

NOTE TO DESIGNER: This document is meant to be a tool to help in the development of a Contractor's Note (CN) when turbidity monitoring is required at a project site. Coordinate with the district environmental planner to verify the need for turbidity monitoring.

Turbidity monitoring may be required by one or more permits / agencies on the same project. Consideration must be given to how requirements for one may correspond or correlate to another. Coordination with the agencies involved prior to construction may satisfy both requirements with the same monitoring event.

The actions listed below were developed by HQ ENV staff, in coordination with Idaho Department of Environmental Quality (IDEQ), and are meant to outline the general procedures that should accompany turbidity monitoring. Before modifying these actions, consult with HQ ENV.

Turbidity monitoring is required for projects with a Construction General Permit (CGP) that discharge to waters identified by DEQ as impaired due to sedimentation/siltation or total suspended solids (TSS) in the most recent integrated report.

Turbidity monitoring may also be required in the 404 permit U.S. Army Corps of Engineers (USACE) or in the biological assessment or opinion (BA/BO) by Idaho Fish and Game (IDFG), U.S. Fish and Wildlife Service (USFWS), or National Marine Fisheries Service (NMFS).

If you have questions about this CN, contact HQ ENV, Caleb (x78518)

ENVIRONMENTAL REQUIREMENT – TURBIDITY MONITORING

01/17

To be compliant with the contract permits, this contract requires collecting and analyzing water samples as follows: **NOTE TO DESIGNER:** On CGP projects that require monitoring, add the following “Turbidity monitoring is required when stormwater or allowable non-stormwater discharges are leaving the project limits and entering a water of the United States AND the construction site or construction support activities that are the source of discharge are not stabilized per CGP Section 2.2 or shut down per CGP Section 4.1.4.3.”

A. Data Collection

1. Analyze all samples following instrument manufacturer's written instructions.
2. Properly and regularly calibrate the turbidimeter in accordance with the manufacturer's written instructions.
3. Verify instrument calibration in accordance with the manufacturer's written instructions.
4. The person(s) who collects, analyzes, and records samples shall be knowledgeable in the principles and practices of water quality protection. **NOTE TO DESIGNER:** On projects with CGP coverage requiring monitoring, substitute the following, “The person(s) who collects, analyzes, and records samples shall meet the definition of a “qualified person” as defined in the CGP Section 4.1.1.”.
5. Sample collection shall be done on a grab sample basis. A grab sample, also known as a catch sample, consists of a single sample taken at a specific time giving a snapshot of water quality and may be manual or automated. If the sample collection will be automated and the sample data will not be reviewed after each sampling event, telemetry equipment must be used that will notify the operator when parameters are exceeded.
6. Sample intervals shall be twice daily, or as directed, and shall be evenly distributed throughout the work day to give an accurate representation of construction activities. If additional samples

are collected, beyond those required, only the results of the required monitoring events need to be recorded in the SWPPP. **NOTE TO DESIGNER: Twice daily is the interval specified in the IDEQs 401 certification of the CGP. This is the minimum interval for ITD projects.**

7. Collect samples in pairs during each sample interval. A pair of samples shall consist of one upstream of project discharge to determine background turbidity levels and one downstream of project discharge or within any visible plume to determine turbidity levels leaving the project site.
8. Modify sample interval and/or location if unsafe conditions warrant. Document any modification to the sample interval or location in the sample logbook.
9. If monitoring equipment will be physically located in the water body, then the following conditions shall apply:
 - In Section 10, navigable waters (http://www.nww.usace.army.mil/Portals/28/docs/regulatory/ContactUs/Section%2010%20Waters_map.pdf), a Nationwide Permit #5 from USACE is required.
 - If any temporary fill is needed to construct or maintain the monitoring equipment, a 404 permit from USACE is required.

B. Exceedances

1. Immediately cease all earth disturbing construction activities if an increase of 50 NTUs instantaneously or 25 NTUs over ten consecutive days over the background turbidity level occurs or a plume is observed originating from the project, unless a short term exceedance is approved. **NOTE TO DESIGNER: Coordinate with the Environmental Planner. These limits are the state water quality standards. Regulatory agencies may impose more stringent limits. Review the 404 permit or the BA/BO for specific limits. If discharging to a water body with Endangered Species Act (ESA) listed species, consider specifying to cease work when turbidity results approach the instantaneous limit of 50 NTUs (i.e. 35 – 45 NTUs).**
2. Take immediate action to address the cause of the exceedance. **NOTE TO DESIGNER: For projects with CGP coverage, include the following, “per CGP Section 5”.**
3. Increase monitoring frequency to hourly until state water standards are met.
4. Construction activities may continue once turbidity readings return to within 25 NTUs of background levels and actions have been taken to address the cause of the exceedance. **NOTE TO DESIGNER: Coordinate with the Environmental Planner. If an exceedance of the limits outlined in B.1 would constitute an unauthorized “take” as per the BA/BO, insert the following, “Construction may not resume until the appropriate regulatory agency is contacted and they determine if a re-evaluation is required.”**
5. Provide a verbal report to the Engineer within 24 hours of any water quality exceedance, followed by a written report within 5 days using form ITD-2790 (Notice of Potential Violation of the Construction General Permit or Notice of Prohibited Discharge).

C. Logbook and Diary

1. Maintain a legible, organized logbook and construction diary at the construction site and make it available for inspection with the SWPPP.
2. All logbook entries shall include the following information:
 - Date.
 - Time.
 - Sample location .

- Instrument calibration verification.
 - Turbidity result (NTUs).
 - Cloud cover (cloudy, partly cloudy, or clear), wind direction and speed, precipitation in last 24hrs (inches), and ambient air temperature (°F) at the time of sample collection.
 - Visual observations of any discharge. **NOTE TO DESIGNER: For projects with CGP coverage requiring turbidity monitoring, include the following, “per CGP 4.1.6.6.b.”.**
 - If applicable, corrective actions taken and their observed effectiveness per B.2 above.
 - Printed name and signature of the sample collector.
3. Include photographic documentation of any visible variation in water quality.
 4. Include a map or sketch, including GPS coordinates, of each sample location.
 5. Submit routine monitoring data to the Engineer or to regulatory agencies upon request.