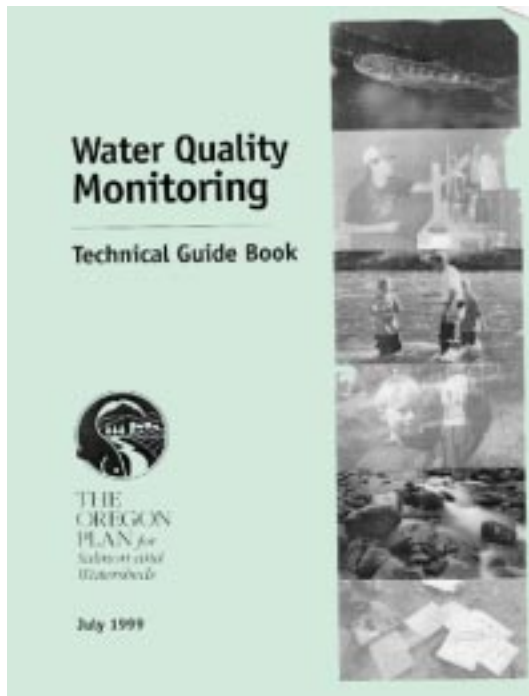


## Document No.: 21

### Water Quality Monitoring: Technical Guide Book

**Citation:** Oregon Plan for Salmon and Watersheds. 1999. Water Quality Monitoring Technical Guide Book.



**Source:** Oregon Plan Monitoring Team  
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Internet: <http://www.oregon-plan.org/status.html#wqguide>  
**Cost:** No Charge

**Abstract:** As a component of the Oregon Plan for Salmon and Watersheds and the Oregon Watershed Assessment Manual, the Guidebook provides a standardized set of water quality monitoring methods for use by the public in determining the status and trends of aquatic habitat and species. The first few chapters provide background information, monitoring strategies, and ways to develop a

monitoring plan including criteria for selecting monitoring sites, data quality guidelines, and methods to store and analyze water quality data. References and Oregon State contacts are provided in each chapter to obtain more detailed information. The subsequent chapters provide protocols designed to be stand-alone documents on basic monitoring techniques for each:

- stream temperature
- dissolved oxygen
- pH, conductivity
- nitrogen/phosphorus concentration
- turbidity
- stream macroinvertebrates
- pesticides and toxic chemicals
- road sediment
- sediment deposition

Information on additional references is included in each chapter, as well as estimated time and labor requirements per technique, equipment lists and specifications, detailed instructions on using equipment for sampling and analysis, and equipment costs based on 1997 prices.

Two appendices provide detailed techniques for evaluating road-related erosion and hazards to aquatic systems (Appendix D of Guidebook: Road Hazard Inventory) and for assessing sediment deposition in streams (Appendix E of Guidebook: Sediment Deposition).

**Target Application:** General & Management & Research

**Suitable for Volunteers:** Yes

**Training Required:** No

**Monitoring Focus:** Guidance for the standard and consistent collection of field-based data on a range of water quality parameters. Chapters include detailed discussion of monitoring strategies and ways to develop a monitoring plan. Also explained are criteria for selecting monitoring sites, data quality guidelines, and methods to store and analyze water quality data.

**Geographic Scale:** Basin, sub-basin, stream reach, project site

**Methods:** Office & Field & Laboratory

**Level of Data Quality:** Levels 2, 3 & 4

*Note:* Oregon has a different Data Quality objective rating: Levels A-C. Level A is the highest, and can be used to assess compliance with water quality standards, permitting requirements and other regulatory activities. Level B is the next highest, is easier and less expensive, and can be used as an early warning of potential problems or as a screening tool. Level C is the lowest, and is the easiest to collect, but because of its low accuracy and precision, Level C data is best used for educational purposes.

**Equipment and Tools (*list*):** Provided in each chapter of the document; see Water Quality Equipment List

**Data Forms:** Provided in document; also available from the internet at:

<http://waterquality.deq.state.or.us/wq/303dlist/DataRptFormat.htm>

**Examples of Filled-in Data Forms:** Provided in the document; also available from the internet at:

<http://waterquality.deq.state.or.us/wq/303dlist/qappexample.htm>

**Key References:** Included in each chapter of the document

