[NAME OF PROJECT]

Data Management Plan

[VERSION, YEAR]

This data management plan template is intended to accompany the Guidebook titled: Improving Environmental Monitoring Collaborations Through Co-development of Data Management Plans: *A guide for Resource Management Agencies and Environmental Stewardship Groups*. This version of the template does not contain instructions on how to fill out each section. To view the instructions, see the extended version of the template.

This template is a resource to help Stewardship Groups and Resource Management Agencies better collaborate on environmental monitoring initiatives by facilitating co-development of a data management plan. The template should be completed in full prior to any fieldwork being conducted, as the process of co-developing a data management plan – which should include transparent, face-to-face discussions – helps establish rapport and build trust, and may flag potential challenges that could adversely affect the project.

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Participants, Roles, and Responsibilities

Resource Management Agency (RMA) Collaborators

[RESOURCE MANAGEMENT AGENCY]

- o Jurisdiction/Mandate:
- o Interest/Expectations:
- o Role and responsibilities:
- o Resources/Capacity:
- o Primary point(s) of contact:

Stewardship Group (SG) Collaborators

[STEWARDSHIP GROUP]

- o Group focus/Mandate:
- o Interest/Expectations:
- o Role and responsibilities:
- o Resources/Capacity:
- o Primary point(s) of contact:

Code of Conduct

Collaboration is necessary to tackle large, interdisciplinary problems; and it is at the interface of disciplines that truly creative, innovative problem-solving takes place. However, collaboration can also be challenging and, at times, frustrating; and a collaboration is destined to fail if respectful boundaries are not maintained.

Participants in this collaboration have agreed to the following:

- o ...
- o ...

Project Description, Goals, and Objectives

Project Description:

- o Project name:
- o Project purpose:
- o Proposed project timeline:

Goals and Objectives:

1. [GOAL]
   - o Objective 1:
   - o Objective 2:
   - o ...

   Indicator(s) of Success:

   - o Metric:

Metadata and Documentation

Metadata

Metadata that must be recorded for <u>all parameters</u>, the format in which they are to be recorded, and what device is to be used (if applicable) are:

  - …
  - …

Metadata that must be recorded for <u>specific parameters only</u>, the format in which they are to be recorded, and what device is to be used (if applicable) are:

[PARAMETER]

  - …
  - …

Equipment and Maintenance Record

Location of Equipment and Maintenance Record:

Information recorded at time of maintenance for each piece/type of equipment:

[PIECE/TYPE OF EQUIPMENT]

  - Description of work:
  - Date:
  - Personnel:
  - Date of next scheduled maintenance:
  - …

Quality Assurance/Quality Control Record

Location of QA/QC Record:

Information that must be included in record:

  - Changes to protocols or methods:
    - Approval process:
    - Description of change to protocol or method:
    - Date protocol or method was changed:
    - Reason for changing protocol or method:
  - Training:
    - Training/refresher training mandatory?:
    - Description:
    - …

Protocols, Methods, and Materials/Equipment

[PARAMETER]

Sampling Plan

Metric:

Target/Acceptable range:

Limit of acceptable change:

Person(s) responsible for data collection/sampling:

Method of data collection/sampling:

Data will be recorded (e.g., by hand, digitally):

Frequency of sampling/recording:

To ensure continuity of data collection and avoid gaps in the dataset:

Materials and Equipment

[ITEM]

- o Purpose/function of item:
- o Quantity:
- o Cost per item:
- o Lifespan:
- o Purchased from:
- o Delivery time [if applicable]:
- o Person responsible for acquiring item(s):
- o Additional notes (e.g., batteries required):

Maintenance of Equipment

Protocols/methods/reason(s) steps are important:

Person(s) responsible for each task:

Prior to Data Collection

Protocols/methods/reason(s) steps are important:

Person(s) responsible for each task:

Quality Assurance

QA/QC protocols/reason(s) steps are important:

Person(s) responsible for each task:

During Data Collection

Protocols/methods/reason(s) steps are important:

Person(s) responsible for each task:

Quality Assurance
QA/QC protocols/reason(s) steps are important:

Person(s) responsible for each task:

After Data Collection
Protocols/methods/reason(s) steps are important:

Person(s) responsible for each task:

Quality Assurance
QA/QC protocols/reason(s) steps are important:

Person(s) responsible for each task:

Transfer of Samples to Laboratory (if applicable)
Laboratory that samples will be transferred to:

Business hours of laboratory:

Person(s) responsible for transferring samples:

To ensure sample preservation…

Quality Assurance
QA/QC protocols/reason(s) steps are important:

Person(s) responsible for each task:

Laboratory Analysis
Laboratory's protocols/methods of analysis:

Quality Assurance
Laboratory's QA/QC protocols/methods:

Data Transfer, Storage, Organization, and Protection
[PARAMETER]
Transfer
Following data collection, data will be transferred to:

Person(s) responsible for data transfer:

Method of data transfer (e.g., email):

Upon receiving the data, the receiving person will:

Storage and Organization
Data will be stored:

File format will be:

Person(s) responsible for storing and organizing data:

Data organization will consist of:

Protection

To prevent the data from being lost or destroyed:

Person(s) responsible for ensuring data are protected:

Person(s) allowed to access the data include:

Data will be backed up to:

Backups will occur:

Backups and/or copies of the data will be stored:

In the event the data are lost:

Mechanisms for protecting the data in the event of an adverse change in political climate include:

Data Analysis/Statistical Power

[PARAMETER]

- o Target/Acceptable range:
- o Limit of acceptable change:
- o Statistician consulted (if applicable):
- o Results of consultation:
- o Person(s) responsible for data analysis:
- o Method of analysis:
- o This method was chosen because:

Data Sharing

The intended data end-users are:

[PARAMETER]

Those who will have access to the data include:

Privacy concerns (if applicable):

Protocols to maintain privacy and/or obtain permission for sharing data include (if applicable):

[INTENDED END-USER]

Person(s) responsible for sharing data and/or results of analyses with end-user:

Method of data sharing:

Timeline/deadlines:

Linking the Data to Action

[PARAMETER]

[INTENDED END-USER]

The data will be used in the following processes:

Actions taken by [end-user] in response to measurements that are outside the stated 'acceptable range' and/or exceed the stated threshold include:

Public Education

Public engagement and/or education activities will include:

Person(s) responsible for planning and implementing activities:

Communication Plan

Meetings

Meetings will be held:

Purpose of Meetings:

Roles and Responsibilities:

- o Chairing/Co-chairing:
- o Booking the meeting room or initiating the video-conference:
- o Recording minutes:
- o Distributing minutes:
- o ...

Communication Regarding Data Use

Stewardship Groups must be notified if, and for what, their data are used (including, but not limited to, the intended uses outlined in the "Linking the Data to Action" section).

[INTENDED END-USER]

Person responsible for communicating to Stewardship Group(s) that data were used:

Method of communication:

Coordination in the Event a Person Cannot Fulfill Their Commitment(s)

If a volunteer cannot fulfill their commitment (e.g., cannot collect samples on a specified day), they must contact [person]. Please give at least [amount of time] notice if and when possible.

If an RMA collaborator cannot fulfill their commitment, they must contact [person]. Please give at least [amount of time] notice if and when possible.

Support for Volunteers

The following person(s) are available to provide support to volunteers in the event of challenges or questions related to:

- o   ...
- o   ...

Public Engagement and Outreach

Methods for engaging the public will include:

Person(s) responsible for public engagement and outreach:

Additional Stakeholders

[STAKEHOLDER]

Relevance:

Representative:

[Stakeholder] would like to be informed/kept up-to-date on:

Communication will consist of:

Person responsible for maintaining communication with [stakeholder]:

[Stakeholder] has offered to contribute:

Training

For volunteers participating in this monitoring initiative, training is [mandatory/optional] and refresher training is [mandatory/optional].

Person(s) responsible for training volunteers:

Training will be offered:

Refresher courses will be offered:

Training will consist of/cover the following skills:

- o   [Skill]:
- o   ...

Documents provided to participants include:

Upon completion of training, participants will receive:

Budget and Funding

Funding Sources: Details and Stipulations

[SOURCE]

- o   Date application submitted:
- o   Date funding received:
- o   Amount:
- o   Funding can be used for:
- o   Funding cannot be used for:

- o   Required reporting:
- o   Additional important information:

Budget

…

Evaluation

Evaluation of the Project/Collaboration

Evaluation of the project/collaboration will consist of:

Evaluation will occur:

Person(s) responsible for implementing evaluation:

Results of the evaluation will be discussed by all parties at [location/method of communication and date/time]; during which a plan to address concerns will be made.

Evaluation of the Data Management Plan

Evaluation of this Data Management Plan will consist of:

Evaluation will occur:

Person(s) responsible for implementing evaluation:

Results of the evaluation will be discussed by all parties at [location/method of communication and date/time]; during which a plan to address concerns will be made.

Person(s) responsible for updating this Plan following the group discussion:

Evaluation of Training

Evaluation of training methods will consist of:

Evaluation will occur:

Person(s) responsible for implementing evaluation:

Results of the evaluation will be discussed by all parties at [location/method of communication and date/time]; during which a plan to address concerns will be made.

Appendices

RMA Collaborator Jurisdiction, Mandates, and Limitations

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Background Information

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