



**THE NAVAJO NATION
DEPARTMENT OF WATER RESOURCES**

P. O. Box 678 • Fort Defiance, Arizona 86504 • (928) 729-4003 • FAX (928) 729-4029

**BEN SHELLY
PRESIDENT**

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WATER CODE ADMINISTRATION (WCA): 928-729-4132 Fax: -4421

CONSTRUCTION USE OF WASTEWATER LAGOONS

MANDATORY BLEACH OR HTH USE WITH LAGOON WATER*

(Applicable to non-turbid (not muddy, silty, or overly cloudy) lagoon water. Use double the prescribed treatment noted in the INSTRUCTIONS below, in cases of excess turbidity.)

TO ACCESS LAGOON WATER, CONTRACTORS MUST FIRST SIGN A COMPLIANCE & HOLD HARMLESS DECLARATION & THEN OBTAIN A SEPARATE WATER USE PERMIT.

I. The Two Acceptable Chlorine Compound Disinfectants are as follows:

- A. Liquid Household Bleach Chlorine Source:** Sodium Hypochlorite—needs to be no less than 5.25% concentration of Sodium Hypochlorite in the household bleach.
- B. HTH Chlorine Source:** Calcium Hypochlorite—this is granular (dry) “swimming pool” chlorine and needs to be 68-70% Calcium Hypochlorite in the HTH.

II. The Minimum required amounts of household bleach or HTH for using water taken directly from wastewater lagoons are given under the following INSTRUCTIONS. (Lagoon *outfall* or discharge water already treated with chlorine before its release—by a certified and compliant wastewater facility—is not subject to this requirement. If the facility is not certified, or is certified but not compliant, treatment is required for lagoon outfall.)

INSTRUCTIONS: (Mandatory! Water Use Permit copies must be in water trucks at all times.)

- 1. HOW MUCH BLEACH OR HTH TO USE:** Have available one quart of regular, unscented (no additives) household bleach for each 1,000 gallons of non-turbid lagoon water to be used. Or, have available 3 ounces of granulated HTH for each 1,000 gallons of non-turbid lagoon water to be used. (This will result in initial chlorine concentrations of 13-15 ppm (mg/l). That is 600% to 1,000% higher than the residual concentration of 1-2 ppm often seen in highly treated drinking water. The “excess” chlorine will be consumed by natural reactions with organic matter, metals, and/or other compounds in the water, with the goal of a residual of 1 ppm or more by the time the water is emptied from the truck.)
- 2. WHEN TO ADD BLEACH OR HTH TO THE TRUCK:** *ALWAYS* add the Bleach or HTH to the water-hauling truck tank *BEFORE* adding water. For a 4,000 gallon truck add one gallon of bleach to the tank *before* loading. Or, put 12 oz. ($\frac{3}{4}$ lb.) of HTH in the tank *before* loading.
- 3. WHY ADD CHLORINE BEFORE THE WATER?** Adding chlorine sources *BEFORE* loading water allows critical mixing and more contact time between the chlorine and the pathogens (bugs) in the water.
- 4. WHAT IS THE MINIMUM CONTACT TIME?** The *minimum contact time*—time that the water has to be in the truck tank with the Bleach or the HTH before the water can be used—is 30 minutes.

*Adopted 3/1/11. Developed pursuant to basic WCA responsibilities under 22 N.N.C. § 1101. Prepared by Jack Utter, Ph. D., J. D., WCA Principal Hydrologist. Note: The WCA will defer to any higher alternative requirement established through the WCA by the Navajo Nation EPA’s Water Quality Program. Also, the WCA cannot issue a relevant permit unless the lagoon operator (e.g., NTUA, BIA, BIE, or NNTCOB) approves the permit applicant’s physical access to the lagoon facility.



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—CONSTRUCTION USE OF LAGOON WASTEWATER—

Incorporated herein, by reference, is WCA Public Notice No. NNWCA-IR-2011-1, titled "CONSTRUCTION USE OF WASTEWATER LAGOONS." That notice makes mandatory the addition of chlorine compounds to water removed from wastewater lagoons, for construction use, when such lagoons are within Navajo Nation territorial jurisdiction. Any water imported onto the Nation for construction use must also be accompanied by a water import permit obtained from the WCA.

The two prerequisites for obtaining a permit to use water taken directly from a wastewater lagoon for construction use are: (1) acknowledgment of receipt and review of Public Notice No. NNWCA-IR-2011-1 and (2) the signing of this Compliance & Hold Harmless Declaration.

Compliance & Hold Harmless Declaration (Again, this is not a permit but a prerequisite.)*

Permittee hereby acknowledges receipt and review of Public Notice NNWCA-IR-2011-1, and agrees to remain in continuous compliance with NNWCA-IR-2011-1 for every water load taken by Permittee, or Permittee's agents or subcontractors, from a wastewater lagoon within the territorial jurisdiction of the Nation. Permittee agrees to keep truck records available for inspection, demonstrating compliance with every truck load, and acknowledges that non-compliance may result in a cutting off of access to any construction water. Noncompliance may also result in fines or other sanctions, including exclusion from doing business on the Nation—at the discretion of the WCA or other N.N. authorities.

Permittee agrees to hold harmless and indemnify the Navajo Nation and all units and employees thereof, and Navajo Tribal Utility Authority and all units and employees thereof, against any and all losses, liabilities, or other causes of action of any type whatsoever, which the Nation, NTUA, or their employees might be subject to resulting from Permittee's use of wastewater and related actions or inactions. Nothing herein, or in applicable water use permits, waives, nor shall any provision of a permit or this document be construed to waive, the sovereign immunity of the Navajo Nation.

Permittee, or agent, Signature _____ Date: _____

Print Name & Title: _____

Business Name & Mailing Address: _____

Phone: _____ Fax: _____ E-Mail _____

*It is recommended that operators wear appropriate protective gloves when handling hoses and pumps, sanitize their hands, avoid touching their faces and food, and wipe down all truck handles and control surfaces with sanitizers or other appropriate disinfectants during the water hauling day. Adopted 3/30/11.