

1.1.1 How To Use The Compendium

The purpose of this Compendium is to enhance the user's knowledge and ability to make decisions regarding measurements of water quality in various water bodies. It should be useful to field operators conducting water quality monitoring, technical advisors and trainers of citizen monitoring groups, agency staff, or any other person interested in water quality issues.

The Introduction you are reading now is part of the first section (Section 1) of the compendium, and it also includes introductory NON-GUIDANCE materials on a number of topics.

In contrast, Sections 2 through 9 consist of materials, collectively known as “protocols”, organized in Folders by subject-matter or by specific water-quality parameters, and are intended to be used as “guidance and tools” in conjunction with monitoring and assessments or other watershed information gathering efforts. The guidance in Sections 2 through 9 is technical in nature, and designed to be used by citizen monitors or by others collecting watershed data. In addition, the Appendices to this Compendium provide useful information regarding funding sources for watershed-oriented activities. It must be noted that this Compendium does not include outreach and other materials regarding the administrative and organizational aspects of establishing watershed groups (for which the reader is referred to other publications), nor does it provide information relevant to advocacy and political activity.

The CWT Compendium is about collecting usable and reliable data of known quality. It takes different kinds of guidance and tools to accomplish this. In fact, the different kinds are like a ball that can be sliced in several dimensions of organization. Some folks slice it by “chemical-biological-physical” parameters while others slice it by “streams-estuaries-lakes”. Because this is a compendium of methods, we have chosen to slice it by logistics, essentially starting with what you pack in your field kit and ending with how you report the quality of your data. In other words, it is sliced by what you want to do and what spatial scale it represents (Point? Line? Area?).

Each Section contains a number of Groups and each Group is made of several Folders, organized by subjects or in order of importance to Citizen Monitoring. A Folder is a package of documents providing information and guidance on a specific Parameter or subject. There may be four types of guidance document in each Folder:

Fact Sheet (FS) – these 2- to 5-page documents tell you why the parameter you are monitoring is important. They provide parameter-specific information regarding the ecological significance and the regulatory benchmarks that have been developed for that water quality parameter. Examples: how much ammonia is toxic to fish, or what are the water quality standards for dissolved oxygen. Note that FSs are not guidance documents. Each Fact Sheet has a unique identifier.

Information Paper (IP) – these 3- to 8-page documents help you choose your way of measuring a given parameter - in the parameter-specific guidance folders. The IPs provide a "method menu" table for a selection of methods with information on cost, labor, attainable accuracy & precision, applicability, and major sources of error associated with each method. Most IPs also include a brief description of the measurement principles and provide practical advice based on what folks have learned while using these methods. IPs also have unique identifiers.

Standard Operating Procedure (SOP) – these 1- to 9-page documents give you step by step instructions on how to use a given instrument or kit, and some of them include formal data sheets or are associated with electronic file templates. A comprehensive and specific SOP is an extremely boring document that burdens you with unending nitty gritty details on how to calibrate or check your instrument and where to record your findings/actions, how to conduct measurements in your samples, and how to control, check, record and report (CCRR) the accuracy and precision of your measurements. In short, the SOP will help you generate and communicate data of known quality. There may be several SOPs in each Folder. SOPs are instrument or kit-specific, and are listed inside the Folder in the same order as provided in the “method menu” table of the IP. SOPs have unique identifiers that relate them to the Folder they belong to.

Other guidance– these provide further insight on the theory and practice of monitoring methods or techniques, and have been included in some Folders because we found them useful. Most of these documents are independent publications, and are shown in the Table of Contents with a citation of the author and the publication year. These documents do not have a unique ID.

Once you have identified the Folder you need, you can go in and select the pieces you want to use. Some folders have all four types of documents, while other Folders may only have two or three types. Note that the present compendium is the latest edition of a work in progress. So please feel free to contact us about your ideas: if you are using this compendium, you are a part of the Clean Water Team.