INSTRUCTIONS FOR TURBIDITY MONITORING FORMS

Beaches, Inlets and Ports Program
Florida Department of
Environmental Protection
JCPCompliance@FloridaDEP.gov

Purpose

The Florida Department of Environmental Protection (Department) requires turbidity monitoring for coastal construction activities to verify compliance with permit conditions, water quality standards, and applicable regulatory requirements. These forms provide a standardized format for reporting physical turbidity monitoring data collected during construction activities. Data submitted through these forms may be incorporated into Department compliance databases and used to evaluate project performance and permit compliance. These forms are intended for reporting physical turbidity monitoring data and are not intended for visual turbidity observations.

Turbidity Monitoring Requirements

Turbidity monitoring shall be conducted in accordance with DEP-SOP-001/01 FT 1600, *Field Measurement of Turbidity*, and all applicable permit conditions. Users should review the standard operating procedure before conducting monitoring activities.

The SOP is available on the Department website:
http://publicfiles.dep.state.fl.us/dear/sas/sopdoc/2008sops/ft1600.pdf.

General Instructions

PDF Software Requirements

These forms are Adobe PDF AcroForms that contain interactive fields, automated calculations, and embedded functionality. Users shall complete, save, and submit the forms using Adobe Acrobat or Adobe Reader.

Other PDF applications and browser-based PDF viewers may not fully support form functionality, resulting in missing fields, disabled functions, or incomplete data.

If the form does not display correctly in a web browser, download the file and open it directly in Adobe Acrobat or Adobe Reader before completing the form.

If you are unable to download the form, you may request a copy from the relevant permitting or compliance staff.

Form Format.
Two form formats are available:

- Turbidity Monitoring Form
- Turbidity Monitoring Form – Additional Monitoring Stations.

The Additional Monitoring Stations format shall be used when permit conditions require intermediate stations, additional compliance stations, or other supplemental monitoring locations.

Form Version.
The same form version (e.g., Turbidity Beta V2 06162022; Turbidity Beta V2a 06162022; Turbidity V3 02172026; and Turbidity V3 11202025) shall be used throughout the duration of a project unless otherwise directed by the Department.

Prior to construction, coordinate with Department compliance staff to confirm that the appropriate form format and version have been selected.

Current forms are available at:
(https://floridadep.gov/rcp/beaches-inlets-ports/forms/turbidity-monitoring-form).

Signature Requirements.
Each turbidity form shall be completed, signed, and submitted in accordance with permit requirements.

The signatory shall certify that:

- The information provided is accurate and complete.
- Monitoring activities were performed by qualified personnel.
- Sampling and analytical procedures complied with applicable permit conditions and Department requirements.
- Equipment calibration and quality assurance procedures were performed as required by DEP-SOP-001/01 FT 1600

Calibration Requirements.

Primary Calibration.

Instruments used to measure turbidity shall be calibrated using certified primary turbidity standards within one month prior to the commencement of monitoring and at least once per month thereafter, for the duration of the project.

Secondary Calibration Verification.

Calibration verification shall be performed:

- Prior to daily use,
- Each time the instrument is powered on,
- Following completion of sampling activities.

At least two stable secondary standards that bracket the anticipated turbidity sample range shall be used during calibration verification.

Calibration Documentation.

All calibration activities shall be documented.

The date of the most recent primary calibration shall be reported in the 'Comments' field.

If the post-sampling calibration verification differs by more than eight percent (8%) from the pre-sampling calibration value, the associated turbidity results shall be reported as estimates. Any calibration issues, equipment malfunctions, or corrective actions shall be documented in the 'Comments' field.

Calibration records required by DEP-SOP-001/01 FT 1600 shall be included as attachments to the form.

Note: A detailed description of the calibration methods should have been included in the ***Turbidity Scope of Work submitted to the Department*** pre-construction.

Sampling Event Requirements.

A sampling event consists of all turbidity samples collected for a single construction activity (or turbidity source) during one permit-required monitoring period.

A separate form shall be completed for each sampling event and each independent turbidity source.

Examples of separate turbidity sources include:

- Dredging operations
- Beach placement operations
- Pipeline leaks
- Overflow events

- Other construction-related activities generating turbidity

Each form shall document the associated compliance station, background station, and any required intermediate stations.

Sampling Order.
The compliance station should generally be sampled before the background station.

Background sampling locations shall satisfy applicable permit requirements and should be selected to represent ambient conditions comparable to those at the compliance station, including water depth and offshore position when practicable.

Form Completion and Submission Requirements.

- Complete one form for each sampling event.
- Include all required supporting documentation.
- Save each form as an individual PDF file.
- **Do not** merge multiple forms into a portfolio or a single pdf.
- Submit completed forms within the timeframe specified by the permit.

Supporting documentation may include:

- Maps
- Calibration documentation
- Weather reports
- Photographs
- Other relevant compliance information

*Note: Reduce the file size of the supporting information prior to uploading to the form. **Do not** reduce, optimize, flatten, print-to-PDF or otherwise compress the turbidity monitoring form itself, as doing so will disable or invalidate the AcroForm features.*

Files names shall follow the convention:
PermitNumber_Date_Activity_Sampling Event
Example:
0123456-001-JC_YEARMMDD_Dredge_AM

Note: Each completed form shall be retained as an individual PDF and shall not be compressed, optimized, or otherwise modified. Where multiple forms are submitted for the same reporting period, they may be packaged within a single ZIP file and submitted by email or uploaded to the BIPP File Portal (with an email notification to the JCP Compliance mailbox).

Specific Instructions

This form is divided into 6 parts. Each part should be completed as follows:

Part 1. *General Information*

Date: Enter the date of the sampling event. Use the format: **MM/DD/YYYY**

Monitoring Firm: Enter the name of the firm responsible for monitoring turbidity.

DEP Permit Name: Enter the project name exactly as it appears in the DEP Permit.

DEP Permit Number: Enter the number for the initial permit (with a JC or BI extension) unless that permit has been '**superseded**' by a subsequent modification (usually with a JM or a BM extension). Format '0123456-00X-XX'

E-Mail: Enter the e-mail address for the point-of-contact for the monitoring firm.

Phone Number: Enter the phone number of the primary point-of-contact for the monitoring firm, including the area code.

Statement of monitoring requirements: Enter a brief description of the mixing zone boundary and the numerical turbidity threshold.
Note: Describe the compliance station location relative to the permit defined mixing zone boundary and the direction of the turbidity plume at the time of sampling. The description shall clearly identify the applicable mixing zone dimension or resource boundary used to establish compliance. For example, if the compliance station is located along the offshore boundary of a 150m x 1000m mixing zone polygon, the description should read "down current, 150m offshore". If the compliance stations is located along the alongshore boundary, the description should read "down-current, 1,000m alongshore". When the mixing zone boundary is defined relative to the nearest benthic resource (i.e., seagrass or hardbottom), describe the compliance station accordingly (e.g., 100m offshore at the hardbottom edge).

Part 2 *Activity, Weather and Water Conditions*

Description of Site, Activity, Equipment and Weather: Provide a concise description of:

- Construction activity
- Equipment in use
- Sampling methods
- Sample handling procedures

- Analytical methods
- Relevant weather conditions (not captured by the form fields).

For example,

"Dredging at the offshore borrow area using a cutterhead suction dredge; turbidity samples were collected using a Niskin Bottle Sampler and analyzed immediately using a Hatch Turbidimeter 2100Q. Conditions were overcast, windy with chop".

Note: Other comments and any additional details that do not fit within this text box should be entered in the comments field.

Weather and Water Conditions: Report weather and water conditions present at the time of sampling.

All measurements shall be entered using the units specified in the form (e.g., kts for wind speed).

If unsafe weather conditions prevent sampling, the supporting weather report from a reliable, independent source, such as an online weather service shall be attached.

Activity Type: Select the activity from the drop-down menu provided.

If 'Other' is selected, provide details in the "Description of Site, Activity, or Equipment" field.

Calibration: Select "Yes" or "No" to indicate whether turbidity monitoring equipment was calibrated in accordance with the DEP-SOP-001/01 FT 1600.

If the post-sampling verification confirms that a drift greater than 8 % was observed, the turbidity results shall be reported as estimates and calibration/equipment issues shall be described in the comments field.

Note: the calibration requirements are described in the General Instructions.

Part 3 *Location*

Provide location information for:
- Construction activity location
- Compliance station
- Background station
- Any additional monitoring station required by the permit

For each location, report:

- Easting
- Northing
- Latitude
- Longitude
- Water depth

Datum and UTM Zone shall also be provided.

Latitude and Longitude shall be reported in decimal degrees to 5-decimal places (DDD.DDDDD^0).

Longitude values shall include the negative sign (-DDD.DDDDD^0).

Note. Always report the Latitude/Longitude coordinates. When possible, report the Easting/Northing (UTM) Coordinates. Providing ***both*** *coordinate systems is important because they serve different purposes:*

- ***Latitude/Longitude (decimal degrees)*** *is widely recognized and easily viewed and verified by the public using mapping applications such as* ***Google Earth****.*
- ***Easting/Northing (UTM coordinates)*** *provides a more precise and project-consistent spatial reference but requires GIS software or specialized tools to interpret.*

Part 4a *Results*

Report the following information for each sampling location and depth evaluated:

- Collection depth
- Collection time
- Turbidity measurement (NTU)

Collection depth refers to the depth at which the sample was collected not the total water depth at that location.

Collection time shall be reported using 24-hour format (i.e., 1300 instead of 1:00pm).

Only fields applicable to the permit-required monitoring shall be completed. For example, if permit does not require sampling at bottom depth, or the water depth at the location does not facilitate sampling at a particular depth (e.g., surface or bottom), then leave those fields blank.

The form automatically calculates the difference between compliance and background turbidity measurements and indicates compliance based on values entered in the **statement of monitoring requirements** by the user.

Note: If collection time differs significantly from analysis time, please provide an explanation in the comments field.

Part 4b *Additional Stations* (Expanded Form Only)

This section is included only in the Turbidity Monitoring Form – Additional Monitoring Stations and shall be completed when additional monitoring stations are required by permit conditions or project-specific circumstances.

Additional monitoring stations may include intermediate stations (i.e., samples located at specific intervals between the compliance sample and the construction activity), additional compliance stations required at permit-specified locations, (i.e., at the nearest seagrass edge or at the edge of the boundary to an Outstanding Florida Water) or supplemental stations (e.g., contractor elected to sample additional stations to document site conditions).

Note: Project-related turbidity sources that do not have an associated mixing zone, such as scow leaks, pipeline leaks, or overflow events, shall be monitored at the source in accordance with permit requirements.

Indicate whether intermediate monitoring is permit-required using the selection field provided.

For each additional station, provide:

- Station description
- Location information
- Collection depth
- Collection time
- Turbidity results

Location and sampling information shall be reported using the same procedures described in Parts 3 and 4a.

Only relevant fields need to be completed in this section and fields associated with stations that were not sampled may be left blank.

Part 5 *Comments, Certification and Attachments*

Comments: Use the Comments field to document information not captured elsewhere in the form, including:

- Conditions affecting sampling (e.g., inlet plume unrelated to project activities or cruise ship wake, influencing the compliance sample)

- Explanations for why no work occurred during the sampling period (e.g., dredge down due for remainder of day due to mechanical failure)
- Deviations from permit-required protocol
- Calibration concerns
- Construction delays
- Exceedance response actions
- Corrective measures implemented

When reporting exceedances, include all information required by the permit, including cessation of work, corrective actions, and probable cause of the exceedance.

Note: If additional sampling is required due to a turbidity exceedance, each sampling event should be submitted on a separate form.

Statement by responsible party: Enter the name of the person responsible for implementing the sampling protocol and provide a signature affirming the authenticity of the data, precision and detection limits of measurements, the calibration status of the meter, and the accuracy of the GPS coordinates.

Note: if the individual signing the form is not the same person who collected and analyzed the sample(s), then the names of all individuals involved in the sampling event – and their specific roles (e.g., collected sample, analyzed sample, calibrated equipment) must be provided in the comments section.

Attachments:
Attach all supporting documentation necessary to document compliance with permit requirements.

Supporting documentation may include:

- Georeferenced Maps
- Calibration records
- Weather reports
- Photographs
- Monitoring logs
- Other supporting figures

Provide a title for each attachment using the title field associated with the attachment area.

Maps should clearly show:

- Construction activity locations
- Compliance stations
- Background stations
- Additional monitoring stations
- Resource boundaries
- Direction of Flow
- Applicable permit boundaries

Reduce attachment file sizes before upload to the form when practical. *If the weekly submission is too large to email, submit via the BIPP File Portal and notify the Compliance team of the upload via email.*

Only image file formats supported by this AcroForm. *PDF documents cannot be attached to this AcroForm. If a PDF document needs to be submitted to the Department, please include it as a separate attachment to the email when submitting the completed turbidity forms.*