Presence of Baseflow	3-Strong
Iron Oxidizing Bacteria	0-Absent
Leaf Litter	0-Strong
Sediment on Plants or Debris	0-Absent
Organic Debris Lines or Piles	0-Absent
Soil-based evidence of high water table	0-No
Subtotal =	3
Biology	
Fibrous Roots in Streambed	3-Absent
Rooted Upland Plants in Streambed	0-Strong
Aquatic Macroinvertebrates	0-Absent
Aquatic Mollusks	1-Weak
Fish	0-Absent
Crayfish	0-Absent
Amphibians	0-Absent
Algae	0-Absent
Wetland Plants in Streambed	0.75-FACW
Subtotal =	4.75
Stream Type Determination	
Total Score	19.25
Stream Determination	Intermittent (≥19)
Notes	
Notes	Jurisdictional Roadside drainage.

22046: Bright Mountain S	Stream Dataform 1
Project	22046: Bright Mountain Solar
ID	280518
Survey Date	09/21/2022
User	Rebecca Steinberg
Stream ID:	13-ST011
Administrative 1	
Investigator(s)	RMS
Latitude, Longitude	
Latitude	37.29179626
Longitude	-83.23647983
Current Precipitation	None
Precipitation in Past 48 Hours	None
Town/County/State	Hazard, Perry County, Kentucky
General Characteristics 1	
NYSDEC Mapped Stream	No
Drainage Ditch	Yes
Surface Water Depth at Thalweg (Inches)	3
Stream Gradient	Moderate (6-11%)
Substrate	Boulder, Cobble
OHWM width for stream reach (feet)	6
Geomorphology	
Continuity of channel bed and bank	3-Strong
Sinuosity of channel along thalweg	1-Weak
In Channel Structures	3-Strong
Particle Size of Stream Substrate	3-Strong
Active/Relic Floodplain	0-Absent
Depositional Bars or Benches	0-Absent
Recent Alluvial Deposits	0-Absent
Are Headcuts present	0-Absent
Grade Control	1.5-Strong
Natural Valley	0-Absent
Second or Greater Order Channel	0-No
Subtotal =	11.5
Hvdrology	

Presence of Baseflow	3-Strong
Iron Oxidizing Bacteria	0-Absent
Leaf Litter	0-Strong
Sediment on Plants or Debris	0-Absent
Organic Debris Lines or Piles	0-Absent
Soil-based evidence of high water table	0-No
Subtotal =	3
Biology	
Fibrous Roots in Streambed	3-Absent
Rooted Upland Plants in Streambed	0-Strong
Aquatic Macroinvertebrates	0-Absent
Aquatic Mollusks	1-Weak
Fish	0-Absent
Crayfish	0-Absent
Amphibians	0-Absent
Algae	0-Absent
Wetland Plants in Streambed	0.75-FACW
Subtotal =	4.75
Stream Type Determination	
Total Score	19.25
Stream Determination	Intermittent (≥19)
Notes	
Notes	Jurisdictional Roadside drainage.

22046: Bright Mountain	Stream Dataform 1
Project	22046: Bright Mountain Solar
ID	280513
Survey Date	09/21/2022
User	Josh Bean
Stream ID:	13-ST012
Administrative 1	
Investigator(s)	JB RS LL MS
Latitude, Longitude	_
Latitude	37.2913747
Longitude	-83.2356439
Current Precipitation	None
Precipitation in Past 48 Hours	None
Town/County/State	Hazard, Perry County, Kentucky
General Characteristics 1	
NYSDEC Mapped Stream	No, but connects to mapped stream
NYSDEC mapped Classification	
Drainage Ditch	No
Surface Water Depth at Thalweg (Inches)	0
Stream Gradient	Gentle (0-5%)
Substrate	Boulder, Silt/Clay (No grit)
OHWM width for stream reach (feet)	5
Geomorphology	
Continuity of channel bed and bank	2-Moderate
Sinuosity of channel along thalweg	1-Weak
In Channel Structures	1-Weak
Particle Size of Stream Substrate	1-Weak
Active/Relic Floodplain	0-Absent
Depositional Bars or Benches	0-Absent
Recent Alluvial Deposits	0-Absent
Are Headcuts present	0-Absent
Grade Control	0-Absent
Natural Valley	1-Moderate
Second or Greater Order Channel	0-No
Subtotal =	6.0

Hydrology	
Presence of Baseflow	0-Absent
Iron Oxidizing Bacteria	0-Absent
Leaf Litter	0.5-Moderate
Sediment on Plants or Debris	1-Moderate
Organic Debris Lines or Piles	0-Absent
Soil-based evidence of high water table	0-No
Subtotal =	1.5
Biology	
Fibrous Roots in Streambed	1-Moderate
Rooted Upland Plants in Streambed	3-Absent
Aquatic Macroinvertebrates	0-Absent
Aquatic Mollusks	0-Absent
Fish	0-Absent
Crayfish	0-Absent
Amphibians	0-Absent
Algae	0.5-Weak
Wetland Plants in Streambed	0.75-FACW
Subtotal =	5.25
Stream Type Determination	
Total Score	12.75
Stream Determination	Ephemeral (<19)
Notes	
Notes	Stream flows along roadside and drains into culvert which flows into Kentucky mapped stream.

22046: Bright Mountain	Stream Dataform 1
Project	22046: Bright Mountain Solar
ID	320147
Survey Date	09/22/2022
User	Rebecca Steinberg
Stream ID:	13-ST013
Administrative 1	
Investigator(s)	JB RS
Latitude, Longitude	
Latitude	37.29150563
Longitude	-83.28157201
Current Precipitation	None
Precipitation in Past 48 Hours	None
Town/County/State	Hazard, Perry County, Kentucky
Administrative 2	
Investigator(s)	RS,MS,LL,JB
Latitude, Longitude	
Latitude	37.29150563
Longitude	-83.28157201
Datum	WGS84
Current Precipitation	None
Precipitation in Past 48 Hours	None
Town/County/State	Hazard, Perry County, Kentucky
General Characteristics 1	
NYSDEC Mapped Stream	No
Drainage Ditch	No
Surface Water Depth at Thalweg (Inches)	6
Stream Gradient	Steep (>12%)
Substrate	Bedrock, Boulder, Cobble, Sand (Gritty feel)
OHWM width for stream reach (feet)	6
Geomorphology	
Continuity of channel bed and bank	3-Strong
Sinuosity of channel along thalweg	3-Strong
In Channel Structures	3-Strong
Particle Size of Stream Substrate	3-Strong
Active/Relic Floodplain	0-Absent

Depositional Bars or Benches	3-Strong
Recent Alluvial Deposits	0-Absent
Are Headcuts present	3-Strong
Grade Control	1.5-Strong
Natural Valley	1.5-Strong
Second or Greater Order Channel	3-Yes
Subtotal =	24
Hydrology	
Presence of Baseflow	2-Moderate
Iron Oxidizing Bacteria	3-Strong
Leaf Litter	1-Weak
Sediment on Plants or Debris	0.5-Weak
Organic Debris Lines or Piles	0.5-Weak
Soil-based evidence of high water table	0-No
Subtotal =	7
Biology	
Fibrous Roots in Streambed	3-Absent
Rooted Upland Plants in Streambed	3-Absent
Aquatic Macroinvertebrates	3-Strong
Aquatic Mollusks	0-Absent
Fish	0-Absent
Crayfish	1.5-Strong
Amphibians	1-Moderate
Algae	0-Absent
Wetland Plants in Streambed	0-Other
Subtotal =	11.5
Stream Type Determination	
Total Score	42.5
Stream Determination	Perennial (≥30)
Notes	
Notes	

22046: Bright Mountain S	Stream Dataform 1
Project	22046: Bright Mountain Solar
ID	320148
Survey Date	09/22/2022
User	Rebecca Steinberg
Stream ID:	13-ST014
Administrative 1	
Investigator(s)	MS,RS,LL,JB
Latitude, Longitude	
Latitude	37.29280282
Longitude	-83.28006553
Datum	WGS84
Current Precipitation	None
Precipitation in Past 48 Hours	None
Town/County/State	Hazard, Perry County, Kentucky
General Characteristics 1	
NYSDEC Mapped Stream	Yes
NYSDEC mapped Classification	
Drainage Ditch	No
Surface Water Depth at Thalweg (Inches)	36
Stream Gradient	Steep (>12%)
Substrate	Bedrock, Boulder, Cobble
OHWM width for stream reach (feet)	8
Geomorphology	
Continuity of channel bed and bank	3-Strong
Sinuosity of channel along thalweg	2-Moderate
In Channel Structures	3-Strong
Particle Size of Stream Substrate	3-Strong
Active/Relic Floodplain	0-Absent
Depositional Bars or Benches	2-Moderate
Recent Alluvial Deposits	0-Absent
Are Headcuts present	3-Strong
Grade Control	1.5-Strong
Natural Valley	1.5-Strong
Second or Greater Order Channel	0-No

Subtotal =	19
Hydrology	
Presence of Baseflow	3-Strong
Iron Oxidizing Bacteria	0-Absent
Leaf Litter	1-Weak
Sediment on Plants or Debris	1-Moderate
Organic Debris Lines or Piles	0.5-Weak
Soil-based evidence of high water table	0-No
Subtotal =	5.5
Biology	
Fibrous Roots in Streambed	1-Moderate
Rooted Upland Plants in Streambed	3-Absent
Aquatic Macroinvertebrates	3-Strong
Aquatic Mollusks	0-Absent
Fish	1.5-Strong
Crayfish	1-Moderate
Amphibians	0.5-Weak
Algae	0-Absent
Wetland Plants in Streambed	0-Other
Subtotal =	10
Stream Type Determination	
Total Score	34.5
Stream Determination	Perennial (≥30)
Notes	
Notes	

22046: Bright Mountain S	Stream Dataform 1
Project	22046: Bright Mountain Solar
ID	298701
Survey Date	04/12/2022
User	Rebecca Steinberg
Stream ID:	14-ST001
Administrative 1	
Investigator(s)	JK, RMS, CS
Latitude, Longitude	
Latitude	37.28395172
Longitude	-83.29914711
Current Precipitation	None
Precipitation in Past 48 Hours	None
Town/County/State	Hazard, Perry County, Kentucky
General Characteristics 1	
NYSDEC Mapped Stream	No
Drainage Ditch	No
Surface Water Depth at Thalweg (Inches)	0
Stream Gradient	Steep (>12%)
Substrate	Boulder, Cobble, Gravel
OHWM width for stream reach (feet)	3
Geomorphology	
Continuity of channel bed and bank	2-Moderate
Sinuosity of channel along thalweg	0-Absent
In Channel Structures	0-Absent
Particle Size of Stream Substrate	1-Weak
Active/Relic Floodplain	0-Absent
Depositional Bars or Benches	0-Absent
Recent Alluvial Deposits	0-Absent
Are Headcuts present	0-Absent
Grade Control	1-Moderate
Natural Valley	1-Moderate
Second or Greater Order Channel	0-No
Subtotal =	5
Hydrology	

Presence of Baseflow	0-Absent
Iron Oxidizing Bacteria	0-Absent
Leaf Litter	1-Weak
Sediment on Plants or Debris	0-Absent
Organic Debris Lines or Piles	0-Absent
Soil-based evidence of high water table	0-No
Subtotal =	1
Biology	
Fibrous Roots in Streambed	2-Weak
Pooted Upland Plants in	2 Weak
Streambed	
Aquatic Macroinvertebrates	0-Absent
Aquatic Mollusks	0-Absent
Fish	0-Absent
Crayfish	0-Absent
Amphibians	0-Absent
Algae	0-Absent
Wetland Plants in Streambed	0-Other
Subtotal =	4
Stream Type Determination	
Total Score	10
Stream Determination	Ephemeral (<19)
Notes	
Notes	

22046: Bright Mountain	Stream Dataform 1
Project	22046: Bright Mountain Solar
ID	224864
Survey Date	04/13/2022
User	Kori Malsegna
Stream ID:	14-ST002
Administrative 1	
Investigator(s)	CM, RMS, JK
Latitude, Longitude	
Latitude	37.2917105
Longitude	-83.29666233
Datum	NAD83/2011
Current Precipitation	None
Precipitation in Past 48 Hours	Rain
Town/County/State	Hazard, Perry County, Kentucky
General Characteristics 1	
NYSDEC Mapped Stream	No
Drainage Ditch	No
Surface Water Depth at Thalweg (Inches)	3
Stream Gradient	Steep (>12%)
Substrate	Boulder, Cobble, Gravel, Sand (Gritty feel)
OHWM width for stream reach (feet)	6
Geomorphology	
Continuity of channel bed and bank	3-Strong
Sinuosity of channel along thalweg	1-Weak
In Channel Structures	2-Moderate
Particle Size of Stream Substrate	2-Moderate
Active/Relic Floodplain	0-Absent
Depositional Bars or Benches	0-Absent
Recent Alluvial Deposits	0-Absent
Are Headcuts present	0-Absent
Grade Control	1.5-Strong
Natural Valley	1.5-Strong
Second or Greater Order Channel	0-No
Subtotal =	11

Hydrology	
Presence of Baseflow	2-Moderate
Iron Oxidizing Bacteria	0-Absent
Leaf Litter	0.5-Moderate
Sediment on Plants or Debris	0-Absent
Organic Debris Lines or Piles	0-Absent
Soil-based evidence of high water table	0-No
Subtotal =	2.5
Biology	
Fibrous Roots in Streambed	0-Strong
Rooted Upland Plants in Streambed	0-Strong
Aquatic Macroinvertebrates	0-Absent
Aquatic Mollusks	0-Absent
Fish	0-Absent
Crayfish	0-Absent
Amphibians	0-Absent
Algae	0-Absent
Wetland Plants in Streambed	0-Other
Subtotal =	0
Stream Type Determination	
Total Score	13.5
Stream Determination	Ephemeral (<19)
Notes	
Notes	14-ST002

22046: Bright Mountain S	Stream Dataform 1
Project	22046: Bright Mountain Solar
ID	298681
Survey Date	04/13/2022
User	Rebecca Steinberg
Stream ID:	14-ST003
Administrative 1	
Investigator(s)	CM, RMS, JK
Latitude, Longitude	
Latitude	37.29211467
Longitude	-83.29607765
Current Precipitation	None
Precipitation in Past 48 Hours	Rain
Town/County/State	Hazard, Perry County, Kentucky
General Characteristics 1	
NYSDEC Mapped Stream	No
Drainage Ditch	No
Surface Water Depth at Thalweg (Inches)	3
Stream Gradient	Steep (>12%)
Substrate	Boulder, Cobble, Gravel, Sand (Gritty feel)
OHWM width for stream reach (feet)	6
Geomorphology	
Continuity of channel bed and bank	3-Strong
Sinuosity of channel along thalweg	1-Weak
In Channel Structures	2-Moderate
Particle Size of Stream Substrate	2-Moderate
Active/Relic Floodplain	0-Absent
Depositional Bars or Benches	0-Absent
Recent Alluvial Deposits	0-Absent
Are Headcuts present	0-Absent
Grade Control	1.5-Strong
Natural Valley	1.5-Strong
Second or Greater Order Channel	0-No
Subtotal =	11
Hydrology	

Presence of Baseflow	2-Moderate
Iron Oxidizing Bacteria	0-Absent
Leaf Litter	0.5-Moderate
Sediment on Plants or Debris	0-Absent
Organic Debris Lines or Piles	0-Absent
Soil-based evidence of high water table	0-No
Subtotal =	2.5
Biology	
Fibrous Roots in Streambed	0-Strong
Rooted Upland Plants in Streambed	0-Strong
Aquatic Macroinvertebrates	0-Absent
Aquatic Mollusks	0-Absent
Fish	0-Absent
Crayfish	0-Absent
Amphibians	0-Absent
Algae	0-Absent
Wetland Plants in Streambed	0-Other
Subtotal =	0
Stream Type Determination	
Total Score	13.5
Stream Determination	Ephemeral (<19)
Notes	
Notes	14-ST003

22046: Bright Mountain S	Stream Dataform 1
Project	22046: Bright Mountain Solar
ID	298683
Survey Date	04/14/2022
User	Rebecca Steinberg
Stream ID:	14-ST004
Administrative 1	
Investigator(s)	CM, RMS, JK
Latitude, Longitude	
Latitude	37.29044471
Longitude	-83.30178141
Current Precipitation	None
Precipitation in Past 48 Hours	Rain
Town/County/State	Hazard, Perry County, Kentucky
General Characteristics 1	
NYSDEC Mapped Stream	No
Drainage Ditch	No
Surface Water Depth at Thalweg (Inches)	0
Stream Gradient	Steep (>12%)
Substrate	Boulder, Cobble, Gravel
OHWM width for stream reach (feet)	5
Geomorphology	
Continuity of channel bed and bank	3-Strong
Sinuosity of channel along thalweg	1-Weak
In Channel Structures	1-Weak
Particle Size of Stream Substrate	1-Weak
Active/Relic Floodplain	0-Absent
Depositional Bars or Benches	0-Absent
Recent Alluvial Deposits	0-Absent
Are Headcuts present	0-Absent
Grade Control	1.5-Strong
Natural Valley	1.5-Strong
Second or Greater Order Channel	0-No
Subtotal =	9
Hydrology	

Presence of Baseflow	0-Absent
Iron Oxidizing Bacteria	0-Absent
Leaf Litter	0.5-Moderate
Sediment on Plants or Debris	0-Absent
Organic Debris Lines or Piles	0-Absent
Soil-based evidence of high water table	0-No
Subtotal =	0.5
Biology	
Fibrous Roots in Streambed	0-Strong
Rooted Upland Plants in Streambed	0-Strong
Aquatic Macroinvertebrates	0-Absent
Aquatic Mollusks	0-Absent
Fish	0-Absent
Crayfish	0-Absent
Amphibians	0-Absent
Algae	0-Absent
Wetland Plants in Streambed	0-Other
Subtotal =	0
Stream Type Determination	
Total Score	9.5
Stream Determination	Ephemeral (<19)
Notes	
Notes	14-ST004

22046: Bright Mountain S	Stream Dataform 1
Project	22046: Bright Mountain Solar
ID	224865
Survey Date	04/14/2022
User	Kori Malsegna
Stream ID:	14-ST005
Administrative 1	
Investigator(s)	JK, RMS, CS
Latitude, Longitude	
Latitude	37.290983
Longitude	-83.296589
Current Precipitation	None
Precipitation in Past 48 Hours	None
Town/County/State	Hazard, Perry County, Kentucky
General Characteristics 1	
NYSDEC Mapped Stream	No
Drainage Ditch	No
Surface Water Depth at Thalweg (Inches)	0
Stream Gradient	Moderate (6-11%)
Substrate	Boulder, Cobble, Gravel
OHWM width for stream reach (feet)	3
Geomorphology	
Continuity of channel bed and bank	3-Strong
Sinuosity of channel along thalweg	2-Moderate
In Channel Structures	2-Moderate
Particle Size of Stream Substrate	3-Strong
Active/Relic Floodplain	0-Absent
Depositional Bars or Benches	0-Absent
Recent Alluvial Deposits	0-Absent
Are Headcuts present	1-Weak
Grade Control	1-Moderate
Natural Valley	0-Absent
Second or Greater Order Channel	0-No
Subtotal =	12
Hydrology	

Presence of Baseflow	3-Strong
Iron Oxidizing Bacteria	0-Absent
Leaf Litter	1-Weak
Sediment on Plants or Debris	1-Moderate
Organic Debris Lines or Piles	1-Moderate
Soil-based evidence of high water table	0-No
Subtotal =	6
Biology	
Fibrous Roots in Streambed	3-Absent
Rooted Upland Plants in	3-Absent
Streambed	
Aquatic Macroinvertebrates	0-Absent
Aquatic Mollusks	0-Absent
Fish	0-Absent
Crayfish	0-Absent
Amphibians	0.5-Weak
Algae	0-Absent
Wetland Plants in Streambed	0-Other
Subtotal =	6.5
Stream Type Determination	
Total Score	24.5
Stream Determination	Intermittent (>19)
Notes	
Notes	

		Print Form	Save A	\s	E-mail	
U.S. Army Corps of Engineers (USACE) RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET The proponent agency is Headquarters USACE CECW-CO-R. OMB Control No. 0710-XXXX Approval Expires:						
Project ID #: 12-ST001 Site Name: Bright Mountain Solar Date and Time: 5/23/23						
Location (lat/long): 37.303091 -83.261344		Investigator(s): RS RF				
Step 1 Site overview from remote and online resources Check boxes for online resources used to evaluate site: gage data LiDAR geologic maps climatic data satellite imagery land use maps Other: aerial photos topographic maps Other: Other: Step 2 Site conditions during field assessment First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. Forest borders stream. Gentle gradient, gravel, sand, silt and clay substrate. Well defined bed and banks. No obstructions or disturbances affecting flow. Step 3 Check the boxes next to the indicators used to identify the location of the OHWM. OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the						
OHWM. Go to page 2 to describe ove	rall rationale for location of OH	WM, write any additional	observations, and	to attach	a photo log.	
	Sediment indicators		Ancillary indicat	tors /presenc	e of	
Break in slope: x on the bank: undercut bank: valley bottom: Other: Other: Shelving: x shelf at top of bank: natural levee: man-made berms or levees: other berms: Channel bar: shelving (berms) on bar: unvegetated: vegetation transition	Soil development Changes in chara Mudcracks: Changes in partic distribution: transition from upper limit of s silt deposits: Vegetation Indicators Change in vegetat and/or density: Check the appropri the general vegetat graminoids to wood the vegetation tra the middle of the d banks, and into th vegetation do	:: le-sized to to and-sized particles ion type X ate boxes and select tion change (e.g., dy shrubs). Describe nsition looking from channel, up the the floodplain.	Organic lit Presence Leaf litter washed av Water stai Weathered Other observed Describe:	disturbe way: ining: d clasts of indicato	wood: d or or bedrock: rs?	
Image: constraint of the constraint	Absent to: de absent to: de absent to: de moss to: forbs to: graminoids to woody shrubs to: deciduous trees to: coniferous trees to: Coniferous trees to: and/or bent: Exposed roots be intact soil layer:	ciduous trees : I down Iow	Step 4 Is addition support this deter Yes If yes, describe a to datasheet:	nal inform rmination Nand attac	ation needed to ? lo h information	

		Print Form	Save As	E-mail	
Project ID #: 12	-ST001				
Step 5 Describe rationale for location of OHWM Break in slope, channel bar and transition in vegetation were the primary indicators used to determine OWHM as there were persistent throughout the entire stream reach.					
Additional obs	ervations or notes				
Attach a photo l	og of the site. Use the table below, or attach separately.				
Photo	log attached? Yes No If no, explain why not:				
Number photo	graphs in the order that they are taken. Attach photograp	hs and inc l ude annota	ations of features.		
Photo Number	Photograph description				

			Print Form	Save As	E-mail
		OHWM Field Identification Datashe	eet Instructions and Field Pr	rocedure	
Step 1	Site overview from rem Online Resources: Iden assess this site. a. gage data	ote and online resources ntify what information is available for e. topographic maps	the site ₋ Check boxes on da	Complete Step 1 pr atasheet next to the res	ior to site visit. ources used to
	 b. aerial photos c. satellite imagery d. LiDAR Landscape context: Us a. Note on the datashe i. Overall land use and ii. Recent extreme event b. Consider the following i. What physical chara ii. Was there a recent iii. How will land use and over the last year, 	f. geologic maps g. land use maps h. climatic data (precipitation and f e the online resources to put the site at under Step 1: d change if known ents if known (e.g., flood, drought, landsl to inform weighting of evidence observed cteristics are likely to be observed in spe flood or drought? Are you expecting to s ffect specific stream characteristics? Ho decade, century?	temperature) in the context of the surrou ides, debris flows, wildfires) ed during field visit. ecific environments? ee recently formed or obscure w natural is the hydrologic rec	i nding landscape. ed indicators? gime? How stab l e has th	e landscape been
Step 2	Site conditions during	the field assessment (assemble evide	ence)		
	 a. Identify the assessme b. Walk up and down the the potential OHWM if c. Note broad trends in a and sediment charact i. Is this a single thr Is this a stream-w ii. Are there any sediment charact iii. Are there obviou iv. Are there man-m natural structures jams) that will information of the structure of the structure. 	nt area. e assessment area noting all ndicators hannel shape, vegetation, eristics ead or multi-thread system? etland complex? condary and/or floodplain channels? s man-made alterations to the system? hade (e.g., bridges, dams, culverts) or s (e.g., bedrock outcrops, Large Wood luence or control flow?	 d. Look for signs of recurring Where does the flow co ii. Are there signs of fluvia bedforms, etc.) at the c e. Look for indicators on bot accessible, then look acro f. In Step 2 of the datashe flow conditions that may i evidence. i. What land use and flow to observe indicators a ii. What recent extreme e site and affected your 	g fluvial action. nverge on the landscape al action (sediment sortin convergence zone? th banks. If the opposite coss the channel at the ba- set describe any adjacen nfluence interpretation of v conditions may be affec- t the site? events may have caused ability to observe indicat	 P: y; bank is not ank. t land use or f each line of cting your ability changes to the cors?
Step 3a	List evidence				
	Assemble evidence by a. If needed, use a sepa	checking the boxes next to each line	of evidence:	an Enrinstance pool d	avalonment may be

- to check boxes next to possible indicators, or check boxes of possible indicators in pencil and use pen for final decision.
- b. If using fillable form, then follow the instructions for filling in the fillable form.

Geomorphic indicators Where are the breaks in slope?	Sediment and soil indicators Where does evidence of	Vegetation Indicators Where are the significant transitions in	Ancillary indicators Is there organic litter		
Are there identifiable banks?	soil formation appear?	vegetation species, density, and age?	present?		
Is there an easily identifiable		Is there vegetation growing on the channel bed?			
top of bank?	Are there mudcracks present?		Is there any leaf litter		
Are the banks actively eroding?		If no, how long does it take for the non-tolerant	disturbed or washed		
Are the banks undercut?	Is there evidence of sediment	vegetation to establish relative to how often flows	away?		
Are the banks armored?	sorting by grain size?				
Is the channel confined by		Where are the significant transitions in	Is there large wood		
the surrounding hillslopes?		vegetation?	deposition?		
Are there natural or man-made		In the upper station to leave at of flowing water 2			
berms and levees?		is the vegetation tolerant of flowing water?	Is there evidence of		
Are there fluvial terraces?		Has any vegetation been flattened by flowing	water staining?		
Are there channel bars?		water?			
	1				
Are the following features of fluvial tr	ansport present?	In some cases, it may be helpful to explain why a	in indicator was NOT at		
Evidence of erosion: obstacle marks, scour, armoring		the OHWM elevation, but found above or below. It can also be useful to			
Bedforms; riffles, pools, steps, knickpoints/headcuts		note if specific indicators (e.g., vegetation) are NOT present. For instance,			
Evidence of deposition: imbricated clasts, gravel sheets, etc.		note if the site has no clear vegetation zonation.			

- Step 3b Weight each line of evidence and weigh body of evidence

Weight each indicator by considering its importance based upon: a. Relevance:

i. Is this indicator left by low, high, or extreme flows?

Tips on how to assess the indicator relative to type of flow:

Consider the elevation of the indicator relative to the channel bed. What is the current flow level based on season or nearby gages? Consider the elevation of the indicator relative to the current flow. If the stream is currently at baseflow and indicator is adjacent to that, relevance, strength, and reliability. then it is likely a low flow indicator. The difference between high and extreme flow indicators can sometimes be difficult to determine.

*Landscape context from Step 1 can help determine the relevance, strength, and reliability of the indicators observed in the field.

Save As

*Information in Chapter 2 of the OHWM field manual provides information on specific indicators which can assist in putting these in context and determining

ii. Did recent extreme events and/or land use affect this indicator?

1. Recent floods may have left many extreme flow indicators, or temporarily altered channel form. Other resources will likely be needed to support any OHWM identification at this site. Field evidence of the OHWM may have to wait for the site to recover from the recent flood.

2. Droughts may cause field evidence of OHWM to be obscured, because there has been an extended time since the last high flow event. There can be overgrowth of vegetation or deposition of material from surrounding landscape that can obscure indicators.

3. Both man-made (e.g., dams, construction, mining activities, urbanization, agriculture, grazing) and natural (e.g., fires, floods, debris flows, beaver dams) disturbances can all alter how indicators are expected to appear at a site. Chapter 6 and Chapter 7 of the OHWM field manual provides specific case-studies that can help in interpreting evidence at these sites.

b. Strength:

- i. Is this indicator persistent across the landscape?
 - 1. Look up and downstream and across the channel to see if you see the same indicator at multiple locations.
- 2. Does the indicator occur at the same elevation as other indicators?

c. Reliability:

- i. Is this indicator persistent on the landscape over time? Will this indicator still persist across seasons?
 - 1. This can be difficult to determine for some indicators and may be specific to climatic region (in terms of persistence of vegetation) and history of and use or other natural disturbances.
- 2. Chapter 2, Chapter 6, and Chapter 7 of the OHWM field manual describes each indicator in detail and provides examples of areas where indicators are difficult to interpret.

d. Weigh body of evidence:

- i. Combine weights: integrate the weighted line of evidence (relevance, strength, reliability) of each indicator.
- ii. For each of the observed indicators, which are more heavily weighted? Where do high value indicators co-occur along the stream reach? Do they co-occur at a similar elevation along the banks relative to water surface (or channel bed if there is no water).
- iii. On datasheet, select the indicators used to identify the OHWM. Information in Chapter 2 of the OHWM field manual provides descriptions of specific indicators which can assist in putting these in context and determining relevance, strength, and relieability.
- e. Take photographs of indicators and attach a log using either page 2 of datasheet or another method of logging photos. i. Annotate photos with descriptions of indicators.

Step 4 Is additional information needed? Are other resources needed to support the lines of evidence observed in the field?

- a. If additional resources are needed, then repeat steps 3a and 3b for the resources selected in Step 1 of assembling, weighting, and weighing evidence collected from online resources. Chapter 5 of the OHWM field manual provides information on using online resources.
- b. Any data collected from online tools have strengths and weaknesses. Make sure these are clear when determining relevance, strength, and reliability of the remotely collected data. Clearly describe why other resources were needed to support the lines of evidence observed in the field, as well as the relevance, strength, and reliability of the supporting data and/or resources.
- c. Attach any remote data and data analysis to the datasheet.

- a. Why do the combination of indicators represent the OHWM?
- b. If there are multiple possibilities for the OHWM, explain why there are two (or more) possibilities. Include any relevant discussion on why specific indicators were not included in the final decision.
- c. If needed, add additional site notes on page 2 of the datasheet under Step 5.

			Print Form		Save As	S	E-mail
U.S. Army Corps of Engineers (USACE) RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET Approval Expires:							
The proponent agency is Headquarters USACE CECW-CO-R.					-		
Project ID #: 12-ST002Site Name: Bright Mountain SolarDate and Time: 5/23/23							
Location (lat/long): 37.287731 -83.237975	Ir	nvesti	gator(s): RS RF				
Step 1 Site overview from remote and online resources Check boxes for online resources used to evaluate site: gage data LiDAR climatic data satellite imagery land use maps Other:					m online resources. s or drought)? rred prior or during the Kentucky and use is forested with road.		
 Step 2 Site conditions during field assessment First look for changes in channel shape, d distribution. Make note of natural or man-r rockfalls etc. Forest borders stream. Perennial streas substrate. Well defined bed and bank 	epositional and erosional fe nade disturbances that wou am with a gentle gra- ts. No obstructions o	atures Id affe dien or dis	s, and changes in ve ect flow and channe t, bolder cobbl turbances affe	egetation I form, su e grave cting f	and sed uch as br el, san low.	liment ty idges, rij d, silt	be, size, density, and brap, landslides, and clay
Step 3 Check the boxes next to the indicators OHWM is at a transition point, therefore OHWM. From the drop-down menu next to `x', or just above `a' the OHWM. OHWM. Go to page 2 to describe overall re	used to identify the location some indicators that are used each indicator, select the a ationale for location of OHW	on of t ed to d approp VM, wr	the OHWM. determine location r riate location of the ite any additional ol	nay be ju indicator oservatio	ust below r by seled ons, and t	and abc cting eith to attach	ive the er just below `b', at a photo log.
Geomorphic indicators	Sediment indicators			Ancillary	indicato	ors	
Break in slope: x	Soil development:			Wr Wr	acking/p	oresence	e of _x
				organic litter: Presence of large wood:			
			SOII . U	Leaf litter disturbed or			
undercut bank:	Mudcracks:	_eizod		washed away:			
valley bottom:	distribution:	Water staining:					
Other:	transition from		to	We	eathered	clasts o	or bedrock:
Shelving: x	upper limit of sar	nd-size	ed particles C	Other ob	served i	ndicator	s?
shelf at top of bank: a	silt deposits:)escribe	•		
	Vegetation Indicators			, coonse	•		
	Change in vegetatio	on type	.				
man-made berms or levees:	and/or density:		x				
berms:	the general vegetatio	ie boxi on cha	nge (e.g.,				
Channel bar: x	graminoids to woody	shrub	s). Describe				
shelving (berms) on bar:	the vegetation trans the middle of the ch	sition hanne	looking from				
unvegetated:	banks, and into the	flood	plain.				
yegetation transition (go to veg. indicators)	wegetation absent to:	iduou	s trees	Step 4 Is	addition	al inform	ation needed to
go to sed. indicators)	moss to:						0
upper limit of deposition	forbs to:						
Instream bedforms and other b	graminoids to:			to datash	escribe a heet:	nd attacr	1 Information
bedload transport evidence: deposition bedload indicators	woody						
(e.g., imbricated clasts,	shrubs to:						
gravel sneets, etc.) bedforms (e.g., poofs,	trees to:						
riffles, steps, etc.):	coniferous trees to:						
(e.g., obstacle marks, scour,	Vegetation matted o	down					
smoothing, etc.) Secondary channels:	Exposed roots belo intact soil layer:	w					

ENG FORM 6250, AUG 2021

PREVIOUS EDITIONS ARE OBSOLETE.

		Print Form	Save As	E-mail			
Project ID #: 12	-ST002						
Step 5 Describe Break in slo as there wer	Step 5 Describe rationale for location of OHWM Break in slope, channel bar and transition in vegetation were the primary indicators used to determine OWHM as there were persistent throughout the entire stream reach.						
Additional obse	ervations or notes						
Attach a photo lo	og of the site. Use the table below, or attach separately.						
List photograp	hs and include descriptions in the table below.						
Photo Number	Photograph description						

			Print Form	Save As	E-mail
		OHWM Field Identification Datashe	eet Instructions and Field Pr	rocedure	
Step 1	Site overview from rem Online Resources: Iden assess this site. a. gage data	ote and online resources ntify what information is available for e. topographic maps	the site ₋ Check boxes on da	Complete Step 1 pr atasheet next to the res	ior to site visit. ources used to
	b. aerial photos f. geologic maps c. satellite imagery g. land use maps d. LiDAR h. climatic data (precipitation and temperature) Landscape context: Use the online resources to put the site in the context of the surrounding landscape. a. Note on the datasheet under Step 1: i. Overall land use and change if known ii. Recent extreme events if known (e.g., flood, drought, landslides, debris flows, wildfires) b. Consider the following to inform weighting of evidence observed during field visit. i. What physical characteristics are likely to be observed in specific environments? ii. How will land use affect specific stream characteristics? How natural is the hydrologic regime? How stable has the landscape been surver the landscape been surver the landscape been				
Step 2	Site conditions during	the field assessment (assemble evide	ence)		
	 a. Identify the assessme b. Walk up and down the the potential OHWM if c. Note broad trends in a and sediment charact i. Is this a single thr Is this a stream-w ii. Are there any sediment charact iii. Are there obviou iv. Are there man-m natural structures jams) that will information of the structure of the structure. 	nt area. e assessment area noting all ndicators hannel shape, vegetation, eristics ead or multi-thread system? etland complex? condary and/or floodplain channels? s man-made alterations to the system? hade (e.g., bridges, dams, culverts) or s (e.g., bedrock outcrops, Large Wood luence or control flow?	 d. Look for signs of recurring Where does the flow co ii. Are there signs of fluvia bedforms, etc.) at the c e. Look for indicators on bot accessible, then look acro f. In Step 2 of the datashe flow conditions that may i evidence. i. What land use and flow to observe indicators a ii. What recent extreme e site and affected your 	g fluvial action. nverge on the landscape al action (sediment sortin convergence zone? th banks. If the opposite coss the channel at the ba- set describe any adjacen nfluence interpretation of v conditions may be affec- t the site? events may have caused ability to observe indicat	 P: y; bank is not ank. t land use or f each line of cting your ability changes to the cors?
Step 3a	List evidence				
	Assemble evidence by a. If needed, use a sepa	checking the boxes next to each line	of evidence:	an Enrinstance pool d	avalonment may be

- to check boxes next to possible indicators, or check boxes of possible indicators in pencil and use pen for final decision.
- b. If using fillable form, then follow the instructions for filling in the fillable form.

Geomorphic indicators Where are the breaks in slope?	Sediment and soil indicators Where does evidence of	Vegetation Indicators Where are the significant transitions in	Ancillary indicators Is there organic litter		
Are there identifiable banks?	soil formation appear?	vegetation species, density, and age?	present?		
Is there an easily identifiable		Is there vegetation growing on the channel bed?			
top of bank?	Are there mudcracks present?		Is there any leaf litter		
Are the banks actively eroding?		If no, how long does it take for the non-tolerant	disturbed or washed		
Are the banks undercut?	Is there evidence of sediment	vegetation to establish relative to how often flows	away?		
Are the banks armored?	sorting by grain size?				
Is the channel confined by		Where are the significant transitions in	Is there large wood		
the surrounding hillslopes?		vegetation?	deposition?		
Are there natural or man-made		In the upper station to leave at of flowing water 2			
berms and levees?		is the vegetation tolerant of flowing water?	Is there evidence of		
Are there fluvial terraces?		Has any vegetation been flattened by flowing	water staining?		
Are there channel bars?		water?			
	1				
Are the following features of fluvial tr	ansport present?	In some cases, it may be helpful to explain why a	in indicator was NOT at		
Evidence of erosion: obstacle marks, scour, armoring		the OHWM elevation, but found above or below. It can also be useful to			
Bedforms; riffles, pools, steps, knickpoints/headcuts		note if specific indicators (e.g., vegetation) are NOT present. For instance,			
Evidence of deposition: imbricated	l clasts, gravel sheets, etc.	note if the site has no clear vegetation zonation.			

- Step 3b Weight each line of evidence and weigh body of evidence

Weight each indicator by considering its importance based upon: a. Relevance:

i. Is this indicator left by low, high, or extreme flows?

Tips on how to assess the indicator relative to type of flow:

Consider the elevation of the indicator relative to the channel bed. What is the current flow level based on season or nearby gages? Consider the elevation of the indicator relative to the current flow. If the stream is currently at baseflow and indicator is adjacent to that, relevance, strength, and reliability. then it is likely a low flow indicator. The difference between high and extreme flow indicators can sometimes be difficult to determine.

*Landscape context from Step 1 can help determine the relevance, strength, and reliability of the indicators observed in the field.

Save As

*Information in Chapter 2 of the OHWM field manual provides information on specific indicators which can assist in putting these in context and determining

ii. Did recent extreme events and/or land use affect this indicator?

1. Recent floods may have left many extreme flow indicators, or temporarily altered channel form. Other resources will likely be needed to support any OHWM identification at this site. Field evidence of the OHWM may have to wait for the site to recover from the recent flood.

2. Droughts may cause field evidence of OHWM to be obscured, because there has been an extended time since the last high flow event. There can be overgrowth of vegetation or deposition of material from surrounding landscape that can obscure indicators.

3. Both man-made (e.g., dams, construction, mining activities, urbanization, agriculture, grazing) and natural (e.g., fires, floods, debris flows, beaver dams) disturbances can all alter how indicators are expected to appear at a site. Chapter 6 and Chapter 7 of the OHWM field manual provides specific case-studies that can help in interpreting evidence at these sites.

b. Strength:

- i. Is this indicator persistent across the landscape?
 - 1. Look up and downstream and across the channel to see if you see the same indicator at multiple locations.
- 2. Does the indicator occur at the same elevation as other indicators?

c. Reliability:

- i. Is this indicator persistent on the landscape over time? Will this indicator still persist across seasons?
 - 1. This can be difficult to determine for some indicators and may be specific to climatic region (in terms of persistence of vegetation) and history of and use or other natural disturbances.
- 2. Chapter 2, Chapter 6, and Chapter 7 of the OHWM field manual describes each indicator in detail and provides examples of areas where indicators are difficult to interpret.

d. Weigh body of evidence:

- i. Combine weights: integrate the weighted line of evidence (relevance, strength, reliability) of each indicator.
- ii. For each of the observed indicators, which are more heavily weighted? Where do high value indicators co-occur along the stream reach? Do they co-occur at a similar elevation along the banks relative to water surface (or channel bed if there is no water).
- iii. On datasheet, select the indicators used to identify the OHWM. Information in Chapter 2 of the OHWM field manual provides descriptions of specific indicators which can assist in putting these in context and determining relevance, strength, and relieability.
- e. Take photographs of indicators and attach a log using either page 2 of datasheet or another method of logging photos. i. Annotate photos with descriptions of indicators.

Step 4 Is additional information needed? Are other resources needed to support the lines of evidence observed in the field?

- a. If additional resources are needed, then repeat steps 3a and 3b for the resources selected in Step 1 of assembling, weighting, and weighing evidence collected from online resources. Chapter 5 of the OHWM field manual provides information on using online resources.
- b. Any data collected from online tools have strengths and weaknesses. Make sure these are clear when determining relevance, strength, and reliability of the remotely collected data. Clearly describe why other resources were needed to support the lines of evidence observed in the field, as well as the relevance, strength, and reliability of the supporting data and/or resources.
- c. Attach any remote data and data analysis to the datasheet.

- a. Why do the combination of indicators represent the OHWM?
- b. If there are multiple possibilities for the OHWM, explain why there are two (or more) possibilities. Include any relevant discussion on why specific indicators were not included in the final decision.
- c. If needed, add additional site notes on page 2 of the datasheet under Step 5.

		Print Form	ı	Save As	E-mail
U.S. Arm RAPID ORDINARY HIGH WATER The proponent ag	y Corps of Engineers (U MARK (OHWM) FIELD ency is Headquarters USACE	SACE) IDENTIFICATIOI CECW-CO-R.	N DATA S	SHEET Approv	ontrol No. 0710-XXXX ral Expires:
Project ID #: 12-ST003	Site Name: Bright Mountair	n Solar	Da	ate and Time: 5/23	/23
Location (lat/long): 37.296607 -83.255938		Investigator(s): JB S	B		
Step 1 Site overview from remote and online Check boxes for online resources used to gage data LiDAR	resources evaluate site:	Describe lar Were there a No signif	nd use and f ny recent ex icant prec	flow conditions fro treme events (flood cipitation even	om online resources. ds or drought)? ats occurred prior
Imatic data Imatic data Imatic data <td>Iand use maps</td> <td colspan="4">Jand use maps or during survey. Stream flows parallel to roadway.</td>	Iand use maps	Jand use maps or during survey. Stream flows parallel to roadway.			
 Step 2 Site conditions during field assessment First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. Forest and road border stream banks. This is an intermittent stream flows north down a Gentle slope. Stream has moderately well defined channel bed and banks. Stream substrate is composed of gravel and silt. This stream flows north before being diverted east through a culvert and drains into First Creek. Step 3 Check the boxes next to the indicators used to identify the location of the OHWM. OHWM is at a transition point, therefore some indicator, select the appropriate location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below `b', at `x', or just above `a' the OHWM. OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log. 					
Geomorphic indicators	Sediment indicators			ry indicators	e of
Break in slope: x on the bank: x undercut bank: valley bottom: Other: Other: shelf at top of bank: natural levee: man-made berms or levees: other berms: Channel bar:	Soil development Changes in chara Mudcracks: Changes in particl distribution: transition from upper limit of sc silt deposits: Vegetation Indicators Change in vegetati and/or density: Check the appropri the general vegetat graminoids to wood the vegetation transition transit	: cter of soil: le-sized to to and-sized particles ion type X ate boxes and select ion change (e.g., dy shrubs). Describe maifing looking from	- Other of Descril	briganic litter: Presence of large Leaf litter disturbe washed away: Water staining: Weathered clasts of bbserved indicator be:	wood: d or or bedrock: rs?
shelving (berms) on bar: unvegetated: vegetation transition (go to veg. indicators) sediment transition (go to sed. indicators) upper limit of deposition on bar: Instream bedforms and other bedload transport evidence: deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.) bedforms (e.g., poofs, riffles, steps, etc.): erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)	the middle of the of banks, and into the banks, and into the absent to: moss to: forbs to: graminoids to graminoids to woody shrubs to: deciduous trees to: coniferous trees to: Vegetation matted and/or bent: Exposed roots bel	channel, up the e floodplain. tbs : : I down x low	Step 4 support If yes, to data	Is additional inform t this determination Yes X h describe and attact asheet:	ation needed to ? lo h information

		Print Form	Save As	E-mail
Project ID #: 12	-ST003			
Step 5 Describe Break in slo persistent th	rationale for location of OHWM pe, transition in vegetation were the primary inc roughout the entire stream reach.	dicators used to de	etermine OWHM	as there were
Additional obse	ervations or notes			
Attach a photo lo Photo	og of the site. Use the table below, or attach separately. log attached?			
List photograp	hs and include descriptions in the table below.			
Number photo	graphs in the order that they are taken. Attach photograpl	ns and include annota	itions of features.	
Number	Photograph description			

			Print Form	Save As	E-mail
		OHWM Field Identification Datashe	eet Instructions and Field Pr	rocedure	
Step 1	Site overview from rem Online Resources: Iden assess this site. a. gage data	ote and online resources ntify what information is available for e. topographic maps	the site ₋ Check boxes on da	Complete Step 1 pr atasheet next to the res	ior to site visit. ources used to
	b. aerial photos f. geologic maps c. satellite imagery g. land use maps d. LiDAR h. climatic data (precipitation and temperature) Landscape context: Use the online resources to put the site in the context of the surrounding landscape. a. Note on the datasheet under Step 1: i. Overall land use and change if known ii. Recent extreme events if known (e.g., flood, drought, landslides, debris flows, wildfires) b. Consider the following to inform weighting of evidence observed during field visit. i. What physical characteristics are likely to be observed in specific environments? ii. How will land use affect specific stream characteristics? How natural is the hydrologic regime? How stable has the landscape been surver the landscape been surver the landscape been				
Step 2	Site conditions during	the field assessment (assemble evide	ence)		
	 a. Identify the assessme b. Walk up and down the the potential OHWM if c. Note broad trends in a and sediment charact i. Is this a single thr Is this a stream-w ii. Are there any sediment charact iii. Are there obviou iv. Are there man-m natural structures jams) that will information of the structure of the structure. 	nt area. e assessment area noting all ndicators hannel shape, vegetation, eristics ead or multi-thread system? etland complex? condary and/or floodplain channels? s man-made alterations to the system? hade (e.g., bridges, dams, culverts) or s (e.g., bedrock outcrops, Large Wood luence or control flow?	 d. Look for signs of recurring Where does the flow co ii. Are there signs of fluvia bedforms, etc.) at the c e. Look for indicators on bot accessible, then look acro f. In Step 2 of the datashe flow conditions that may i evidence. i. What land use and flow to observe indicators a ii. What recent extreme e site and affected your 	g fluvial action. nverge on the landscape al action (sediment sortin convergence zone? th banks. If the opposite coss the channel at the ba- set describe any adjacen nfluence interpretation of v conditions may be affec- t the site? events may have caused ability to observe indicat	 P: y; bank is not ank. t land use or f each line of cting your ability changes to the cors?
Step 3a	List evidence				
	Assemble evidence by a. If needed, use a sepa	checking the boxes next to each line	of evidence:	an Enrinstance pool d	avalonment may be

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Geomorphic indicators Where are the breaks in slope?	Sediment and soil indicators Where does evidence of	Vegetation Indicators Where are the significant transitions in	Ancillary indicators Is there organic litter		
Are there identifiable banks?	soil formation appear?	vegetation species, density, and age?	present?		
Is there an easily identifiable		Is there vegetation growing on the channel bed?			
top of bank?	Are there mudcracks present?		Is there any leaf litter		
Are the banks actively eroding?		If no, how long does it take for the non-tolerant	disturbed or washed		
Are the banks undercut?	Is there evidence of sediment	vegetation to establish relative to how often flows	away?		
Are the banks armored?	sorting by grain size?				
Is the channel confined by		Where are the significant transitions in	Is there large wood		
the surrounding hillslopes?		vegetation?	deposition?		
Are there natural or man-made		In the uppertation to leave at of flowing water 2			
berms and levees?		is the vegetation tolerant of flowing water?	Is there evidence of		
Are there fluvial terraces?		Has any vegetation been flattened by flowing	water staining?		
Are there channel bars?		water?			
	1				
Are the following features of fluvial tr	ansport present?	In some cases, it may be helpful to explain why a	in indicator was NOT at		
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Save As

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- i. Is this indicator persistent on the landscape over time? Will this indicator still persist across seasons?
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- c. Attach any remote data and data analysis to the datasheet.

- a. Why do the combination of indicators represent the OHWM?
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- c. If needed, add additional site notes on page 2 of the datasheet under Step 5.

		Print Form	Save A	١s	E-mail	
U.S. Army RAPID ORDINARY HIGH WATER M. The proponent agen	Corps of Engineers (U ARK (OHWM) FIELD Icy is Headquarters USACE	SACE) IDENTIFICATION	DATA SHEET	OMB Co Approv	ontrol No. 0710-XXXX ral Expires:	
Project ID #: 12-ST004 Si	te Name: Bright Mountair	1 Solar	Date and Ti	me: 5/24	/23	
Location (lat/long): 37.290876 -83.246939		Investigator(s): RS RF				
Step 1 Site overview from remote and online res Check boxes for online resources used to ev	sources raluate site:	Describe land Were there any	use and flow cond recent extreme eve	litions fro	om online resources. Is or drought)?	
gage dataLiDARgeologic mapsNo significant precipitation events occurr or during survey. Stream occurs in foresterclimatic datasatellite imageryland use mapsor during survey. Stream occurs in forester			ts occurred prior in forested area.			
aerial photos X topographic maps	 Other:					
Step 2 Site conditions during field assessment First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. Forest borders stream. Intermittent stream with a steep gradient, cobble gravel, sand, silt and clay substrate. Well defined bed and banks. Stream begins at groundwater discharge site and flows west into wetland.						
 Step 3 Check the boxes next to the indicators used to identify the location of the OHWM. OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below `b', at `x', or just above `a' the OHWM. OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log. 						
Geomorphic indicators	Sediment indicators		Ancillary indicat	tors		
Break in slope: x	Soil development	:	Wracking organic lit	/presence tter:	e of	
\bigcirc on the bank: x	Changes in chara	cter of soil: b	Presence	of large	wood:	
undercut bank:	Mudcracks:	Mudcracks:		Leaf litter disturbed or washed away:		
valley bottom:	distribution:	le-sized	Water sta	ining:		
Other:	transition from	to	Weathere	d clasts o	or bedrock:	
Shelving:	upper limit of s	and-sized particles	Other observed	indicato	rs?	
shelf at top of bank:	silt deposits:		Describe:			
natural levee:	Vegetation Indicators					
man-made berms or levees:	Change in vegetati and/or density:	ion type _X				
other	Check the appropri	ate boxes and select				
Channel bar:	graminoids to wood	lon change (e.g., ly shrubs). Describe				
shelving (berms) on bar:	the vegetation training the middle of the	nsition looking from				
	banks, and into th	e floodplain.				
go to veg. indicators)	vegetation for absent to:	rbs	Step 4 Is addition	nal inform	ation needed to	
sediment transition (go to sed. indicators)	moss to:				? 0	
upper limit of deposition	forbs to:					
Instream bedforms and other b	graminoids to	:	to datasheet:	and attac	h information	
bedload transport evidence:	woody					
(e.g., imbricated clasts,	shrubs to:					
bedforms (e.g., poofs,	trees to:					
erosional bedload indicators	coniterous trees to:					
(e.g., obstacle marks, scour,	Vegetation matted	l down				
Secondary channels:	Exposed roots be intact soil layer:	low				

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		Print Form	Save As	E-mail
Project ID #: 12	-ST004			
Step 5 Describe Break in slo persistent th	rationale for location of OHWM pe, transition in vegetation were the primary inc roughout the entire stream reach.	dicators used to de	etermine OWHM	as there were
Additional obse	ervations or notes			
Attach a photo	og of the site. Use the table below, or attach separately.			
Photo	log attached? Yes No If no, explain why not:			
List photograp Number photo	hs and include descriptions in the table below. graphs in the order that they are taken. Attach photograpl	ns and inc l ude annota	ations of features.	
Photo Number	Photograph description			

			Print Form	Save As	E-mail
		OHWM Field Identification Datashe	eet Instructions and Field Pr	rocedure	
Step 1	Site overview from rem Online Resources: Iden assess this site. a. gage data	ote and online resources ntify what information is available for e. topographic maps	the site ₋ Check boxes on da	Complete Step 1 pr atasheet next to the res	ior to site visit. ources used to
	b. aerial photos f. geologic maps c. satellite imagery g. land use maps d. LiDAR h. climatic data (precipitation and temperature) Landscape context: Use the online resources to put the site in the context of the surrounding landscape. a. Note on the datasheet under Step 1: i. Overall land use and change if known ii. Recent extreme events if known (e.g., flood, drought, landslides, debris flows, wildfires) b. Consider the following to inform weighting of evidence observed during field visit. i. What physical characteristics are likely to be observed in specific environments? ii. How will land use affect specific stream characteristics? How natural is the hydrologic regime? How stable has the landscape been surver the landscape been surver the landscape been				
Step 2	Site conditions during	the field assessment (assemble evide	ence)		
	 a. Identify the assessme b. Walk up and down the the potential OHWM if c. Note broad trends in a and sediment charact i. Is this a single thr Is this a stream-wii. Are there any sediment charact iii. Are there obviou iv. Are there man-matural structures jams) that will information of the structure of the structure. 	nt area. e assessment area noting all ndicators hannel shape, vegetation, eristics ead or multi-thread system? etland complex? condary and/or floodplain channels? s man-made alterations to the system? hade (e.g., bridges, dams, culverts) or s (e.g., bedrock outcrops, Large Wood luence or control flow?	 d. Look for signs of recurring Where does the flow co ii. Are there signs of fluvia bedforms, etc.) at the c e. Look for indicators on bot accessible, then look acro f. In Step 2 of the datashe flow conditions that may i evidence. i. What land use and flow to observe indicators a ii. What recent extreme e site and affected your 	g fluvial action. nverge on the landscape al action (sediment sortin convergence zone? th banks. If the opposite coss the channel at the ba- set describe any adjacen nfluence interpretation of v conditions may be affec- t the site? events may have caused ability to observe indicat	 P: y; bank is not ank. t land use or f each line of cting your ability changes to the cors?
Step 3a	List evidence				
	Assemble evidence by a. If needed, use a sepa	checking the boxes next to each line	of evidence:	an Enrinstance pool d	avalonment may be

- to check boxes next to possible indicators, or check boxes of possible indicators in pencil and use pen for final decision.
- b. If using fillable form, then follow the instructions for filling in the fillable form.

Geomorphic indicators Where are the breaks in slope?	Sediment and soil indicators Where does evidence of	Vegetation Indicators Where are the significant transitions in	Ancillary indicators Is there organic litter		
Are there identifiable banks?	soil formation appear?	vegetation species, density, and age?	present?		
Is there an easily identifiable		Is there vegetation growing on the channel bed?			
top of bank?	Are there mudcracks present?		Is there any leaf litter		
Are the banks actively eroding?		If no, how long does it take for the non-tolerant	disturbed or washed		
Are the banks undercut?	Is there evidence of sediment	vegetation to establish relative to how often flows	away?		
Are the banks armored?	sorting by grain size?				
Is the channel confined by		Where are the significant transitions in	Is there large wood		
the surrounding hillslopes?		vegetation?	deposition?		
Are there natural or man-made		In the upper station to leave at of flowing water 2			
berms and levees?		is the vegetation tolerant of flowing water?	Is there evidence of		
Are there fluvial terraces?		Has any vegetation been flattened by flowing	water staining?		
Are there channel bars?		water?			
	1				
Are the following features of fluvial tr	ansport present?	In some cases, it may be helpful to explain why a	in indicator was NOT at		
Evidence of erosion: obstacle marks, scour, armoring		the OHWM elevation, but found above or below. It can also be useful to			
Bedforms; riffles, pools, steps, knickpoints/headcuts		note if specific indicators (e.g., vegetation) are NOT present. For instance,			
Evidence of deposition: imbricated	l clasts, gravel sheets, etc.	note if the site has no clear vegetation zonation.			

- Step 3b Weight each line of evidence and weigh body of evidence

Weight each indicator by considering its importance based upon: a. Relevance:

i. Is this indicator left by low, high, or extreme flows?

Tips on how to assess the indicator relative to type of flow:

Consider the elevation of the indicator relative to the channel bed. What is the current flow level based on season or nearby gages? Consider the elevation of the indicator relative to the current flow. If the stream is currently at baseflow and indicator is adjacent to that, relevance, strength, and reliability. then it is likely a low flow indicator. The difference between high and extreme flow indicators can sometimes be difficult to determine.

*Landscape context from Step 1 can help determine the relevance, strength, and reliability of the indicators observed in the field.

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*Information in Chapter 2 of the OHWM field manual provides information on specific indicators which can assist in putting these in context and determining

ii. Did recent extreme events and/or land use affect this indicator?

1. Recent floods may have left many extreme flow indicators, or temporarily altered channel form. Other resources will likely be needed to support any OHWM identification at this site. Field evidence of the OHWM may have to wait for the site to recover from the recent flood.

2. Droughts may cause field evidence of OHWM to be obscured, because there has been an extended time since the last high flow event. There can be overgrowth of vegetation or deposition of material from surrounding landscape that can obscure indicators.

3. Both man-made (e.g., dams, construction, mining activities, urbanization, agriculture, grazing) and natural (e.g., fires, floods, debris flows, beaver dams) disturbances can all alter how indicators are expected to appear at a site. Chapter 6 and Chapter 7 of the OHWM field manual provides specific case-studies that can help in interpreting evidence at these sites.

b. Strength:

- i. Is this indicator persistent across the landscape?
 - 1. Look up and downstream and across the channel to see if you see the same indicator at multiple locations.
- 2. Does the indicator occur at the same elevation as other indicators?

c. Reliability:

- i. Is this indicator persistent on the landscape over time? Will this indicator still persist across seasons?
 - 1. This can be difficult to determine for some indicators and may be specific to climatic region (in terms of persistence of vegetation) and history of and use or other natural disturbances.
- 2. Chapter 2, Chapter 6, and Chapter 7 of the OHWM field manual describes each indicator in detail and provides examples of areas where indicators are difficult to interpret.

d. Weigh body of evidence:

- i. Combine weights: integrate the weighted line of evidence (relevance, strength, reliability) of each indicator.
- ii. For each of the observed indicators, which are more heavily weighted? Where do high value indicators co-occur along the stream reach? Do they co-occur at a similar elevation along the banks relative to water surface (or channel bed if there is no water).
- iii. On datasheet, select the indicators used to identify the OHWM. Information in Chapter 2 of the OHWM field manual provides descriptions of specific indicators which can assist in putting these in context and determining relevance, strength, and relieability.
- e. Take photographs of indicators and attach a log using either page 2 of datasheet or another method of logging photos. i. Annotate photos with descriptions of indicators.

Step 4 Is additional information needed? Are other resources needed to support the lines of evidence observed in the field?

- a. If additional resources are needed, then repeat steps 3a and 3b for the resources selected in Step 1 of assembling, weighting, and weighing evidence collected from online resources. Chapter 5 of the OHWM field manual provides information on using online resources.
- b. Any data collected from online tools have strengths and weaknesses. Make sure these are clear when determining relevance, strength, and reliability of the remotely collected data. Clearly describe why other resources were needed to support the lines of evidence observed in the field, as well as the relevance, strength, and reliability of the supporting data and/or resources.
- c. Attach any remote data and data analysis to the datasheet.

- a. Why do the combination of indicators represent the OHWM?
- b. If there are multiple possibilities for the OHWM, explain why there are two (or more) possibilities. Include any relevant discussion on why specific indicators were not included in the final decision.
- c. If needed, add additional site notes on page 2 of the datasheet under Step 5.

		Print Form	Save A	ıs	E-mail
U.S. Army Co RAPID ORDINARY HIGH WATER MA The proponent agency	orps of Engineers (US RK (OHWM) FIELD I / is Headquarters USACE	SACE) IDENTIFICATION E CECW-CO-R.	DATA SHEET	OMB Co Approv	ontrol No. 0710-XXXX ral Expires:
Project ID #: 66-ST001 Site	Name: Bright Mountain	n Solar	Date and Tir	me: 5/23,	/23
Location (lat/long): 37.296607 -83.255938		Investigator(s): JB SB			
Step 1 Site overview from remote and online resources Check boxes for online resources used to eval gage data LiDAR Climatic data satellite imagery	urces uate site: geologic maps	Describe land u Were there any No significa or during su	use and flow cond recent extreme eve ant precipitatio rvey. Occurs i	itions fro ents (flooc on even in fores	be online resources. Is or drought)? Its occurred prior sted area on
aerial photos 🔀 topographic maps	Other:				
Step 2 Site conditions during field assessment First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. Forest borders stream banks. This is an intermittent stream flows south down a steep slope. Stream has moderately well defined channel bed and banks. Stream substrate is composed of bolder cobble gravel and silt. No disturbances or man made features disrupt flow regime.					
 Step 3 Check the boxes next to the indicators used to identify the location of the OHWM. OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below `b', at `x', or just above `a' the OHWM. OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log. 					
Geomorphic indicators	Sediment indicators		Ancillary indicat	ors	
Break in slope: x on the bank: x undercut bank: valley bottom: b Other: Other: shelf at top of bank: natural levee: man-made berms or levees: other berms: Channel bar: shelving (berms) on bar: unvegetated:	Soil development: Changes in charae Mudcracks: Changes in particl distribution: transition from upper limit of se silt deposits: Vegetation Indicators Change in vegetati and/or density: Check the appropria the general vegetati graminoids to wood the vegetation tran the middle of the of banks, and into the	to e-sized to and-sized particles to and-sized particles to type ate boxes and select ion change (e.g., ly shrubs). Describe insition looking from channel, up the e floodplain.	Wracking/ organic lit Presence Leaf litter washed av Water stai Weathered Other observed	presence ter: of large v disturbe way: ining: d clasts o indicator	e of _X wood: d or _b or bedrock: rs?
vegetation transition (go to veg. indicators) sediment transition (go to sed. indicators) upper limit of deposition on bar: Instream bedforms and other bedload transport evidence: deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.) bedforms (e.g., poofs, riffles, steps, etc.): erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.) Secondary channels:	vegetation absent to: moss to: forbs to: graminoids to: woody shrubs to: deciduous trees to: coniferous trees to: Vegetation matted and/or bent: Exposed roots bel intact soil layer:	ciduous trees : down low	Step 4 Is addition support this deter Yes If yes, describe a to datasheet:	nal inform. mination (N n nd attac	ation needed to ? lo h information

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		Print Form	Save As	E-mail
Project ID #: 66	-ST001			
Step 5 Describe Break in slo persistent th	rationale for location of OHWM pe, transition in vegetation were the primary industry industr	dicators used to de	etermine OWHM	as there were
Additional obse	ervations or notes		-	
Attach a photo lo	og of the site. Use the table below, or attach separately.			
	log attached? Yes No If no, explain why not:			
Number photo	graphs in the order that they are taken. Attach photograph	hs and include annota	ations of features.	
Photo Number	Photograph description			

			Print Form	Save As	E-mail
		OHWM Field Identification Datashe	eet Instructions and Field Pr	rocedure	
Step 1	Site overview from rem Online Resources: Iden assess this site. a. gage data	ote and online resources ntify what information is available for e. topographic maps	the site ₋ Check boxes on da	Complete Step 1 pr atasheet next to the res	ior to site visit. ources used to
	 b. aerial photos f. geologic maps c. satellite imagery g. land use maps d. LiDAR h. climatic data (precipitation and temperature) Landscape context: Use the online resources to put the site in the context of the surrounding landscape. a. Note on the datasheet under Step 1: i. Overall land use and change if known ii. Recent extreme events if known (e.g., flood, drought, landslides, debris flows, wildfires) b. Consider the following to inform weighting of evidence observed during field visit. i. What physical characteristics are likely to be observed in specific environments? ii. Was there a recent flood or drought? Are you expecting to see recently formed or obscured indicators? iii. How will land use affect specific stream characteristics? How natural is the hydrologic regime? How stable has the landscape been 				
Step 2	Site conditions during	the field assessment (assemble evide	ence)		
	 a. Identify the assessme b. Walk up and down the the potential OHWM if c. Note broad trends in a and sediment charact i. Is this a single thr Is this a stream-wii. Are there any sediment charact iii. Are there obviou iv. Are there man-matural structures jams) that will information of the structure of the structure. 	nt area. e assessment area noting all ndicators hannel shape, vegetation, eristics ead or multi-thread system? etland complex? condary and/or floodplain channels? s man-made alterations to the system? hade (e.g., bridges, dams, culverts) or s (e.g., bedrock outcrops, Large Wood luence or control flow?	 d. Look for signs of recurring Where does the flow co ii. Are there signs of fluvia bedforms, etc.) at the c e. Look for indicators on bot accessible, then look acro f. In Step 2 of the datashe flow conditions that may i evidence. i. What land use and flow to observe indicators a ii. What recent extreme e site and affected your 	g fluvial action. nverge on the landscape al action (sediment sortin convergence zone? th banks. If the opposite coss the channel at the ba- set describe any adjacen nfluence interpretation of v conditions may be affec- t the site? events may have caused ability to observe indicat	 P: y; bank is not ank. t land use or f each line of cting your ability changes to the cors?
Step 3a	List evidence				
	Assemble evidence by a. If needed, use a sepa	checking the boxes next to each line	of evidence:	an Enrinstance pool d	avalonment may be

- to check boxes next to possible indicators, or check boxes of possible indicators in pencil and use pen for final decision.
- b. If using fillable form, then follow the instructions for filling in the fillable form.

Geomorphic indicators Where are the breaks in slope?	Sediment and soil indicators Where does evidence of	Vegetation Indicators Where are the significant transitions in	Ancillary indicators Is there organic litter		
Are there identifiable banks?	soil formation appear?	vegetation species, density, and age?	present?		
Is there an easily identifiable		Is there vegetation growing on the channel bed?			
top of bank?	Are there mudcracks present?		Is there any leaf litter		
Are the banks actively eroding?		If no, how long does it take for the non-tolerant	disturbed or washed		
Are the banks undercut?	Is there evidence of sediment	vegetation to establish relative to how often flows	away?		
Are the banks armored?	sorting by grain size?				
Is the channel confined by		Where are the significant transitions in	Is there large wood		
the surrounding hillslopes?		vegetation?	deposition?		
Are there natural or man-made		In the uppertation to leave at of flowing water 2			
berms and levees?		is the vegetation tolerant of flowing water?	Is there evidence of		
Are there fluvial terraces?		Has any vegetation been flattened by flowing	water staining?		
Are there channel bars?		water?			
	1				
Are the following features of fluvial tr	ansport present?	In some cases, it may be helpful to explain why a	in indicator was NOT at		
Evidence of erosion: obstacle marks, scour, armoring		the OHWM elevation, but found above or below. It can also be useful to note if specific indicators (e.g., vegetation) are NOT present. For instance,			
Bedforms; riffles, pools, steps, knickpoints/headcuts					
Evidence of deposition: imbricated	l clasts, gravel sheets, etc.	note if the site has no clear vegetation zonation.			

- Step 3b Weight each line of evidence and weigh body of evidence

Weight each indicator by considering its importance based upon: a. Relevance:

i. Is this indicator left by low, high, or extreme flows?

Tips on how to assess the indicator relative to type of flow:

Consider the elevation of the indicator relative to the channel bed. What is the current flow level based on season or nearby gages? Consider the elevation of the indicator relative to the current flow. If the stream is currently at baseflow and indicator is adjacent to that, relevance, strength, and reliability. then it is likely a low flow indicator. The difference between high and extreme flow indicators can sometimes be difficult to determine.

*Landscape context from Step 1 can help determine the relevance, strength, and reliability of the indicators observed in the field.

Save As

*Information in Chapter 2 of the OHWM field manual provides information on specific indicators which can assist in putting these in context and determining

ii. Did recent extreme events and/or land use affect this indicator?

1. Recent floods may have left many extreme flow indicators, or temporarily altered channel form. Other resources will likely be needed to support any OHWM identification at this site. Field evidence of the OHWM may have to wait for the site to recover from the recent flood.

2. Droughts may cause field evidence of OHWM to be obscured, because there has been an extended time since the last high flow event. There can be overgrowth of vegetation or deposition of material from surrounding landscape that can obscure indicators.

3. Both man-made (e.g., dams, construction, mining activities, urbanization, agriculture, grazing) and natural (e.g., fires, floods, debris flows, beaver dams) disturbances can all alter how indicators are expected to appear at a site. Chapter 6 and Chapter 7 of the OHWM field manual provides specific case-studies that can help in interpreting evidence at these sites.

b. Strength:

- i. Is this indicator persistent across the landscape?
 - 1. Look up and downstream and across the channel to see if you see the same indicator at multiple locations.
- 2. Does the indicator occur at the same elevation as other indicators?

c. Reliability:

- i. Is this indicator persistent on the landscape over time? Will this indicator still persist across seasons?
 - 1. This can be difficult to determine for some indicators and may be specific to climatic region (in terms of persistence of vegetation) and history of and use or other natural disturbances.
- 2. Chapter 2, Chapter 6, and Chapter 7 of the OHWM field manual describes each indicator in detail and provides examples of areas where indicators are difficult to interpret.

d. Weigh body of evidence:

- i. Combine weights: integrate the weighted line of evidence (relevance, strength, reliability) of each indicator.
- ii. For each of the observed indicators, which are more heavily weighted? Where do high value indicators co-occur along the stream reach? Do they co-occur at a similar elevation along the banks relative to water surface (or channel bed if there is no water).
- iii. On datasheet, select the indicators used to identify the OHWM. Information in Chapter 2 of the OHWM field manual provides descriptions of specific indicators which can assist in putting these in context and determining relevance, strength, and relieability.
- e. Take photographs of indicators and attach a log using either page 2 of datasheet or another method of logging photos. i. Annotate photos with descriptions of indicators.

Step 4 Is additional information needed? Are other resources needed to support the lines of evidence observed in the field?

- a. If additional resources are needed, then repeat steps 3a and 3b for the resources selected in Step 1 of assembling, weighting, and weighing evidence collected from online resources. Chapter 5 of the OHWM field manual provides information on using online resources.
- b. Any data collected from online tools have strengths and weaknesses. Make sure these are clear when determining relevance, strength, and reliability of the remotely collected data. Clearly describe why other resources were needed to support the lines of evidence observed in the field, as well as the relevance, strength, and reliability of the supporting data and/or resources.
- c. Attach any remote data and data analysis to the datasheet.

- a. Why do the combination of indicators represent the OHWM?
- b. If there are multiple possibilities for the OHWM, explain why there are two (or more) possibilities. Include any relevant discussion on why specific indicators were not included in the final decision.
- c. If needed, add additional site notes on page 2 of the datasheet under Step 5.

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U.S. Army Corps of Engineers (USACE) OMB Control No. 0710-XXXX RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET The proponent agency is Headquarters USACE CECW-CO-R. OMB Control No. 0710-XXXX Approval Expires:						
Project ID #: 66-ST002	te Name: Bright Mountair	n Solar	Date	e and Time: 5/23/	23	
Location (lat/long): 37.295199 -83.254415		Investigator(s): JB SB				
Step 1 Site overview from remote and online res Check boxes for online resources used to ev gage data LiDAR climatic data satellite imagery aerial photos topographic maps	sources aluate site: geologic maps land use maps Other:	Describe land use and flow conditions from online Were there any recent extreme events (floods or droug No significant precipitation events occurr or during survey. This stream reach is a p Kentucky mapped stream Lower Second		m online resources. s or drought)? s occurred prior ch is a portion of Second Creek		
 Step 2 Site conditions during field assessment First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. This stream is bordered by forest This is an perennial stream flows west down a gentle slope. Stream has well defined channel bed and banks. Stream substrate is composed of bolder cobble gravel sand and silt. No Man made disturbances occur within the mapped reach of stream. Step 3 Check the boxes next to the indicators used to identify the location of the OHWM. OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below `b', at `x', or just above `a' the OHWM. 						
Geomorphic indicators	Sediment indicators		Ancillary	/ indicators		
Break in slope: x on the bank: x undercut bank: x valley bottom: b Other: Other: shelf at top of bank: natural levee: man-made berms or levees: other berms: Channel bar: x shelving (berms) on bar: unvegetated: vecetation transition	Soil development Soil development Changes in chara Mudcracks: Changes in particl distribution: transition from upper limit of sa silt deposits: Vegetation Indicators Change in vegetati and/or density: Check the appropriate the general vegetati graminoids to wood the vegetation transitien the middle of the of banks, and into th vegetation 1,	: x cter of soil: a le-sized to and-sized particles ion type x ate boxes and select ion change (e.g., hy shrubs). Describe nsition looking from channel, up the e floodplain.	Wir Org Pro Wa Wa Other ob	racking/presence ganic litter: esence of large v eaf litter disturbed ashed away: ater staining: eathered clasts o oserved indicator	e of _X vood: d or r bedrock: s?	
Instream bedforms and other bedload transport evidence: deposition bedload indicators gravel sheets, etc.) bedforms (e.g., poofs, briffles, steps, etc.): erosional bedload indicators (e.g., obstacle marks, scour, briffles, etc.) Secondary channels:	 Vogetation der absent to: der absent to: der absent to: der moss to: forbs to: graminoids to woody shrubs to: deciduous trees to: coniferous trees to: Vegetation matted and/or bent: Exposed roots bel intact soil layer: 	: : I down _X	Step 4 Is support the If yes, de to datast	additional information?	ation needed to o n information	

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		Print Form	Save As	E-mail	
Project ID #: 66	-ST002				
Step 5 Describe rationale for location of OHWM Break in slope, soil development and transition in vegetation were the primary indicators used to determine OWHM as there were persistent throughout the entire stream reach.					
Additional obse	ervations or notes				
Attach a photo k	og of the site. Use the table below, or attach separately				
Photo	log attached? Yes No If no, explain why not:				
List photograp	hs and include descriptions in the table below.	_			
Number photo	graphs in the order that they are taken. Attach photograp	ns and inc l ude annota	ations of features.		
Photo Number	Photograph description				

			Print Form	Save As	E-mail
		OHWM Field Identification Datashe	eet Instructions and Field Pr	rocedure	
Step 1	Site overview from rem Online Resources: Iden assess this site. a. gage data	ote and online resources ntify what information is available for e. topographic maps	the site ₋ Check boxes on da	Complete Step 1 pr atasheet next to the res	ior to site visit. ources used to
	 b. aerial photos f. geologic maps c. satellite imagery g. land use maps d. LiDAR h. climatic data (precipitation and temperature) Landscape context: Use the online resources to put the site in the context of the surrounding landscape. a. Note on the datasheet under Step 1: i. Overall land use and change if known ii. Recent extreme events if known (e.g., flood, drought, landslides, debris flows, wildfires) b. Consider the following to inform weighting of evidence observed during field visit. i. What physical characteristics are likely to be observed in specific environments? ii. Was there a recent flood or drought? Are you expecting to see recently formed or obscured indicators? iii. How will land use affect specific stream characteristics? How natural is the hydrologic regime? How stable has the landscape been 				
Step 2	Site conditions during	the field assessment (assemble evide	ence)		
	 a. Identify the assessme b. Walk up and down the the potential OHWM if c. Note broad trends in a and sediment charact i. Is this a single thr Is this a stream-w ii. Are there any sediment charact iii. Are there obviou iv. Are there man-m natural structures jams) that will information of the structure of the structure. 	nt area. e assessment area noting all ndicators hannel shape, vegetation, eristics ead or multi-thread system? etland complex? condary and/or floodplain channels? s man-made alterations to the system? hade (e.g., bridges, dams, culverts) or s (e.g., bedrock outcrops, Large Wood luence or control flow?	 d. Look for signs of recurring Where does the flow co ii. Are there signs of fluvia bedforms, etc.) at the c e. Look for indicators on bot accessible, then look acro f. In Step 2 of the datashe flow conditions that may i evidence. i. What land use and flow to observe indicators a ii. What recent extreme e site and affected your 	g fluvial action. nverge on the landscape al action (sediment sortin convergence zone? th banks. If the opposite coss the channel at the ba- set describe any adjacen nfluence interpretation of v conditions may be affec- t the site? events may have caused ability to observe indicat	 bank is not ank use or f each line of cting your ability changes to the
Step 3a	List evidence				
	Assemble evidence by a. If needed, use a sepa	checking the boxes next to each line	of evidence:	an Enrinstance pool d	avalonment may be

- to check boxes next to possible indicators, or check boxes of possible indicators in pencil and use pen for final decision.
- b. If using fillable form, then follow the instructions for filling in the fillable form.

Geomorphic indicators Where are the breaks in slope?	Sediment and soil indicators Where does evidence of	Vegetation Indicators Where are the significant transitions in	Ancillary indicators Is there organic litter		
Are there identifiable banks?	soil formation appear?	vegetation species, density, and age?	present?		
Is there an easily identifiable		Is there vegetation growing on the channel bed?			
top of bank?	Are there mudcracks present?		Is there any leaf litter		
Are the banks actively eroding?		If no, how long does it take for the non-tolerant	disturbed or washed		
Are the banks undercut?	Is there evidence of sediment	vegetation to establish relative to how often flows	away?		
Are the banks armored?	sorting by grain size?				
Is the channel confined by		Where are the significant transitions in	Is there large wood		
the surrounding hillslopes?		vegetation?	deposition?		
Are there natural or man-made		In the uppertation to leave at of flowing water 2			
berms and levees?		is the vegetation tolerant of flowing water?	Is there evidence of		
Are there fluvial terraces?		Has any vegetation been flattened by flowing	water staining?		
Are there channel bars?		water?			
	1				
Are the following features of fluvial tr	ansport present?	In some cases, it may be helpful to explain why a	in indicator was NOT at		
Evidence of erosion: obstacle marks, scour, armoring		the OHWM elevation, but found above or below. It can also be useful to note if specific indicators (e.g., vegetation) are NOT present. For instance,			
Bedforms; riffles, pools, steps, knickpoints/headcuts					
Evidence of deposition: imbricated	l clasts, gravel sheets, etc.	note if the site has no clear vegetation zonation.			

- Step 3b Weight each line of evidence and weigh body of evidence

Weight each indicator by considering its importance based upon: a. Relevance:

i. Is this indicator left by low, high, or extreme flows?

Tips on how to assess the indicator relative to type of flow:

Consider the elevation of the indicator relative to the channel bed. What is the current flow level based on season or nearby gages? Consider the elevation of the indicator relative to the current flow. If the stream is currently at baseflow and indicator is adjacent to that, relevance, strength, and reliability. then it is likely a low flow indicator. The difference between high and extreme flow indicators can sometimes be difficult to determine.

*Landscape context from Step 1 can help determine the relevance, strength, and reliability of the indicators observed in the field.

Save As

*Information in Chapter 2 of the OHWM field manual provides information on specific indicators which can assist in putting these in context and determining

ii. Did recent extreme events and/or land use affect this indicator?

1. Recent floods may have left many extreme flow indicators, or temporarily altered channel form. Other resources will likely be needed to support any OHWM identification at this site. Field evidence of the OHWM may have to wait for the site to recover from the recent flood.

2. Droughts may cause field evidence of OHWM to be obscured, because there has been an extended time since the last high flow event. There can be overgrowth of vegetation or deposition of material from surrounding landscape that can obscure indicators.

3. Both man-made (e.g., dams, construction, mining activities, urbanization, agriculture, grazing) and natural (e.g., fires, floods, debris flows, beaver dams) disturbances can all alter how indicators are expected to appear at a site. Chapter 6 and Chapter 7 of the OHWM field manual provides specific case-studies that can help in interpreting evidence at these sites.

b. Strength:

- i. Is this indicator persistent across the landscape?
 - 1. Look up and downstream and across the channel to see if you see the same indicator at multiple locations.
- 2. Does the indicator occur at the same elevation as other indicators?

c. Reliability:

- i. Is this indicator persistent on the landscape over time? Will this indicator still persist across seasons?
 - 1. This can be difficult to determine for some indicators and may be specific to climatic region (in terms of persistence of vegetation) and history of and use or other natural disturbances.
- 2. Chapter 2, Chapter 6, and Chapter 7 of the OHWM field manual describes each indicator in detail and provides examples of areas where indicators are difficult to interpret.

d. Weigh body of evidence:

- i. Combine weights: integrate the weighted line of evidence (relevance, strength, reliability) of each indicator.
- ii. For each of the observed indicators, which are more heavily weighted? Where do high value indicators co-occur along the stream reach? Do they co-occur at a similar elevation along the banks relative to water surface (or channel bed if there is no water).
- iii. On datasheet, select the indicators used to identify the OHWM. Information in Chapter 2 of the OHWM field manual provides descriptions of specific indicators which can assist in putting these in context and determining relevance, strength, and relieability.
- e. Take photographs of indicators and attach a log using either page 2 of datasheet or another method of logging photos. i. Annotate photos with descriptions of indicators.

Step 4 Is additional information needed? Are other resources needed to support the lines of evidence observed in the field?

- a. If additional resources are needed, then repeat steps 3a and 3b for the resources selected in Step 1 of assembling, weighting, and weighing evidence collected from online resources. Chapter 5 of the OHWM field manual provides information on using online resources.
- b. Any data collected from online tools have strengths and weaknesses. Make sure these are clear when determining relevance, strength, and reliability of the remotely collected data. Clearly describe why other resources were needed to support the lines of evidence observed in the field, as well as the relevance, strength, and reliability of the supporting data and/or resources.
- c. Attach any remote data and data analysis to the datasheet.

- a. Why do the combination of indicators represent the OHWM?
- b. If there are multiple possibilities for the OHWM, explain why there are two (or more) possibilities. Include any relevant discussion on why specific indicators were not included in the final decision.
- c. If needed, add additional site notes on page 2 of the datasheet under Step 5.

			Print Form	Save A	s	E-mail
U.S. Army Corps of Engineers (USACE) OMB Control No. 0710-XXXX RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET The proponent agency is Headquarters USACE CECW-CO-R. OMB Control No. 0710-XXXX						
Project ID #: 66-ST003	Site Name: Bright Mountain	n Solar		Date and Ti	me: 5/24/	/23
Location (lat/long): 37.294619 -83.253758		Investig	ator(s): JB SB	I		
Step 1 Site overview from remote and online resources Check boxes for online resources used to evaluate site: gage data LiDAR climatic data satellite imagery land use maps other:			m online resources. Is or drought)? ts occurred prior bordered by			
 Step 2 Site conditions during field assessment First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. This is an intermittent stream that begins at the outlet to a hill seep. It flows north northwest down a steep gradient and terminates at the confluence of another intermittent stream. This stream has well defined channel bed and banks. The stream bed is composed of cobble, gravel and and silt. Step 3 Check the boxes next to the indicators used to identify the location of the OHWM. OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below `b', at `x', or just above `a' the OHWM. OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.						
	Soil development	• v		Wracking	presence	e of
Instant in Gloper A Image: Shelving: Image: Shelf at top of bank:	Changes in chara Changes in chara Mudcracks: Changes in partic distribution: transition from upper limit of s silt deposits:	Icter of s	soil: a to d particles	organic lift Presence Leaf litter washed av Water stail Weathered Other observed Describe:	iter: of large v disturbed way: ining: x d clasts c indicator	wood: d or or bedrock: 's?
natural levee: Vegetation Indicators man-made berms or levees: Change in vegetation type and/or density: other Check the appropriate boxes and select the general vegetation change (e.g., graminoids to woody shrubs). Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain.						
vegetation transition (go to veg. indicators) sediment transition (go to sed. indicators) upper limit of deposition on bar: Instream bedforms and other bedload transport evidence: deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.) bedforms (e.g., poofs, b riffles, steps, etc.): erosional bedload indicators (e.g., obstacle marks, scour, b smoothing, etc.) Secondary channels:	vegetation gra absent to: gra moss to: forbs to: graminoids to woody shrubs to: deciduous trees to: coniferous trees to: Vegetation matted and/or bent: Exposed roots be intact soil layer:	aminoid : d down low	ls	Step 4 Is addition support this deter Yes If yes, describe a to datasheet:	nal informa mination? Nand attach	ation needed to

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		Print Form	Save As	E-mail	
Project ID #: 66	-ST003				
Step 5 Describe rationale for location of OHWM Break in slope, soil development and transition in vegetation were the primary indicators used to determine OWHM as there were persistent throughout the entire stream reach.					
Additional obs	ervations or notes				
Attach a photo lo	og of the site. Use the table below, or attach separately.				
Photo	log attached? Yes No If no, explain why not:				
List photograp Number photo	hs and include descriptions in the table below. graphs in the order that they are taken. Attach photograpi	hs and include annota	ations of features.		
Photo Number	Photograph description				

			Print Form	Save As	E-mail
		OHWM Field Identification Datashe	eet Instructions and Field Pr	rocedure	
Step 1	Site overview from rem Online Resources: Iden assess this site. a. gage data	ote and online resources ntify what information is available for e. topographic maps	the site ₋ Check boxes on da	Complete Step 1 pr atasheet next to the res	ior to site visit. ources used to
	 b. aerial photos f. geologic maps c. satellite imagery g. land use maps d. LiDAR h. climatic data (precipitation and temperature) Landscape context: Use the online resources to put the site in the context of the surrounding landscape. a. Note on the datasheet under Step 1: i. Overall land use and change if known ii. Recent extreme events if known (e.g., flood, drought, landslides, debris flows, wildfires) b. Consider the following to inform weighting of evidence observed during field visit. i. What physical characteristics are likely to be observed in specific environments? ii. Was there a recent flood or drought? Are you expecting to see recently formed or obscured indicators? iii. How will land use affect specific stream characteristics? How natural is the hydrologic regime? How stable has the landscape been 				
Step 2	Site conditions during	the field assessment (assemble evide	ence)		
	 a. Identify the assessme b. Walk up and down the the potential OHWM if c. Note broad trends in a and sediment charact i. Is this a single thr Is this a stream-w ii. Are there any sediment charact iii. Are there obviou iv. Are there man-m natural structures jams) that will information of the structure of the structure. 	nt area. e assessment area noting all ndicators hannel shape, vegetation, eristics ead or multi-thread system? etland complex? condary and/or floodplain channels? s man-made alterations to the system? hade (e.g., bridges, dams, culverts) or s (e.g., bedrock outcrops, Large Wood luence or control flow?	 d. Look for signs of recurring Where does the flow co ii. Are there signs of fluvia bedforms, etc.) at the c e. Look for indicators on bot accessible, then look acro f. In Step 2 of the datashe flow conditions that may i evidence. i. What land use and flow to observe indicators a ii. What recent extreme e site and affected your 	g fluvial action. nverge on the landscape al action (sediment sortin convergence zone? th banks. If the opposite coss the channel at the ba- set describe any adjacen nfluence interpretation of v conditions may be affec- t the site? events may have caused ability to observe indicat	 P: y; bank is not ank. t land use or f each line of cting your ability changes to the cors?
Step 3a	List evidence				
	Assemble evidence by a. If needed, use a sepa	checking the boxes next to each line	of evidence:	an Enrinstance pool d	avalonment may be

- to check boxes next to possible indicators, or check boxes of possible indicators in pencil and use pen for final decision.
- b. If using fillable form, then follow the instructions for filling in the fillable form.

Geomorphic indicators Where are the breaks in slope?	Sediment and soil indicators Where does evidence of	Vegetation Indicators Where are the significant transitions in	Ancillary indicators Is there organic litter		
Are there identifiable banks?	soil formation appear?	vegetation species, density, and age?	present?		
Is there an easily identifiable		Is there vegetation growing on the channel bed?			
top of bank?	Are there mudcracks present?		Is there any leaf litter		
Are the banks actively eroding?		If no, how long does it take for the non-tolerant	disturbed or washed		
Are the banks undercut?	Is there evidence of sediment	vegetation to establish relative to how often flows	away?		
Are the banks armored?	sorting by grain size?				
Is the channel confined by		Where are the significant transitions in	Is there large wood		
the surrounding hillslopes?		vegetation?	deposition?		
Are there natural or man-made		In the upper station to leave at of flowing water 2			
berms and levees?		is the vegetation tolerant of flowing water?	Is there evidence of		
Are there fluvial terraces?		Has any vegetation been flattened by flowing	water staining?		
Are there channel bars?		water?			
	1				
Are the following features of fluvial tr	ansport present?	In some cases, it may be helpful to explain why a	in indicator was NOT at		
Evidence of erosion: obstacle marks, scour, armoring		the OHWM elevation, but found above or below. It can also be useful to note if specific indicators (e.g., vegetation) are NOT present. For instance,			
Bedforms; riffles, pools, steps, knickpoints/headcuts					
Evidence of deposition: imbricated	l clasts, gravel sheets, etc.	note if the site has no clear vegetation zonation.			

- Step 3b Weight each line of evidence and weigh body of evidence

Weight each indicator by considering its importance based upon: a. Relevance:

i. Is this indicator left by low, high, or extreme flows?

Tips on how to assess the indicator relative to type of flow:

Consider the elevation of the indicator relative to the channel bed. What is the current flow level based on season or nearby gages? Consider the elevation of the indicator relative to the current flow. If the stream is currently at baseflow and indicator is adjacent to that, relevance, strength, and reliability. then it is likely a low flow indicator. The difference between high and extreme flow indicators can sometimes be difficult to determine.

*Landscape context from Step 1 can help determine the relevance, strength, and reliability of the indicators observed in the field.

Save As

*Information in Chapter 2 of the OHWM field manual provides information on specific indicators which can assist in putting these in context and determining

ii. Did recent extreme events and/or land use affect this indicator?

1. Recent floods may have left many extreme flow indicators, or temporarily altered channel form. Other resources will likely be needed to support any OHWM identification at this site. Field evidence of the OHWM may have to wait for the site to recover from the recent flood.

2. Droughts may cause field evidence of OHWM to be obscured, because there has been an extended time since the last high flow event. There can be overgrowth of vegetation or deposition of material from surrounding landscape that can obscure indicators.

3. Both man-made (e.g., dams, construction, mining activities, urbanization, agriculture, grazing) and natural (e.g., fires, floods, debris flows, beaver dams) disturbances can all alter how indicators are expected to appear at a site. Chapter 6 and Chapter 7 of the OHWM field manual provides specific case-studies that can help in interpreting evidence at these sites.

b. Strength:

- i. Is this indicator persistent across the landscape?
 - 1. Look up and downstream and across the channel to see if you see the same indicator at multiple locations.
- 2. Does the indicator occur at the same elevation as other indicators?

c. Reliability:

- i. Is this indicator persistent on the landscape over time? Will this indicator still persist across seasons?
 - 1. This can be difficult to determine for some indicators and may be specific to climatic region (in terms of persistence of vegetation) and history of and use or other natural disturbances.
- 2. Chapter 2, Chapter 6, and Chapter 7 of the OHWM field manual describes each indicator in detail and provides examples of areas where indicators are difficult to interpret.

d. Weigh body of evidence:

- i. Combine weights: integrate the weighted line of evidence (relevance, strength, reliability) of each indicator.
- ii. For each of the observed indicators, which are more heavily weighted? Where do high value indicators co-occur along the stream reach? Do they co-occur at a similar elevation along the banks relative to water surface (or channel bed if there is no water).
- iii. On datasheet, select the indicators used to identify the OHWM. Information in Chapter 2 of the OHWM field manual provides descriptions of specific indicators which can assist in putting these in context and determining relevance, strength, and relieability.
- e. Take photographs of indicators and attach a log using either page 2 of datasheet or another method of logging photos. i. Annotate photos with descriptions of indicators.

Step 4 Is additional information needed? Are other resources needed to support the lines of evidence observed in the field?

- a. If additional resources are needed, then repeat steps 3a and 3b for the resources selected in Step 1 of assembling, weighting, and weighing evidence collected from online resources. Chapter 5 of the OHWM field manual provides information on using online resources.
- b. Any data collected from online tools have strengths and weaknesses. Make sure these are clear when determining relevance, strength, and reliability of the remotely collected data. Clearly describe why other resources were needed to support the lines of evidence observed in the field, as well as the relevance, strength, and reliability of the supporting data and/or resources.
- c. Attach any remote data and data analysis to the datasheet.

- a. Why do the combination of indicators represent the OHWM?
- b. If there are multiple possibilities for the OHWM, explain why there are two (or more) possibilities. Include any relevant discussion on why specific indicators were not included in the final decision.
- c. If needed, add additional site notes on page 2 of the datasheet under Step 5.

		Print Form	Save A	∖s	E-mail	
U.S. Army Corps of Engineers (USACE) RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET The proponent agency is Headquarters USACE CECW-CO-R. OMB Control No. 0710-XXXX Approval Expires:						
Project ID #: 66-ST004 S	ite Name: Bright Mountair	n Solar	Date and Ti	me: 5/24	/23	
Location (lat/long): 37.294638 -83.25376		Investigator(s): JB SB				
Step 1 Site overview from remote and online re Check boxes for online resources used to evaluate the second seco	Describe land u Were there any No significa or during su forest borde	Describe land use and flow conditions from online resources. Were there any recent extreme events (floods or drought)? No significant precipitation events occurred prior or during survey. Flows parallel with driveway. forest borders southern bank.				
aerial photos topographic maps Other: Step 2 Site conditions during field assessment First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. This is intermittent stream begins at the outlet of an emergent wetland and flows north west before it joins 66-ST003 at a culvert. This stream displayed strong evidence of base flow, well defined channel bed and banks. The stream substrate is composed of cobble gravel sand silt and clay. Step 3 Check the boxes next to the indicators used to identify the location of the OHWM. OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the						
`x', or just above `a' the OHWM OHWM. Go to page 2 to describe overa	I rationale for location of OH	WM, write any additional	observations, and	to attach	a photo log.	
Geomorphic indicators	Sediment indicators		Ancillary indica	tors	o of	
Break in slope: x on the bank: x undercut bank: valley bottom: Other: Other: Shelving: shelf at top of bank: natural levee: man-made berms or levees: other berms: Channel bar: shelving (berms) on bar: unvegetated: vegetation transition	Soil development Changes in chara Mudcracks: Changes in particl distribution: transition from upper limit of sa silt deposits: Vegetation Indicators Change in vegetati and/or density: Check the appropriate the general vegetati graminoids to wood the vegetation tran the middle of the of banks, and into th	: cter of soil: le-sized to and-sized particles ion type ate boxes and select ion change (e.g., ly shrubs). Describe nsition looking from channel, up the e floodplain.	Wracking organic lii Presence Leaf litter washed a Water sta Weathere Other observed Describe:	/presence tter: of large v disturbe way: ining: d clasts o indicator	e of wood: d or or bedrock: rs?	
Vegetation transition (go to veg. indicators) sediment transition (go to sed. indicators) upper limit of deposition on bar: Instream bedforms and other bedload transport evidence: deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.) bedforms (e.g., poofs, briffles, steps, etc.): erosional bedload indicators (e.g., obstacle marks, scour, briffles, etc.) Secondary channels:	<pre>vegetation dec absent to: dec moss to: forbs to: graminoids to woody shrubs to: deciduous trees to: coniferous trees to: Vegetation matted and/or bent: Exposed roots bel intact soil layer:</pre>	ciduous trees : ! down _X low	Step 4 Is addition support this deter Yes If yes, describe to datasheet:	nal inform rmination Nand attac	ation needed to ? lo h information	

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		Print Form	Save As	E-mail
Project ID #: 66	-ST004			
Step 5 Describe Break in slo OWHM the	rationale for location of OHWM pe, soil development and transition in vegetation se were the most persistent and reliable indicator	n were the primators observed.	ry indicators used	to determine
Additional obse	ervations or notes			
Attach a photo k	bg of the site. Use the table below, or attach separately.			
List photograp	hs and include descriptions in the table below.			
Number photo	graphs in the order that they are taken. Attach photograp	hs and inc l ude annota	ations of features.	
Photo Number	Photograph description			

			Print Form	Save As	E-mail
		OHWM Field Identification Datashe	eet Instructions and Field Pr	rocedure	
Step 1	Site overview from rem Online Resources: Iden assess this site. a. gage data	ote and online resources ntify what information is available for e. topographic maps	the site ₋ Check boxes on da	Complete Step 1 pr atasheet next to the res	ior to site visit. ources used to
	 b. aerial photos c. satellite imagery d. LiDAR Landscape context: Us a. Note on the datashe i. Overall land use and ii. Recent extreme event b. Consider the following i. What physical chara ii. Was there a recent iii. How will land use and over the last year, 	f. geologic maps g. land use maps h. climatic data (precipitation and f e the online resources to put the site at under Step 1: d change if known ents if known (e.g., flood, drought, landsl to inform weighting of evidence observed cteristics are likely to be observed in spe flood or drought? Are you expecting to s ffect specific stream characteristics? Ho decade, century?	temperature) in the context of the surrou ides, debris flows, wildfires) ed during field visit. ecific environments? ee recently formed or obscure w natural is the hydrologic rec	i nding landscape. ed indicators? gime? How stab l e has th	e landscape been
Step 2	Site conditions during	the field assessment (assemble evide	ence)		
	 a. Identify the assessme b. Walk up and down the the potential OHWM if c. Note broad trends in a and sediment charact i. Is this a single thr Is this a stream-w ii. Are there any sediment charact iii. Are there obviou iv. Are there man-m natural structures jams) that will information of the structure of the structure. 	nt area. e assessment area noting all ndicators hannel shape, vegetation, eristics ead or multi-thread system? etland complex? condary and/or floodplain channels? s man-made alterations to the system? hade (e.g., bridges, dams, culverts) or s (e.g., bedrock outcrops, Large Wood luence or control flow?	 d. Look for signs of recurring Where does the flow co ii. Are there signs of fluvia bedforms, etc.) at the c e. Look for indicators on bot accessible, then look acro f. In Step 2 of the datashe flow conditions that may i evidence. i. What land use and flow to observe indicators a ii. What recent extreme e site and affected your 	g fluvial action. nverge on the landscape al action (sediment sortin convergence zone? th banks. If the opposite coss the channel at the ba- set describe any adjacen nfluence interpretation of v conditions may be affec- t the site? events may have caused ability to observe indicat	 P: y; bank is not ank. t land use or f each line of cting your ability changes to the cors?
Step 3a	List evidence				
	Assemble evidence by a. If needed, use a sepa	checking the boxes next to each line	of evidence:	an Enrinstance pool d	avalonment may be

- to check boxes next to possible indicators, or check boxes of possible indicators in pencil and use pen for final decision.
- b. If using fillable form, then follow the instructions for filling in the fillable form.

Geomorphic indicators Where are the breaks in slope?	Sediment and soil indicators Where does evidence of	Vegetation Indicators Where are the significant transitions in	Ancillary indicators Is there organic litter		
Are there identifiable banks?	soil formation appear?	vegetation species, density, and age?	present?		
Is there an easily identifiable		Is there vegetation growing on the channel bed?			
top of bank?	Are there mudcracks present?		Is there any leaf litter		
Are the banks actively eroding?		If no, how long does it take for the non-tolerant	disturbed or washed		
Are the banks undercut?	Is there evidence of sediment	vegetation to establish relative to how often flows	away?		
Are the banks armored?	sorting by grain size?				
Is the channel confined by		Where are the significant transitions in	Is there large wood		
the surrounding hillslopes?		vegetation?	deposition?		
Are there natural or man-made		In the upper station to leave at of flowing water 2			
berms and levees?		is the vegetation tolerant of flowing water?	Is there evidence of		
Are there fluvial terraces?		Has any vegetation been flattened by flowing	water staining?		
Are there channel bars?		water?			
	1				
Are the following features of fluvial tr	ansport present?	In some cases, it may be helpful to explain why an indicator was NOT at			
Evidence of erosion: obstacle mar	ks, scour, armoring	the OHWM elevation, but found above or below. It can also be useful to			
Bedforms; riffles, pools, steps, kni	ckpoints/headcuts	note if specific indicators (e.g., vegetation) are NOT present. For instance,			
Evidence of deposition: imbricated	l clasts, gravel sheets, etc.	note if the site has no clear vegetation zonation.			

- Step 3b Weight each line of evidence and weigh body of evidence

Weight each indicator by considering its importance based upon: a. Relevance:

i. Is this indicator left by low, high, or extreme flows?

Tips on how to assess the indicator relative to type of flow:

Consider the elevation of the indicator relative to the channel bed. What is the current flow level based on season or nearby gages? Consider the elevation of the indicator relative to the current flow. If the stream is currently at baseflow and indicator is adjacent to that, relevance, strength, and reliability. then it is likely a low flow indicator. The difference between high and extreme flow indicators can sometimes be difficult to determine.

*Landscape context from Step 1 can help determine the relevance, strength, and reliability of the indicators observed in the field.

Save As

*Information in Chapter 2 of the OHWM field manual provides information on specific indicators which can assist in putting these in context and determining

ii. Did recent extreme events and/or land use affect this indicator?

1. Recent floods may have left many extreme flow indicators, or temporarily altered channel form. Other resources will likely be needed to support any OHWM identification at this site. Field evidence of the OHWM may have to wait for the site to recover from the recent flood.

2. Droughts may cause field evidence of OHWM to be obscured, because there has been an extended time since the last high flow event. There can be overgrowth of vegetation or deposition of material from surrounding landscape that can obscure indicators.

3. Both man-made (e.g., dams, construction, mining activities, urbanization, agriculture, grazing) and natural (e.g., fires, floods, debris flows, beaver dams) disturbances can all alter how indicators are expected to appear at a site. Chapter 6 and Chapter 7 of the OHWM field manual provides specific case-studies that can help in interpreting evidence at these sites.

b. Strength:

- i. Is this indicator persistent across the landscape?
 - 1. Look up and downstream and across the channel to see if you see the same indicator at multiple locations.
- 2. Does the indicator occur at the same elevation as other indicators?

c. Reliability:

- i. Is this indicator persistent on the landscape over time? Will this indicator still persist across seasons?
 - 1. This can be difficult to determine for some indicators and may be specific to climatic region (in terms of persistence of vegetation) and history of and use or other natural disturbances.
- 2. Chapter 2, Chapter 6, and Chapter 7 of the OHWM field manual describes each indicator in detail and provides examples of areas where indicators are difficult to interpret.

d. Weigh body of evidence:

- i. Combine weights: integrate the weighted line of evidence (relevance, strength, reliability) of each indicator.
- ii. For each of the observed indicators, which are more heavily weighted? Where do high value indicators co-occur along the stream reach? Do they co-occur at a similar elevation along the banks relative to water surface (or channel bed if there is no water).
- iii. On datasheet, select the indicators used to identify the OHWM. Information in Chapter 2 of the OHWM field manual provides descriptions of specific indicators which can assist in putting these in context and determining relevance, strength, and relieability.
- e. Take photographs of indicators and attach a log using either page 2 of datasheet or another method of logging photos. i. Annotate photos with descriptions of indicators.

Step 4 Is additional information needed? Are other resources needed to support the lines of evidence observed in the field?

- a. If additional resources are needed, then repeat steps 3a and 3b for the resources selected in Step 1 of assembling, weighting, and weighing evidence collected from online resources. Chapter 5 of the OHWM field manual provides information on using online resources.
- b. Any data collected from online tools have strengths and weaknesses. Make sure these are clear when determining relevance, strength, and reliability of the remotely collected data. Clearly describe why other resources were needed to support the lines of evidence observed in the field, as well as the relevance, strength, and reliability of the supporting data and/or resources.
- c. Attach any remote data and data analysis to the datasheet.

- a. Why do the combination of indicators represent the OHWM?
- b. If there are multiple possibilities for the OHWM, explain why there are two (or more) possibilities. Include any relevant discussion on why specific indicators were not included in the final decision.
- c. If needed, add additional site notes on page 2 of the datasheet under Step 5.

		Print Form		Save A	s	E-mail
U.S. Arm RAPID ORDINARY HIGH WATER The proponent ag	y Corps of Engineers (U MARK (OHWM) FIELD ency is Headquarters USACE	SACE) IDENTIFICATION CECW-CO-R.	DATA	A SHEET	OMB Co Approv	ntrol No. 0710-XXXX al Expires:
Project ID #: 66-ST005	Site Name: Bright Mountain	1 Solar		Date and Tir	me: 5/24/	/23
Location (lat/long): 37.295262 -83.254222		Investigator(s): JB SB				
Step 1 Site overview from remote and online Check boxes for online resources used to gage data LiDAR Climatic data satellite imagery	resources evaluate site: geologic maps	Describe land Were there any No signific or during s	use ar / recent ant p: urvey	nd flow cond t extreme eve recipitatio v. This str	itions fro ents (flood on even eam is	m online resources. s or drought)? ts occurred prior bordered by
aerial photos topographic maps	Other:	developme	nt and	d forest.		
 Step 2 Site conditions during field assessment First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. This is intermittent stream begins at the confluence of 66-ST003 and 66-ST004. This stream is diverted through two culverts. The culvert on the southern end of the stream diverts it under a driveway and the culvert on the north end diverts the stream under a road. This stream flows north into lower second creek. This stream displayed strong evidence of base flow, has well defined channel bed and banks. Its substrate is composed of boulders, cobble gravel, sand and silt. Step 3 Check the boxes next to the indicators used to identify the location of the OHWM. OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below `b', at `x', or just above `a' the OHWM. OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log. 						
Geomorphic indicators	Sediment indicators		Anc	illary indicat	ors	
Break in slope: x on the bank: x undercut bank: valley bottom: Other: Shelving: shelf at top of bank: natural levee: man-made berms or levees: other berms: Channel bar: shelving (berms) on bar;	Soil development Changes in chara Mudcracks: Changes in partic distribution: transition from upper limit of s silt deposits: Vegetation Indicators Change in vegetatt and/or density: Check the appropri the general vegetatt graminoids to wood the weigetation tra the middle of the	x x x x x x x x x x x x x x	Othe	viracking, organic lit Presence Leaf litter washed av Water stai Weathered er observed	of large v disturbed way: ning: x d clasts o	vood: d or or bedrock: s?
unvegetated: vegetation transition (go to veg. indicators) sediment transition (go to sed. indicators) upper limit of deposition on bar: Instream bedforms and other bedload transport evidence: deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.) bedforms (e.g., poofs, b riffles, steps, etc.): erosional bedload indicators (e.g., obstacle marks, scour, b smoothing, etc.) Secondary channels:	banks, and into the vegetation absent to: moss to: forbs to: graminoids to: woody shrubs to: deciduous trees to: coniferous trees to: Vegetation mattee and/or bent: Exposed roots be intact soil layer:	e floodplain. ciduous trees down _X low	Ster supp If ye to c	o 4 Is addition port this deter Yes es, describe a datasheet:	nal informa mination? N and attach	ation needed to o n information

ENG FORM 6250, AUG 2021

PREVIOUS EDITIONS ARE OBSOLETE.

		Print Form	Save As	E-mail
Project ID #: 66	-ST005			
Step 5 Describe Break in slo OWHM the	rationale for location of OHWM pe, soil development and transition in vegetatio se were the most persistent and reliable indicato	n were the primators observed.	ry indicators used	to determine
Additional obse	ervations or notes			
Photo	log attached? \bigvee Yes \bigvee No If no. explain why not:			
List photograp	hs and include descriptions in the table below.			
Number photo	graphs in the order that they are taken. Attach photograp	hs and include annota	ations of features.	
Photo Number	Photograph description			

			Print Form	Save As	E-mail
		OHWM Field Identification Datashe	eet Instructions and Field Pr	rocedure	
Step 1	Site overview from rem Online Resources: Iden assess this site. a. gage data	ote and online resources ntify what information is available for e. topographic maps	the site ₋ Check boxes on da	Complete Step 1 pr atasheet next to the res	ior to site visit. ources used to
	 b. aerial photos c. satellite imagery d. LiDAR Landscape context: Us a. Note on the datashe i. Overall land use and ii. Recent extreme event b. Consider the following i. What physical chara ii. Was there a recent iii. How will land use and over the last year, 	f. geologic maps g. land use maps h. climatic data (precipitation and f e the online resources to put the site at under Step 1: d change if known ents if known (e.g., flood, drought, landsl to inform weighting of evidence observed cteristics are likely to be observed in spe flood or drought? Are you expecting to s ffect specific stream characteristics? Ho decade, century?	temperature) in the context of the surrou ides, debris flows, wildfires) ed during field visit. ecific environments? ee recently formed or obscure w natural is the hydrologic rec	i nding landscape. ed indicators? gime? How stab l e has th	e landscape been
Step 2	Site conditions during	the field assessment (assemble evide	ence)		
	 a. Identify the assessme b. Walk up and down the the potential OHWM if c. Note broad trends in a and sediment charact i. Is this a single thr Is this a stream-w ii. Are there any sediment charact iii. Are there obviou iv. Are there man-m natural structures jams) that will information of the structure of the structure. 	nt area. e assessment area noting all ndicators hannel shape, vegetation, eristics ead or multi-thread system? etland complex? condary and/or floodplain channels? s man-made alterations to the system? hade (e.g., bridges, dams, culverts) or s (e.g., bedrock outcrops, Large Wood luence or control flow?	 d. Look for signs of recurring Where does the flow co ii. Are there signs of fluvia bedforms, etc.) at the c e. Look for indicators on bot accessible, then look acro f. In Step 2 of the datashe flow conditions that may i evidence. i. What land use and flow to observe indicators a ii. What recent extreme e site and affected your 	g fluvial action. nverge on the landscape al action (sediment sortin convergence zone? th banks. If the opposite coss the channel at the ba- set describe any adjacen nfluence interpretation of v conditions may be affec- t the site? events may have caused ability to observe indicat	 P: y; bank is not ank. t land use or f each line of cting your ability changes to the cors?
Step 3a	List evidence				
	Assemble evidence by a. If needed, use a sepa	checking the boxes next to each line	of evidence:	an Enrinstance pool d	avalonment may be

- to check boxes next to possible indicators, or check boxes of possible indicators in pencil and use pen for final decision.
- b. If using fillable form, then follow the instructions for filling in the fillable form.

Geomorphic indicators Where are the breaks in slope?	Sediment and soil indicators Where does evidence of	Vegetation Indicators Where are the significant transitions in	Ancillary indicators Is there organic litter		
Are there identifiable banks?	soil formation appear?	vegetation species, density, and age?	present?		
Is there an easily identifiable		Is there vegetation growing on the channel bed?			
top of bank?	Are there mudcracks present?		Is there any leaf litter		
Are the banks actively eroding?		If no, how long does it take for the non-tolerant	disturbed or washed		
Are the banks undercut?	Is there evidence of sediment	vegetation to establish relative to how often flows	away?		
Are the banks armored?	sorting by grain size?				
Is the channel confined by		Where are the significant transitions in	Is there large wood		
the surrounding hillslopes?		vegetation?	deposition?		
Are there natural or man-made		In the upper station to leave at of flowing water 2			
berms and levees?		is the vegetation tolerant of flowing water?	Is there evidence of		
Are there fluvial terraces?		Has any vegetation been flattened by flowing	water staining?		
Are there channel bars?		water?			
	1				
Are the following features of fluvial tr	ansport present?	In some cases, it may be helpful to explain why an indicator was NOT at			
Evidence of erosion: obstacle mar	ks, scour, armoring	the OHWM elevation, but found above or below. It can also be useful to			
Bedforms; riffles, pools, steps, kni	ckpoints/headcuts	note if specific indicators (e.g., vegetation) are NOT present. For instance,			
Evidence of deposition: imbricated	l clasts, gravel sheets, etc.	note if the site has no clear vegetation zonation.			

- Step 3b Weight each line of evidence and weigh body of evidence

Weight each indicator by considering its importance based upon: a. Relevance:

i. Is this indicator left by low, high, or extreme flows?

Tips on how to assess the indicator relative to type of flow:

Consider the elevation of the indicator relative to the channel bed. What is the current flow level based on season or nearby gages? Consider the elevation of the indicator relative to the current flow. If the stream is currently at baseflow and indicator is adjacent to that, relevance, strength, and reliability. then it is likely a low flow indicator. The difference between high and extreme flow indicators can sometimes be difficult to determine.

*Landscape context from Step 1 can help determine the relevance, strength, and reliability of the indicators observed in the field.

Save As

*Information in Chapter 2 of the OHWM field manual provides information on specific indicators which can assist in putting these in context and determining

ii. Did recent extreme events and/or land use affect this indicator?

1. Recent floods may have left many extreme flow indicators, or temporarily altered channel form. Other resources will likely be needed to support any OHWM identification at this site. Field evidence of the OHWM may have to wait for the site to recover from the recent flood.

2. Droughts may cause field evidence of OHWM to be obscured, because there has been an extended time since the last high flow event. There can be overgrowth of vegetation or deposition of material from surrounding landscape that can obscure indicators.

3. Both man-made (e.g., dams, construction, mining activities, urbanization, agriculture, grazing) and natural (e.g., fires, floods, debris flows, beaver dams) disturbances can all alter how indicators are expected to appear at a site. Chapter 6 and Chapter 7 of the OHWM field manual provides specific case-studies that can help in interpreting evidence at these sites.

b. Strength:

- i. Is this indicator persistent across the landscape?
 - 1. Look up and downstream and across the channel to see if you see the same indicator at multiple locations.
- 2. Does the indicator occur at the same elevation as other indicators?

c. Reliability:

- i. Is this indicator persistent on the landscape over time? Will this indicator still persist across seasons?
 - 1. This can be difficult to determine for some indicators and may be specific to climatic region (in terms of persistence of vegetation) and history of and use or other natural disturbances.
- 2. Chapter 2, Chapter 6, and Chapter 7 of the OHWM field manual describes each indicator in detail and provides examples of areas where indicators are difficult to interpret.

d. Weigh body of evidence:

- i. Combine weights: integrate the weighted line of evidence (relevance, strength, reliability) of each indicator.
- ii. For each of the observed indicators, which are more heavily weighted? Where do high value indicators co-occur along the stream reach? Do they co-occur at a similar elevation along the banks relative to water surface (or channel bed if there is no water).
- iii. On datasheet, select the indicators used to identify the OHWM. Information in Chapter 2 of the OHWM field manual provides descriptions of specific indicators which can assist in putting these in context and determining relevance, strength, and relieability.
- e. Take photographs of indicators and attach a log using either page 2 of datasheet or another method of logging photos. i. Annotate photos with descriptions of indicators.

Step 4 Is additional information needed? Are other resources needed to support the lines of evidence observed in the field?

- a. If additional resources are needed, then repeat steps 3a and 3b for the resources selected in Step 1 of assembling, weighting, and weighing evidence collected from online resources. Chapter 5 of the OHWM field manual provides information on using online resources.
- b. Any data collected from online tools have strengths and weaknesses. Make sure these are clear when determining relevance, strength, and reliability of the remotely collected data. Clearly describe why other resources were needed to support the lines of evidence observed in the field, as well as the relevance, strength, and reliability of the supporting data and/or resources.
- c. Attach any remote data and data analysis to the datasheet.

- a. Why do the combination of indicators represent the OHWM?
- b. If there are multiple possibilities for the OHWM, explain why there are two (or more) possibilities. Include any relevant discussion on why specific indicators were not included in the final decision.
- c. If needed, add additional site notes on page 2 of the datasheet under Step 5.

		Print Form		Save A	S	E-mail
U.S. Army RAPID ORDINARY HIGH WATER The proponent ag	y Corps of Engineers (U MARK (OHWM) FIELD ency is Headquarters USACE	SACE) IDENTIFICATION CECW-CO-R.	DAT	A SHEET	OMB Co Approv	ontrol No. 0710-XXXX al Expires:
Project ID #: 66-ST006	Site Name: Bright Mountair	n Solar		Date and Tin	me: 5/23,	/23
Location (lat/long): 37.294619 -83.253758		Investigator(s): JB S	3			
Step 1 Site overview from remote and online in the check boxes for online resources used to gage data LiDAR Climatic data satellite imagery	resources evaluate site: geologic maps land use maps	Describe lan Were there a No signifi or during forest.	d use a ny recer cant p surve	nd flow cond at extreme eve precipitatio y. This stre	itions fro ints (flood on even eam is 1	om online resources. Is or drought)? Its occurred prior bordered by
Step 2 Site conditions during field assessment First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc. This is an intermittent stream that flows west northwest down a steep gradient through a forested area. This stream displayed weak evidence of base flow and had well defined channel bed and banks. The stream substrate was composed of cobble, gravel, sand silt and clay. No man mad disturbances occur within the delineated reach of stream that affect flow. Step 3 Check the boxes next to the indicators used to identify the location of the OHWM. OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. Erom the drop-down menu pays to each indicator select the appropriate location of the selection of the indicator by selecting either just below 'b' at						
`x', or just above `a' the OHWI OHWM. Go to page 2 to describe over	M. all rationale for location of OH	WM, write any additio	nal obs	ervations, and	to attach	a photo log.
Geomorphic indicators	Sediment indicators		An	cillary indicat	ors	-
Break in slope: x on the bank: x undercut bank: valley bottom: Other: Shelving: shelf at top of bank: natural levee: man-made berms or levees: other berms: Channel bar: shelving (berms) on bar:	Soil development Changes in chara Mudcracks: Changes in particle distribution: transition from upper limit of se silt deposits: Vegetation Indicators Change in vegetati and/or density: Check the appropriat the general vegetation transite the widdle of the of banks, and into the	: x cter of soil: le-sized to to and-sized particles tion type x ate boxes and select ion change (e.g., ly shrubs). Describe msition looking from channel, up the o floodplain		Wracking/ organic lit Presence of Leaf litter Washed av Water stai Weathered	ning: b	e of wood: d or _X or bedrock: rs?
unvegetated: vegetation transition (go to veg. indicators) sediment transition (go to sed. indicators) upper limit of deposition on bar: Instream bedforms and other bedload transport evidence: deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.) bedforms (e.g., poofs, riffles, steps, etc.): erosional bedload indicators (e.g., obstacle marks, scour, b smoothing, etc.) Secondary channels:	vegetation absent to: moss to: forbs to: graminoids to woody shrubs to: deciduous trees to: coniferous trees to: Vegetation matted and/or bent: Exposed roots bel intact soil layer:	ciduous trees : : down _x	Ster sup to	p 4 Is addition port this deter Yes yes, describe a datasheet:	al inform mination' N and attacl	ation needed to ? lo h information

		Print Form	Save As	E-mail
Project ID #: 66	-ST006			
Step 5 Describe Break in slo OWHM the	rationale for location of OHWM pe, soil development and transition in vegetatio se were the most persistent and reliable indicato	n were the primar ors observed.	ry indicators used	to determine
Additional obse	ervations or notes			
Attach a photo lo	og of the site. Use the table below, or attach separately.			
Photo	log attached? Yes No If no, explain why not:			
List photograp	hs and include descriptions in the table below.	he and include annotr	ations of foaturos	
Photo Number	Photograph description			

			Print Form	Save As	E-mail
		OHWM Field Identification Datashe	eet Instructions and Field Pr	rocedure	
Step 1	Site overview from rem Online Resources: Iden assess this site. a. gage data	ote and online resources ntify what information is available for e. topographic maps	the site ₋ Check boxes on da	Complete Step 1 pr atasheet next to the res	ior to site visit. ources used to
	 b. aerial photos c. satellite imagery d. LiDAR Landscape context: Us a. Note on the datashe i. Overall land use and ii. Recent extreme event b. Consider the following i. What physical chara ii. Was there a recent iii. How will land use and over the last year, 	f. geologic maps g. land use maps h. climatic data (precipitation and f e the online resources to put the site at under Step 1: d change if known ents if known (e.g., flood, drought, landsl to inform weighting of evidence observed cteristics are likely to be observed in spe flood or drought? Are you expecting to s ffect specific stream characteristics? Ho decade, century?	temperature) in the context of the surrou ides, debris flows, wildfires) ed during field visit. ecific environments? ee recently formed or obscure w natural is the hydrologic rec	i nding landscape. ed indicators? gime? How stab l e has th	e landscape been
Step 2	Site conditions during	the field assessment (assemble evide	ence)		
	 a. Identify the assessme b. Walk up and down the the potential OHWM if c. Note broad trends in a and sediment charact i. Is this a single thr Is this a stream-w ii. Are there any sediment charact iii. Are there obviou iv. Are there man-m natural structures jams) that will information of the structure of the structure. 	nt area. e assessment area noting all ndicators hannel shape, vegetation, eristics ead or multi-thread system? etland complex? condary and/or floodplain channels? s man-made alterations to the system? hade (e.g., bridges, dams, culverts) or s (e.g., bedrock outcrops, Large Wood luence or control flow?	 d. Look for signs of recurring Where does the flow co ii. Are there signs of fluvia bedforms, etc.) at the c e. Look for indicators on bot accessible, then look acro f. In Step 2 of the datashe flow conditions that may i evidence. i. What land use and flow to observe indicators a ii. What recent extreme e site and affected your 	g fluvial action. nverge on the landscape al action (sediment sortin convergence zone? th banks. If the opposite coss the channel at the ba- set describe any adjacen nfluence interpretation of v conditions may be affec- t the site? events may have caused ability to observe indicat	 P: y; bank is not ank. t land use or f each line of cting your ability changes to the cors?
Step 3a	List evidence				
	Assemble evidence by a. If needed, use a sepa	checking the boxes next to each line	of evidence:	an Enrinstance pool d	avalonment may be

- to check boxes next to possible indicators, or check boxes of possible indicators in pencil and use pen for final decision.
- b. If using fillable form, then follow the instructions for filling in the fillable form.

Geomorphic indicators Where are the breaks in slope?	Sediment and soil indicators Where does evidence of	Vegetation Indicators Where are the significant transitions in	Ancillary indicators Is there organic litter		
Are there identifiable banks?	soil formation appear?	vegetation species, density, and age?	present?		
Is there an easily identifiable		Is there vegetation growing on the channel bed?			
top of bank?	Are there mudcracks present?		Is there any leaf litter		
Are the banks actively eroding?		If no, how long does it take for the non-tolerant	disturbed or washed		
Are the banks undercut?	Is there evidence of sediment	vegetation to establish relative to how often flows	away?		
Are the banks armored?	sorting by grain size?				
Is the channel confined by		Where are the significant transitions in	Is there large wood		
the surrounding hillslopes?		vegetation?	deposition?		
Are there natural or man-made		In the uppertation to leave at of flowing water 2			
berms and levees?		is the vegetation tolerant of flowing water?	Is there evidence of		
Are there fluvial terraces?		Has any vegetation been flattened by flowing	water staining?		
Are there channel bars?		water?			
	1				
Are the following features of fluvial tr	ansport present?	In some cases, it may be helpful to explain why an indicator was NOT at			
Evidence of erosion: obstacle mar	ks, scour, armoring	the OHWM elevation, but found above or below. It can also be useful to			
Bedforms; riffles, pools, steps, kni	ckpoints/headcuts	note if specific indicators (e.g., vegetation) are NOT present. For instance,			
Evidence of deposition: imbricated	l clasts, gravel sheets, etc.	note if the site has no clear vegetation zonation.			

- Step 3b Weight each line of evidence and weigh body of evidence

Weight each indicator by considering its importance based upon: a. Relevance:

i. Is this indicator left by low, high, or extreme flows?

Tips on how to assess the indicator relative to type of flow:

Consider the elevation of the indicator relative to the channel bed. What is the current flow level based on season or nearby gages? Consider the elevation of the indicator relative to the current flow. If the stream is currently at baseflow and indicator is adjacent to that, relevance, strength, and reliability. then it is likely a low flow indicator. The difference between high and extreme flow indicators can sometimes be difficult to determine.

*Landscape context from Step 1 can help determine the relevance, strength, and reliability of the indicators observed in the field.

Save As

*Information in Chapter 2 of the OHWM field manual provides information on specific indicators which can assist in putting these in context and determining

ii. Did recent extreme events and/or land use affect this indicator?

1. Recent floods may have left many extreme flow indicators, or temporarily altered channel form. Other resources will likely be needed to support any OHWM identification at this site. Field evidence of the OHWM may have to wait for the site to recover from the recent flood.

2. Droughts may cause field evidence of OHWM to be obscured, because there has been an extended time since the last high flow event. There can be overgrowth of vegetation or deposition of material from surrounding landscape that can obscure indicators.

3. Both man-made (e.g., dams, construction, mining activities, urbanization, agriculture, grazing) and natural (e.g., fires, floods, debris flows, beaver dams) disturbances can all alter how indicators are expected to appear at a site. Chapter 6 and Chapter 7 of the OHWM field manual provides specific case-studies that can help in interpreting evidence at these sites.

b. Strength:

- i. Is this indicator persistent across the landscape?
 - 1. Look up and downstream and across the channel to see if you see the same indicator at multiple locations.
- 2. Does the indicator occur at the same elevation as other indicators?

c. Reliability:

- i. Is this indicator persistent on the landscape over time? Will this indicator still persist across seasons?
 - 1. This can be difficult to determine for some indicators and may be specific to climatic region (in terms of persistence of vegetation) and history of and use or other natural disturbances.
- 2. Chapter 2, Chapter 6, and Chapter 7 of the OHWM field manual describes each indicator in detail and provides examples of areas where indicators are difficult to interpret.

d. Weigh body of evidence:

- i. Combine weights: integrate the weighted line of evidence (relevance, strength, reliability) of each indicator.
- ii. For each of the observed indicators, which are more heavily weighted? Where do high value indicators co-occur along the stream reach? Do they co-occur at a similar elevation along the banks relative to water surface (or channel bed if there is no water).
- iii. On datasheet, select the indicators used to identify the OHWM. Information in Chapter 2 of the OHWM field manual provides descriptions of specific indicators which can assist in putting these in context and determining relevance, strength, and relieability.
- e. Take photographs of indicators and attach a log using either page 2 of datasheet or another method of logging photos. i. Annotate photos with descriptions of indicators.

Step 4 Is additional information needed? Are other resources needed to support the lines of evidence observed in the field?

- a. If additional resources are needed, then repeat steps 3a and 3b for the resources selected in Step 1 of assembling, weighting, and weighing evidence collected from online resources. Chapter 5 of the OHWM field manual provides information on using online resources.
- b. Any data collected from online tools have strengths and weaknesses. Make sure these are clear when determining relevance, strength, and reliability of the remotely collected data. Clearly describe why other resources were needed to support the lines of evidence observed in the field, as well as the relevance, strength, and reliability of the supporting data and/or resources.
- c. Attach any remote data and data analysis to the datasheet.

- a. Why do the combination of indicators represent the OHWM?
- b. If there are multiple possibilities for the OHWM, explain why there are two (or more) possibilities. Include any relevant discussion on why specific indicators were not included in the final decision.
- c. If needed, add additional site notes on page 2 of the datasheet under Step 5.

Appendix D. Photo Documentation

Photo 1. Stream 05-ST001 - Upstream	1
Photo 2. Stream 05-ST001 - Downstream	1
Photo 3. Stream 05-ST003 - Upstream	2
Photo 4. Stream 05-ST003 - Downstream	2
Photo 5. Stream 05-ST004 - Upstream	3
Photo 6. Stream 05-ST004 - Downstream	3
Photo 7. Stream 05-ST005 - Upstream	4
Photo 8. Stream 05-ST005 - Downstream	4
Photo 9. Stream 05-ST006 - Upstream	5
Photo 10. Stream 05-ST006 - Downstream	5
Photo 11. Stream 13-ST001 – Upstream	6
Photo 12. Stream 13-ST001 – Downstream	6
Photo 13. Stream 13-ST002 – Upstream	7
Photo 14. Stream 13-ST002 – Downstream	7
Photo 15. Stream 13-ST002A – Upstream	8
Photo 16. Stream 13-ST002A – Downstream	8
Photo 17. Stream 13-ST003 – Upstream	9
Photo 18. Stream 13-ST003 – Downstream	9
Photo 19. Stream 13-ST004 – Upstream1	0
Photo 20. Stream 13-ST004 – Downstream 1	0
Photo 21. Stream 13-ST005 – Upstream1	1
Photo 22. Stream 13-ST005 – Downstream 1	1
Photo 23. Stream 13-ST005A – Upstream1	2
Photo 24. Stream 13-ST005A – Downstream 1	2
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Photo Documentation



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Intermittent

Photo 1. Stream 05-ST001 -Upstream

Intermittent

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EDR

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Photo 3. Stream 05-ST003 -Upstream

Ephemeral



Photo 4. Stream 05-ST003 -Downstream

Ephemeral

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EDR

Photo Documentation



Photo 5. Stream 05-ST004 -Upstream

Ephemeral



Photo 6. Stream 05-ST004 -Downstream

Ephemeral

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EDR _____