

Agricultural Lands Discharge Program

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Common Types of Monitoring

Forensic monitoring is used to identify pollutant sources on the ground for purposes of timely remedial action. It is typically conducted on small spatial scales, as close to suspected pollutant sources as possible. Forensic monitoring is usually done during periodic inspections. In addition to identifying pollution sources directly, they may also be identified by tracing a noticeable change in the quality of waters instream to potential pollution sources upslope.

Implementation monitoring is used to determine whether activities were carried out as planned. Typically, this type of monitoring relates to the implementation of a set of rules or land use guidelines and prescriptions, is qualitative, and may be conducted at any spatial scale. Implementation monitoring can be as simple as photographic documentation, provided that the photographs are adequate to represent and substantiate the implementation of a control practice.

Effectiveness monitoring is used to determine whether particular land management prescriptions (e.g., erosion control measures, restrictions on activities in riparian zones, etc.) are effective at achieving desired results. There are two types of effectiveness monitoring: upslope or hillside effectiveness monitoring and instream monitoring. Upslope effectiveness monitoring can be done through qualitative inspections or photographs taken over time to verify the effectiveness of practices on the ground. Instream effectiveness monitoring can involve visual observations, photographs, or water sampling and analysis. Instream effectiveness monitoring can be conducted upstream and downstream of a discharge point, or before, during, and after the implementation of a control practice, for example.

Assessment monitoring is used to characterize existing water quality conditions, usually as a snapshot of conditions at a moment in time. Data collected may be used to direct further, more in-depth monitoring activities. Assessment monitoring often involves instream water sampling and analysis.

Trend monitoring is used to characterize water quality conditions over time. Trends in the data can provide information about the effects that cumulative impacts may be having on that parameter. Trend monitoring often involves instream water sampling and analysis.

Compliance monitoring is used to determine whether discharges resulting from land use activities are in compliance with water quality standards. Compliance monitoring may be conducted at various spatial scales, but is most applicable at the project scale or smaller. Compliance monitoring often involves instream water sampling and analysis.