

**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: | | | ___ storm (heavy rain) | | ___ storm (heavy rain) | |
| | 12-mo. SPEI Value: | | ___ rain (steady rain) | | ___ rain (steady rain) | | |
| | Drought Condition: | | Precipitation past 48 hours: | ___ intermittant rain | | ___ intermittant rain | |
| | Obtained from: | | | ___ % cloud cover | | ___ % cloud cover | |
| Date Obtained: | | ___ clear/sunny | | ___ clear/sunny | | | |
| **Field evaluations should be performed <u>at least</u> 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: | | | | | | |
| | Alternative Methods used (describe)? | | | | | | |
| PHOTO DOCUMENTATION (include additional photographs as attachment) | Time | Photo # | Description | Identifiable References | Photographer | | |
| | | | | | | | |
| | | | | | | | |
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| | | | | | | | |
| 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 cooridor 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) | | | | |

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| 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> | | | | |