

# APPENDIX J - FEDERAL OIL AND GAS LEASING AVAILABILITY ANALYSIS– AQUATIC RESOURCES

Table J-1. Marcellus Shale by Aquatic Species and Watershed

Scientific Name	Common Name	Watershed	National Forest (NF) or Private (P) occurrence	% GWNF	Marcellus Acres on GWNF	Marcellus % of watershed on GWNF	Marcellus % of watershed on NF & Private land	Marcellus shale on FS at occurrence	Fed or Pvt Mineral Ownership at occurrence
<i>Pleurobema collina</i>	James spiny mussel	Potts Creek	P	26%	12,529	11.3%	47.8%		
		Cowpasture River	P	59%	95,086	42.0%	71.9%		
		Catawba Creek-James River	P	5%	6,955	3.3%	22.1%		
		Craig Creek	P	1%	1,259	0.5%	62.1%		
		Calfpasture River	P	59%	69,850	46.3%	72.5%		
<i>Helenium virginicum</i>	Virginia sneezeweed	Naked Creek-South Fork Shenandoah River	P	10%	1,331	0.6%	0.9%		
<i>Scirpus ancistrochaetus</i>	northeastern bulrush	Dry River-North River	NF	59%	110,980	58.9%	67.8%	Y	FED
		Naked Creek-South Fork Shenandoah River	P	10%	1,331	0.6%	0.9%		
		Potts Creek	NF	26%	12,529	11.3%	47.8%	N	
		Back Creek-Jackson River	P	41%	55,586	25.2%	45.0%		
<i>Notropis semperasper</i>	Roughhead shiner	Dunlap Creek	P	42%	37,679	34.8%	73.6%		
		Potts Creek	P	26%	12,529	11.3%	47.8%		
		Back Creek-Jackson River	NFP	41%	55,586	25.2%	45.0%	Y	PVT
		Wilson Creek-Jackson River	P	38%	22,436	16.2%	44.7%		
		Cowpasture River	NFP	59%	95,086	42.0%	71.9%	Y	FED
		Catawba Creek-James River	P	5%	6,955	3.3%	22.1%		
		Craig Creek	P	1%	1,259	0.5%	62.1%		
		Calfpasture River	P	59%	69,850	46.3%	72.5%		
<i>Noturus gilberti</i>	Orangefin madtom	Cowpasture River	P	59%	95,086	42.0%	71.9%		

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		Craig Creek	P	1%	1,259	0.5%	62.1%		
<i>Hydraena maureenae</i>	Maureen's shale stream beetle	Shoemaker River-North Fork Shenandoah River	NF	53%	61,945	46.5%	87.8%	Y	FED
		Wilson Creek-Jackson River	P	38%	22,436	16.2%	44.7%		
		Cowpasture River	NFP	59%	95,086	42.0%	71.9%	Y	PVT
		Craig Creek	P	1%	1,259	0.5%	62.1%		
		Calfpasture River	NF	59%	69,850	46.3%	72.5%	Y	FED
<i>Cicindela ancicisconensis</i>	Appalachian tiger beetle	Wilson Creek-Jackson River	P	38%	22,436	16.2%	44.7%		
		Cowpasture River	NFP	59%	95,086	42.0%	71.9%	Y	FED
<i>Sorex palustris punctulatus</i>	southern water shrew	North Fork South Branch Potomac River	NFP	5%	10,384	5.1%	71.3%	Y	FED
		Back Creek-Jackson River	NFP	41%	55,586	25.2%	45.0%	Y	FED
<i>Alasmidonta varicosa</i>	Brook floater	Smith Creek-North Fork Shenandoah River	P	6%	333	0.2%	5.4%		
		Stony Creek-North Fork Shenandoah River	P	28%	4,906	2.2%	20.2%		
<i>Elliptio lanceolata</i>	Yellow lance	Wilson Creek-Jackson River	P	38%	22,436	16.2%	44.7%		
		Cowpasture River	P	59%	95,086	42.0%	71.9%		
		Catawba Creek-James River	P	5%	6,955	3.3%	22.1%		
		Craig Creek	P	1%	1,259	0.5%	62.1%		
<i>Fusconaia masoni</i>	Atlantic pigtoe	Catawba Creek-James River	P	5%	6,955	3.3%	22.1%		
		Craig Creek	P	1%	1,259	0.5%	62.1%		
		Calfpasture River	P	59%	69,850	46.3%	72.5%		
<i>Lasmigona subviridis</i>	Green floater	Stony Creek-North Fork Shenandoah River	P	28%	4,906	2.2%	20.2%		
<i>Villosa constricta</i>	Notched Rainbow	Potts Creek	P	26%	12,529	11.3%	47.8%		
		Cowpasture River	P	59%	95,086	42.0%	71.9%		

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		Catawba Creek-James River	P	5%	6,955	3.3%	22.1%		
		Craig Creek	P	1%	1,259	0.5%	62.1%		
<i>Peltigera hydrothyria</i>	waterfan	North Fork South Branch Potomac River	NF	5%	10,384	5.1%	71.3%	Y	FED
		Middle River	NF	10%	22,543	9.4%	11.0%	Y	FED
		Stony Creek-North Fork Shenandoah River	NF	28%	4,906	2.2%	20.2%	N	PVT
		Cowpasture River	NF	59%	95,086	42.0%	71.9%	Y	FED
<i>Cambarus monongalensis</i>	A Crayfish	North Fork South Branch Potomac River	NF	5%	10,384	5.1%	71.3%	Y	FED
<i>Anguilla rostrata</i>	American eel	Middle River	P	10%	22,543	9.4%	11.0%		
		Dry River-North River	P	59%	110,980	58.9%	67.8%		
		Naked Creek-South Fork Shenandoah River	P	10%	1,331	0.6%	0.9%		
		Smith Creek-North Fork Shenandoah River	P	6%	333	0.2%	5.4%		
		Stony Creek-North Fork Shenandoah River	P	28%	4,906	2.2%	20.2%		
		Cedar Creek	NFP	19%	422	0.4%	32.7%	N	FED
		Craig Creek	P	1%	1,259	0.5%	62.1%		
<i>Salvelinus fontinalis</i>	Brook trout	North Fork South Branch Potomac River	NFP	5%	10,384	5.1%	71.3%	Y	FED
		South Fork South Branch Potomac River	NFP	29%	55,525	30.1%	90.5%	Y	BOTH
		Cacapon River	NFP	20%	5,484	2.1%	66.9%	N	PVT
		Dry River-North River	NFP	59%	110,980	58.9%	67.8%	Y	BOTH
		Naked Creek-South Fork Shenandoah River	NFP	10%	1,331	0.6%	0.9%	N	PVT
		Shoemaker River-North Fork Shenandoah River	NFP	53%	61,945	46.5%	87.8%	Y	PVT
		Smith Creek-North Fork Shenandoah River	NF	6%	333	0.2%	5.4%	N	PVT

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		Stony Creek-North Fork Shenandoah River	NFP	28%	4,906	2.2%	20.2%	Y	PVT
		Cedar Creek	NFP	19%	422	0.4%	32.7%	Y	FED
		Dunlap Creek	NFP	42%	37,679	34.8%	73.6%	Y	FED
		Potts Creek	NFP	26%	12,529	11.3%	47.8%	Y	FED
		Back Creek-Jackson River	NFP	41%	55,586	25.2%	45.0%	Y	FED
		Wilson Creek-Jackson River	NFP	38%	22,436	16.2%	44.7%	Y	FED
		Cowpasture River	NFP	59%	95,086	42.0%	71.9%	Y	BOTH
		Catawba Creek-James River	P	5%	6,955	3.3%	22.1%		
		Craig Creek	NFP	1%	1,259	0.5%	62.1%	Y	FED
		Calfpasture River	NFP	59%	69,850	46.3%	72.5%	Y	FED
		Little Calfpasture River	NFP	30%	14,974	28.0%	65.2%	Y	FED
<i>Cottus cf. cognatus</i>	Checkered sculpin	Cacapon River	P	20%	5,484	2.1%	66.9%		
<i>Aeshna canadensis</i>	Canada darner	North Fork South Branch Potomac River	NF	5%	10,384	5.1%	71.3%		
<i>Aeshna tuberculifera</i>	black-tipped darner	North Fork South Branch Potomac River	NF	5%	10,384	5.1%	71.3%	Y	FED
		Dry River-North River	NF	59%	110,980	58.9%	67.8%	Y	PVT
		Naked Creek-South Fork Shenandoah River	NF	10%	1,331	0.6%	0.9%	N	FED
		Potts Creek	NF	26%	12,529	11.3%	47.8%	Y	FED
		Wilson Creek-Jackson River	P	38%	22,436	16.2%	44.7%		
		Catawba Creek-James River	P	5%	6,955	3.3%	22.1%		
<i>Aeshna verticalis</i>	green-striped darner	North Fork South Branch Potomac River	NF	5%	10,384	5.1%	71.3%	Y	FED
<i>Calopteryx amata</i>	Superb jewelwing	North Fork South Branch Potomac River	NF	5%	10,384	5.1%	71.3%	Y	FED
<i>Calopteryx angustipennis</i>	Appalachian jewelwing	Stony Creek-North Fork Shenandoah River	NF	28%	4,906	2.2%	20.2%	Y	FED
		Cowpasture River	NF	59%	95,086	42.0%	71.9%	Y	FED
		Craig Creek	P	1%	1,259	0.5%	62.1%		

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<i>Cordulegaster diastatops</i>	delta-spotted spiketail	North Fork South Branch Potomac River	NF	5%	10,384	5.1%	71.3%	Y	FED
<i>Enallagma annexum (AKA cyathigerum)</i>	northern bluet	North Fork South Branch Potomac River	NF	5%	10,384	5.1%	71.3%	Y	FED
<i>Epitheca canis</i>	beaverpond baskettail	North Fork South Branch Potomac River	NF	5%	10,384	5.1%	71.3%	Y	FED
<i>Gomphus adelphus</i>	mustached clubtail	Cowpasture River	P	59%	95,086	42.0%	71.9%		
		Calfpasture River	P	59%	69,850	46.3%	72.5%		
<i>Gomphus quadricolor</i>	rapids clubtail	Cowpasture River	P	59%	95,086	42.0%	71.9%		
		Craig Creek	P	1%	1,259	0.5%	62.1%		
		Calfpasture River	P	59%	69,850	46.3%	72.5%		
<i>Ladona julia (AKA Libellula julia)</i>	chalk-fronted corporal skimmer	North Fork South Branch Potomac River	NF	5%	10,384	5.1%	71.3%	Y	FED
<i>Lanthus parvulus</i>	double-striped clubtail	North Fork South Branch Potomac River	NFP	5%	10,384	5.1%	71.3%	Y	FED
<i>Lestes disjunctus</i>	northern spreadwing	North Fork South Branch Potomac River	NF	5%	10,384	5.1%	71.3%	Y	FED
		Back Creek-Jackson River	P	41%	55,586	25.2%	45.0%		
		Wilson Creek-Jackson River	P	38%	22,436	16.2%	44.7%		
<i>Leucorrhinia hudsonica</i>	Hudsonian whiteface	North Fork South Branch Potomac River	NF	5%	10,384	5.1%	71.3%	Y	FED
<i>Nehalennia irene</i>	sedge sprite	North Fork South Branch Potomac River	NF	5%	10,384	5.1%	71.3%	Y	FED
<i>Neurocordulia yamaskanensis</i>	stygian shadowdragon	Stony Creek-North Fork Shenandoah River	P	28%	4,906	2.2%	20.2%		
		Wilson Creek-Jackson River	P	38%	22,436	16.2%	44.7%		

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<i>Rhionaeschna mutata</i> (AKA <i>Aeshna mutata</i> )	spatterdock darner	North Fork South Branch Potomac River	NF	5%	10,384	5.1%	71.3%	Y	FED
		Potts Creek	P	26%	12,529	11.3%	47.8%		
<i>Somatochlora elongata</i>	Ski-tipped emerald	North Fork South Branch Potomac River	NF	5%	10,384	5.1%	71.3%	Y	FED
<i>Sympetrum obtrusum</i>	white-faced meadowhawk	North Fork South Branch Potomac River	NF	5%	10,384	5.1%	71.3%	Y	FED
<i>Isonychia hoffmani</i>	Hoffman's Isonychia mayfly	North Fork South Branch Potomac River	NF	5%	10,384	5.1%	71.3%	Y	FED
<i>Nemotaulius hostilis</i>	a limnephilid caddisfly	North Fork South Branch Potomac River	NF	5%	10,384	5.1%	71.3%	Y	FED
<i>Glyptemys insculpta</i>	wood turtle	South Fork South Branch Potomac River	P	29%	55,525	30.1%	90.5%		
		Cacapon River	NFP	20%	5,484	2.1%	66.9%	Y	PVT
		Shoemaker River-North Fork Shenandoah River	NFP	53%	61,945	46.5%	87.8%	Y	PVT
		Smith Creek-North Fork Shenandoah River	P	6%	333	0.2%	5.4%		
		Stony Creek-North Fork Shenandoah River	NFP	28%	4,906	2.2%	20.2%	N	PVT
		Cedar Creek	NFP	19%	422	0.4%	32.7%	Y	FED

Table J-2. Aquatic Species Viability Changes due to Marcellus Shale Development in Watershed by Forest Plan Alternative \* (Shaded cells indicate a change in viability)

Scientific Name	Common Name	Watershed	Viability outcome from EIS viability	Viability outcome Alt A	Viability outcome Alt B	Viability outcome Alts C and I	Viability outcome Alt D	Viability outcome Alt E	Viability outcome Alt F	Viability outcome Alt G	Viability outcome Alt H
<i>Pleurobema collina</i>	James spiny mussel	Potts Creek	C	C	C	C	C	C	C	C	C
		Cowpasture River	C	C	C	C	C	C	C	C	C
		Catawba Creek-James River	E	E	E	E	E	E	E	E	E
		Craig Creek	C	C	C	C	C	C	C	C	C
		Calfpasture River	C	C	C	C	C	C	C	C	C
<i>Helenium virginicum</i>	Virginia sneezeweed	Naked Creek-South Fork Shenandoah River	C	C	C	C	C	C	C	C	C
<i>Scirpus ancistrochaetus</i>	northeastern bulrush	Dry River-North River	D	E	E	D	E	D	E	D	D
		Naked Creek-South Fork Shenandoah River	E	E	E	E	E	E	E	E	E
		Potts Creek	D	D	D	D	D	D	D	D	D
		Back Creek-Jackson River	E	E	E	E	E	E	E	E	E
<i>Notropis semperasper</i>	Roughhead shiner	Dunlap Creek	C	C	C	C	C	C	C	C	C
		Potts Creek	C	C	C	C	C	C	C	C	C
		Back Creek-Jackson River	B	C	C	C	C	C	C	C	C
		Wilson Creek-Jackson River	C	C	C	C	C	C	C	C	C
		Cowpasture River	B	C	C	C	C	C	C	C	C
		Catawba Creek-James River	C	C	C	C	C	C	C	C	C
		Craig Creek	C	C	C	C	C	C	C	C	C
		Calfpasture River	C	C	C	C	C	C	C	C	C
<i>Noturus gilberti</i>	Orangefin madtom	Cowpasture River	C	C	C	C	C	C	C	C	C
		Craig Creek	C	C	C	C	C	C	C	C	C
<i>Hydraena maureenae</i>	Maureen's shale stream beetle	Shoemaker River-North Fork Shenandoah River	D	E	E	E	E	E	E	E	E
		Wilson Creek-Jackson River	E	E	E	E	E	E	E	E	E
		Cowpasture River	B	C	C	C	C	C	C	C	C

Scientific Name	Common Name	Watershed	Viability outcome from EIS viability	Viability outcome Alt A	Viability outcome Alt B	Viability outcome Alts C and I	Viability outcome Alt D	Viability outcome Alt E	Viability outcome Alt F	Viability outcome Alt G	Viability outcome Alt H
		Craig Creek	E	E	E	E	E	E	E	E	E
		Calfpasture River	D	E	E	D	E	D	E	D	E
<i>Cicindela ancocisconensis</i>	Appalachian tiger beetle	Wilson Creek-Jackson River	E	E	E	E	E	E	E	E	E
		Cowpasture River	D	E	E	D	E	D	E	D	E
<i>Sorex palustris punctulatus</i>	southern water shrew	North Fork South Branch Potomac River	D	D	D	D	D	D	D	D	D
		Back Creek-Jackson River	D	E	E	D	E	D	E	D	E
<i>Alasmidonta varicosa</i>	Brook floater	Smith Creek-North Fork Shenandoah River	E	E	E	E	E	E	E	E	E
		Stony Creek-North Fork Shenandoah River	E	E	E	E	E	E	E	E	E
<i>Elliptio lanceolata</i>	Yellow lance	Wilson Creek-Jackson River	C	C	C	C	C	C	C	C	C
		Cowpasture River	C	C	C	C	C	C	C	C	C
		Catawba Creek-James River	E	E	E	E	E	E	E	E	E
		Craig Creek	C	C	C	C	C	C	C	C	C
<i>Fusconaia masoni</i>	Atlantic pigtoe	Catawba Creek-James River	E	E	E	E	E	E	E	E	E
		Craig Creek	C	C	C	C	C	C	C	C	C
		Calfpasture River	E	E	E	E	E	E	E	E	E
<i>Lasmigona subviridis</i>	Green floater	Stony Creek-North Fork Shenandoah River	C	C	C	C	C	C	C	C	C
<i>Villosa constricta</i>	Notched Rainbow	Potts Creek	C	C	C	C	C	C	C	C	C
		Cowpasture River	C	C	C	C	C	C	C	C	C
		Catawba Creek-James River	C	C	C	C	C	C	C	C	C
		Craig Creek	C	C	C	C	C	C	C	C	C
<i>Peltigera hydrothyria</i>	waterfan	North Fork South Branch Potomac River	B	B	B	B	B	B	B	B	B
		Middle River	B	C	C	B	C	B	C	B	C

Scientific Name	Common Name	Watershed	Viability outcome from EIS viability	Viability outcome Alt A	Viability outcome Alt B	Viability outcome Alts C and I	Viability outcome Alt D	Viability outcome Alt E	Viability outcome Alt F	Viability outcome Alt G	Viability outcome Alt H
		Stony Creek-North Fork Shenandoah River	B	B	B	B	B	B	B	B	B
		Cowpasture River	B	C	C	B	C	B	C	B	C
<i>Cambarus monongalensis</i>	A Crayfish	North Fork South Branch Potomac River	B	B	B	B	B	B	B	B	B
<i>Anguilla rostrata</i>	American eel	Middle River	C	C	C	C	C	C	C	C	C
		Dry River-North River	C	C	C	C	C	C	C	C	C
		Naked Creek-South Fork Shenandoah River	C	C	C	C	C	C	C	C	C
		Smith Creek-North Fork Shenandoah River	C	C	C	C	C	C	C	C	C
		Stony Creek-North Fork Shenandoah River	C	C	C	C	C	C	C	C	C
		Cedar Creek	A	A	A	A	A	A	A	A	A
		Craig Creek	E	E	E	E	E	E	E	E	E
<i>Salvelinus fontinalis</i>	Brook trout	North Fork South Branch Potomac River	B	B	B	B	B	B	B	B	B
		South Fork South Branch Potomac River	B	C	C	C	C	C	C	C	C
		Cacapon River	B	B	B	B	B	B	B	B	B
		Dry River-North River	A	C	C	C	C	C	C	C	C
		Naked Creek-South Fork Shenandoah River	B	B	B	B	B	B	B	B	B
		Shoemaker River-North Fork Shenandoah River	B	C	C	C	C	C	C	C	C
		Smith Creek-North Fork Shenandoah River	B	B	B	B	B	B	B	B	B
		Stony Creek-North Fork Shenandoah River	A	C	C	C	C	C	C	C	C
		Cedar Creek	B	C	C	B	C	B	C	B	B
		Dunlap Creek	B	C	C	B	C	B	C	B	C
		Potts Creek	B	C	C	B	C	B	C	B	C
		Back Creek-Jackson River	A	C	C	A	C	A	C	A	C

Scientific Name	Common Name	Watershed	Viability outcome from EIS viability	Viability outcome Alt A	Viability outcome Alt B	Viability outcome Alts C and I	Viability outcome Alt D	Viability outcome Alt E	Viability outcome Alt F	Viability outcome Alt G	Viability outcome Alt H
		Wilson Creek-Jackson River	A	C	C	A	C	A	C	A	A
		Cowpasture River	A	C	C	C	C	C	C	C	C
		Catawba Creek-James River	C	C	C	C	C	C	C	C	C
		Craig Creek	B	C	C	B	C	B	C	B	B
		Calfpasture River	A	C	C	A	C	A	C	A	C
		Little Calfpasture River	B	C	C	B	C	B	C	B	C
<i>Cottus cf. cognatus</i>	Checkered sculpin	Cacapon River	C	C	C	C	C	C	C	C	C
<i>Aeshna canadensis</i>	Canada darner	North Fork South Branch Potomac River	D	D	D	D	D	D	D	D	D
<i>Aeshna tuberculifera</i>	black-tipped darner	North Fork South Branch Potomac River	D	D	D	D	D	D	D	D	D
		Dry River-North River	B	C	C	C	C	C	C	C	C
		Naked Creek-South Fork Shenandoah River	D	D	D	D	D	D	D	D	D
		Potts Creek	B	C	C	B	C	B	C	B	C
		Wilson Creek-Jackson River	C	C	C	C	C	C	C	C	C
		Catawba Creek-James River	E	E	E	E	E	E	E	E	E
<i>Aeshna verticalis</i>	green-striped darner	North Fork South Branch Potomac River	D	D	D	D	D	D	D	D	D
<i>Calopteryx amata</i>	Superb jewelwing	North Fork South Branch Potomac River	D	D	D	D	D	D	D	D	D
<i>Calopteryx angustipennis</i>	Appalachian jewelwing	Stony Creek-North Fork Shenandoah River	B	C	C	B	C	B	C	B	B
		Cowpasture River	B	C	C	B	C	B	C	B	C
		Craig Creek	C	C	C	C	C	C	C	C	C
<i>Cordulegaster diastatops</i>	delta-spotted spiketail	North Fork South Branch Potomac River	B	B	B	B	B	B	B	B	B
<i>Enallagma annexum (AKA cyathigerum)</i>	northern bluet	North Fork South Branch Potomac River	D	D	D	D	D	D	D	D	D
<i>Epitheca canis</i>	beaverpond baskettail	North Fork South Branch Potomac River	D	D	D	D	D	D	D	D	D

Scientific Name	Common Name	Watershed	Viability outcome from EIS viability	Viability outcome Alt A	Viability outcome Alt B	Viability outcome Alts C and I	Viability outcome Alt D	Viability outcome Alt E	Viability outcome Alt F	Viability outcome Alt G	Viability outcome Alt H
<i>Gomphus adelphus</i>	mustached clubtail	Cowpasture River	C	C	C	C	C	C	C	C	C
		Calfpasture River	C	C	C	C	C	C	C	C	C
<i>Gomphus quadricolor</i>	rapids clubtail	Cowpasture River	C	C	C	C	C	C	C	C	C
		Craig Creek	C	C	C	C	C	C	C	C	C
		Calfpasture River	C	C	C	C	C	C	C	C	C
<i>Ladona julia</i> (AKA <i>Libellula julia</i> )	chalk-fronted corporal skimmer	North Fork South Branch Potomac River	D	D	D	D	D	D	D	D	D
<i>Lanthus parvulus</i>	double-striped clubtail	North Fork South Branch Potomac River	B	B	B	B	B	B	B	B	B
<i>Lestes disjunctus</i>	northern spreadwing	North Fork South Branch Potomac River	D	D	D	D	D	D	D	D	D
		Back Creek-Jackson River	C	C	C	C	C	C	C	C	C
		Wilson Creek-Jackson River	C	C	C	C	C	C	C	C	C
<i>Leucorrhinia hudsonica</i>	Hudsonian whiteface	North Fork South Branch Potomac River	D	D	D	D	D	D	D	D	D
<i>Nehalennia irene</i>	sedge sprite	North Fork South Branch Potomac River	D	D	D	D	D	D	D	D	D
<i>Neurocordulia yamaskanensis</i>	stygian shadowdragon	Stony Creek-North Fork Shenandoah River	C	C	C	C	C	C	C	C	C
		Wilson Creek-Jackson River	C	C	C	C	C	C	C	C	C
<i>Rhionaeschna mutata</i> (AKA <i>Aeshna mutata</i> )	spatterdock darner	North Fork South Branch Potomac River	D	D	D	D	D	D	D	D	D
		Potts Creek	C	C	C	C	C	C	C	C	C
<i>Somatochlora elongata</i>	Ski-tipped emerald	North Fork South Branch Potomac River	D	D	D	D	D	D	D	D	D
<i>Sympetrum obtrusum</i>	white-faced meadowhawk	North Fork South Branch Potomac River	D	D	D	D	D	D	D	D	D
<i>Isonychia hoffmani</i>	Hoffman's Isonychia mayfly	North Fork South Branch Potomac River	B	B	B	B	B	B	B	B	B

Scientific Name	Common Name	Watershed	Viability outcome from EIS viability	Viability outcome Alt A	Viability outcome Alt B	Viability outcome Alts C and I	Viability outcome Alt D	Viability outcome Alt E	Viability outcome Alt F	Viability outcome Alt G	Viability outcome Alt H
<i>Nemotaulius hostilis</i>	a limnephilid caddisfly	North Fork South Branch Potomac River	D	D	D	D	D	D	D	D	D
<i>Glyptemys insculpta</i>	wood turtle	South Fork South Branch Potomac River	C	C	C	C	C	C	C	C	C
		Cacapon River	B	C	C	C	C	C	C	C	C
		Shoemaker River-North Fork Shenandoah River	B	C	C	C	C	C	C	C	C
		Smith Creek-North Fork Shenandoah River	C	C	C	C	C	C	C	C	C
		Stony Creek-North Fork Shenandoah River	B	B	B	B	B	B	B	B	B
		Cedar Creek	B	C	C	B	C	B	C	B	B

\*Outcome A. Species is well distributed and abundant within watershed. Forest Service may influence conditions in the watershed to keep it well distributed. Likelihood of maintaining viability is high.

Outcome B. Species is potentially at risk in the watershed; however, the extent and location of NFS lands with respect to the species is conducive to positively influence the sustainability of the species within this watershed. Therefore, likelihood of maintaining viability is moderate.

Outcome C. Species is potentially at risk within the watershed; however, the extent and location of NFS lands with respect to the species is NOT conducive to positively influence the sustainability of the species within this watershed. Therefore, species viability in the watershed may be at risk.

Outcome D. The species is so rare within the watershed (population is at very low density and/or at only a few local sites) that stochastic events (accidents, weather events, etc.) may place persistence of the species within the watershed at risk; however, the extent and location of NFS lands with respect to the species is conducive to positively influence the sustainability of the species within this watershed. Therefore, likelihood of maintaining viability is moderate.

Outcome E. The species is so rare within the watershed (population is at very low density and/or at only a few local sites) that stochastic events (accidents, weather events, etc.) may place persistence of the species within the watershed at risk. Forest Service ability to influence the species is limited. Therefore species viability in the watershed may be at risk.