

New Mexico Environment Department Surface Water Quality Bureau

LEVEL 1 Hydrology Determination Field Sheet

Date:		Time:		Evaluators:			
Stream Name:			Site Description:				
WQS as found under NMAC (20.6.4):			Assessment Unit:				
Starting Latitude:			Ending Latitude:				
Starting Longitude:			Ending Longitude:				
Starting Elevation:			Ending Elevation:				
TOTAL POINTS*:							
<i>*See Hydrology Protocol for determination</i>							
WEATHER CONDITIONS	DROUGHT CONDITIONS:		Nearest weather station:	PAST 48 HOURS**:		CURRENTLY**:	
	12-mo. SPI Value:			Precipitation past 48 hours:	___ storm (heavy rain)		___ storm (heavy rain)
	12-mo. SPEI Value:		___ rain (steady rain)		___ rain (steady rain)		
	Drought Condition:		___ intermittant rain		___ intermittant rain		
	Obtained from:		___ % cloud cover		___ % cloud cover		
Date Obtained:		___ clear/sunny		___ clear/sunny			
**Field evaluations should be performed at least 48 hours after the last major rainfall event.							
SITE OBSERVATIONS ALONG ENTIRE REACH	Nearest Stream Modification (description and proximity):						
	Nearest Diversion (description and proximity):						
	Nearest Discharge (description and proximity):						
	Include any and all modifications/discharges and diversions regardless of perceived impact to hydrologic regime along with any field observations						
CALCULATIONS FOR DETERMINING FLOODPLAIN AND CHANNEL DIMENSIONS (Use for 1.8 on Field Survey)	Thalweg Height (#1)	Bankfull Height (#2)	Change in Height (#1 - #2)	Change in Height x 2 (#3)	Flood-prone Area Height (#1-#3)		
	Flood-prone width:						
	Bankfull Width:						
	Flood-prone Width to Bankfull Width Ratio:						
PHOTO DOCUMENTATION (include additional photographs as attachment)	Time	Photo #	Description	Identifiable References	Photographer		
OTHER SITE CHARACTERISTIC NOTES/ SCHEMATICS							

LEVEL 1 INDICATORS	Stream Condition (identify all that apply then choose most prominent score)			
	Strong	Moderate	Weak	Poor
1.1 Water In Channel	<input type="checkbox"/> Flow is evident throughout reach <input type="checkbox"/> Flow is observed in riffles <input type="checkbox"/> Flow may not be evident in runs	<input type="checkbox"/> Wet Channel <input type="checkbox"/> Flow is barely discernable <input type="checkbox"/> Floating object needed to observe flow	<input type="checkbox"/> Dry Channel with standing pools <input type="checkbox"/> Saturated or moist sediment under rocks/debris <input type="checkbox"/> Evidence of base flows	<input type="checkbox"/> Dry Channel <input type="checkbox"/> Dry under rocks/debris <input type="checkbox"/> No evidence of base flows
	6	4	2	0
	Notes/Comments:			
1.2 Fish in Channel	<input type="checkbox"/> Found easily <input type="checkbox"/> Found consistently throughout reach	<input type="checkbox"/> Found with little difficulty <input type="checkbox"/> Not consistent throughout reach	<input type="checkbox"/> Found with difficulty (10 or more minutes of searching)	<input type="checkbox"/> Not present (after 10 or more minutes of searching)
	3	2	1	0
	Species Observed and Notes/Comments:			
1.3 Benthic Macroinvertebrates in Channel	<input type="checkbox"/> Found easily <input type="checkbox"/> Found consistently throughout reach	<input type="checkbox"/> Found with little difficulty <input type="checkbox"/> Not consistent throughout reach	<input type="checkbox"/> Found with difficulty (10 or more minutes of searching)	<input type="checkbox"/> Not present (after 10 or more minutes of searching)
	3	2	1	0
	Species Observed and Notes/Comments:			
1.4 Filamentous Algae/Periphyton in Channel	<input type="checkbox"/> Found easily <input type="checkbox"/> Found consistently throughout reach	<input type="checkbox"/> Found with little difficulty <input type="checkbox"/> Not consistent throughout reach	<input type="checkbox"/> Found with difficulty (10 or more minutes of searching)	<input type="checkbox"/> Not present (after 10 or more minutes of searching)
	3	2	1	0
	Notes/Comments:			
1.5 Vegetation along cooridor (within floodplain)	<input type="checkbox"/> Dramatic compositional species difference between upland and riparian corridor <input type="checkbox"/> Distinct riparian corridor exists along entire reach <input type="checkbox"/> Riparian, aquatic or wetland species dominate entire reach	<input type="checkbox"/> Distinct riparian corridor exists but not along entire reach <input type="checkbox"/> Compositional species difference between upland and riparian corridor <input type="checkbox"/> Riparian species interspersed with upland species	<input type="checkbox"/> Minimal compositional species difference between upland and riparian corridor <input type="checkbox"/> Vegetation growing along the riparian area occurs in greater density or grows more vigorously than in the adjacent uplands	<input type="checkbox"/> No compositional species difference between upland and riparian corridor <input type="checkbox"/> Vegetation growing along the riparian area does not occur in greater density or grow more vigorously than in the adjacent uplands
	3	2	1	0
	Species Observed and Notes/Comments:			
1.6 Rooted Upland Plants in Channel	<input type="checkbox"/> Rooted upland plants are absent within the streambed/thalweg	<input type="checkbox"/> There are a few rooted upland plants within the streambed/thalweg	<input type="checkbox"/> Rooted upland plants are consistently dispersed throughout the streambed/thalweg	<input type="checkbox"/> Rooted upland plants are prevalent within the streambed/thalweg
	3	2	1	0
	Species Observed and Notes/Comments:			
SUBTOTAL (1.1-1.6)				

1.7 Sinuosity of Segment (for length no less than two meanders)	<input type="checkbox"/> Calculated ratio > 1.4	<input type="checkbox"/> Calculated ratio 1.4 <> 1.2	<input type="checkbox"/> Calculated ratio 1.2 <> 1.0	<input type="checkbox"/> Calculated ratio = 1.0
	<input type="checkbox"/> Numerous closely spaced bends	<input type="checkbox"/> Mostly bends	<input type="checkbox"/> Few bends	<input type="checkbox"/> Completely straight
	<input type="checkbox"/> Few straight sections	<input type="checkbox"/> Some straight sections	<input type="checkbox"/> Mostly straight sections	
	3	2	1	0
<input type="checkbox"/> Calculated		Notes/Comments:		
<input type="checkbox"/> Observed				
1.8 Floodplain and Channel Dimensions	<input type="checkbox"/> Calculated ratio > 2.5	<input type="checkbox"/> Calculated ratio 2.5 <> 1.2	<input type="checkbox"/> Calculated ratio < 1.2	
	<input type="checkbox"/> Minimally confined	<input type="checkbox"/> Moderately confined	<input type="checkbox"/> Incised/confined channel	
	<input type="checkbox"/> Wide, active floodplain	<input type="checkbox"/> Floodplain active during larger events	<input type="checkbox"/> Floodplain absent or narrow	
	3	1.5	0	
<input type="checkbox"/> Calculated		Notes/Comments:		
<input type="checkbox"/> Observed				
1.9 In-Channel Structure: Riffle-Pool Sequence	<input type="checkbox"/> Frequent number of riffle and pools observed throughout reach	<input type="checkbox"/> Less frequent number of riffle and pools	<input type="checkbox"/> Mostly has areas of pools <u>or</u> of riffles	<input type="checkbox"/> No riffles or pools observed
	<input type="checkbox"/> Obvious transition between riffles and pools	<input type="checkbox"/> Transition between riffles and pools difficult to distinguish		
	3	2	1	0
Notes/Comments:				
SUBTOTAL (1.1-1.9)				
1.10 Particle Size or Stream Substrate Sorting	<input type="checkbox"/> Particle sizes in the channel are noticeably different from particle sizes outside the channel in the flood-prone area.	<input type="checkbox"/> Particle sizes in the channel are moderately similar to particle sizes outside the channel in the flood-prone area.	<input type="checkbox"/> Particle sizes in the channel are similar or comparable to particle sizes outside the channel in the flood-prone area.	
	<input type="checkbox"/> Clear distribution of various sized substrates in the stream channel.	<input type="checkbox"/> Various sized substrates are present in the stream channel.	<input type="checkbox"/> Substrate sorting is not readily observed in the stream channel.	
		<input type="checkbox"/> Higher ratio of larger particles (gravel/cobble).		
	3	1.5	0	
<input type="checkbox"/> Calculated		Notes/Comments:		
<input type="checkbox"/> Observed				
1.11 Hydric Soils Within Flood-Prone Area	<input type="checkbox"/> Hydric soils were observed in reach		<input type="checkbox"/> Hydric soils were not observed in reach	
	3		0	
Notes/Comments:				
1.12 Sediment on Plants and Debris	<input type="checkbox"/> Sediment found readily on plants and debris in:	<input type="checkbox"/> Sediment found but not prevalent on plants and debris.	<input type="checkbox"/> Sediment on plants and debris is isolated in small amounts along the sample reach.	<input type="checkbox"/> No sediment is present on plants or debris.
	<input type="checkbox"/> channel	<input type="checkbox"/> Sediment mostly accumulated on plants and debris in pools		
	<input type="checkbox"/> streambank			
	<input type="checkbox"/> floodplain			
	1.5	1	0.5	0
Notes/Comments:				
1.13 Seeps and Springs	<input type="checkbox"/> Seeps and/or springs present in reach		<input type="checkbox"/> Seeps and/or springs not present in reach	
	1.5		0	
Notes/Comments:				
1.14 Iron Oxidizing Bacteria/Fungi	<input type="checkbox"/> Iron-oxidizing bacteria/fungi present in reach		<input type="checkbox"/> Iron-oxidizing bacteria/fungi not present in reach	
	1.5		0	
Notes/Comments:				
TOTAL POINTS (1.1-1.14)				
<p>Total <9, the stream is determined to be EPHEMERAL.</p> <p>Total ≤9 and <12, the stream is determined to be INTERMITTENT until further analysis indicates otherwise</p> <p>Total ≥ 12.0 and ≤ 19.0, the stream is determined to be INTERMITTENT</p> <p>Total > 19.0 and ≤ 22.0, the stream is determined to be PERENNIAL until further analysis indicates otherwise</p> <p>Total < 22.0, the stream is determined to be PERENNIAL.</p>				