

MEMORANDUM OF AGREEMENT
Between
THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (IDEM)
And
THE INDIANA DEPARTMENT OF NATURAL RESOURCES (IDNR)
Concerning
MONITORING AND NOTIFICATION ACTIVITIES FOR THE INDIANA DUNES
STATE PARK BEACHES FOR THE 2022 BEACH SEASON

Contract #0000000000000000000063542

This Memorandum of Agreement (MOA) is entered into between the Indiana Department of Natural Resources (IDNR) and the Indiana Department of Environmental Management (IDEM) for the purpose of implementing Indiana's 2022 Monitoring and Notification Program for Beaches in Lake, Porter and La Porte Counties adjacent to Lake Michigan Coastal Recreational Waters (Indiana Lake Michigan Beach Program). IDEM receives funding from the U.S. Environmental Protection Agency (EPA) for this project under the statutory authority of the Beaches Environment Assessment and Coastal Health Act of 2000.

This will be a cooperative effort between IDEM and the IDNR for performing recreational water quality monitoring and public notification activities at the Indiana Dunes State Park beaches as set forth in this MOA and the attached **Exhibit A, Total Estimated Project Expense Budget; Exhibit B, Schedule for Project Tasks; Exhibit C, Special Conditions; Exhibit D, Sampling Locations; Exhibit E, Standard Operating Procedure for Sample Collection Labeling, Storage, Transport, and Analysis; Exhibit F, Federal Grant Requirements; Exhibit G, Field Data Sheet; Exhibit H, Chain of Custody; Exhibit I, Beach Signage; and Exhibit J, Example of Progress Report Template.**

I. IDEM Agrees to the Following

- A. IDEM shall assign a project number to conduct all financial tracking of the IDEM project in PeopleSoft Financials and initiate the Sub-state Process with the Indiana State Auditor's Office within 30 days of the execution of this MOA.
- B. The IDEM Beach Program Coordinator, or designee, shall, to the extent practicable, review all invoices and relevant supporting documentation submitted by IDNR within 15 days of receipt to ensure compliance with the applicable federal grant requirements; this MOA; and other applicable laws, regulations, or policies. The IDEM Beach Program Coordinator shall notify IDNR in writing of any circumstances requiring an extension of this timeframe.
- C. Following review and approval of the invoice and supporting documentation, IDEM shall utilize the Sub-state Process to reimburse IDNR for expenses accrued pursuant to **Task A of Section II** of this MOA, not to exceed \$11,832.00. Reimbursement shall be contingent upon IDNR expending the funds as indicated in Section II of this MOA and complying with the agency responsibilities set forth in Section II of this MOA. Funds will be released in compliance with the applicable federal grant requirements; this MOA; and other applicable laws, regulations, or policies.

- D. IDEM shall provide information and technical assistance, through the Indiana Lake Michigan Beach Program Staff, as needed to facilitate IDNR's implementation of the tasks set forth in Section II of this MOA.

II. IDNR Agrees to the Following

Task: A *E. coli* Monitoring

The IDNR shall collect, transport, analyze, and report the results of *E. coli* bacteria sampling conducted at the following beaches, in accordance with the Category I, Category II, and Category III conditions listed below.

1. State Park East – One (1) specific sampling location, which is depicted on the attached map (**Exhibit D**) as SP DSP 2, shall be sampled once per day, seven (7) days per week, beginning May 27, 2022 and continuing through September 5, 2022, for a total of one hundred two (102) samples to be collected at State Park East.
2. State Park West - One (1) specific sampling location, which is depicted on the attached map (**Exhibit D**) as SP DSP 4, shall be sampled once per day, seven (7) days per week, beginning May 27, 2022 and continuing through September 5, 2022, for a total of one hundred two (102) samples to be collected at State Park West.

CATEGORY I. CONDITIONS PERTAINING TO SAMPLE COLLECTION AND TRANSPORT ACTIVITIES:

- a. The IDNR shall sample each of the above specified locations for *E. coli* bacteria and report the results seven (7) days per week throughout the designated 2022 beach season. For purposes of this MOA, the 2022 beach season will commence May 27, 2022, continue for a period of approximately fifteen (15) consecutive weeks, and conclude September 6, 2022.
- b. The IDNR shall ensure that grab (not composite) samples are collected, that each grab sample is individually analyzed, and that the result of each grab sample is individually reported.
- c. During each sample collection and transport trip, the IDNR shall ensure that at least one (1) field blank sample is included with the routine *E. coli* samples. **The IDNR shall bear the cost of field blank samples with no reimbursement from the IDEM.**
- d. The IDNR shall ensure that all samples are collected, labeled, stored, and transported in accordance with the Standard Operating Procedure for Sample Collection, Labeling, Storage, Transport, and Analysis, which is attached as **Exhibit E**.
- e. For each sampling event, the IDNR shall ensure that a Field Data Sheet that contains the information found in **Exhibit G** to document field conditions is completed.
- f. The IDNR shall ensure that a Chain of Custody Form that contains the information found in **Exhibit H** is utilized for each sample collected and transported to the Analytical Laboratory for analysis, including field blanks.

- g. The IDNR shall ensure that all samples collected (including field blanks) and associated Field Data Sheets and Chain of Custody Forms are timely transported and delivered to the Analytical Laboratory for analysis, such that the Analytical Laboratory has reasonable and adequate time to analyze the samples within the required six (6) hour holding time.
- h. The IDNR shall ensure that Chain of Custody Forms and Field Data Sheets accompany all samples (including field blanks) and are relinquished to the Analytical Laboratory upon sample delivery. The IDNR shall ensure that the Analytical Laboratory retains all Chain of Custody Forms and Field Data Sheets until the completion of the designated 2022 beach season, at which time they shall be returned to the IDNR to maintain until at least December 1, 2022.

CATEGORY II. CONDITIONS PERTAINING TO ANALYTICAL ACTIVITIES:

- a. The IDNR shall ensure that the Analytical Laboratory analyzes the samples using an EPA approved method for identifying the concentration of *E. coli* bacteria within each sample. (Examples: EPA 1103.1, EPA1603, SM9213D, SM9223B, IDEXX Colilert)
- b. The IDNR shall ensure that the Analytical Laboratory has and adheres to appropriate quality control/quality assurance procedures for analysis of water samples for *E. coli* bacteria utilizing an EPA approved method.
- c. The IDNR shall ensure that the Analytical Laboratory adheres to the procedures set forth in the Standard Operating Procedure for Sample Collection, Labeling, Storage, Transport, and Analysis, which is attached as **Exhibit E**.
- d. The IDNR shall ensure that the field data sample numbers (*i.e.* sample ID numbers) and chain of custody information is entered into a computer laboratory information management system (LIMS).
- e. The IDNR shall ensure that within one (1) hour of the completion of the analysis, the *E. coli* monitoring sample/test results are entered into the IDEM BeachAlert Online System, which is accessible at: <https://portal.idem.IN.gov/BeachAlert>.
- f. The IDNR shall ensure that all notification information generated pursuant to this MOA is inputted into the IDEM BeachAlert Online System, which is accessible at <https://portal.idem.IN.gov/BeachAlert>, within one (1) hour of the information being available.
- g. In the event that any *E. coli* result exceeds 235 colony forming units/100 mL (235 cfu/100 mL), the IDNR shall ensure that the Analytical Laboratory immediately (*i.e.* within 30 minutes of obtaining the result) notifies the IDNR of the result.

CATEGORY III. CONDITIONS PERTAINING TO WARNINGS AND NOTIFICATION ACTIVITIES:

- a. When the beach is open for swimming, the IDNR shall post the IDEM approved “Water Quality is Good” sign (as depicted in **Exhibit I**) signifying that the beach waters are open for swimming.
- b. Upon being notified by the Analytical Laboratory of a single sample result that exceeds 235 cfu/100 mL, the IDNR shall consider the best interests of the beach users and decide to either (a) close the beach and post IDEM approved closure signage, or (b) post IDEM approved advisory signage to

inform the public of the risks. The IDNR shall ensure that the appropriate signage is posted at the affected beach, at location(s) approved by the IDEM, at a minimum. The IDEM approved closure and advisory signage is depicted in **Exhibit I**.

- c. The IDNR shall ensure that IDEM approved advisory signage to inform the public of the risk of swimming in Lake Michigan waters is timely posted when there is the potential for elevated levels of *E. coli* that could negatively impact the quality of the water for full body contact, regardless of whether a water quality sample has been collected, analyzed and reported. Additionally, a beach may also be closed or an advisory issued due to other conditions that might cause risk to beachgoers (e.g. rip current, high waves, storm events). In such cases the appropriate IDEM approved signage should be posted.
- d. The IDNR shall ensure that IDEM approved advisory signage is timely posted as a result of a significant rainfall or a CSO (combined sewer overflow) that could negatively impact the quality of the water for full body contact.
- e. The IDNR shall maintain a current date and time log of the closure/advisory postings in a spreadsheet, in a form and format deemed appropriate by the IDEM.
- f. The IDNR shall ensure that advisory and closure signage is removed as soon as it is known that the *E. coli* concentrations at the affected beach no longer exceed 235 cfu/100mL, or when other factors that initiated the posting of the advisory or closure signage no longer exist.
- g. The IDNR shall ensure that the IDEM approved sign legend (white sign depicted in **Exhibit I**), which contains the Spanish translation of the “water quality is good,” closure, and advisory signage, is continually posted throughout the designated 2022 beach season at locations approved by the IDEM. Additionally, the IDNR shall ensure that the IDEM approved “water quality notice” signage (blue sign depicted in **Exhibit I**), which informs the public that the beach is monitored for *E. coli*, is posted at all beaches throughout the designated 2022 beach season at locations approved by the IDEM.

The following non-budgeted tasks (tasks not assigned monetary amounts) must be satisfactorily completed before final payment. The IDEM may reduce reimbursement as follows: by up to 5% of the total MOA amount (\$591.60) for each report called for in Tasks B and C that is not submitted by the deadline or does not contain all of the information specified in this MOA; and by up to 2.5% of the total MOA amount (\$295.80) for each beach manager meeting referenced in Task D at which an IDNR representative is not present, for a total potential reimbursement reduction of up to 25% of the total MOA amount (\$2,958.00).

Task: B Progress Reports

The IDNR shall provide progress reports to the IDEM, in Microsoft Excel format, that contain, for each beach, information including, but not limited to, individual *E. coli* sample results for each sampling location, daily rainfall totals, all CSO notifications received by the IDNR, and a beach advisory and closure summary. Daily rainfall totals may be collected by rain gauge, or through appropriate websites (e.g. www.wunderground.com or <http://w2.weather.gov/climate/xmacis.php?wfo=lot>), or from the nearest municipal Sanitary District Wastewater Treatment Plant (WWTP). A Microsoft Excel progress report template will be provided to the IDNR prior to the start of the beach monitoring season and must be used for all progress reports. An example of the progress report template is shown in **Exhibit J**.

The above described reports shall be provided to the IDEM according to the following schedule:

The first report is within 31 days after the commencement of the designated 2022 beach season;

The second report is due 60 days after the commencement of the designated 2022 beach season;

The third and final progress report is due 5 business days, after the conclusion of the designated 2022 beach season.

Task: C Final Summary Report

The IDNR shall prepare and submit a final written project report to the IDEM within twenty-seven (27) days of the close of the designated 2022 beach season. The report shall contain a summary of samples collected and the sample results, CSO notifications received and actions taken, precipitation data collected, and the beach advisories and closures issued throughout the designated 2022 beach season and the reasons for each advisory and/or closure.

Task: D Beach Meetings Attendance

The IDNR shall, upon receipt of at least 10 days advance notice from IDEM, send a representative to participate in both the preseason Kick Off Meeting, which will be held prior to the 2022 designated beach season on a date and at a time and location to be determined by IDEM, and the End of Season Beach Manager meeting, which will be held after the conclusion of the 2022 designated beach season on a date and at a time and location to be determined by IDEM. The IDNR representative shall be responsible for: 1) providing beach program-related input and 2) conveying beach program information to IDNR staff.

Task: E Invoicing

1. IDNR shall use the project number provided by IDEM to conduct all financial tracking of the project in PeopleSoft Financials, changing the first three numbers of the project to reflect IDNR's business unit number.
2. IDNR shall utilize the procedure governing sub-state transactions set forth by the Government Management Information Systems (GMIS) Division of the Indiana Office of Technology and the State Budget Agency for the Project Costing module of PeopleSoft Financials (hereafter, "Sub-state Process") to generate and submit to the IDEM Beach Program Coordinator, or designee, an invoice requesting payment for eligible expenditures pursuant to this MOA. The invoice shall be accompanied by all relevant supporting documentation, related to **Task A** of this MOA.
3. IDNR shall have until October 7, 2022 to submit all invoices to the IDEM Beach Program Coordinator, or designee, for payment via the Sub-state Process.
4. IDNR shall return to IDEM any unexpended funds or any funds determined to be disallowed under the terms of federal grant CU10E73102; this MOA; or other applicable laws, regulations, or policies. Repayment shall be made to IDEM via the Sub-state Process within thirty (30) days after IDNR becomes aware of excess funds or funds due to IDEM.

Task: G Federal Grant Requirements

The IDNR shall comply with the requirements set forth in **Exhibit F** upon execution of the MOA.

III. Commencement, Modification and Termination

This MOA shall commence on the date of the last signatory and shall remain in effect until December 1, 2022. Any modification must be in writing and be signed by both Parties. Any Party may terminate this MOA by giving thirty (30) days written notice to the other Party.

When the Director of the State Budget Agency makes a written determination that funds are not appropriated or otherwise available to support continuation of performance of this memoranda, the memoranda shall be canceled. A determination by the Director of the State Budget Agency that funds are not appropriated or otherwise available to support continuation of performance shall be final and conclusive.

The undersigned attests, subject to the penalties for perjury, he/she has been duly authorized to execute this Agreement on behalf of the entity designated below, and that he/she has not, nor has any other partner, associate, member, employee, representative, agent, or officer of the entity designated below, directly or indirectly, to the best of his/her knowledge, entered into or offered to enter into any combination, collusion, or agreement to receive or pay, and that he/she has not received or paid any sum of money or other consideration for the execution of this Agreement, other than that which appears upon the face of this Agreement.

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In Witness Whereof, the Indiana Department of Natural Resources and the Indiana Department of Environmental Management have, through their duly authorized representatives, entered into this Memorandum. The parties, having read and understood the foregoing terms of this Memorandum, do by their respective signatures dated below agree to the terms thereof.

Indiana Department of Natural Resources

By: *Bortner, Dan -300*
CA323784AAAA476...

Title: Director

Date: 5/23/2022 | 12:43 EDT

Indiana Department of Environmental Management

By: *Brian C. Rockensuess*
9A2744AC03D7478...

Title: Commissioner

Date: 5/23/2022 | 13:08 EDT

.	
Electronically Approved by: State Budget Agency By: Zachary Q. Jackson, Director (for)	

EXHIBIT A
TOTAL ESTIMATED PROJECT EXPENSE BUDGET

The IDNR will be reimbursed by the IDEM for estimated expenses in the following areas not to exceed the indicated amounts. Payment of up to \$11,832.00 will be made in arrears, upon submittal of an invoice and required reports to the IDEM, for the specified purposes. Funds cannot be released by the IDEM until the work has been completed and the appropriate invoice and required reports have been submitted to the IDEM. The IDEM may reduce reimbursement as follows: by up to 5% of the total MOA amount (\$591.60) for each report called for in Tasks B and C that is not submitted by the deadline or does not contain all of the information specified in this MOA; and by up to 2.5% of the total MOA amount (\$295.80) for each beach manager meeting referenced in Task D at which an IDNR representative is not present, for a total potential reimbursement reduction of up to 25% of the total MOA amount (\$2,958.00).

Type of Expenditure	Amount
Task: A	\$11,832.00
Task: B	\$0
Task: C	\$0
Task: D	\$0
Task: E	\$0
Task: F	\$0

TOTAL \$11,832.00

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**EXHIBIT B
SCHEDULE FOR PROJECT TASKS**

The tasks and the associated time periods necessary for the project are as follows:

TIME PERIOD	TASK
Seven (7) days per week, beginning Friday, May 27, 2022 and ending Monday, September 5, 2022.	Task A: Collect, transport, and analyze the results of <i>E. coli</i> bacteria samples obtained at beaches specified in Task A.
Seven (7) days per week, beginning Saturday, May 28, 2022 and ending Tuesday, September 6, 2022.	Task A: Report the results of <i>E. coli</i> bacteria samples obtained at beaches specified in Task A.
Progress Report 1: June 27, 2022 Progress Report 2: July 26, 2022 Progress Report 3: September 12, 2022	Task B: Provide progress reports to the IDEM, containing the information specified in Task B.
October 3, 2022	Task C: Prepare and submit to the IDEM a final report containing the information specified in Task C.
May 2022 October 2022	Task D: Send a representative to attend both beach manager meetings for the designated 2022 beach season.
October 7, 2022	Task E: Final date to submit all invoices related to this MOA to the IDEM for payment.
Upon execution	Task F: Report UEI to IDEM as specified in Exhibit G.

**EXHIBIT C
SPECIAL CONDITIONS**

In addition to the terms and conditions set forth herein, the parties agree to abide by the following special conditions:

Notice to Parties.

Whenever any notice, statement or other communication is required under this MOA, it shall be sent to the following addresses:

Notices to IDEM: Michelle Caldwell, IDEM Beach Grant Coordinator
 330 West US Highway 30, Suite F
 Valparaiso, IN 46385
 (219) 464-0419
 mcaldwel@idem.IN.gov

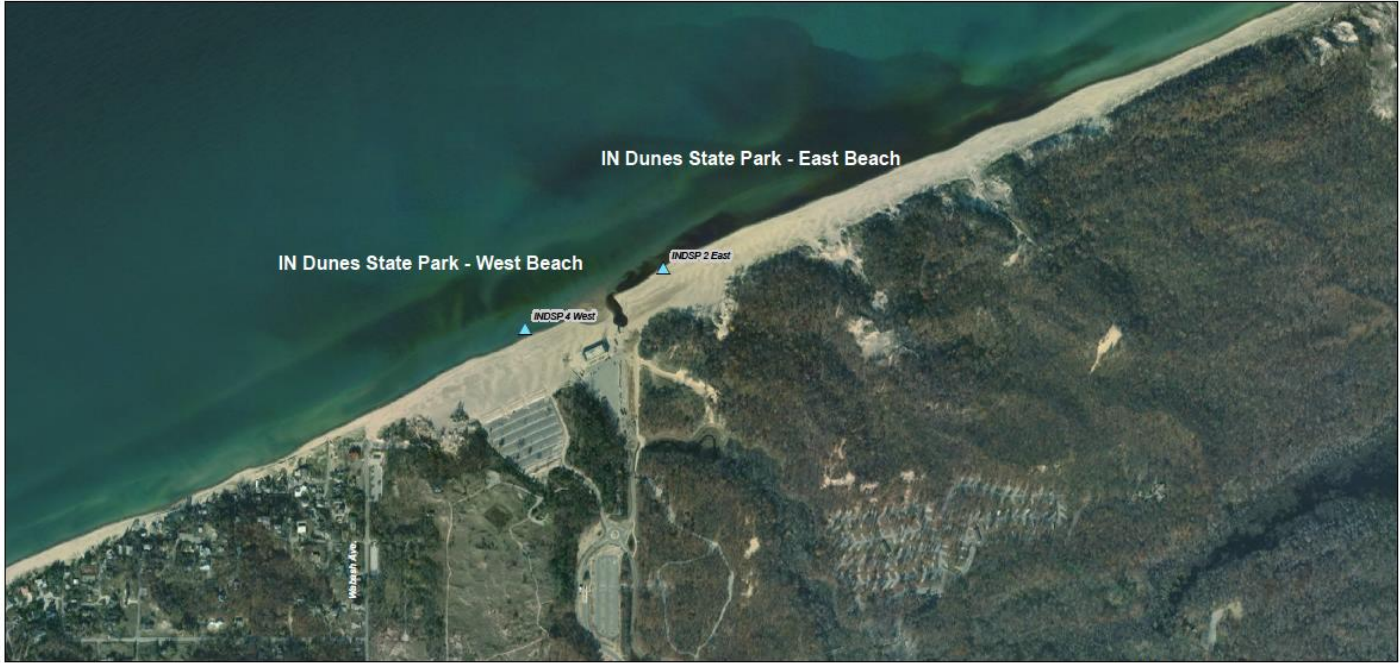
Notices to IDNR: David Snodgrass, Property Manager, IN Dunes State Park.
 1600 N 25 East
 Chesterton, IN 46304
 (219) 926-1952
 DSnodgrass@dnr.IN.gov

Key Person(s).

Not Applicable.

EXHIBIT D SAMPLING LOCATIONS

Lake Michigan Water Sampling Locations: INDIANA DUNES STATE PARK



Tri-County Region

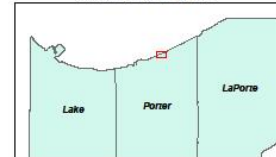


Source: 2008 Aerial Imagery (AES) Chicago 2008
©2008 LAMP Coordinator: Sampling Locations
Map Projection: UTM Zone 18N Map Datum: NAD 83
Disclaimer: This map is intended to serve as an informational
representation only. This information is not warranted for accuracy or
other purposes.
Map by: Gary Miller, 2008, Illinois State Survey, Illinois Natural Areas, Engineering & Surveying Division, 12/2008

0 500 1,000 2,000 Feet



Aerial Extent Along Coast



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EXHIBIT E
**STANDARD OPERATING PROCEDURE FOR SAMPLE COLLECTION, LABELING,
STORAGE, TRANSPORT, AND ANALYSIS**

I. Sampling Methods

- A. General Description:** Water samples will be collected from established beach sites using sterile containers. Samples will be collected from the water column and treated aseptically. Samples will be released to a laboratory for microbiological examination. All sampling will follow these general rules:
- B. Documentation of Additional Parameters:** Alongside sampling for bacteria concentrations, site and physical conditions will be documented. These parameters are:
- Wind (calm, light breeze, moderate breeze, windy)
 - Wind direction
 - Water surface (calm, shoreline breakers (waves))
 - Water color (clear medium brown, dark brown, red-brown, green brown, other)
 - Smell (none, sewage, oily, rotten eggs, fishy)
 - Other (dead fish, algal bloom, litter/trash, dogs)
 - Rainfall
 - Air Temp (°C)
 - Weather in the past 24 hours: Storm (heavy rain), Rain (steady rain), Showers (intermittent rain), Overcast, Clear/Sunny
 - Weather Now: Storm (heavy rain), Rain (steady rain), Showers (intermittent rain), Overcast, Clear/Sunny
 - Obtain the parameters: Wind, Wind direction, Rainfall, and Air temperature from <http://coastwatch.glerl.noaa.gov/>. Use <http://www.weatherbug.com> for weather information for the past 24 hours.
- C. Health and Safety Warnings**
- All field assessments require two qualified personnel.
 - Proper Personnel Protection Equipment needs to be worn at all times.
 - A complete first aid kit must be included in the field equipment.
 - A mobile or cellular phone should be included in the field equipment, if available.
 - The Program Manager must be aware of all field assessment scheduling.
- D. Cautions**
- Surface Water sampling during severe weather events (thunder/lightning) and or high waves must not be allowed.
- E. Personnel Qualifications**
- Prior to initial sampling, all personnel (new and experienced) must be appropriately and adequately trained in the sample collection and transport processes, as well as field safety, by qualified personnel. The training shall include, but not necessarily be limited to participation in a training session coordinated by the IDEM BEACH Act Program Manager prior to the initiation of the designated 2022 Beach Season.

- Re-briefing and introduction of new field techniques and/or revisions to the SOP will be conducted as needed.

F. Apparatus and Materials

- Wadeable Surface Water Equipment
 - Sterile glass or sterile plastic bottles (125ml minimum) or sterile Whirl-pak® baggies (8-18 oz)
 - Cooler with ice packs or ice
 - Sample labels
 - Permanent marker
 - Field data sheet
 - Indelible ink
 - Meter stick
 - A copy of this SOP
 - Soap, alcohol wipes or some other form of disinfectant
- Optional Equipment
 - Rubber/latex gloves
 - Conductivity Meter
 - Fluorometer
 - Turbidimeter
- Health and Safety Equipment Needs
 - Proper Personal Protection Equipment
 - Complete first aid kit
 - Cellular/mobile phone
- Pre-sampling Equipment Concerns
 - Inspect all bottles used previously and ensure the bottles have been thoroughly cleaned and sterilized. Discard caps with compromised lining and discard glass bottles with chipped necks. Inspect all sterile Whirl-pak® bags for tears or punctures.

G. Sample Labels

- Sample labels must be properly completed to include the sample's field identification number.
- Labels shall be printed and affixed to the outside wall of the sample container in the lab, prior to going to the field.

H. Sample Collection

- At fixed sites, ensure that sampling occurs at locations described for the duration of the sampling season.
- Prior to collecting samples from a station, wash hands and arms with alcohol wipes, a disinfectant lotion, or soap and water, and dry to reduce exposure to potentially harmful bacteria or microorganisms.
- Samples need to be collected between the hours of 6:00 a.m. to 10:00 a.m.
- The first sample to be prepared is the 'field' blank (at least one blank per sampling day is recommended). Open one of the sampling bottles and fill it with 100 mL of sterile buffered solution (see EPA Method 1103.1). Cap the bottle and place in a cooler and transport blank along with the beach water samples that are to be collected. *The field blank is a field quality control sample and must read upon analysis, <10 CFU/mL.*
- Avoid sample collection close to swimmers/waders. Sample up-current if swimmers/waders are at the fixed site.

- The sampler will approach the sampling site from downstream or down current until at about 45 cm (18 inches) depth in water. Avoid kicking up bottom material at the sampling site. If material is kicked up, wait until the water clears before collecting a sample.
- Collecting samples during rough water conditions (waves on the surface) will require the sampler to approach the waves from a 45 degree angle, at which point the sampler will acquire the sample by having the sample jar enter the water approximately 3 inches below the still water line, perpendicular to the wave crest (trough).
- Samples must be collected in containers approved for the analytical method being used.
- Sample bottles will be prepared and provided by the laboratory charged with conducting the analyses.
- Exercise extreme care to avoid contaminating the sample and sample container. Precautions that must be taken include:
 - Do not remove bottle covering and closure until just prior to obtaining each sample.
 - Do not touch the inside of the sample container.
 - Do not rinse the sample container.
 - Do not put caps on the ground while sampling.
 - Do not transport the samples with other environmental samples.
- When using sterile bottle, uncap container and submerge the bottle neck-first into the water. **Protect the underside of the cap from contamination. Protect the neck of the container from contamination as well.** The container shall be submerged to 15 cm (6 inches). Avoid touching solid objects with the sample container. Face the opening the container toward the prevailing current and allow it to fill with water. If there is no current, create a current artificially by pushing the bottle forward horizontally in the direction away from the hand. Remove the container from the water column. Pour off some of the sample to allow for ample air space in the container (at least 2.5 cm) to facilitate mixing by shaking. Replace the cap immediately. Samples need to be protected from direct sunlight after sample collection.
- When using sterile Whirl-pak® baggies, remove the perforated portion which will allow the bag to open. Pull gently on the white tabs to open the bag. Submerge the container neck-first into the water. The container shall be submerged to 15 cm (6 inches). Avoid touching solid objects with the sample container. Face the opening of the container toward the prevailing current and allow it to fill with water. If there is no current, create a current artificially by pushing the bottle forward horizontally in the direction away from the hand. Remove the container from the water column. Pour off some of the sample to allow for ample air space in the container (at least 2.5cm) to facilitate mixing by shaking. Seal by first pinching closed the opening of the baggie and then flipping (or whirl) the baggie over two to three times. Samples need to be protected from direct sunlight after sample collection.
- Due to unforeseen circumstances, a sample container may break or the jar may become contaminated. If this happens, then a new sample container will be used which requires a new label. Extra labels should be carried to the field. Complete all information on the sample label. Enter specific details to identify the sample on a permanent label. Take care in transcribing sampling information to the label. The label shall be clean, waterproof, nonsmearing, and large enough to accommodate the necessary information. The label must be securely attached to the sample bottle but removable when necessary. Preprinting standard information on the label can save time in the field. The marking pen or other device must be nonsmearing and maintain a permanent legible mark.

- Immediately place the container upright on ice in the cooler (care should be taken to ensure that sample bottles are not totally immersed in water during transit or storage). Samples shall be kept in the cooler and held at 1 to 4 °C during transit to the laboratory.
- Samples will be taken to the Analytical Laboratory within six hours of collection for processing, before the six hour holding time expires. Do not analyze samples that exceed holding times.
- Complete all entries on the Field Sheet. The site and physical condition assessment is performed at the same fixed site from where the sample is collected. This record also provides a back-up record of sample identification.
- After collecting samples from a station, wash hands and arms with alcohol wipes, a disinfectant lotion, or soap and water, and dry to reduce exposure to potentially harmful bacteria or microorganisms.

I. Chain of Custody and Documentation

- Upon arrival to the Analytical Laboratory, complete and sign the appropriate chain-of-custody form(s) and release samples to trained laboratory personnel only. The Analytical Laboratory representative must sign and date the chain-of-custody form.

II. Quality Control and Quality Assurance Section (QC/QA)

- A. Timely Delivery of Samples to the Analytical Laboratory and Timely Analysis of Samples:** All samples collected (to include field blanks) and associated Field Data Sheets and Chain of Custody Forms shall be timely transported and delivered to the Analytical Laboratory, such that the Analytical Laboratory has reasonable and adequate time to analyze the samples within the required six (6) hour holding time. If samples exceed the holding time, they will not be analyzed and the Analytical Laboratory will notify the beach manager and a decision will be made whether to go back out to collect other samples for that day or wait until the next day. This decision is at the discretion of the beach manager and will depend of the time of day it is made known that the samples are not suitable for analysis.
- B. Qualified Laboratory:** The Analytical Laboratory must have the capability to analyze the quantity of samples requested within the required time period, have the instrumentation/technical expertise to perform the required analyses, and have the qualified staff to perform the analyses. Additionally, the Analytical Laboratory must have and adhere to appropriate standard operating procedures for the analysis of water samples for *E. coli* bacteria utilizing an EPA approved method (i.e. EPA 1103.1, EPA1603, SM9213D, SM9223B, IDEXX Colilert). Furthermore, the Analytical Laboratory must have and adhere to appropriate quality control/quality assurance procedures for analysis of water samples for *E. coli* bacteria utilizing an EPA approved method (i.e. EPA 1103.1, EPA1603, SM9213D, SM9223B, IDEXX Colilert).
- C. Field Blanks:** Field blanks will be used as a check of the accuracy/bias in sample collection. The field blanks are required with each batch of samples that are collected and transported to the lab. The field blank will be analyzed along with the beach water quality samples. If the field blank has a result of greater than 10 colony forming units per 100 mL of water, then the entire batch of beach water samples shall not be considered valid.

D. Laboratory Data Validation: *The Analytical Laboratory has responsibility for full validation of report data. Validation of laboratory data occurs within the Analytical Laboratory in accordance with procedures set forth in its quality control/quality assurance procedures. The Analytical Laboratory manager is responsible for determining whether the data is acceptable.*

III. Corrective Action:

- A. Field Operations:** Sampling will be postponed if unsafe sampling conditions exist or if representative samples cannot be obtained, as determined by the field sampler. Sampling will be performed once the conditions are safe and representative samples can be obtained.
- B. Notification:** All changes in sampling locations or designation (environmental, recreational), time of sampling, and variations in sampling procedures or protocol will be reported in writing to the IDEM BEACH Act Program Manager as soon as possible and annually to EPA.

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**EXHIBIT F
FEDERAL GRANT REQUIREMENTS**

The requirements set forth in this Exhibit are applicable to this MOA.

This MOA is funded with grant monies received by IDEM from the U.S. EPA. The following is grant specific information that is required pursuant to 2 CFR 200 to be identified to the IDNR and is not provided elsewhere in this agreement.

1. Federal Award Identification: Indiana Great Lakes Beach Monitoring and Notification Program
2. Federal Award Identification Number (FAIN): CU-11E73102
3. Federal Award Date: August 10, 2021.
4. Total Amount of Federal Award: \$204,000.00
5. Federal Award Project Description: Indiana Great Lakes Beach Monitoring and Notification Program
6. Federal Award Project Officer Contact Information:

Steffanie Crossland, Project Officer
U.S. EPA, Region 5, Water Division
77 West Jackson Blvd.
Chicago, IL 60604
Crossland.Steffanie@epa.gov
312-353-4779
7. Catalog of Federal Domestic Assistance (CFDA) Number and Name: 66.472 Beach Monitoring and Notification Implementation Grants
8. The IDNR shall permit IDEM and auditors to have access to all records and financial statements related to this Contract, as necessary to meet the requirements of the grant.
9. System for Award Management Registration (SAM):
Unless the recipient is exempted from this requirement under 2 CFR 25.110, the recipient must maintain current information in the SAM, accessible at <https://www.sam.gov/portal/SAM>. The recipient shall review and update the information at least annually and more frequently if required by changes in its information.
10. Unique Entity Identifier (UEI) Number:
The IDNR shall provide its number to the IDEM.
11. Executive Compensation:
The IDNR as a first tier sub recipient of more than \$25,000 of federal funds that are not Recovery funds from the American Recovery and Reinvestment Act of 2009 must report to the IDEM the names and total compensation of each of its five most highly compensated executives for its preceding fiscal year if the following conditions apply:
 - a.) In the IDNR's preceding fiscal year, it received—

- (i) Eighty (80) percent or more of its annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act as defined at 2 CFR 170.320 (and sub awards); and
- (ii) \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts), and Federal financial assistance subject to the Transparency Act (and sub awards); and
- (iii) The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15 (d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d) or section 6104 of the Internal Revenue Code of 1986). (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/execomp.htm>.)

12. Security

If the IDNR, as a sub-recipient of federal funds, is required to collect and or manage environmental data under this agreement, the IDNR shall ensure that any connections between its network or information system and the EPA networks used by the recipient to transfer data are secure. A connection is defined as a dedicated persistent interface between an Agency IT system and an external IT system for the purpose of transferring information. If the IDNR's connections do not go through the Environmental Information Exchange System or EPA's Central Data Exchange, the IDNR agrees to contact the EPA Project Officer (PO) and work with the designated Regional/Headquarters Information Security Officer to ensure that the connections meet EPA security requirements, including entering into Interconnection Service Agreements as appropriate. This condition does not apply to manual entry of data by the recipient into systems operated and used by EPA's regulatory programs for the submission of reporting and/or compliance data.

Time frames for providing the information listed above are as follows:

- 13. The IDNR shall provide its UEI number to the State (IDEM) upon execution of the MOA. The IDNR shall provide the sub-recipient executive total compensation listed above, if applicable, to the State (IDEM) by June 1, 2022.

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EXHIBIT G Indiana Lake Michigan Beach Program - Field Data Sheet

1) SAMPLE CERTIFICATION - I certify the following information is correct and corresponds with E. coli sample collection	Print Name:
Sample Date:	Signature:

Laboratory Control Number	Sample Location	Water Surface	Weather Now	Air Temp (°C)	Water Color	Smell	Wind Direction	Wind Speed	Weather Past 24 hours	TIME	AM/PM

Obtain the parameters for Wind, Wind Direction, Rainfall, Air Temperature from <http://coastwatch.glerl.noaa.gov/>

Use <http://www.weatherbug.com> for weather information for the past 24 hours.

EXHIBIT H

Indiana Lake Michigan Beach Program - Chain of Custody for E. coli Sampling & Analysis

1) SAMPLE CERTIFICATION - I certify the following samples were collected by me or in my presence:	Print Name:
Sample Date:	Signature:

Sample Location Information				Time Collected	AM	PM
Laboratory Control Number	Sample Location	Container Type	Comments			

Container Type	
Plastic Bottle	P
Whirl-Pack	W
Glass Bottle	G

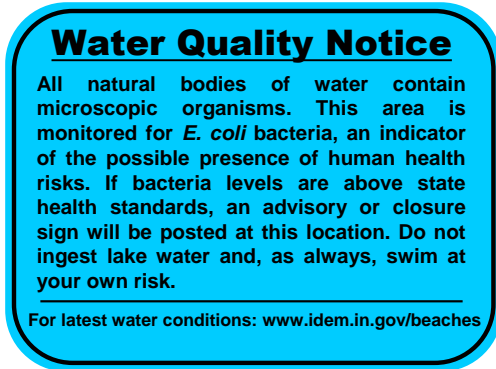
TRANSFER OF CUSTODY - I certify that I received the above samples.	DATE	TIME
sign		
Relinquished by:		
sign		AM/PM
Received by:		
sign		
Relinquished by:		
sign		AM/PM
Received by:		

I certify that I received the above samples. After recording the samples in the official logbook, they will remain in the custody of the competent lab personnel or be secure in a locked area at all times.		
Sign		
Received by:		
Laboratory:		
Address:		AM/PM

For Laboratory Use Only	
Cooler Temp:	Sample Condition:

EXHIBIT I

IDEM approved signage for Indiana's Lake Michigan Beaches Program



The above sign notifies the public that the beach is monitored for *E. coli*



The above sign is an example of the legend. Legend signs for Indiana will have the Spanish translation only.



The above sign is posted when beach waters are open for swimming.



The above sign is posted for an Advisory



The above sign is posted for a Closure

EXHIBIT J

Example of Progress Report Template

Sample Date	E. coli Results			Rainfall	CSO Call	Beach Advisory (Start Date of Advisory)	Beach Advisory (Date Advisory was lifted)	Beach Closure (Start Date of Closure)	Beach Closure (Date Closure was lifted)	# of Samples Collected
	Sample Time	INDSP 1 East	Field Blank Result	Daily Rainfall Total (in inches)						
(date/month/yr)	0:00am/pm	#			Y/N	(date/month/yr)	(date/month/yr)	(date/month/yr)	(date/month/yr)	#
Saturday, May 27, 2017										
Sunday, May 28, 2017										
Monday, May 29, 2017										
Tuesday, May 30, 2017										
Wednesday, May 31, 2017										
Thursday, June 01, 2017										
Friday, June 02, 2017										
Saturday, June 03, 2017										
Sunday, June 04, 2017										
Monday, June 05, 2017										
Tuesday, June 06, 2017										
Wednesday, June 07, 2017										
Thursday, June 08, 2017										
Friday, June 09, 2017										
Saturday, June 10, 2017										
Sunday, June 11, 2017										
Monday, June 12, 2017										
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Thursday, June 15, 2017										
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Sunday, June 18, 2017										
Monday, June 19, 2017										
Tuesday, June 20, 2017										
Wednesday, June 21, 2017										
Thursday, June 22, 2017										
Friday, June 23, 2017										
Saturday, June 24, 2017										
Sunday, June 25, 2017										
Monday, June 26, 2017										1st Progress Report
Tuesday, June 27, 2017										
Wednesday, June 28, 2017										
Thursday, June 29, 2017										
Friday, June 30, 2017										
Saturday, July 01, 2017										
Sunday, July 02, 2017										
Monday, July 03, 2017										
Tuesday, July 04, 2017										
Wednesday, July 05, 2017										

<-- your control sample should NOT be counted as a sample in this column

Example