Abbreviated Monitoring Plan (AMP):
ADEQ Water Quality Improvement Grant Program

When to use this form: This form is intended to document plans for sampling water quality and monitoring best management practices on individual grant projects under ADEQs Water Quality Improvement Grant program and NRCS National Water Quality Initiative. This AMP is intended to provide more specific sampling and monitoring details than could be described in a watershed-scale Sample and Analysis Plan (SAP). Specific methodologies will be identified here and reference ADEQs Standard Operating Procedures (SOP; 2014) for such measures.

Grant Project Name: _____

Grant ID#: _____

Project Location: _____

Provide a Brief Description of the Project:

Preparer: _____ **Date:** _____

Approvals:

Unit Manager: _____ Date: _____

Grant Project Manager: _____ Date: _____

Additional copies of this form will be provided to: (Check all that apply)

- ☐ Unit Manager
- ☐ Team Leader
- ☐ Grant Project Manager
- ☐ ADEQ Project Manager
- ☐ Team Members
- ☐ Project File

WATER QUALITY EFFECTIVENESS MONITORING

All work described in this Abbreviated Monitoring Plan shall follow procedures detailed in the appropriate SOP or equivalent.

Provide the following information about the Project Technical Design:

Site(s) to be sampled (*include a map*):

Sampling points:

Provide the rationale for selecting the sampling points:

Sample Type(s):

Quality Control (QC) Samples Collected:

Special Sample Requirements:

List any Special Training Requirements:

Projected Sampling Date(s):

Sampling Table:

Site ID #	Site Name	Latitude	Longitude	Analyte(s)

Field Sampling Requirements: Field notes will be recorded in a field notebook or tablet computer. Measurements will be recorded on appropriate field sheets, which will be maintained by the Sampling Team Leader. Samples will be collected in accordance with established procedures.

Field Measurements should include: pH, temperature (°C; water and ambient), dissolved oxygen (mg/L and % saturated), specific conductance (µS/cm), Total Dissolved Solids (TDS; mg/L), turbidity (NTU), and flow (cubic feet per second). See attached field sheet.

List Sampling SOPs to be followed:

Sample Handling and Custody Requirements:

Laboratory:

Copy of Chain of Custody Attached: Yes: ☐ No: ☐ Explain:

BEST MANAGEMENT PRACTICE EVALUATION

All work described in this Abbreviated Monitoring Plan shall follow procedures detailed in the appropriate SOP or equivalent.

BMP Objective(s):

(e.g., To reduce sheet erosion in rangelands and sediment discharge from shrub encroached grassland by reducing shrub cover and increasing perennial grass and substrate cover).

Type of BMP(s):

Projected BMP Evaluation Date(s):

BMP Evaluation Table: (Complete the table below)

BMP Site Name	Latitude	Longitude	Type of BMP	BMP area (ac) or length (ft)	Install Date	Photopoint (Y/N)	Pretreat Data (Y/N)	Control Sites or Data (Y/N)	Monitoring Locations (#)	Water Quality Monitoring at BMP (Y/N)

BMP Site Name (e.g., Willow wash rock dam 1, Willow wash rock dam 2); Latitude and longitude = center point of BMP

BMP Evaluation Requirements: Field notes and measurements will be recorded in a field notebook or tablet computer, which will be maintained by the Team Leader.

BMP evaluations are to take into account the type of action, availability of pre-treatment data and/or paired control sites, and the desired or practical level of assessment or monitoring. BMP evaluations may include, but are not limited to: visual assessments, photographic monitoring, and/or quantitative data gathering and analysis (e.g., via vegetation transects, total station analysis, bottom deposit assessment, bank pins and other bank stability methods, and any other evaluation methods deemed appropriate).

List BMP Evaluation Sampling SOPs to be followed:

PHOTOGRAPHIC MONITORING

Photographic monitoring is one of the best ways to document changes/improvements as a result of BMPs. Each photographic monitoring trip should include the same data (see table) and should be executed the same way every time. The latitude and longitude, direction of photo, marker to ensure photos can be duplicated, what the picture is capturing, and who is taking the photograph are all important pieces of information to include.

Photographic Monitoring Table: (Table should be completed during each photo monitoring visit)

Date	Image #	Point ID	Type of Marker	Latitude	Longitude	BMP	Direction of Photos	Description of Photos

Point ID = Site ID or other ID; Type of Marker = t-post, rebar, etc.; Direction of photos = cardinal direction: N, S, E, W; Description of photos = general observations, key features

---

HEALTH AND SAFETY

Phone Numbers:

Nearest Hospital Emergency Room:

Police:

Border Patrol:

Safety Table

Hazard	PPE	Precautions
Flash Flood	N/A	Use extreme caution when crossing flooded river fords in vehicles. Beware of changing weather conditions and be prepared to seek higher ground. Observe rules of thumb; Don't wade in stream over factor of 9 (i.e., depth ft x velocity ft/s > 9).
Lightning	N/A	Take cover in vehicle or building
Contact with chemicals and poor quality water	Nitrile Gloves, Safety Glasses, Hip/Chest Waders	Avoid direct contact with polluted stream water. Wash-up thoroughly before eating, drinking, etc. Some sample bottles contain sulfuric or nitric acid, use caution when handling.
Heat Stress	N/A	Drink plenty of potable water; wear a hat and light colored clothing. Take breaks as needed.
Hypothermia	Rain/snow gear	Expect sub-freezing and wet conditions during winter months. Keep dry.
Wildlife – snakes and other poisonous critters. There is a potential for Africanized bees	Snake leggings	Use caution walking to sites. Avoid dark color clothing (attracts bees).
Slips, Trips, and Falls	Deep lugged boots and flash lights at night	Use good footings, and ropes for assistance down steep slopes. Watch where you're going.

Map of Water Quality Sampling Locations (include BMP locations where applicable):

Map of Best Management Practices and BMP Evaluation Locations:

The following information shall be considered part of the Abbreviated Monitoring Plan unless noted otherwise.

Project Organization and Task Responsibilities:

1. Project Manager is responsible for comprehensive oversight and final decision making for the Project.
2. Team Leader is responsible for:
    - Assembling team and briefing members on requirements of the project
    - Supervising preparation of equipment
    - Overall collection of samples, record keeping, and delivery to laboratory (water quality)
    - Safety of field personnel
    - Overall coordination and documentation of field activities related to the project
3. Quality Assurance (QA) Coordinator will oversee the preparation of the sampling plan and is available to review and approve plans. Questions regarding validity and usability of data will be directed to the QA Coordinator.

Data Quality Indicators:

Representativeness is the degree to which data accurately and precisely represent a characteristic of an environmental condition or a population. One time sampling events should focus on issues related to judgmental sampling and why certain areas are included or not included and the steps being taken to avoid either false positives or false negatives.

Comparability expresses the confidence with which one data set can be compared to another. This is accomplished by using standardized methods for sample collection and analysis.

Completeness is the amount of acceptable quality data collected as compared to the amount needed to ensure that the uncertainty or error is within acceptable limits.

Instrument, Equipment and Supplies, Testing and Maintenance Requirements:
Instruments will be calibrated and maintained in accordance with manufacturer instructions and the procedures outlined in appropriate Standard Operating Procedures (SOPs). Water quality sample containers will be pre-cleaned containers.

Assessment/Oversight:
Identification of problems related to technical performance will be the responsibility of the technical staff working on this project. The Sampler will assess any problems that arise in the field, and if needed and will communicate with the Project Manager and any technical staff. Any changes in technical procedures will be documented in field notes and highlighted in reports related to this project.

Data Review, Validation and Usability:
All data will be reviewed and verified by Team Leader. Water quality data from laboratories will be initially validated by the laboratory performing the analysis. Any questions regarding the verification and usability of the data will be discussed with ADEQ's Quality Assurance Unit and decisions made appropriately.

Documentation and Records:
The Team Leader will prepare a summary of the sampling activities for the day. The summary should include the following:

- Name of Team Leader and Team Members
- Number and location of water quality samples collected by matrix including QA/QC samples
- Number and location of BMPs to be evaluated
- Locations of photographic monitoring
- On-site measurements made and results obtained at each location (including times)

- Disposition of all samples (where they were delivered for analysis)
- Photocopies of Chain of Custody
- Noteworthy observations at each sampling location