

West Virginia Wetland Rapid Assessment Datasheet

Identifiers (refer to page 25 of WVWRAM User Manual)

Site name KSF Store Hollow #2 PFO Date 7-10-2024 SiteEventCode KL-74_W-5_R-2
 Crew leader name Sara Miller Field crew name(s) Kylie Joins
 Time (24 hr) Start 11:00 End 13:00 gear decontaminated prior to entering site (p.21)
 Directions to site: all datasheets checked by crew leader at end of sampling
Google Maps: Number 2 Store Hollow.
Follow Kanawha State Forest Drive to the archery range of Number 2 Store Hollow. Wetland is north of the open (fill) area.

Notes on land use history, site conditions, wildlife observed, discussions with landowner or other on-site personnel, or deviations from protocol:
Kanawha State Forest was historically mined, logged, and settled. Historic topo maps show a railroad and settlement in the area of the wetland in 1909. This forested wetland lies between a paved road and the old railroad bed, which is now a berm that cuts the wetland off from flooding along the eastern boundary, while flooding from Davis Creek can only readily occur at the outlet. Up-gradient (south) of the wetland is bounded by a raised meadow that has developed on fill material from the dredging of Ellison Pond above the former dam. Two high-quality vernal pools with abundant wood frog and spotted salamander juveniles (seen in springtime) under canopy of deciduous trees. Inflow from seepage, intermittent flow from a shallow ditch along the road, a perched culvert under the road, and rainfall.

GPS make/model Garmin GPSMap 64st GPS datum: NAD83 other _____ Photos of inlet, outlet, NWI types, soils, stressors, and any other key features (p.26)
 Coordinates (decimal degrees): 38.27062, -81.66364

<p>Assessment Area Check one (p.27)</p> <input checked="" type="checkbox"/> AA is the entire Wetland Unit (most sites). <input type="checkbox"/> AA is a portion of the very large WU (> 25 acres) <input type="checkbox"/> AA is only the Project Area, smaller than the WU - see manual for exceptions when project area survey is acceptable Comment _____	<p>Purpose of Assessment Check all that apply</p> <input type="checkbox"/> pre-impact <input type="checkbox"/> replicate <input checked="" type="checkbox"/> other <input type="checkbox"/> restoration <input type="checkbox"/> baseline <input type="checkbox"/> random <input type="checkbox"/> years post- _____ <input type="checkbox"/> reference Comment <u>Training</u>	<p>PERIMETER AND NATURAL BUFFER (p.37)</p> <p>Natural perimeter Check one (p.37)</p> <input type="checkbox"/> 100% <input type="checkbox"/> 75-99% <input checked="" type="checkbox"/> < 75%
<p>Mapping All boxes should be checked at completion (p.31)</p> <input checked="" type="checkbox"/> current land use compared to air photo for 50m (164 ft) and 300m (984 ft) buffer <input checked="" type="checkbox"/> NWI wetland types GPS'ed and/or drawn on air photo <input checked="" type="checkbox"/> perimeter walked; inlet, outlet, or other features GPS'ed and/or drawn on air photo <input checked="" type="checkbox"/> soil sample locations GPS'ed and/or drawn on air photo	<p>Special Conservation Concern Check one(p.35)</p> <p><u>None</u> B-rank from topmost box in list below. Read definitions in manual!</p> <input type="checkbox"/> old-growth swamp (B3) <input type="checkbox"/> large bog or fen (B4) <input type="checkbox"/> mature forested swamp (B5) <input type="checkbox"/> summit sinkhole (Ridge&Valley only)(B5) <input checked="" type="checkbox"/> no known special concern (none) Comment _____	<p>50m (164') natural buffer for water quality Check one (p.38)</p> <input type="checkbox"/> > 90% <input type="checkbox"/> 75-90% <input checked="" type="checkbox"/> 50-75% <input type="checkbox"/> < 50% <p>Contiguous 300m (984') natural wildlife buffer Check one (p.39)</p> <input type="checkbox"/> > 90% <input type="checkbox"/> 60-90% <input checked="" type="checkbox"/> < 60%

NON-REGULATORY ADDITIONAL INFORMATION For land acquisition and full functional scores (p.39)

<p>Ownership/Access Check one (p.39)</p> <input checked="" type="checkbox"/> public, or private with permanent unrestricted access <input type="checkbox"/> private, with seasonal, partial, or case-by-case access <input type="checkbox"/> private, without public access Comment <u>Kanawha State Forest</u>	<p>Investment Check one (p.40)</p> <input type="checkbox"/> compensatory mitigation site <input type="checkbox"/> conservation easement <input type="checkbox"/> other conservation investment <input checked="" type="checkbox"/> no known conservation investment Comment _____	<p>Recreation Infrastructure Check all that apply (p.41)</p> <input checked="" type="checkbox"/> maintained parking <input type="checkbox"/> boardwalk <input type="checkbox"/> informational kiosk or brochure <input checked="" type="checkbox"/> maintained road w/i 30m (100') with view <input type="checkbox"/> maintained trail <input type="checkbox"/> boat access <input type="checkbox"/> no infrastructure Comment _____
<p>Planning or scientific use Check all that apply (p.40)</p> <input type="checkbox"/> water quality plan includes wetland <input type="checkbox"/> habitat plan includes wetland <input type="checkbox"/> monitored > 2yrs, non-regulatory, data available to public <input checked="" type="checkbox"/> no known planning or sustained scientific use Comment _____	<p>Other Public Use Check all that apply (p.41)</p> <input checked="" type="checkbox"/> wetland visible from public area <100m (328') <input checked="" type="checkbox"/> evidence of non-consumptive use <input type="checkbox"/> evidence of consumptive use <input type="checkbox"/> no evidence of public use Comment <u>wetlands classes</u>	

<p>TOPOGRAPHY AND STRUCTURE (p.41)</p> <p>Depressions Check one (p.42)</p> <input type="checkbox"/> none <input type="checkbox"/> trace-10% <input checked="" type="checkbox"/> 10-33% <input type="checkbox"/> >33%	<p>Structural Patch Type. ≥ 3 m² (32 ft²) patch unless otherwise specified. Check all that apply (p.44)</p> <input checked="" type="checkbox"/> Open water <input type="checkbox"/> Oxbows, secondary channels, swales <input checked="" type="checkbox"/> Pools inaccessible to fish <input type="checkbox"/> Springs or upwelling groundwater <input checked="" type="checkbox"/> Non-vegetated flats (mudflats, sandflats) <input checked="" type="checkbox"/> Animal mounds or burrows <input type="checkbox"/> Beaver dams or lodges <input checked="" type="checkbox"/> Abundant deciduous leaf litter <input type="checkbox"/> Plant hummocks or tussocks <input type="checkbox"/> Plant hummocks or tussocks > 25% cover of wetland (abundant) <input checked="" type="checkbox"/> Coarse woody debris at least 10 cm (4") diameter and 91 cm (36") long <input type="checkbox"/> Coarse woody debris, abundant: > 3% cover of wetland <input checked="" type="checkbox"/> Standing snags at least 7.6 cm (3") diameter and 137 cm (4.5') tall <input checked="" type="checkbox"/> Standing snags, abundant: ≥ 3/acre with dbh > 25 cm (10") <input checked="" type="checkbox"/> Upturned tree root wads (tip-up mounds) and pits Comment <u>Crayfish</u>
<p>Microtopographic complexity Check one (p.42)</p> <input type="checkbox"/> < 3% <input checked="" type="checkbox"/> 3-40% <input type="checkbox"/> > 40%	
<p>Karst topography Check all that apply (p.43)</p> <input type="checkbox"/> limestone spring <input type="checkbox"/> sinkhole <input type="checkbox"/> sinking stream (not on mined land) <input type="checkbox"/> isolated closed depression over limestone <input type="checkbox"/> limestone/dol outcrop <input type="checkbox"/> cave adjacent <input checked="" type="checkbox"/> no evidence of karst	

Site name KSF Store Hollow #2 PFO

Date 5-11-2023

VEGETATION STRUCTURE (p.47)

Skip if no PFO present. Forest structure. Check all that apply (p.47)

Stratum covers ≥ 5% of PFOs or occupies ≥ 0.1 acre:

- Canopy Understory Shrub Herb Moss

Skip if no PFO present. Forest regeneration. Check one (p.47)

All native tree canopy species with >10% cover are present in the sapling layer.

- Yes No

Vegetation fringing open water Check one (p.49)

At least 90% of open water (lake, pond ≥ 0.1 acre, perennial stream) boundaries are fringed by band of wetland vegetation ≥ 10 m (33 ft) wide.
 Yes No ("no" includes sites not adjacent to open water)

Skip if no PEM present. PEM canopy height(s). Check all that apply (p.48)

Height stratum covers ≥ 5% of PEMs or occupies ≥ 0.1 acre:

- < 30 cm (1 ft) 30-100 cm (1-3.3 ft) > 100 cm (3.3 ft)

Tall (>100 cm) gaminoid marsh Check one (p.48)

Tall marsh with at least seasonal standing water and cattails, sedges, bluejoint grass, or bulrushes occupies ≥ 0.1 acre.

- Yes No

Mowed or grazed wetland Check one (p.49)

Mowed < 15 cm (6") tall or livestock-grazed areas
 none trace - 33% 33-67% > 67%

HYDROLOGY (p.50)

Check one (p.50)

- Floodplain Wetland Unit (≥10% of wetland receives overland flow in 100-yr flood or more frequently, or major beaver influence in headwater wetlands)
 Non-floodplain Wetland Unit (may have stream associated with it but overland flow or beavers impact <10% of wetland)

Largest water source Check one; note stream order if perm. flowing (p.51)

- relatively permanently flowing and → 1st or 2nd 3+ order
 intermittent or ephemeral
 underground spring
 no visible inlet (dispersed groundwater and precipitation only)
 bidirectional (no stream; water level follows lake level or river flood stage)

If largest water source is a surface stream: Check one if applicable

- natural altered or constructed

Comment Wetland is partially separated from Davis Creek

Largest outlet is... Check one (p.52)

- relatively permanently flowing
 relatively permanently flowing but highly constricted
 intermittent or ephemeral
 no surface outlet (groundwater only)

If largest outlet is a surface stream: Check one if applicable

- natural altered or constructed

Comment _____

Overbank flooding and connection to river continuum Check all that are observed within the wetland. Skip if no stream nearby/potentially connected. (pp.53-56)

- active beaver dam
 flood deposits (sediment deposits, debris, drift deposits, flood wrack)
 vegetation flattened and aligned along flow lines
 tree trunks with flood lines (water marks, silt coatings, staining, moss or lichen trim lines) or flood impact scars
 absence of leaf litter under deciduous trees as a result of flooding (not livestock impacts)
 braided stream channels, backwater sloughs, backchannels, or other flood drainage patterns present
 flood-prone area (inundated at 2 x maximum bankfull depth) overlaps at least 10% of wetland

Disconnection from river continuum Check all that are observed at the stream that controls the floodplain. Skip if no stream potentially connected. (pp.53-56)

- physical barriers between wetland & stream (roads, railbeds, hardened levees)
 artificial drainage of floodplain between wetland and stream (ditches, drains, grading of land to improve drainage)
 stream channel hardened (riprap, gabions, concrete)
 stream channel straightened and/or moved to toeslope (meanders eliminated)
 dam upstream significantly reduces flooding
 land subsidence or significant streamflow reduction (sinking stream) in mined areas NOT on karst
 stream channel banks are steep, eroding, have abundant bank slides or slumps, have < 50% cover of roots, or are unvegetated
 stream is entrenched or moderately entrenched (Rosgen ER < 2.2 or Rosgen types A, F, G, B). Entrenchment is calculated as the flood-prone width divided by the bankfull width. Flood-prone width is measured at the elevation equal to twice the maximum bankfull depth. Maximum bankfull depth is the height of bankfull flow above the thalweg.
 stream is incised; bank height ratio (BHR) > 1.5. Bank height ratio is calculated as the height of lowest bank divided by maximum bankfull depth.
 flood prone area (inundated at 2 x maximum bankfull depth) does not extend to more than 10% of wetland

Worksheet for entrenchment, incisement, and flood-prone area measurements (pp.54-56)

See user manual for diagrams and definitions. Any units may be used as long as they are consistent.

maximum bankfull depth: 0.8m

2 x maximum bankfull depth: 1.6m

bankfull width: 7.5m

flood-prone width (inundated at 2 x max bankfull depth): 40m

lowest bank height: 0.9m

40 / 7.5 = 5.3

flood-prone width / bankfull width = entrenchment ratio (ER)

0.9 / 0.8 = 1.125
 lowest bank height / maximum bankfull depth = bank height ratio (BHR)

Site name KSF Store Hollow #2 PFODate 5-11-2023**Hydrology Stressors.** Check all that apply, then review total disturbance below. (p.57)

- Ditch
- Tile or drain
- Weir, spillway, standing pipe or water control structure
- Impoundment impacting hydrology (excluding beaver dams)
- Berm
- Road or impervious surface (paved and/or not at grade)
- RR track
- Undersized or perched culvert
- Pump, spring box, water well
- Filling/excavating/grading the land surface
- Dredging of aquatic bed
- Point source discharge
- Stormwater input
- Agricultural runoff
- Invasive vegetation concentrated along watercourses, with at least twice as much invasive cover as areas away from watercourses
- Adjacent stream channel/riparian zone aggrading, with fresh splays of sediment, partially buried culverts, or bar formation
- More than 25% of the upland-wetland edge is abrupt and straight, not a gradual and complex transition zone > 3 meters (10 ft) wide
- Other _____

Review the total hydrologic disturbances above and rank severity of impact by checking one box below.

- Intact: Hydrologic regime is characterized by natural patterns, with no major hydrologic stressors present.
- Mild on-going disturbance and/or past disturbance but now essentially recovered. For example, small ditches or diversions; berms or roads at/near grade; or minor flow additions.
- Moderate on-going disturbance and/or in the process of recovering from more severe disturbance in the past. For example, dams upstream or downstream moderately affect hydroperiod; ditches or diversions < 1 m (3.3 ft) deep; two lane roads; culverts adequate for base stream flow but not flood flow; or moderate flow additions. Outlets may be moderately constricted, but flow is still possible.
- Severe on-going disturbance. For example, dams upstream or downstream moderately to substantially affect hydroperiod; a 4-lane highway; diversions upstream or > 1 m (3.3 ft) deep that withdraw a significant portion of flow; large amounts of fill or excavation; significant artificial groundwater pumping; or heavy flow additions. Outlets may be substantially constricted, blocking most flow.
- Hydrology is entirely artificial; no natural inflows. E.g., a water treatment wetland constructed below the outflow from a wastewater treatment plant.

Water Quality Stressors. Check all that apply. (p.57)

- No water quality stressors observed.
- Discharges to the wetland: stormwater discharges, livestock or agricultural runoff, straight pipes, drainage ditches, industrial discharges, oil slicks, sediment plumes, algal mats, odors, adjacent spoil piles, leaking silt fences, road salt, ROW herbicide, or erosion on the upland edges.
- Contiguous water body has algal bloom, power boat use, or other observable impairment.
- Other _____

Vegetation Removal or Alteration. Check one box that best describes the wetland. (p.58)

- Minimal or no signs of anthropogenic vegetation removal or alteration OR impacts occurred in the past (typically > 80 years ago) and the wetland appears to have recovered to near-natural conditions. Examples: mature forested swamps, undisturbed beaver systems, undisturbed peatlands.
- Moderate. Vegetation removal or alteration is on-going and has moderate impact in terms of either severity or extent OR impacts occurred in the past and wetland is still in the process of recovering. Examples: successional swamps (black willow, box elder), young/unstructured swamps, many shrub/emergent.
- Severe. More than half of wetland is impacted by regular mowing, clearing, grazing, timbering, farming, dredging of aquatic bed, herbicide/pesticide/fertilizer application, burning, excessive herbivory or other form of on-going vegetation removal or alteration. Comment _____

Soil Stressors. Check all that apply, then review total disturbance below. (p.59)

- Livestock (trampling, pugging, compaction, or heavy grazing that leads to erosion)
- Machinery (plowing, filling, grading, dredging, compaction)
- ATV or vehicles (ruts, compaction, other disturbance)
- Removal of soil (mining, excavation)
- Replacement of soil with waste or fill (mining spoil, landfill)
- Other trampling or soil compaction
- Other erosion, sedimentation, or stressor. Comment _____

Review the total soil disturbances above and rank severity of impact by checking one box below.

- Intact: no anthropogenic disturbance.
- Small to moderate stress to soil profile. On-going stressors affect < 10% of wetland OR impacts occurred in the past and the soil profile has largely recovered. Depth of disturbance typically < 10 cm (4"); ponding/channeling of water in disturbed areas has little or no impact on overall site hydrology.
- Substantial stress to soil profile with extensive and long-lasting impacts; depth of disturbance > 10 cm (4"), may cause significant ponding or channeling of water that alters hydrology and vegetation.

Site name KSF Store Hollow #2 PFO

Date 5-11-2023

NWI Wetland Types Refer to NWI code sheets. List all NWI codes present in assessment area; minimum 1 soil sample per each NWI code; minimum 1 soil sample per each 10 acres; NWI codes may be sampled more than once.
 Assign System, Class, and Subclass of the NWI code based on vegetation (ex. PEM1). Then sample soil and assign Water Regime, pH, and Soil organic/mineral modifiers. Add Special modifiers if present (ex. PEM1Abtn). (p.33,59,91, Reference Sheets)

NWI Wetland Type Code (refer to NWI Codes diagram)						Sampled	Not sampled (permanently ponded)	Soil notes Optional notes on soil profile or soil features.
NWI System & Class	Sub-class	Wat. reg.	Spe-cial	pH	Soil			
Exmp. PEM	1	B	d	t	n	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0-5cm sapric, 5-15cm mucky mod min, 15-30+cm silt loam 25% redox conc
1. PFO	1	B		t	n	<input checked="" type="checkbox"/>	<input type="checkbox"/>	14 inch profile, lots of roots present in top 10in. Free water at 17in. 10YR 3/3 dried to 10YR 5/4 in upper 3in. NRCS soil scientist Aron Sattler confirmed this is seasonally saturated hydric soil.
2. PFO	1	B		t	n	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.5YR 3/1 with 5YR 4/6 redox features in top layer, 35cm profile
3. PFO	1	E		t	n	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0-30cm sandy loam, dark to low chroma, no redox. Water table at 2cm depth. 30-40cm sand with coal or shale fragments.
4.						<input type="checkbox"/>	<input type="checkbox"/>	
5.						<input type="checkbox"/>	<input type="checkbox"/>	
6.						<input type="checkbox"/>	<input type="checkbox"/>	
7.						<input type="checkbox"/>	<input type="checkbox"/>	

NWI Water Regime Refer to NWI code diagram, NWI Water Regime Non-tidal Modifiers, and NWI Water Regime Restriction reference sheets. (p.60)

Add Water Regime modifier to NWI code at top of page:

temporarily flooded (A)	seasonally flooded (C)	seasonally flooded-saturated (E)	permanently flooded (H)
seasonally saturated (B)	continuously saturated (D)	semipermanently flooded (F)	intermittently flooded (J)
		intermittently exposed (G)	artificially flooded (K)

Special Modifiers Only if applicable. Refer to NWI Code diagram and definitions. (p.62)

If applicable, add Special modifier to NWI code at top of page. Add only the first applicable modifier, in this order: b, d, f, m, h, r, s, x
 beaver (b), partly ditched/draind (d), farmed (f), managed (m), diked/impounded (h), artificial substrate (r), spoil (s), excavated (x)

Soil pH pH value of soil at 10 cm (4") below the surface (p.63)

Soil sampling site #								Add pH modifier to NWI code at top of page:
Ex. 1	2	3	4	5	6	7		pH < 5.5 = acid (a)
5.7	6.8	7.1	6.7					pH 5.5-7.4 = circumneutral (t)
								pH > 7.4 = alkaline (i)

ORGANIC MATERIAL

2 cm (0.8") Organic Material Near Surface Remove duff layer. Collect sample from top 8 cm (3") of soil profile. Refer to Organic Soils reference sheet.

Peat, mucky peat, muck, or mucky modified mineral soil in top 8 cm (3") below the soil surface. (p.63 & Reference Sheet)

Soil sampling site #							
1	2	3	4	5	6	7	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Present: at least 2 cm (0.8") thick organic layer or mucky modified mineral layer
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not present

Total Depth of Surficial Organic Material (not required for impact assessment; required for condition & restoration monitoring) (p.64 & Reference Sheet)

Soil sampling site #								Description of Organic Material: peat/fibric, mucky peat/hemic, muck/sapric, or mucky modified mineral soil. Ex. 0-5cm sapric, 5-15cm mucky mod min
Ex. 1	2	3	4	5	6	7		
15	0	0	0				<input checked="" type="checkbox"/> cm <input type="checkbox"/> inches	

Deep Organic Soil. Excavate each soil hole to either 40 cm (16") depth of organic soil, or 80 cm (32") total soil depth, whichever comes first.

Histosol: Peat, mucky peat, or muck soil with at least 12-18% organic matter by weight and >= 40 cm (16") deep within the upper 80 cm (32") of soil profile.

Histic epipedon: Peat, mucky peat, or muck soil with at least 12-18% organic matter by weight and >= 20 cm (8") thick, but < 40 cm (16") thick, as a surface horizon. Aquic conditions or artificial drainage is required. Note that mucky modified mineral soil is NOT included in this section. (p.64)

Soil sampling site #								Add Soil modifier to NWI code at top of page:
1	2	3	4	5	6	7		organic (g)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Histosol present; NWI soil modifier = organic (g)	mineral (n)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Histic epipedon present, but no histosol; NWI soil modifier = mineral (n)	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Neither histosol nor histic epipedon present; NWI soil modifier = mineral (n)	

West Virginia Wetland Rapid FQA Datasheet

(refer to WVWRAM User Manual pages 66-74)

WVWRAM Field Form

Site name <u>KSF Store Hollow #2 PFO</u>		Date <u>5-11-2023</u>		
NW1 Wetland Type Code <small>(p.69)</small> <i>NWI codes must match codes on Soils sheet</i>	Dominant species identified	% of AA <small>field estimate or GIS (p.69)</small>	Total veg cover <small>if < 100%</small>	Sum of identified cover
1. <u>PFO1Btn</u>	■	48		161
2. <u>PFO1Etn</u>	■	52		118
3. _____	□			
<p>Dominant species identification (p.69). Sum cover values of identified vascular plant species across all strata within each wetland type. Stop when all dominant vascular plant species (≥ 10% total cover across all strata) AND highly invasive (bolded) plants have been identified AND the sum of species cover is ≥ 80%. For NW1 wetland types with total vegetative cover of < 100% (e.g., aquatic bed, mudflats), the sum of species must be ≥ 80% of the total vegetative cover. Example: PAB has total cover of 40%. 80% of 40% = 32% is the required sum of species cover.</p>				
<p>Species Checklist. Circle space when species has at least 10% cover in wetland type. At the end of each wetland type meander, record cover within circles. Highly invasive wetland species are <u>underlined</u> and must be recorded even if they have < 10% cover. Write in any dominant species not listed. Use absolute cover, not relative cover. Typical cover values are 0.1, 1, 3, 5, 10, 20, 30, 40, 50, 60, 70, 80, 90, or 100 percent.</p>				
Aquatic Plants (true aquatic plants that are submergent or have floating leaves)				
NW1 wetland type #		NW1 wetland type #		NW1 wetland type #
1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
___ ___ ___ <i>Brasenia schreberi</i>	___ ___ ___ <i>Lemna minor</i>	___ ___ ___ <i>Potamogeton sp.(not P. crispus)</i>		
___ ___ ___ <i>Callitriche heterophylla</i>	___ ___ ___ <u>Myriophyllum aquaticum</u>	___ ___ ___ <i>Utricularia gibba</i>		
___ ___ ___ <i>Ceratophyllum demersum</i>	___ ___ ___ <i>Nuphar lutea ssp. advena</i>	___ ___ ___ <i>Wolffia brasiliensis</i>		
___ ___ ___ <i>Elodea canadensis</i>	___ ___ ___ <i>Nymphaea odorata</i>			
___ ___ ___ <u>Hydrilla verticillata</u>	___ ___ ___ <i>Potamogeton crispus</i>			
Trees (woody plants that typically mature to a maximum height > 6 m)				
NW1 wetland type #		NW1 wetland type #		NW1 wetland type #
1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
___ ___ ___ <i>Abies balsamea</i>	___ ___ ___ <i>Crataegus sp.</i>	___ ___ ___ <i>Prunus serotina</i>		
(2) ___ ___ ___ <i>Acer negundo</i>	(13) (13) ___ ___ ___ <i>Fagus grandifolia</i>	___ ___ ___ <i>Quercus alba</i>		
___ ___ ___ <i>Acer rubrum</i>	___ ___ ___ <i>Fraxinus americana</i>	___ ___ ___ <i>Quercus bicolor</i>		
___ ___ ___ <i>Acer saccharinum</i>	___ ___ ___ <i>Fraxinus pennsylvanica</i>	___ ___ ___ <i>Quercus palustris</i>		
___ ___ ___ <i>Acer saccharum</i>	___ ___ ___ <i>Juglans nigra</i>	___ ___ ___ <i>Quercus rubra</i>		
___ ___ ___ <i>Aesculus flava</i>	(10) (10) ___ ___ ___ <i>Liquidambar styraciflua</i>	___ ___ ___ <i>Robinia pseudoacacia</i>		
___ ___ ___ <i>Betula alleghaniensis</i>	(8) ___ ___ ___ <i>Liriodendron tulipifera</i>	___ ___ ___ <i>Salix alba</i>		
___ ___ ___ <i>Betula lenta</i>	___ ___ ___ <i>Nyssa sylvatica</i>	___ ___ ___ <i>Salix nigra</i>		
(17) (17) ___ ___ ___ <i>Betula nigra</i>	___ ___ ___ <i>Picea rubens</i>	___ ___ ___ <i>Tsuga canadensis</i>		
(15) (15) ___ ___ ___ <i>Carpinus caroliniana ssp. virg.</i>	___ ___ ___ <i>Pinus rigida</i>	(11) (11) ___ ___ ___ <i>Ulmus americana</i>		
___ ___ ___ <i>Carya cordiformis</i>	(42) (42) ___ ___ ___ <i>Platanus occidentalis</i>	___ ___ ___ <i>Ulmus rubra</i>		
___ ___ ___ <i>Carya ovata</i>	___ ___ ___ <i>Populus tremuloides</i>			
Shrubs (woody plants with that typically mature to a maximum height < 6 m, often multi-stemmed)				
NW1 wetland type #		NW1 wetland type #		NW1 wetland type #
1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
___ ___ ___ <i>Alnus incana ssp. rugosa</i>	___ ___ ___ <i>Kalmia latifolia</i>	___ ___ ___ <i>Spiraea tomentosa</i>		
___ ___ ___ <i>Alnus serrulata</i>	___ ___ ___ <i>Ligustrum vulgare</i>	___ ___ ___ <i>Vaccinium angustifolia</i>		
___ ___ ___ <i>Aronia melanocarpa</i>	(11) ___ ___ ___ <i>Lindera benzoin</i>	___ ___ ___ <i>Spiraea tomentosa</i>		
___ ___ ___ <i>Asimina triloba</i>	___ ___ ___ <i>Lonicera morrowii</i>	___ ___ ___ <i>Vaccinium angustifolia</i>		
___ ___ ___ <i>Berberis thunbergii</i>	___ ___ ___ <i>Physocarpus opulifolius</i>	___ ___ ___ <i>Vaccinium myrtilloides</i>		
___ ___ ___ <i>Cephalanthus occidentalis</i>	___ ___ ___ <i>Rhododendron maximum</i>	___ ___ ___ <i>Vaccinium oxycoccos</i>		
___ ___ ___ <i>Cornus amomum</i>	(3) ___ ___ ___ <u>Rosa multiflora</u>	___ ___ ___ <i>Viburnum dentatum</i>		
___ ___ ___ <i>Elaeagnus umbellata</i>	___ ___ ___ <i>Rosa palustris</i>	___ ___ ___ <i>Viburnum nudum var. cassinoides</i>		
___ ___ ___ <i>Gaylussacia baccata</i>	___ ___ ___ <i>Rubus pensilvanicus</i>	___ ___ ___ <i>Viburnum recognitum</i>		
___ ___ ___ <i>Hypericum densiflorum</i>	___ ___ ___ <i>Salix sericea</i>			
___ ___ ___ <i>Ilex mucronata</i>	___ ___ ___ <i>Sambucus nigra ssp. canadensis</i>			
___ ___ ___ <i>Ilex verticillata</i>	___ ___ ___ <i>Spiraea alba</i>			
Woody Vines				
___ ___ ___ <i>Apios americana</i>	(5) ___ ___ ___ <u>Lonicera japonica</u>	(5) ___ ___ ___ <i>Toxicodendron radicans</i>		
___ ___ ___ <i>Clematis virginiana</i>	___ ___ ___ <i>Rubus hispida</i>	(0.1) ___ ___ ___ <u>Celastrus orbiculata</u>		

Ferns

NW1 wetland type #

NW1 wetland type #

NW1 wetland type #

1 2 3

1 2 3

1 2 3

____ *Dennstaedtia punctilobula*____ *Osmunda cinnamomea*____ *Pteridium aquilinum*____ *Onoclea sensibilis*____ *Osmunda regalis var. spectabilis*____ *Thelypteris noveboracensis***Forbs** (broad-leaved herbs, excluding true aquatics which are in the first section of the checklist)____ *Acorus calamus*____ ***Iris pseudacorus***____ *Ranunculus hispidus var. nitidus*____ *Agrimonia parviflora*____ *Justicia americana*____ *Ranunculus repens*____ *Alisma subcordatum*____ *Laportea canadensis*____ *Sagittaria latifolia*____ *Apocynum cannabinum*____ *Lespedeza cuneata*____ *Saururus cernuus*____ *Asclepias incarnata*____ *Ludwigia palustris*____ *Solidago altissima*____ *Bidens frondosa*____ *Ludwigia peploides*____ *Solidago canadensis*____ *Bidens tripartita*____ *Lycopus uniflorus*____ *Solidago gigantea*____ *Boehmeria cylindrica*____ *Lysimachia nummularia*____ *Solidago rugosa*____ *Caltha palustris*____ ***Lythrum salicaria***____ *Solidago uliginosa*____ *Chelone glabra*____ *Mimulus ringens*____ *Sorghum halapense*____ *Cicuta maculata*____ *Murdannia keisak*____ *Symphyotrichum lanceolatum*____ *Diodia virginiana*____ *Myosotis scorpioides*____ *Symphyotrichum lateriflorum*____ *Dipsacus fullonum*____ *Nasturtium officinale*____ *Symphyotrichum prenanthoides*____ *Doellingeria umbellata*____ *Packeria aurea*____ *Symphyotrichum puniceum*____ *Epilobium coloratum*____ *Pilea pumila*____ *Symplocarpus foetidus*____ *Eupatorium perfoliatum*____ *Polygonum amphibium*____ *Trifolium pratense*____ *Euthamia graminifolia*____ *Polygonum caespitosum longisetum*____ *Verbena hastata*____ *Galium aparine*____ ***Polygonum cuspidatum***____ *Verbesina alternifolia*____ *Galium tinctorium*____ *Polygonum hydropiperoides*____ *Vernonia noveboracensis*____ *Glechoma hederacea*____ *Polygonum pennsylvanicum*____ *Viola cucullata*____ *Helenium autumnale*____ ***Polygonum perfoliatum***____ *Xanthium strumarium*____ *Hibiscus moscheutos*____ *Polygonum punctatum*____ *Hypericum mutilum*____ *Polygonum sagittatum*____ *Impatiens capensis*____ *Ranunculus acris***Graminoids** (grasses, sedges, rushes)____ *Agrostis gigantea*____ *Carex stricta*____ *Juncus effusus*____ *Agrostis perennans***(10)** **(10)**____ *Carex torta*____ *Juncus tenuis*____ *Agrostis stolonifera*____ *Carex tribuloides*____ *Leersia oryzoides*____ *Andropogon gerardii*____ *Carex trisperma*____ *Leersia virginica*____ *Anthoxanthum odoratum*____ *Carex utriculata***(4)**____ ***Microstegium vimineum***____ ***Arthraxon hispidus***____ *Carex vulpinoidea*____ *Panicum dichotomiflorum*____ *Calamagrostis canadensis*____ *Cinna arundinacea*____ ***Phalaris arundinacea***____ *Carex aquatilis*____ *Cinna latifolia*____ ***Phragmites australis***____ *Carex atlantica*____ *Danthonia compressa*____ *Poa compressa /pratensis/trivialis*____ *Carex canescens*____ *Dichanthelium clandestinum*____ *Poa palustris*____ *Carex crinita*____ *Dichanthelium dichotomum microcarpum*____ *Rhynchospora alba*____ *Carex debilis*____ *Dulichium arundinaceum*____ *Schoenoplectus pungens*____ *Carex echinata*____ *Echinochloa crus-galli*____ *Schoenoplectus tabernaemontani*____ *Carex folliculata*____ *Eleocharis obtusa*____ *Scirpus atrovirens*____ *Carex frankii*____ *Eleocharis palustris*____ *Scirpus cyperinus*____ *Carex grayii*____ *Eleocharis tenuis*____ *Scirpus polyphyllus*____ *Carex gynandra*____ *Eriophorum virginicum*____ *Setaria faberi*____ *Carex intumescens*____ *Glyceria laxa*____ *Setaria parviflora*____ *Carex lupulina*____ *Glyceria melicaria*____ *Sparganium americanum/eurycarpum*____ *Carex lurida*____ *Glyceria septentrionalis*____ *Sparganium chlorocarpum***(5)**____ *Carex prasina*____ *Glyceria striata*____ ***Typha latifolia, Typha sp.***____ *Carex scoparia*____ *Holcus lanatus*____ *Carex squarrosa*____ *Juncus acuminatus*____ *Carex stipata*____ *Juncus brevicaudatus /subcaudatus***Non-vascular Plants** (DO NOT INCLUDE non-vascular species in the dominant species calculations)____ *Sphagnum spp.*____ *Filamentous Algae*

____ Total mosses & liverworts

____ *Chara algae*

West Virginia Wetland Rapid Assessment Datasheet - Photo Log (p.26 of WVWRAM User Manual) Page 7

Site name KSF Store Hollow #2 PFO Date 5-11-2023
 Camera type/camera number Olympus Tough Photographer E. Byers

Take photos of inlet(s), outlet, each NWI wetland type, soils, stressors and any other key features.

Notes:

Photo # (field)	Photo Description (use key words)	Photo ID (DEP office)	Photo # (field)	Photo Description (use key words)	Photo ID (DEP office)
1	Seepage into wetland				
2	Outlet				
3	Culvert from road				
4	Road				
5	Powerline stressor in Buffer				
6-7	PFO1Btn and soil				
8-9	PFO1Etn and soil				
10	Davis Creek				
11	Trail in buffer				
12	Coarse woody material				
13-15	Crayfish mound				
16	Tip-up mound				
17	Fe at outlet				
18	Biofilm				

West Virginia Wetland Rapid Assessment Datasheet - overflow notes

Site name KSF Store Hollow #2 PFO

Date 5-11-2023

Directions to site:

Notes on land use history, site conditions, wildlife observed, discussions with landowner or other on-site personnel, or deviations from protocol:

Other overflow notes (include datasheet heading):

Water source continued: by a berm (old RR bed) that is just under 2x bankfull height, which means only the largest floods reach the wetland on this side. Inflow is seepage, intermittent flow from a shallow ditch between the road and the filled meadow up-gradient, a perched culvert, and rainfall. Flooding from Davis Creek may enter the wetland via the outlet as well.