	Category Water Quality					
Level of Confidence in Data Value	**Data Content**		**Data Coverage**		**Data Quality**	
	Parameter	**Description**	**Parameter**	**Description**	**Parameter**	**Description**
0	Assessment	No basis established.	Spatial	No data available.	QA/QC	No QA/QC available.
	Land Use	No land use information or maps provided. Man induced impacts not identified.	Temporal	No information available.	Protocols	No protocols available or identified.
	Reference Condition	No monitoring parameters or data provided and no reference condition established.			Relevance	Assertions lack any documentation and are irrelevant.
	Source	No source acknowledged or evidence to even suggest a source.				
	Photographs	None.				
1	Assessment	Based solely on observation or perception of a problem.	Spatial	Limited or no data at critical locations.	QA/QC	Noted and/or described. Data quality is suspect or unknown.
	Land Use	General land use information provided, but no maps available.	Temporal	Based on sporadic or singular observations. Period of record is incomplete.	Protocols	Incomplete or no protocols noted and/or described. Protocols not followed. Detection limits are too high. Samples not properly preserved.

	Reference Condition	Monitoring parameters are limited for problem definition. No comparison to a reference condition.			Relevance	No observation date or >5 years old. The ambient conditions provided are marginally relevant to the water quality problem described.
	Source	No evidence of man induced impacts identified. Source is extrapolated from upstream or downstream condition.				
	Photographs	One photograph provided, but fails to demonstrate the relevant water quality issue.				
2	Assessment	Simple assessment. Source, nature, and extent of water quality problem is described. Sample data is based on grab or composite water quality samples.	Spatial	Moderate spatial coverage, relative to size of waterbody. Coverage does not adequately target probable impairments (e.g., one location). Limited data with no exceedances of standards, however sediments indicate contamination and probable sources of contaminates are located in the watershed.	QA/QC	Data quality and sensitivity is low to moderate. Toxicity test replication is low. No contamination evident from QC. Low detection limits.

	Land Use	General information and maps are provided but are not specific to water quality problem described.	Temporal	Moderate temporal coverage; data collected at critical periods; may include quarterly sampling; short periods of record must include good spatial coverage.	Protocols	Data collected following appropriate protocols; training of individuals was limited.
	Reference Condition	Reference condition can be approximated by professional based upon information provided. Limited chemical parameters. May include: historical fish contaminate levels, screening model results, acute or chronic testing, sediment contamination data or source water assessment map.			Relevance	Information used to base assessment not recently collected (>5 years old) but useful to give a historical perspective for approximating reference condition or trends.
	Source	Indirect evidence that problem is due to man induced impacts. Probable impairment causes are targeted and probable sources of impairment documented.				
	Photographs	Several photographs of water quality problem are provided.				
3	Assessment	Intermediate assessment. Source, nature, and extent of water quality problem are	Spatial	Broad spatial coverage with sufficient frequency to capture acute events.	QA/QC	Data has moderate precision and sensitivity, moderate replication

		substantially described. Sample data is based on series of grab or composite water quality samples.				used in toxicity tests; QC documents no significant sampling or analytical errors.
	Land Use	Detailed information and maps are provided and are specific to water quality problem described, but lack direct link to a source or the identified problem.	Temporal	Broad temporal coverage with sufficient frequency to capture acute events; monthly sampling during key periods; lengthy period of record (sampled over period of months for >2 years.)	Protocols	Professional scientist provides training; the sampler is well trained. A qualified professional collects the samples. Data analyzed in competent (certified) laboratory that uses methods with low detection levels.
	Reference Condition	Reference condition can be determined with a reasonable degree of confidence and used as a basis for assessment. Combination of two or more reinforcing analyses, using: water column, sediment, chlorophyll, toxicity testing, or bioaccumulation data. IF drinking water, total & dissolved metals measured; organic compounds measured.			Relevance	Data are older than five years, but there are no indications that the condition it reflects have changed significantly.

	Source	Direct evidence that problem is due to man induced impacts. Impairment causes are targeted and sources of impairment documented. Width/depth integrated sampling employed. Models calibrated.				
	Photographs	Numerous photographs of water quality problem are provided that include documentation of time, ambient conditions and camera settings.				
4	Assessment	Detailed assessment of water quality problem provided.	Spatial	Assessment based on multiple sample sites adequate for statistical analysis to assess differences.	QA/QC	High level of precision and sensitivity. High replication for toxicity tests.
	Land Use	Information and/or maps provided are relevant and sufficient to document water quality problem.	Temporal	Assessment based on data collected over multiple time frames for a period > 3 years, with sufficient frequency and parameter coverage to capture acute events, chronic conditions and other potential impacts.	Protocols	Data collected and analyzed by qualified professionals following detailed QA/QC protocols.

	Reference Condition	Abundant quantitative data on reference conditions are provided. Three or more quantitative analyses support assessment including: water column chemistry, sediment chemistry, chlorophyll, bioaccumulation date or toxicity testing. If drinking water, total & dissolved metals measured; organic compounds measured; sampling and analysis includes sediments.			Relevance	Quantitative data is current, generally less than five years old, and there is no doubt that the assessment reflects current conditions. There have not been any significant changes in activities occurring in the watershed since the data were collected.
	Source	Substantial information that problem is due to man induced impacts is provided.				
	Photographs	Comprehensive photos documenting extent of water quality problem are provided.				

	Category - Water Quantity					
Level of Confidence in Data	**Data Content**		**Data Coverage**		**Data Quality**	
	Parameter	**Description**	**Parameter**	**Description**	**Parameter**	**Description**
0	Assessment	No basis established.	Spatial	No data available.	QA/QC	No QA/QC noted and/or described.

	Land and Water Uses	No information or maps provided.	Temporal	No information available.	Protocols	No protocols noted and/or described.
	Reference Condition	No data to make comparison and no reference condition identified.			Relevance	No observation date provided or not relevant to water quantity problem described.
	Source	No source acknowledged or evidence to even suggest a source for the problem.				
	Photographs	None.				
1	Assessment	Based solely on observation or perception of a problem.	Spatial	Based on observation taken at a single site or limited access point.	QA/QC	QA/QC data provided indicating poor overall data quality.
	Land Use	General land use information provided, but no maps available.	Temporal	Based on sporadic or singular observation.	Protocols	Based upon visual observation alone.
	Reference Condition	No comparison to a reference condition.			Relevance	No observation date or 5 yrs old and only marginally relevant to the water quantity problem described.
	Source	No man induced impacts identified.				
	Photographs	One photograph provided, but fails to demonstrate the relevant water quantity issue.				

2	Assessment	Simple assessment. Source, nature, and extent of water quantity problem are described. No quantitative data provided.	Spatial	Based on one repetitive visited site.	QA/QC	Very little QA/QC information pertaining to assessment is provided.
	Land Use	General information and maps are provided but are not specific to water quantity problem described.	Temporal	Assessment based on annual visit non-specific to season.	Protocols	Simple assessment protocols are identified.
	Reference Condition	Descriptive information on reference condition is provided but no quantitative data.			Relevance	Information used to base assessment on not recently collected but useful to give a historical perspective for approximating reference condition or trends.
	Source	Indirect evidence that problem is due to man induced impacts.				
	Photographs	Several photographs of water quantity problem are provided.				
3	Assessment	Assessment of water quantity problem with a few quantitative measurements.	Spatial	Assessment based on more than one sample site.	QA/QC	Quantitative data submitted with a moderated amount of QA/QC information
	Land Use	Information and/or maps provided are relevant but not sufficient to	Temporal	Assessment based on data collected over a single time frame.	Protocols	Quantitative data collected with standardized protocols.

		document water quantity problem.				
	Reference Condition	Sparse quantitative data on reference condition.			Relevance	Information use to base assessment on is recent. Useful for approximating reference conditions or identifying trends.
	Source	Some evidence that problem is due to man induced impacts is provided.				
	Photographs	Many photographs documenting water quantity problem are provided.				
4	Assessment	Detailed assessment of water quantity problem provided. Multiple quantitative measurements support assessment.	Spatial	Assessment based on multiple sample sites adequate for statistical analysis.	QA/QC	Quantitative data submitted with a large amount of QA/QC information and highly acceptable data quality indications.
	Land Use	Information and/or maps provided are relevant and sufficient to document water quantity problem.	Temporal	Assessment based on data collected over multiple time frames.	Protocols	Quantitative data collected with standardized protocols.
	Reference Condition	Abundant quantitative data on reference conditions are provided.			Relevance	Quantitative data is current. There is no doubt that the assessment reflects current conditions.

	Source	Substantial information that problem is due to man induced impacts is provided.				
	Photographs	Comprehensive photos documenting extent of water quantity problem are provided.				

	Category - Habitat					
Level of Confidence in Data	**Data Content**		**Data Coverage**		**Data Quality**	
	Parameter	**Description**	**Parameter**	**Description**	**Parameter**	**Description**
0	Assessment	No basis established.	Spatial	No data available.	QA/QC	No QA/QC. Data quality is indeterminate.
	Land and Water Uses	No documentation.	Temporal	No documentation. Period of record is unknown.	Protocols	No data collected or unknown protocols.
	Reference Condition	No monitoring parameters or data provided and no reference condition established.			Relevance	No data provided and assertions are irrelevant and lack documentation.
	Source	No source acknowledged or evidence even to suggest a source.				
	Photographs	None.				

1	Assessment	Visual observations of habitat characteristics were made with no true assessment. No direct documentation of current or historical use by individual species.	Spatial Temporal	Assessments are only made at limited access points such as road crossings, or other types of accessible areas, or by aerial flyover.	QA/QC	Incomplete QA/QC noted and/or described. Data quality is suspect.
	Land and Water Uses	Only has documentation of land and water use practices that might alter habitat	Temporal	Based on sporadic or singular observations. Period of record is incomplete.	Protocols	Data were not collected by trained individuals following appropriate protocols.
	Reference Condition	No attempt to compare to reference condition; observed impacts are likely to be natural.			Relevance	Data are not relevant; habitat has likely changed significantly since the assessment was made.
	Source	No evidence of man induced impacts identified. Source is extrapolated from upstream or downstream condition.				
	Photographs	One photograph provided, but fails to demonstrate the relevant habitat issue.				
2	Assessment	Visual observations of habitat characteristics were made with simple assessment. Direct visual	Spatial	Limited spatial coverage. Site specific studies.	QA/QC	Data precision and sensitivity are low.

		observation of evidence of use by individual fish and wildlife species (e.g. spawning adults; tracks, bones, wildlife migration, nesting, animal scat). Anecdotal historical information of use by species.				
	Land and Water Use	Use of land use and topographic maps, other reports to characterize watershed condition; probable sources of impairment are documented.	Temporal	Limited to annual visit and nonspecific to season.	Protocols	Qualified professional involved only through correspondence. Data were collected following appropriate protocols; however, individuals had limited training.
	Reference Condition	Reference condition can be approximated by a qualified professional			Relevance	Data can be used to give an historical perspective for approximating reference condition or trends. It is unlikely that the habitat has changed significantly since the assessment was made.
	Source	Indirect evidence that problem is due to man induced impacts. Probable impairment causes are targeted and probable sources of				

		impairment documented.				
	Photographs	Several photographs of current channel, watershed, lake condition, waterbody are provided.				
3	Assessment	Use of visual-based habitat assessment following standard SOPs (e.g., Stream Reach Assessment and PFC.) Assessment includes quantitative measurements of selected parameters. Species use documented by limited sampling.	Spatial	An attempt was made to access the stream reach, lake, or other type of waterbody wherever possible. Assessment is broad; often covering the entire stream reach or targeted portion of waterbody	QA/QC	Data has moderate precision and sensitivity.
	Land and Water Use	Data on land and water uses are used to supplement assessment	Temporal	Assessment during a single season the norm.	Protocols	Professional biologist performs survey or provides training. Professional biologist or hydrologist performs the assessment.
	Reference Condition	Reference condition can be determined with a reasonable degree of confidence and used as a basis for assessment.			Relevance	Data were collected recently or are very unlikely that the habitat has changed significantly since the assessment was made.
	Source	Direct evidence that problem is				

		due to man induced impacts.				
	Photographs	Photographs of channel, watershed, lake, or other waterbody condition prior to alteration and current conditions are provided.				
4	Assessment	Assessment of habitat based on quantitative measurements of instream parameters, channel morphology and floodplain characteristics, preferably under standardized and commonly used protocols. Designed quantitative sampling using established protocols.	Spatial	Assessment based on good access of the entire stream reach including private property. Helicopter surveys, etc.	QA/QC	High level of precision and sensitivity.
	Land and Water Use	Information and/or maps provided are relevant and sufficient to document habitat quality.	Temporal	Data from multiple years.	Protocols	Assessment was performed by a highly experienced professional.
	Reference Condition	Reference condition is well understood and is used as the basis of the assessment.			Relevance	Data are current; there is no doubt that the assessment reflects current conditions and documents past conditions.
	Source	Direct evidence that problem is due to man				

		induced impacts.				
	Photographs	Comprehensive historical photographs of channel, watershed, lake, and waterbody condition prior to alteration and current conditions are provided, including specific dates, ambient conditions and full descriptive documentation. Groundtruthing.				