

May 21, 2026

JOHN STEFFEN
SYNAGRO
435 WILLIAMS COURT
SUITE 100
BALTIMORE MD 21220
jsteffen@synagro.com

**Re: Des Moines Water Works – Charles Carruthers
Solid Waste Database No. 77-BUD-17-26
Beneficial Use Determination (BUD) Approval**

Dear Mr. Steffen:

This correspondence serves as the Iowa Department of Natural Resources' (DNR) notice of approval for the beneficial use of lime sludge generated by the Des Moines Water Works' (DMWW) Fleur Drive Treatment Plant. The approved use is for a base layer for a proposed new pole building and a base layer within an existing cattle building owned by Charles Carruthers and located at 57209 220th Avenue, Lacona, IA 50139.

This beneficial use determination (BUD) approval is valid for one year, until May 21, 2027. Any requests for modification should reference the Solid Waste Database No. provided above. A request for renewal must be submitted to the DNR at least ninety (90) days prior to the expiration date.

Please note that this determination contains Special Conditions that may require a response or action by you, which if not properly complied with, may prompt enforcement action by the DNR. Furthermore, the issuance of this BUD does not relieve the generator, marketer, or end-user of the responsibility to comply with all other applicable local, state, and federal statutes, ordinances, and rules.

Thank you for your commitment to environmental compliance. If you have any questions, please contact me at [\(515\) 201-8272](tel:515-201-8272) or chad.stobbe@dnr.iowa.gov.

Sincerely,



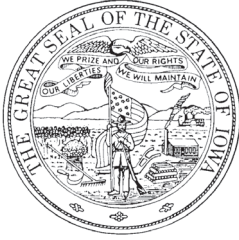
Digitally signed by Chad A.
Stobbe
Date: 2026.05.21 16:12:44 -05'00'

Chad A. Stobbe
Environmental Specialist Senior
Land Quality Bureau

Enclosures (2)

cc: Josh Russell, Des Moines Water Works
jrussell@dmww.com

Charles Carruthers, Project Site
scenralconstruction@gmail.com



IOWA DEPARTMENT
OF NATURAL RESOURCES

BENEFICIAL USE DETERMINATION



- I. DNR ID Number: **77-BUD-17-26**
- II. End-User:
Name: Charles Carruthers, Property Owner
Address: 57209 220th Avenue
Lacona, IA 50139
Email: scentralconstruction@gmail.com
Phone: (641) 203-2436

Project Location: 57209 220th Avenue
Lacona, IA 50139
Parcel ID: [0201400004](#)
- III. Responsible Official:
Name: John Steffen, Technical Services Specialist
Address: **Synagro**
435 Williams Court, Suite 100
Baltimore, MD 21220
Email: jsteffen@synagro.com
Phone: (319) 352-1090
- IV. By-Product Generator:
Name: Josh Russell, Water Production Operators Supervisor
Address: **Des Moines Water Works**
2201 George Flag Parkway
Des Moines, IA 50321
Email: jrussell@dmww.com
Phone: (515) 283-8710
- V. Issuance Date: May 21, 2026
- VI. Expiration Date: May 21, 2027
- VII. Issued by:  Digitally signed by
Chad A. Stobbe
Date: 2026.05.21
16:14:12 -05'00'
- Chad A. Stobbe
Environmental Services Division

VIII. General Conditions

- 1) The above-named End-User, in cooperation with the By-Product Generator, is hereby authorized to operate a beneficial reuse project at the described project location in conformance with Iowa Code Chapter 455B, the applicable administrative rules existing at the time of issuance, and any subsequent new administrative rules, which may be duly adopted, and the conditions within this determination
- 2) The issuance of this beneficial use determination in no way relieves the End-User or By-Product Generator of the responsibility for complying with all other local, state, and federal statutes, ordinances, and rules or other requirements applicable to the reuse of an authorized by-product as subbase and ongoing maintenance of the project location.
- 3) No legal or financial responsibility arising from the reuse of an authorized by-product shall attach to the State of Iowa or the DNR due to the issuance of this beneficial use determination.
- 4) This authorization applies to the Solid Waste program and does not constitute an approval by all DNR program areas. Any additional approvals for the use of an authorized by-product as a base layer shall be obtained from the appropriate program(s) within the DNR prior to use.
- 5) No provision in this beneficial use determination or the approved Solid By-Product Management Plan (SBMP), constitutes a waiver from [567 IAC 108](#) or the Code of Iowa. Any conflict between a provision of this determination or referenced documents and Iowa rules or statutes shall be resolved in favor of the duly adopted rules and statutes.
- 6) Beneficial use of an authorized by-product for any purpose not universally approved in 567 IAC 108.4(455B,455D), or at any other location than stipulated within this determination, shall receive prior written approval from the DNR to be covered under 567 IAC 108.
- 7) All appropriate measures shall be employed as necessary to prevent and minimize fugitive dust migration resulting from excavation, transport and deposition activities.
- 8) A request for renewal shall be made on a form prescribed by the DNR and filed at least ninety (90) days before the expiration of the current determination. The DNR may request that additional information be submitted in order to make a renewal decision. The DNR may renew the determination if, after a review and inspection of the project location and its compliance history, the DNR finds that the End-User and By-Product Generator are in compliance with 567 IAC 108 and this determination.
- 9) The DNR may revoke this beneficial use determination if it determines that the management of an authorized by-product may present a significant risk to or adverse effect on human health or the environment, or if a good-faith effort to maintain compliance is not being made.
- 10) The placement, dumping or other use of an authorized by-product in a manner inconsistent with this determination may be considered illegal disposal, and the By-Product Generator and End-User may be subject to enforcement action by the DNR as appropriate and as allowed by Iowa law.

11) Failure to comply with Iowa Code Chapter 455B, or any rule of order promulgated pursuant thereto, or any or all provisions of this beneficial use determination may result in: 1) a civil penalty of up to \$5,000 for each day of violation, pursuant to Iowa Code section 455B.307, and 2) the suspension or revocation of this beneficial use determination pursuant to 567 IAC 108.11(455B,455D).

IX. Special Conditions

- 1) Beneficial reuse activities utilizing up to an estimated 800 tons of the solid by-product(s) referenced below shall be limited to the project location(s) as described above.
- 2) The following by-product(s) from the specified generator(s) has been authorized for beneficial reuse at the above-referenced project location:
 - a. **“Lime Sludge”** as generated by Des Moines Water Works’ (DMWW) Fleur Drive Treatment Plant, and as characterized relative to the Toxicity Characteristics Leaching Procedure (TCLP-EPA method 1311), Synthetic Precipitation Leaching Procedure (SPLP-EPA method 1312) and RCRA Total Metals contaminant levels provided in the April 24, 2026 BUD application ([Doc #116956](#)), is approved as a base layer for a proposed new pole building and a base layer within an existing cattle building under this authorization. All lime sludge destined for the project locations shall be managed in accordance with the Special Conditions expressed herein.
 - b. *[Reserved]*
- 3) At no time shall an authorized by-product(s) exhibit free liquids, toxic or hazardous properties, nor shall any hazardous waste, as defined by [Iowa Code section 455B.411](#), be managed as part of this determination. Unless otherwise stipulated, the approved by-product(s) **shall be analyzed semi-annually** by the By-Product Generator for the following:
 - a. Toxicity Characteristics Leaching Procedure (TCLP - EPA Method 1311): Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium and Silver.
 - b. Synthetic Precipitation Leaching Procedure (SPLP - EPA Method 1312): Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Fluoride, Lead, Mercury, Selenium and Thallium.
 - c. Resource Conservation and Recovery Act (RCRA) Total Metals (EPA Methods 6010, 6020, 7470, 7471): Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium (Note: If Total Chromium \geq 190 mg/kg, further analysis shall be conducted to determine hexavalent and trivalent results), Cobalt, Copper, Fluoride, Lead, Lithium, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Vanadium and Zinc.

Please note that Iowa law (i.e., [567 IAC 83](#), [Iowa Code section 455B.113](#)) requires laboratories reporting environmental data to the DNR be certified for the methods and parameters being measured. This certification process is in cooperation with the [State Hygienic Laboratory](#) (SHL) at the University of Iowa.

Please also note that pursuant to [567 IAC 137.5\(10\)](#), the toxicity values, absorption factors for dermal exposure to soils, and promulgated standards that are a basis for statewide standards are subject to periodic revision.

- 4) At no time shall an authorized by-product exceed the TCLP and SPLP regulatory levels in 567 IAC 108; nor shall an authorized by-product have any Resource Conservation and Recovery Act (RCRA) Total Metals contaminant levels exceeding the [Iowa Statewide Standards for Contaminants in Soil](#) pursuant to [567 IAC 137](#).
 - a. Any analytical exceedance shall be reported to the DNR in writing within ten (10) business days of receiving the results from the laboratory.
 - b. Upon a By-Product Generator's receipt of a laboratory report that denotes a regulatory exceedance, reuse activities utilizing that by-product shall immediately cease until retesting of a representative sample confirms it is within applicable regulatory standards.
 - c. Any authorized by-product that fails to comply with the regulatory limits expressed above shall be refused by the End-User, and managed as a solid waste and properly disposed of in accordance with all other local, state, and federal statutes, ordinances, and rules or other applicable requirements (e.g., disposal at a sanitary landfill).
 - d. Beneficial use of any by-product that fails to comply with a regulatory limit expressed above will result in a Notice of Violation (NOV) issued to the applicable By-Product Generator. If additional information regarding a cited violation is discovered, or if further violations occur, the DNR may reconsider its position and take subsequent enforcement action as appropriate and as allowed by Iowa law (e.g., determination revocation).
 - e. Prior to resuming beneficial reuse of an authorized by-product that failed to comply with a regulatory limit expressed above, the By-Product Generator shall notify the DNR and End-User in writing of a return to regulatory compliance. This written notification shall include the applicable certified laboratory report(s) and the most current Analytical Testing Report Form(s) (DNR Form 542-0652), and contain a narrative discussion regarding the circumstances surrounding the documented exceedance (e.g., conclusion as to why the exceedance occurred, steps being taken to minimize the probability of any future exceedance, how the by-product was managed in the interim). Upon review and concurrence that the submitted information documents a return to regulatory compliance, the DNR will promptly notify the By-Product Generator and End-User in writing, that beneficial reuse of the referenced by-product may resume.
 - f. To ensure that the By-Product Generator is able to maintain regulatory compliance, the authorized by-product that failed to comply with a regulatory limit expressed above, shall undergo supplemental monthly testing (i.e., exceeding parameter and test method) for the next quarter. Strict adherence to applicable regulatory and health-based limits is vital to ensuring such applications do not adversely affect human health and the environment.

- g. The DNR reserves the right, at its sole discretion, to increase the frequency of by-product testing, pursuant to Special Condition #3, if an authorized by-product fails to comply with applicable regulatory limits.
 - h. If there has been a verified release of contaminants, the DNR reserves the right to place specific conditions upon the End-User, including, but not limited to, the establishment of an environmental covenant pursuant to [Iowa Code Chapter 455I](#).
- 5) The By-Product Generator, in collaboration with the Responsible Official, shall comply with the approved Contingency Plan (included with application, [Doc #116956](#)). This detailed Contingency Plan outlines alternative management options that have been secured (e.g., storage until retesting, direct disposal at a sanitary landfill) for authorized by-products (i.e., that in transit and future generation) that may fail to meet applicable regulatory standards. This detailed Contingency Plan also describes the sampling, handling, and testing procedures established by the By-Product Generator to ensure representative samples are analyzed on each authorized by-product in accordance with the U.S. EPA's Test Methods for Evaluating Solid Waste: Physical/Chemical Methods (SW-846).
 - 6) The By-Product Generator shall submit to the DNR, copies of the semi-annual certified laboratory reports, and a summary of each report's results using the most current [DNR Form 542-0652](#) titled, "Solid By-Product Management Plan - Analytical Testing Report." These reports will be due March 1st and September 1st.
 - 7) The By-Product Generator shall submit for DNR approval, an annual Solid By-Product Management Plan (SBMP, included within application, [Doc #116956](#)) in accordance with 567 IAC 108.6(2) and 567 IAC 108.7(455B,455D) for reuse activities conducted during the prior calendar year. The SBMP submittal shall also include a description of any problems encountered and the actions taken to resolve the problems. The By-Product Generator shall submit the SBMP to the DNR's Main Office in Des Moines, IA by March 1st annually.
 - 8) The stockpiling of an authorized by-product, beyond three (3) days of delivery, for beneficial reuse purposes at the project location is not authorized under this determination.
 - 9) All necessary measures (e.g., terraces, silt fences and geo-fabrics) shall be employed as necessary to prevent and minimize soil erosion and fugitive dust migration resulting from excavation, transport and reuse activities at the project location. Any site erosion that occurs shall be promptly corrected by the End-User.
 - 10) Any residual solid waste, such as garbage, refuse or rubbish as defined in [Iowa Code section 455B.301](#), that may be commingled with the authorized by-product, shall be removed prior to placement as subbase at the project location.
 - 11) These beneficial reuse projects shall be closed and maintained by the End-User in a manner that will:

- a. Control, minimize or eliminate to the maximum extent feasible, infiltration of liquids into the deposited material and releases of material or contaminated runoff to the ground or surface waters or to the atmosphere;
- b. Preclude the probability of future impoundment of water or sediment. All diversion and drainage structures must be maintained to prevent run-on and runoff erosion; and
- c. Include measures that provide for stability to prevent the movement of the deposited material and make repairs as necessary to correct the effects of settling, erosion, ponding or other damaging events.

12) The DNR's Central Office in Des Moines and Field Office #5 in Des Moines shall be notified in writing of impending project completion so that beneficial reuse activities may be observed to determine compliance with the conditions defined under this determination.

Appendix A

(Responsible Official Certification)

I do herein swear that I am duly authorized representative of the entity below and I am authorized to execute this document. I understand that this authorization supersedes and replaces any previous authorization issued by the DNR. I further certify that the operation of the above-described project, as applicable, will be in accordance with the plans, specifications, reports and conditions imposed within this beneficial use determination, and the provisions of 567 IAC 108.

By-Product Generator: **Des Moines Water Works**

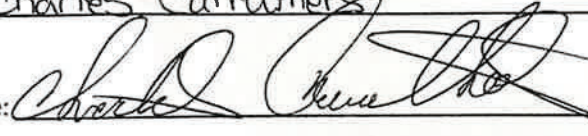
Name: Joshua Russell

Signature: 

Title: Water Production Supervisor of Operations Date: 5/19/26

End-User: **Charles Carruthers, Property Owner**

Name: Charles Carruthers

Signature: 

Title: Owner Date: 5-19-26

Responsible Official: **Synagro**

Name: John Steffen

Signature: 

Title: Technical Service Specialist Date: 5-19-26