

NADP/NTN FIELD COLLECTION PROCEDURES

Keep this sheet for future use

If you have questions contact CAL at 800/952-7353 or ntn@sws.uiuc.edu

Numbers in parenthesis are page numbers in the *National Trends Network Site Operation Manual* (1999)¹



Step 1 PREPARE TO SERVICE FIELD SITE (3-1 to 3-2)

MAKE SURE YOU HAVE ALL OF THESE SUPPLIES:



- 1) black mailer (to carry field bucket, lid, supplies)
- 2) clean bagged field bucket and snap-on lid
- 3) permanent ink marker, notebook, and pen
- 4) raingage chart and ink
- 5) deionized water and Kimwipes

NOTE: Leave the 1-liter sample bottle at your lab / **Never** use it in the field



Step 2 INITIAL COLLECTOR CHECKS (3-3 to 3-4)



- 1) Approach collector with wind in face and inspect for problems, 2) Feel sensor before collector activation (**COOL is GOOD, but HOT indicates a problem**) (C-13), 3) Look into dry-side bucket. **Precipitation in dry bucket indicates a problem**; however, sensor may miss light rain or snow (C-24), and 4) Record problems in notebook and troubleshoot as per instructions on the collector decal.

Step 3 CHANGE THE FIELD BUCKET (3-4 to 3-5)



- 1) Place a single drop of water on lower “rung” of sensor and watch collector open, 2) Look for contaminants (bird droppings, bugs, leaves) in wet-side bucket **but don't put face over bucket**, 3) Snap lid on bucket, using its bag as a glove, 4) Lift bucket from collector, place in bag, seal bag with twist-tie, and place in mailer, 5) **Label bag** with **site ID, date and time off**, and **contaminants**.

Step 4 INSTALL “NEW” WET-SIDE BUCKET AND PERFORM FINAL COLLECTOR CHECKS (3-5)



- 1) Install “new” clean bucket, using its bag as a glove, 2) Feel sensor after 5 minutes activation (**HOT is GOOD, but COOL indicates a problem**) (C-19), 3) Blow remaining water from sensor and watch collector close, and 4) Make sure lid moves smoothly onto wet-side bucket, and seals the bucket (if it doesn't seal, there is a problem) (C-14). Troubleshoot as per instructions on the collector decal.

Step 5 SERVICE RAINGAGE (3-8 to 3-10)



- 1) Move pens up and down to mark time off, then lift them from the chart, 2) **Remove & scan chart to see if collector opened and closed for precipitation (possible problem if it didn't open or close)** (C-19 to C-24), 3) Wind clock, 4) Empty raingage bucket (if it contains no antifreeze), 5) Install new chart and add ink to pens (as needed), and 6) Lower pens to chart, set lower pen on current time, move pens up and down, and move drum back and forth to mark the time on as a “+”.

Step 6 PACK AND TRANSPORT SAMPLE TO YOUR LABORATORY (3-5 to 3-6)



- 1) Record any additional problems in notebook, 2) Place notebook and chart in mailer with bucket, 3) Secure mailer top with straps, and 4) **Handle carefully so sample doesn't spill.**

TURN OVER FOR LAB INSTRUCTIONS

NOTES:

¹The *National Trends Network Site Operation Manual* is available online at <http://nadp.sws.uiuc.edu/lib/manuals/opman.pdf>
NADP-CAL/Illinois State Water Survey

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"Block numbers" and blue text refer to the NADP/NTN FIELD OBSERVER REPORT FORM (FORF)



NOTE: SEND THE SAMPLE TO THE CAL WITHIN 48 HOURS OF COLLECTION.

Carefully fill out the *NADP/NTN FORF* (3-11) as the steps below are completed. Record field or laboratory problems, describe contamination, and note any leakage in Block 10 - **REMARKS**.

Step 1 WEIGH THE SAMPLE (3-14 to 3-17 & Block 6)

1) Remove bucket from mailer and inspect bag for leakage, 2) Leaving lid on bucket, remove bucket from bag and quantify leakage, if any (leakage must be included in sample weight), 3) Wipe outside of bucket clean and dry, 4) **Weigh ALL samples (wet or dry)**, 5) Record **Bucket+Lid+Sample** weight (include leakage weight, if any), 6) Record **CAL Bucket** and **CAL Lid** weight, and 7) Calculate and record **Sample Weight** and **Sample Depth**.



Step 2 INTERPRET THE RAINGAGE CHART (3-15 to 3-22 & Blocks 4 & 7)

1) Compare top and bottom pen traces to ensure that collector was open for precipitation and closed at all other times (if not, this indicates a possible problem)(C-19 to C-24), 2) Record daily precipitation **Type (R, S, M, U)** and precipitation **Amount** to the nearest .01 inches in Block 7, 3) Record **Total Raingage Depth**, 4) If raingage and sample depths differ by > 5%, weigh sample again, and 5) Answer **YES** or **NO** questions for raingage operation in Block 4.



Step 3 DECANT INTO SAMPLE BOTTLE (3-22 to 3-24 & Block 8)

NOTE: Before proceeding, sample must be completely thawed

1) Put on disposable gloves, 2) Remove and set bucket lid inside up, 3) Record any contaminants in sample (**don't put face over bucket**), 4) If bucket is dry, snap on lid and skip to **Step 5** below, 5) Grab bucket and hold handle against side, then pour sample into bottle (**don't touch bucket to bottle rim**), 6) Fill bottle to within 1 inch of top, 7) Put cap on bottle, 8) Discard gloves, and 9) Complete **SAMPLE BOTTLE USE** Block 8 **YES** or **NO**.



Step 4 PREPARE BUCKET and SAMPLE BOTTLE FOR SHIPPING (3-30 to 3-31)

1) After decanting, empty any excess precipitation from bucket, and place old bucket and lid loosely bagged in the "used supply" large 4-in-1 box, 2) Ensure sample bottle cap is tight and wipe bottle dry, 3) Record info on bottle bag, 4) Place bottle in bag and seal, and 5) Place CAL bar code labels on Block 1 of the *FORF* and on the bottle bag.



Step 5 SHIP WEEKLY SAMPLE TO THE CAL (3-31 to 3-32 & Block 4)

1) Place bucket in the "used supply" box, 2) Place sample bottle and bag in the small box, 3) Review *FORF* to **make sure all necessary info has been recorded** (including Block 4 **SITE OPERATIONS YES** or **NO** questions), 4) Keep pink copy of *FORF* and photocopy of raingage chart and put white and yellow copies of *FORF* and original raingage chart in box with sample, 5) Tape box well, and 6) Send sample box to the CAL via First Class mail, UPS ground, or Fed Express.



Step 6 RETURN USED SUPPLIES TO THE CAL

When large 4-in-1 box has 4 **used** buckets and lids, tape well and return them to CAL.

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