



## **Check List for Organizing Field Collection and Management of Data**

### **1.0 Introduction**

The Check List was prepared by Stewart Toshach and Joy Paulus in response to a request from the Pacific Northwest Aquatic Monitoring Partnership. It has been reviewed and approved for distribution by members of the NED Steering Committee.

### **2.0 Background**

This Check List is written primarily for scientific program managers with responsibility for the oversight of data collection efforts within their agency or across shared programs.

Data collection is a critically important part of our scientific method because most results depend directly on the quality, quantity and availability of data.

Broad-scale data collection and monitoring increasingly involves teams of researchers, from different organizations working together. Team members bring different understandings about the data and may not agree on methods. Differences need to be discussed, understood and resolved before comparable data can be collected. The best outcome is that the data can be directly compared across all collection efforts.

Many data collection problems are relatively easy to prevent upfront but are difficult or impossible to recover from after the fact. The worst outcome is “I thought you were entering and managing the data!”

### **3.0 Organizing Your Field Data**

If you address, answer and write up all of the questions in the check list below you will have completed a basic data management plan.

It is important that the data management tasks, roles, responsibilities and deliverables are clearly understood, assigned and documented before field collection begins. Remember why this effort is useful, it is make sure that the data collected is available, useable and comparable when you need it.

Your monitoring efforts should clearly address the following check list:

- Who will be collecting what data, when and where<sup>1</sup>?
- What field form/s or other collection devices will be used?
- What metadata (information about the data) will be maintained and how?
- How are you satisfying any data collection standards?
- Are the data elements (attributes) planned for collection on the field forms? Are they the same as those being used by others? If not, how will the differences be understood or resolved?
- Is there a simple data dictionary that described each data element being collected- name, definition, unit of measure and whether or not it is a required or optional?
- Is there a description of the level of data quality and assurance checking that will be done? By whom and when?
- Is there an agreement for backing-up data at steps along the collection pathway? By whom and when?
- Is there a description of how different versions of the data (e.g. raw, quality checked, derived and etc) will be managed and kept separate?
- Who will 'own' the data and control access?
- Who will have authority to make changes to the data and maintain it?
- When and how will the data be shared?
- What 'long term' repository and access will be used for the data and metadata?
- Who has overall responsibility or authority for completing this check list?
- A flow diagram or similar illustration together with a time line is a good way of visualizing these activities – from beginning to end.

Now you have a basic plan.

#### **4) Executing Your Plan**

Once the plan has been completed, and your participants are committed to it, the next task is deployment. The plan contents can also be used as an important part of the needed metadata record.

By working together to complete the Check List, data collectors and program managers can protect their programs from many common problems that can compromise data collection efforts.

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<sup>1</sup> It is assumed that most scientific data collection efforts have a documented scientific design describing, for statistical or other purposes, the needed frequency, location and precision of data collection.