster novi-belgii</i>	New York aster	X	X	X				X		X	X			X	
<i>Aster pilosus</i>	white heath aster	X	X	X		X	X	X			X		X		
<i>Aster umbellatus</i>	flat-top white aster		X	X		X	X			X	X			X	X
<i>Baptisia tinctoria</i>	yellow wild-indigo	X	X			X	X	X		X	X		X		
<i>Caltha palustris</i>	marsh marigold		X	X		X		X		X	X				X
<i>Chamaecrista asciculata</i> +	partridge pea			X		X	X	X			X		X	X	
<i>Chrysogonum virginianum</i>	green and gold		X	X		X	X	X	X					X	
<i>Chrysopsis mariana</i>	Maryland golden aster	X	X	X		X	X	X		X	X		X		
<i>Clitoria mariana</i>	Maryland butterfly pea		X	X		X	X	X	X	X			X		
<i>Coreopsis tripteris</i>	tall coreopsis		X	X		X	X	X		X	X			X	
<i>Coreopsis verticillata</i>	threadleaf coreopsis		X	X		X	X	X		X	X		X		
<i>Desmodium paniculatum</i>	narrow-leaf tick trefoil	X		X		X	X	X	X				X		
<i>Eupatorium coelestinum</i>	mistflower	X	X	X		X	X	X	X	X	X			X	
<i>Eupatorium fistulosum</i>	Joe Pye weed	X	X	X		X	X	X		X	X			X	
<i>Eupatorium perfoliatum</i>	common boneset			X		X	X	X		X	X			X	X
<i>Helenium autumnale</i>	sneezeweed	X	X	X		X	X	X		X	X			X	
<i>Helianthus angustifolius</i>	narrow-leaf sunflower	X	X	X			X	X		X	X			X	X
<i>Helianthus divaricatus</i>	woodland sunflower	X	X	X		X	X	X		X			X		
<i>Heliopsis helianthoides</i>	oxeye sunflower	X	X	X		X	X	X		X	X		X	X	

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture		
		W	H	C	D	M	P	C	S	P	F	L	M	H
<i>Iris prismatica</i>	slender blueflag		X				X			X	X		X	X
<i>Iris virginica</i>	Virginia blue flag		X	X			X	X		X	X			X
<i>Kosteletskya virginica</i>	seashore mallow	X		X				X			X			X
<i>Lespedeza capitata</i>	round-head bush clover	X		X		X	X	X			X		X	
<i>Liatris graminifolia</i>	grass-leaf blazing star	X	X	X		X	X	X		X	X		X	X
<i>Liatris spicata</i>	spiked blazing star	X	X	X		X				X	X		X	
<i>Liatris squarrosa</i>	plains blazing star	X	X	X			X			X	X		X	
<i>Lilium canadense</i>	Canada lily		X			X	X			X	X		X	X
<i>Lilium philadelphicum</i>	wood lily		X			X				X	X		X	
<i>Lilium superbum</i>	Turk's cap lily		X			X	X	X		X	X		X	X
<i>Lobelia cardinalis</i>	cardinal flower	X	X	X		X	X	X		X	X			X
<i>Lobelia siphilitica</i>	great blue lobelia	X	X	X		X	X	X	X	X				X
<i>Lupinus perennis</i>	lupine, sundial lupine		X			X	X	X		X	X		X	
<i>Mimulus ringens</i>	monkeyflower		X	X		X	X	X			X			X
<i>Monarda didyma</i>	bee balm	X	X	X		X			X	X			X	
<i>Monarda fistulosa</i>	wild bergamot	X	X	X		X	X	X		X	X		X	X
<i>Oenothera fruticosa</i>	sundrops	X	X	X		X	X	X			X		X	X
<i>Opuntia humifusa</i>	Eastern prickly-pear	X	X	X		X	X	X			X		X	
<i>Penstemon laevigatus</i>	smooth beardtongue		X			X	X	X	X	X	X		X	
<i>Physostegia virginiana</i>	obedient plant		X	X		X	X			X	X		X	

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture			
		W	H	C	D	M	P	C	S	P	F	L	M	H	
<i>Pycnanthemum incanum</i>	hoary mountain mint	x		x		x	x	x		x			x		
<i>Pycnanthemum tenuifolium</i>	narrow-ldd mountain mint	x	x	x		x	x	x			x	x		x	x
<i>Rhexia virginica</i>	Virginia meadow-beauty	x		x		x	x	x				x			x
<i>Rudbeckia fulgida</i>	early coneflower		x	x			x				x	x		x	x
<i>Rudbeckia hirta</i>	black eyed Susan		x	x		x	x	x			x	x		x	x
<i>Rudbeckia laciniata</i>	cut-leaved coneflower	x	x	x		x	x	x			x	x		x	
<i>Rudbeckia triloba</i>	three-lobed coneflower	x	x	x		x	x	x			x	x		x	
<i>Sagittaria latifolia</i>	broadleaf arrowhead	x	x	x		x	x	x				x			x
<i>Salvia lyrata</i> +	lyre-leaf sage			x		x	x	x			x	x		x	
<i>Saururus cernuus</i>	lizard's tail		x	x		x	x	x			x	x			x
<i>Senecio aureus</i> +	golden ragwort	x		x		x	x	x		x	x			x	x
<i>Senna marilandica</i>	Maryland wild senna		x	x		x	x	x			x			x	x
<i>Silphium perfoliatum</i>	cup plant	x		x		x	x			x	x	x		x	
<i>Solidago caesia</i>	bluestem goldenrod	x	x	x		x	x	x		x	x			x	
<i>Solidago rugosa</i> +	rough-stemmed goldenrod	x		x		x	x	x			x	x		x	
<i>Solidago sempervirens</i>	seaside goldenrod	x	x	x				x			x	x		x	
<i>Tradescantia virginiana</i>	Virginia spiderwort		x	x		x	x	x		x	x	x		x	
<i>Viola pedata</i>	bird's foot violet	x	x			x	x	x			x	x		x	

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture		
		W	H	C	D	M	P	C	S	P	F	L	M	H
<i>Yucca filamentosa</i>	common yucca	x	x			x	x	x			x		x	
<i>Zephranthes atamasco</i>	Atamasco lily		x	x				x		x	x		x	x

Native Herbs														
Scientific Name	Common Name	Uses				Region			Light			Moisture		
		W	H	C	D	M	P	C	S	P	F	L	M	H
<i>Aster cordifolius</i>	heart-leaved aster		x	x		x	x	x		x	x		x	
<i>Aster divaricatus</i>	white wood aster	x	x	x		x	x			x	x	x	x	
<i>Aster laevis</i>	smooth blue aster	x	x	x		x				x		x		
<i>Aster novae-angliae</i>	New England aster		x	x		x				x	x	x	x	
<i>Aster novi-belgii</i>	New York aster	x	x	x				x		x	x		x	
<i>Aster pilosus</i>	white heath aster	x	x	x		x	x	x		x		x		
<i>Aster umbellatus</i>	flat-top white aster		x	x		x	x			x	x		x	x
<i>Baptisia australis</i> *	blue wild indigo	x	x			x	x			x	x		x	
<i>Baptisia tinctoria</i>	yellow wild-indigo	x	x			x	x	x		x	x	x		
<i>Bidens cernua</i> +	nodding beggar-ticks	x	x	x		x	x	x		x	x	x	x	x
<i>Boltonia asteroides</i> *	aster-like boltonia		x					x		x			x	

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture		
		W	H	C	D	M	P	C	S	P	F	L	M	H
<i>Caltha palustris</i>	marsh marigold		x	x		x		x		x	x			x
<i>Chamaecrista fasciculata</i> +	partridge pea			x		x	x	x			x		x	x
<i>Chelone glabra</i>	white turtlehead		x	x		x	x	x	x	x				x
<i>Chrysogonum virginianum</i>	green and gold		x	x		x	x	x	x				x	
<i>Chrysopsis mariana</i> ( <i>Heterotheca m.</i> )	Maryland golden aster	x	x	x		x	x	x		x	x		x	
<i>Cimicifuga racemosa</i>	black cohosh		x			x	x	x	x	x			x	
<i>Clitoria mariana</i>	Maryland butterfly pea		x	x		x	x	x	x	x			x	
<i>Convallaria majuscula</i> ( <i>C. montana</i> )	American lily-of-the-valley			x		x			x	x			x	
<i>Coreopsis tripteris</i>	tall coreopsis		x	x		x	x	x		x	x		x	
<i>Coreopsis verticillata</i>	threadleaf coreopsis		x	x		x	x	x		x	x		x	
<i>Delphinium tricorne</i>	dwarf larkspur		x			x	x		x	x			x	
<i>Desmodium paniculatum</i>	narrow-leaf tick trefoil	x		x		x	x	x	x				x	
<i>Dicentra cucullaria</i>	Dutchman's breeches		x			x	x		x				x	
<i>Dicentra eximia</i>	wild bleeding heart		x			x	x			x	x		x	
<i>Dodecatheon meadia</i>	shooting star		x			x				x	x		x	
<i>Equisetum hyemale</i>	horsetail, scouring rush			x		x	x	x	x	x	x		x	x

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture			
		W	H	C	D	M	P	C	S	P	F	L	M	H	
<i>Eupatorium coelestinum</i>	mistflower	x	x	x		x	x	x	x	x	x			x	
<i>Eupatorium fistulosum</i>	Joe Pye weed	x	x	x		x	x	x		x	x			x	
<i>Eupatorium perfoliatum</i>	common boneset			x		x	x	x		x	x			x	x
<i>Geranium maculatum</i>	wild geranium		x			x	x		x	x	x			x	
<i>Helenium autumnale</i>	sneezeweed	x	x	x		x	x	x		x	x			x	
<i>Helianthus angustifolius</i>	narrow-leaf sunflower	x	x	x			x	x		x	x			x	x
<i>Helianthus decapetalus</i>	ten-petaled sunflower	x	x	x		x	x	x		x	x			x	
<i>Helianthus divaricatus</i>	woodland sunflower	x	x	x		x	x	x		x			x		
<i>Heliopsis helianthoides</i>	oxeye sunflower	x	x	x		x	x	x		x	x		x	x	
<i>Hepatica acutiloba</i>	sharp-lobed hepatica		x			x			x				x	x	
<i>Hepatica americana</i>	round-lobed hepatica		x			x	x	x	x				x	x	
<i>Heuchera americana</i>	alumroot		x			x	x	x	x				x		
<i>Hibiscus moscheutos</i>	Eastern rosemallow	x	x	x		x	x	x			x				x
<i>Iris cristata</i>	dwarf crested iris		x			x	x		x	x				x	
<i>Iris prismatica</i>	slender blueflag		x					x		x	x			x	x
<i>Iris virginica</i>	Virginia blue flag		x	x			x	x		x	x				x
<i>Kosteletskya virginica</i>	seashore mallow	x		x				x			x				x

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture		
		W	H	C	D	M	P	C	S	P	F	L	M	H
<i>Lespedeza capitata</i>	round-head bush clover	x		x		x	x	x			x	x		
<i>Liatris graminifolia</i>	grass-leaf blazing star	x	x	x		x	x	x		x	x	x	x	
<i>Liatris spicata</i>	spiked blazing star	x	x	x		x				x	x		x	
<i>Liatris squarrosa</i>	plains blazing star	x	x	x			x			x	x		x	
<i>Lilium canadense</i>	Canada lily		x			x	x			x	x		x	x
<i>Lilium philadelphicum</i>	wood lily		x			x				x	x	x		
<i>Lilium superbum</i>	Turk's cap lily		x			x	x	x		x	x		x	x
<i>Lobelia cardinalis</i>	cardinal flower	x	x	x		x	x	x		x	x			x
<i>Lobelia siphilitica</i>	great blue lobelia	x	x	x		x	x	x	x	x				x
<i>Lupinus perennis</i>	lupine, sundial lupine		x			x	x	x		x	x	x		
<i>Maianthemum racemosum</i> ( <i>Smilacina r.</i> )	false Solomon's seal		x	x		x	x	x	x	x			x	
<i>Mertensia virginica</i>	Virginia bluebells		x	x		x	x		x	x			x	x
<i>Mimulus ringens</i>	monkeyflower		x	x		x	x	x			x			x
<i>Monarda didyma</i>	bee balm	x	x	x		x			x	x			x	
<i>Monarda fistulosa</i>	wild bergamot	x	x	x		x	x	x		x	x	x	x	
<i>Nymphaea odorata</i>	American water lily	x	x	x		x	x	x			x			x
<i>Oenothera fruticosa</i>	sundrops	x	x	x		x	x	x			x		x	x

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture		
		W	H	C	D	M	P	C	S	P	F	L	M	H
<i>Opuntia humifusa</i> ( <i>O. compressa</i> )	Eastern prickly-pear	x	x	x		x	x	x			x	x		
<i>Peltandra virginica</i>	arrow arum	x	x	x			x	x		x	x			x
<i>Penstemon laevigatus</i>	smooth beardtongue		x			x	x	x	x	x	x		x	
<i>Phlox carolina</i>	thick-leaved phlox	x	x	x						x	x	x	x	x
<i>Phlox divaricata</i>	woodland phlox, wild blue phlox		x	x		x	x			x		x	x	
<i>Phlox paniculata</i>	summer phlox, garden phlox		x	x		x	x	x		x	x		x	
<i>Phlox stolonifera</i>	creeping phlox		x	x		x			x	x			x	
<i>Phlox subulata</i>	moss phlox		x	x		x	x			x		x		
<i>Physostegia virginiana</i>	obedient plant		x	x		x	x			x	x		x	
<i>Podophyllum peltatum</i> +	mayapple	x	x	x		x	x	x		x	x		x	
<i>Polemonium reptans</i>	Jacob's ladder		x			x	x	x	x	x			x	
<i>Polygonatum biflorum</i>	Solomon's seal		x			x	x	x	x	x		x	x	
<i>Pontederia cordata</i>	pickerel weed	x	x	x			x	x			x			x
<i>Porteranthus trifoliatu</i> s( <i>Gillenia t.</i> )	bowman's root		x			x	x		x	x			x	
<i>Pycnanthemum incanum</i>	hoary mountain mint	x		x		x	x	x	x			x		

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture			
		W	H	C	D	M	P	C	S	P	F	L	M	H	
<i>Pycnanthemum tenuifolium</i>	narrow-leaved mountain mint	x	x	x		x	x	x		x	x		x	x	
<i>Rhexia virginica</i>	Virginia meadow-beauty	x		x		x	x	x			x				x
<i>Rudbeckia fulgida</i>	early coneflower		x	x			x			x	x		x	x	
<i>Rudbeckia hirta</i>	black eyed Susan		x	x		x	x	x		x	x		x	x	
<i>Rudbeckia laciniata</i>	cut-leaved coneflower	x	x	x		x	x	x		x	x			x	
<i>Rudbeckia triloba</i>	three-lobed coneflower	x	x	x		x	x	x		x	x			x	
<i>Sagittaria latifolia</i>	broadleaf arrowhead	x	x	x		x	x	x			x				x
<i>Salvia lyrata</i> +	lyre-leaf sage			x		x	x	x		x	x		x		
<i>Sanguinaria canadensis</i>	bloodroot		x			x	x	x	x					x	
<i>Saururus cernuus</i>	lizard's tail		x	x		x	x	x		x	x				x
<i>Saxifraga virginiana</i>	early saxifrage		x			x	x	x	x	x	x		x	x	
<i>Sedum ternatum</i>	wild stonecrop		x			x	x	x	x	x				x	
<i>Senecio aureus</i> +	golden ragwort	x		x		x	x	x	x	x				x	x
<i>Senna marilandica (Cassia m.)</i>	Maryland wild senna		x	x		x	x	x		x			x	x	
<i>Silene virginica</i>	fire pink		x			x	x			x	x		x	x	
<i>Silphium perfoliatum</i>	cup plant	x		x		x	x		x	x	x			x	
<i>Solidago caesia</i>	bluestem goldenrod	x	x	x		x	x	x	x	x				x	

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture			
		W	H	C	D	M	P	C	S	P	F	L	M	H	
<i>Solidago odora</i>	sweet goldenrod	x	x	x		x	x	x		x	x		x		
<i>Solidago pinetorum</i> +	pineywoods goldenrod	x		x			x	x		x	x		x		
<i>Solidago puberula</i>	downy goldenrod	x	x	x		x	x	x			x		x		
<i>Solidago rugosa</i> +	rough-stemmed goldenrod	x		x		x	x	x		x	x			x	
<i>Solidago sempervirens</i>	seaside goldenrod	x	x	x				x		x	x			x	
<i>Thalictrum dioicum</i>	early meadowrue		x			x	x			x				x	
<i>Tiarella cordifolia</i> var. <i>collina</i>	clumping foamflower		x			x	x			x				x	
<i>Tiarella cordifolia</i> var. <i>cordifolia</i>	spreading foamflower		x			x	x			x				x	
<i>Tradescantia virginiana</i>	Virginia spiderwort		x	x		x	x	x		x	x	x		x	
<i>Trillium erectum</i>	wakerobin		x			x				x				x	
<i>Trillium grandiflorum</i>	white trillium		x			x	x			x				x	
<i>Uvularia grandiflora</i>	bellwort		x			x				x				x	
<i>Verbena hastata</i>	blue vervain	x		x		x	x			x	x			x	x
<i>Vernonia noveboracensis</i>	New York ironweed	x	x	x		x	x	x		x	x				x
<i>Veronicastrum virginicum</i>	Culver's root		x	x		x				x	x		x	x	x
<i>Viola cucullata</i>	marsh blue violet	x	x	x		x	x	x		x	x				x
<i>Viola pedata</i>	bird's foot violet	x	x			x	x	x		x	x		x		

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture			
		W	H	C	D	M	P	C	S	P	F	L	M	H	
<i>Viola pubescens</i> ( <i>V. pennsylvanica</i> )	yellow violet	x	x	x		x	x		x	x				x	
<i>Yucca filamentosa</i>	common yucca	x	x			x	x	x			x		x		
<i>Zephranthes atamasco</i>	Atamasco lily		x	x				x		x	x			x	x
+ May be aggressive in garden setting.															
* Due to the rarity and sensitivity of habitat in Virginia, these species are recommended for horticultural use only. Planting these species in natural areas could be detrimental to the survival of native populations.															

Native Shrubs															
Scientific Name	Common Name	Uses				Region			Light			Moisture			
		W	H	C	D	M	P	C	S	P	F	L	M	H	
<i>Alnus serrulata</i>	common alder	x	x	x		x	x	x	x	x	x				x
<i>Aronia arbutifolia</i>	red chokeberry		x	x		x	x	x	x	x				x	x
<i>Aronia melanocarpa</i>	black chokeberry		x	x		x	x	x		x	x		x	x	x
<i>Baccharis halimifolia</i>	high tide bush		x	x				x			x		x	x	x
<i>Callicarpa americana</i>	American beautyberry	x	x					x	x	x				x	
<i>Castanea pumila</i>	Allegheny chinkapin	x	x	x		x	x	x	x	x	x		x		

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture			
		W	H	C	D	M	P	C	S	P	F	L	M	H	
<i>Ceanothus americanus</i>	New Jersey tea	x	x	x		x	x	x		x	x		x		
<i>Cephalanthus occidentalis</i>	buttonbush		x	x		x	x	x		x	x				x
<i>Clethra alnifolia</i>	sweet pepper-bush	x	x	x				x		x	x			x	x
<i>Cornus amomum</i>	silky dogwood	x		x		x	x	x		x	x			x	x
<i>Crataegus crus-galli</i>	cockspur hawthorn	x	x	x		x	x	x		x	x		x	x	
<i>Gaultheria procumbens</i>	wintergreen	x	x			x	x	x		x	x		x	x	
<i>Gaylussacia baccata</i>	black huckleberry	x	x	x		x	x	x		x	x		x	x	
<i>Gaylussacia frondosa</i>	dangleberry	x	x	x		x		x		x	x	x	x		
<i>Hamamelis virginiana</i>	witch hazel		x	x		x	x	x		x	x		x	x	
<i>Hydrangea arborescens</i>	wild hydrangea		x			x	x	x		x	x			x	
<i>Ilex decidua</i>	deciduous holly, possumhaw	x	x	x				x	x	x	x			x	
<i>Ilex glabra</i>	inkberry	x	x	x				x		x	x		x	x	
<i>Ilex verticillata</i>	winterberry	x	x	x		x	x	x		x	x			x	x
<i>Ilex vomitoria</i>	Yaupon holly	x	x	x				x		x	x	x	x		
<i>Itea virginica</i>	Virginia willow	x	x	x				x		x	x				x
<i>Iva frutescens</i>	marsh elder		x	x				x				x	x	x	
<i>Kalmia latifolia</i>	mountain laurel	x	x	x		x	x	x		x	x			x	

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture		
		W	H	C	D	M	P	C	S	P	F	L	M	H
<i>Leucothoe axillaris</i>	coastal dog-hobble		x					x	x				x	
<i>Leucothoe racemosa</i>	fetterbush, sweetbells		x	x		x	x	x		x	x		x	
<i>Lindera benzoin</i>	spicebush	x	x	x		x	x	x	x				x	
<i>Lyonia lucida</i>	shining fetterbush		x	x				x	x	x			x	
<i>Myrica cerifera</i>	Southern wax myrtle	x	x	x				x	x	x			x	x
<i>Myrica heterophylla</i>	Southern bayberry	x	x	x				x	x	x			x	x
<i>Myrica pensylvanica</i>	Northern bayberry	x	x	x				x			x		x	x
<i>Pieris floribunda</i>	evergreen mountain fetterbush		x	x		x			x				x	
<i>Rhododendron atlanticum</i>	dwarf azalea	x	x					x		x			x	
<i>Rhododendron calendulaceum</i>	flame azalea		x			x				x			x	
<i>Rhododendron catawbiense</i>	Catawba rhododendron		x	x		x	x			x	x		x	
<i>Rhododendron cumberlandense</i>	Cumberland flame azalea		x			x				x			x	
<i>Rhododendron maximum</i>	great rhododendron, rose bay	x	x	x		x	x		x	x			x	x
<i>Rhododendron periclymenoides</i>	pinxter flower		x	x		x	x	x	x	x			x	x
<i>Rhododendron prinophyllum</i>	rose azalea	x	x			x			x	x	x		x	x

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture		
		W	H	C	D	M	P	C	S	P	F	L	M	H
<i>Rhododendron viscosum</i> ( <i>R. serrulata</i> )	swamp azalea		x	x		x	x	x		x	x		x	x
<i>Rhus aromatica</i>	fragrant sumac		x			x	x			x	x		x	
<i>Rhus copallinum</i>	winged sumac, flameleaf sumac	x	x	x		x	x	x	x	x			x	
<i>Rosa carolina</i>	pasture rose	x		x		x	x	x		x	x		x	x
<i>Rubus allegheniensis</i>	Alleghany blackberry	x	x	x		x	x				x		x	
<i>Rubus odoratus</i>	purple flowering raspberry			x		x				x				x
<i>Salix humilis</i>	prairie willow		x	x		x	x	x			x		x	
<i>Salix sericea</i>	silky willow		x	x		x	x	x		x	x		x	
<i>Sambucus canadensis</i>	common elderberry	x	x	x		x	x	x			x		x	x
<i>Spiraea alba</i>	narrow-leaved meadowsweet	x	x	x		x					x		x	
<i>Spiraea latifolia</i>	broad-leaved meadowsweet	x	x	x		x					x		x	
<i>Stewartia malacodendron</i> *	silky camelia		x					x	x	x			x	
<i>Vaccinium angustifolium</i>	Northern lowbush blueberry	x	x	x		x					x		x	

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture		
		W	H	C	D	M	P	C	S	P	F	L	M	H
<i>Vaccinium corymbosum</i> ( <i>V. virgata, formosa</i> )	highbush blueberry	x	x	x		x	x	x	x	x	x	x	x	x
<i>Viburnum dentatum</i>	Southern arrow-wood viburnum	x	x	x		x	x	x		x	x		x	x
<i>Viburnum nudum</i>	possum-haw viburnum		x	x		x	x	x		x	x			x
<i>Viburnum prunifolium</i>	black-haw viburnum	x	x	x		x	x	x		x	x		x	
+ May be aggressive in garden setting.														
* Due to the rarity and sensitivity of habitat in Virginia, these species are recommended for horticultural use only. Planting these species in natural areas could be detrimental to the survival of native populations.														

Native Trees														
Scientific Name	Common Name	Uses				Region			Light			Moisture		
		W	H	C	D	M	P	C	S	P	F	L	M	H
<b>Small trees</b>														
<i>Amelanchier arborea</i>	downy serviceberry	x	x	x		x	x	x		x	x		x	
<i>Amelanchier canadensis</i>	Canada serviceberry	x	x	x		x	x	x			x		x	x
<i>Amelanchier laevis</i>	smooth serviceberry	x	x	x		x				x	x		x	x
<i>Asimina triloba</i>	paw paw	x	x	x		x	x	x		x	x		x	
<i>Cercis canadensis</i>	redbud (Eastern)		x	x		x	x	x		x	x		x	

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture		
		W	H	C	D	M	P	C	S	P	F	L	M	H
<i>Chionanthus virginicus</i>	fringetree		x			x	x	x		x	x			x
<i>Cornus alternifolia</i>	alternate-leaf dogwood	x	x	x		x	x		x	x			x	x
<i>Cornus amomum</i>	silky dogwood	x		x		x	x	x	x	x				x
<i>Cornus florida</i>	flowering dogwood	x	x	x		x	x	x	x	x			x	x
<i>Crateagus crus-galli</i>	cockspur hawthorne	x	x	x		x	x	x		x	x		x	x
<i>Crateagus flava</i>	October haw	x	x			x	x	x		x	x			x
<i>Euonymous atropurpureus</i>	wahoo		x	x		x	x	x	x	x				x
<i>Halesia tetraptera (H. carolina)</i>	common silverbell		x			x				x	x			x
<i>Ilex opaca</i>	American holly	x	x	x		x	x	x	x					x
<i>Magnolia virginiana</i>	sweetbay magnolia		x	x			x	x	x	x				x
<i>Morus rubra</i>	red mulberry	x	x	x		x	x	x	x	x				x
<i>Ostrya virginiana</i>	Eastern hop-hornbeam		x			x	x	x	x	x				x
<i>Persea borbonia</i>	redbay, sweet bay		x	x				x	x	x				x
<i>Prunus americana</i>	American wild plum		x	x		x	x	x		x				x
<i>Prunus virginiana</i>	choke cherry	x	x	x		x				x				x
<i>Rhus glabra</i>	smooth sumac	x	x	x		x	x	x			x		x	x
<i>Rhus hirta (R. typhina)</i>	staghorn sumac	x	x	x		x	x	x			x		x	

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture		
		W	H	C	D	M	P	C	S	P	F	L	M	H
<i>Salix nigra</i>	black willow			x		x	x	x		x	x		x	x
<b>Medium to Large Trees</b>														
<i>Acer rubrum</i>	red maple		x	x		x	x	x			x		x	x
<i>Acer saccharum</i>	sugar maple		x	x		x	x			x	x		x	
<i>Aesculus flava (A. octandra)</i>	yellow buckeye		x			x	x			x			x	
<i>Betula alleghaniensis</i>	yellow birch	x	x	x		x				x	x		x	
<i>Betula lenta</i>	sweet birch, black birch	x	x	x		x	x			x	x		x	
<i>Betula nigra</i>	river birch	x	x	x		x	x	x			x		x	x
<i>Carya alba (C. tomentosa)</i>	mockernut hickory			x		x	x	x	x	x			x	x
<i>Carya glabra</i>	pignut hickory	x	x	x		x	x	x	x	x			x	
<i>Carya ovata</i>	shagbark hickory			x		x	x	x		x	x		x	
<i>Chamaecyparis thyoides*</i>	Atlantic white cedar	x	x					x	x	x			x	x
<i>Diospyros virginiana</i>	persimmon	x	x	x		x	x	x	x	x	x		x	x
<i>Fagus grandifolia</i>	American beech	x	x			x	x	x	x	x	x		x	
<i>Fraxinus americana</i>	white ash	x	x			x	x	x		x	x		x	
<i>Fraxinus pensylvanica</i>	green ash	x	x	x		x	x	x		x	x		x	
<i>Juglans nigra</i>	black walnut	x		x		x	x	x		x	x		x	

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture			
		W	H	C	D	M	P	C	S	P	F	L	M	H	
<i>Juniperus virginiana</i>	red cedar (Eastern)	x	x			x	x	x		x	x		x	x	
<i>Liquidambar styraciflua</i>	sweetgum		x	x		x	x	x		x	x	x		x	x
<i>Liriodendron tulipifera</i>	tulip-tree, tulip poplar	x	x	x		x	x	x			x			x	
<i>Magnolia acuminata</i>	cucumber magnolia		x			x					x			x	
<i>Nyssa aquatica</i>	water tupelo	x	x	x				x		x	x				x
<i>Nyssa sylvatica</i>	black gum	x	x	x		x	x	x		x	x			x	
<i>Oxydendrum arboreum</i>	sourwood		x			x	x	x		x				x	
<i>Pinus echinata</i>	shortleaf pine		x			x	x	x		x	x		x		
<i>Pinus serotina</i>	pond pine	x	x	x				x			x			x	x
<i>Pinus strobus</i>	white pine		x	x		x	x	x			x		x	x	
<i>Pinus taeda</i>	loblolly pine	x	x	x			x	x			x		x		x
<i>Pinus virginiana</i>	Virginia pine			x		x	x	x			x		x		
<i>Platanus occidentalis</i>	sycamore			x		x	x	x		x	x			x	x
<i>Prunus pennsylvanica</i>	pin cherry, fire cherry	x		x		x				x	x		x		
<i>Prunus serotina</i>	wild black cherry	x		x		x	x	x		x	x		x		
<i>Quercus alba</i>	white oak	x	x	x		x	x	x		x	x		x		
<i>Quercus bicolor</i>	swamp white oak	x		x		x	x	x		x	x				x

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture			
		W	H	C	D	M	P	C	S	P	F	L	M	H	
<i>Quercus coccinea</i>	scarlet oak	x	x			x	x	x		x	x		x		
<i>Quercus falcata</i>	Southern red oak	x	x	x		x	x	x		x	x		x	x	
<i>Quercus ilicifolia</i>	bear oak	x		x		x	x				x		x		
<i>Quercus laurifolia</i>	swamp laurel oak	x		x				x		x	x			x	x
<i>Quercus michauxii</i>	swamp chestnut oak	x	x				x	x		x	x				x
<i>Quercus montana (Q. prinus)</i>	chestnut oak	x		x		x	x	x		x	x		x		
<i>Quercus nigra</i>	water oak	x		x				x		x	x		x	x	
<i>Quercus palustris</i>	pin oak	x	x	x		x	x	x		x	x			x	x
<i>Quercus phellos</i>	willow oak	x	x	x			x	x		x	x			x	x
<i>Quercus rubra</i>	Northern red oak	x	x	x		x	x	x		x	x		x	x	
<i>Quercus stellata</i>	post oak	x	x	x		x	x	x			x		x		
<i>Quercus velutina</i>	black oak	x		x		x	x	x		x	x		x		
<i>Robinia pseudoacacia</i>	black locust			x		x	x	x		x	x			x	
<i>Sassafras albidum</i>	sassafras			x		x	x	x		x	x		x	x	
<i>Taxodium distichum</i>	bald cypress		x	x				x			x				x
<i>Thuja occidentalis</i>	white cedar	x	x	x		x					x			x	x
<i>Tilia americana</i>	American basswood			x		x	x	x			x			x	

Appendix 10. Native plant species of Virginia. Provided by the Virginia Department of Conservation and Recreation, Natural Heritage. Letter codes are defined at the end of the Appendix (continued).

Scientific Name	Common Name	Uses				Region			Light			Moisture			
		W	H	C	D	M	P	C	S	P	F	L	M	H	
<i>Tsuga canadensis</i>	Eastern hemlock	x	x	x			x	x			x	x		x	
<i>Tsuga caroliniana</i>	Carolina hemlock	x	x	x			x				x	x		x	x
+ May be aggressive in garden setting.															
* Due to the rarity and sensitivity of habitat in Virginia, these species are recommended for horticultural use only. Planting these species in natural areas could be detrimental to the survival of native populations.															

Recommended Uses	Native Regions	Minimum Light Requirements	Minimum Moisture Requirements	Riparian Vegetation Zones
W = Wildlife	M = Mountains	S = Full Shade	L = Low Moisture	1 = Emergent
H = Horticulture and Landscaping	P = Piedmont	P = Partial Sun	M = Moderate Moisture	2 = Riverside Thicket
C = Conservation and Restoration	C = Coastal Plain	F = Full Sun	H = High Moisture	3 = Saturated Thicket
D = Domestic Livestock Forage				4 = Well-drained Forest