



Request for Comments

Case Name: SPR Biosolids Storage Conditional Use Permit

Case Number: RCU2023-00016

April 21, 2023

The Adams County Planning Commission is requesting comments on the following application: **Conditional Use Permit to allow for storage of biosolids material in the Agricultural-3 zone district on approximately 1.4 acres.** The Assessor's Parcel Number of subject request is 0180300000061.

Applicant Information: South Platte
BLAIR CORNING
2900 S PLATTE RIVER DR
ENGLEWOOD, CO 80110

Please forward any written comments on this application to the Community and Economic Development Department at 4430 South Adams County Parkway, Suite W2000A Brighton, CO 80601-8216 or call (720) 523-6800 by **05/12/2023** in order that your comments may be taken into consideration in the review of this case. If you would like your comments included verbatim please send your response by way of e-mail to LCampbell@adcogov.org.

Once comments have been received and the staff report written, the staff report and notice of public hearing dates may be forwarded to you upon request. The full text of the proposed request and additional colored maps can be obtained by contacting this office or by accessing the Adams County web site at www.adcogov.org/current-land-use-cases.

Thank you for your review of this case.

Lia Campbell
Planner I

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TO: Adams County Community & Economic Development Department

FROM: Jamie Safulko – Deputy Director of Engineering – South Platte Renew

DATE: March 20, 2023

RE: South Platte Renew Biosolids Pad Extension

EXECUTIVE SUMMARY

The South Platte Renew (SPR) is seeking to expand the existing asphalt pad located on land owned by SPR at BMP Site 1023, located in Adams County 25-miles east from Byers, to allow for additional biosolids storage. This construction is imperative to meet operational requirements of the water resource recovery facility due to the ongoing drought that has impacted biosolids land application in the past two years. This construction would not be a new facility and operation at the farm will remain consistent with historically approved methods.

WRITTEN EXPLANATION

SPR is seeking permission from Adams County to expand an existing 200 foot by 200 foot asphalt pad by an additional 110 feet in length, for a total storage pad footprint of 310 feet by 200 feet. The purpose of the expansion is to provide increased storage capacity for biosolids consistent with all Colorado Department of Public Health and Environment (CDPHE) requirements. CDPHE allows for storage of biosolids for up to two years, and the expansion of the pad would allow for 90 days' worth of storage, well under the two year maximum. The pad expansion will also include construction of a berm around the entire pad to prevent stormwater runoff.

The construction of the asphalt pad will match existing and will reference the specifications used for the original construction in 2004 per the Colorado Department of Transportation (CDOT) 1999 Standard Specifications for Road and Bridge Construction and the 2000 Edition M Standard Plans. The pad expansion will consist of 12" of moisture treated subgrade with 5" of hot mix asphalt pavement on top to match per the CDOT detail shown in Figure 1 below.



TO: Adams County Community & Economic Development Department
FROM: Blair Corning – Deputy Director of Environmental Programs - South Platte Renew
DATE: March 30, 2023
RE: South Platte Renew Biosolids Storage Improvements – Land Use

EXECUTIVE SUMMARY

South Platte Renew (SPR) received comments from Adams County on March 27, 2023 regarding application PRE2023-00015 for the “SPR Storage Pad Expansion” project. The pad is located on Parcel No. 0180300000061, on agricultural land owned by the City of Englewood and City of Littleton. During the Conceptual Review meeting, Adams County requested additional information to determine the land use classification for this project. The following memo addresses the questions and concerns following the Conceptual Review meeting on March 29, 2023.

1.0 WHERE DOES THE SOLID WASTE COME FROM?

SPR is the third largest water resource recovery facility (WRRF) in Colorado, treating approximately 18 million gallons per day (MGD) of wastewater from 300,000 residents and businesses in Littleton, Englewood, and 19 connecting communities. SPR is jointly owned by the City of Littleton and City of Englewood. As part of the treatment process, solids are recovered and further treated through the solids handling facilities to meet the Colorado Department of Public Health and Environment (CDPHE) standards for Class B biosolids as mandated per Regulation 64. SPR produced 3,105 dry tons of biosolids in 2022.

2.0 DOES ANY SOLID WASTE PROCESSING OCCUR AT THIS LOCATION?

All solids processing occurs at the SPR WRRF in Englewood, Colorado, so no solids processing has or will occur on Parcel No. 0180300000061. SPR’s solids handling process consists of thickening via dissolved air flotation tanks (DAFTs), anaerobic digestion, and dewatering. Throughout this process, the biosolids are stabilized to meet Class B pathogen and vector attraction requirements. The Class B product is registered as a soil amendment through the Colorado Department of Agriculture for use on farm ground.

3.0 WHERE ARE THE BIOSOLIDS APPLIED?

SPR applies biosolids in both Adams County and Arapahoe County. In total, SPR has 10,429 acres permitted for application, with 4,995 of those acres located in Adams County. Parcel No. 0180300000061 is a permitted application site. There are no permanent structures or service utilities at this site.



4.0 HOW TALL ARE THE PILES OF BIOSOLIDS?

SPR is requesting approval for expansion of the biosolids storage pad from a 200' x 200' footprint to a 310' x 200' footprint to allow for 90 total days of storage and constructing a berm around the entire pad footprint to prevent of spillage or runoff from the storage facilities off of the permitted site. More storage for longer periods of time allows SPR some extra time during periods of crop failure or inclement weather. The proposed improvements will be completed in accordance with Regulation 64 for long term storage and SPR is coordinating with CDPHE to update the approval of the storage duration to long term. The proposed design includes storing biosolids at a height of up to 5 feet.

5.0 WHAT SCREENING OF THE BIOSOLIDS STORAGE EXISTS ON SITE?

All processing and screening of the biosolids is conducted at SPR prior to leaving the treatment plant. The biosolids are hauled by the Beneficial Use team to agricultural land located in Adams County and Arapahoe County to be land applied at permitted agricultural sites. Land application of biosolids allows for the nutrient rich solids to be utilized in place of fertilizer to provide nitrogen and phosphorus needed for plant growth. The biosolids are land applied at agronomic rates as determined by the nitrogen and phosphorus content of the soil and biosolids, soil type, and crop grown.

6.0 CURRENT LAND USE CLASSIFICATION

All of SPR's permitted application sites are within the Agricultural-3 District (A-3). The land use designation is listed in the Adams County Property Reports as Agricultural for sites that are permitted and unowned by SPR, and Exempt for sites that are permitted and owned by SPR. SPR partners with local farmers to cultivate crops on the permitted application sites. The biosolids are registered as a soil amendment product through the Colorado Department of Agriculture and are used as a substitute for traditional fertilizer during farming practices; therefore, they are consistent with an agricultural crop farming use.

The Exempt status is due to the fact that SPR is a tax-exempt entity, although SPR does submit annual payment in lieu of taxes to assist in the provision of services such as road maintenance, law enforcement, and fire protection. No equipment maintenance is conducted on Parcel No. 0180300000061. SPR is a government-owned utility and if a land use designation other than "crop farming" is assigned, the designation for "All government-owned facilities" may be appropriate. SPR does not intend to conduct extraction of any resources, or disposal of any materials.

Following the Conceptual Review Meeting on March 29, 2023, Adams County classified the use as *Agricultural Business and Farming Operations*.



7.0 IS THERE A POTENTIAL FOR INCREASED TRAFFIC ON THIS PARCEL?

The proposed expansion will not increase traffic or road maintenance requirements, as the increased storage is only intended for use during periods of crop failure or inclement weather. Long-term storage will only be used as a back-up in emergency scenarios where SPR is unable to land apply due to the aforementioned factors. Truck trips to the storage pad follow a similar route to SPR’s land application sites, so the total number of truck trips within this area would be unaffected. SPR’s current operations include, on average, one (1) trip to the storage pad each week.

It is SPR’s understanding based on the input received during the March 29, 2023 meeting with the Adams County Development Review team that given the minimal traffic impacts, it is possible that requirements to dedicate additional right-of-way may be waived.

8.0 NUISANCE AND DUST CONTROL

To reduce pathogens and vector attraction, SPR meets Regulation 64’s treatment for Class B biosolids. SPR must meet a certain temperature, detention time, and volatile solids reduction through its anaerobic digestion process, as listed in Table 1 below.

Table 1. Regulation 64 Class B Biosolids Requirements

Parameter	Regulation 64	SPR 2022 Operations
Process to Significantly Reduce Pathogen Destruction	Various approved treatment methods, including Anaerobic Digestion	Anaerobic Digestion
Anaerobic Digestion Mean Cell Residence Time	15 days at 35-55 degrees Celsius OR >60 days at 20 degrees Celsius	22.3 days at 37 degrees Celsius
Vector Attraction Reduction	Minimum 38% volatile solids (VS) reduction	Average VS reduction: 61.6% Minimum month VS reduction: 55.5%

The potential for wind-blown biosolids will be managed through the proposed berm to be constructed around the storage pad. Additionally, Parcel No. 0180300000061 and the adjacent properties are permitted application sites and owned by SPR. Biosolids naturally hold some moisture content and are therefore less susceptible to wind than dry soil.



SOUTH PLATTE
RENEW

OWNED BY LITTLETON/ENGLEWOOD

MEMO

9.0 CDPHE COORDINATION

SPR is working with CDPHE to receive a Notice of Authorization for this project. SPR has spoken with CDPHE, who indicated that the proposed berm will satisfy the requirements in Regulation 64 to prevent movement of spillage or runoff from the storage pad. SPR will provide Adams County with the Notice of Authorization once available.

10.0 BUILDING PERMIT REQUIREMENTS

There are no structures currently on the site and no structures are intended to be built as part of this pad expansion.

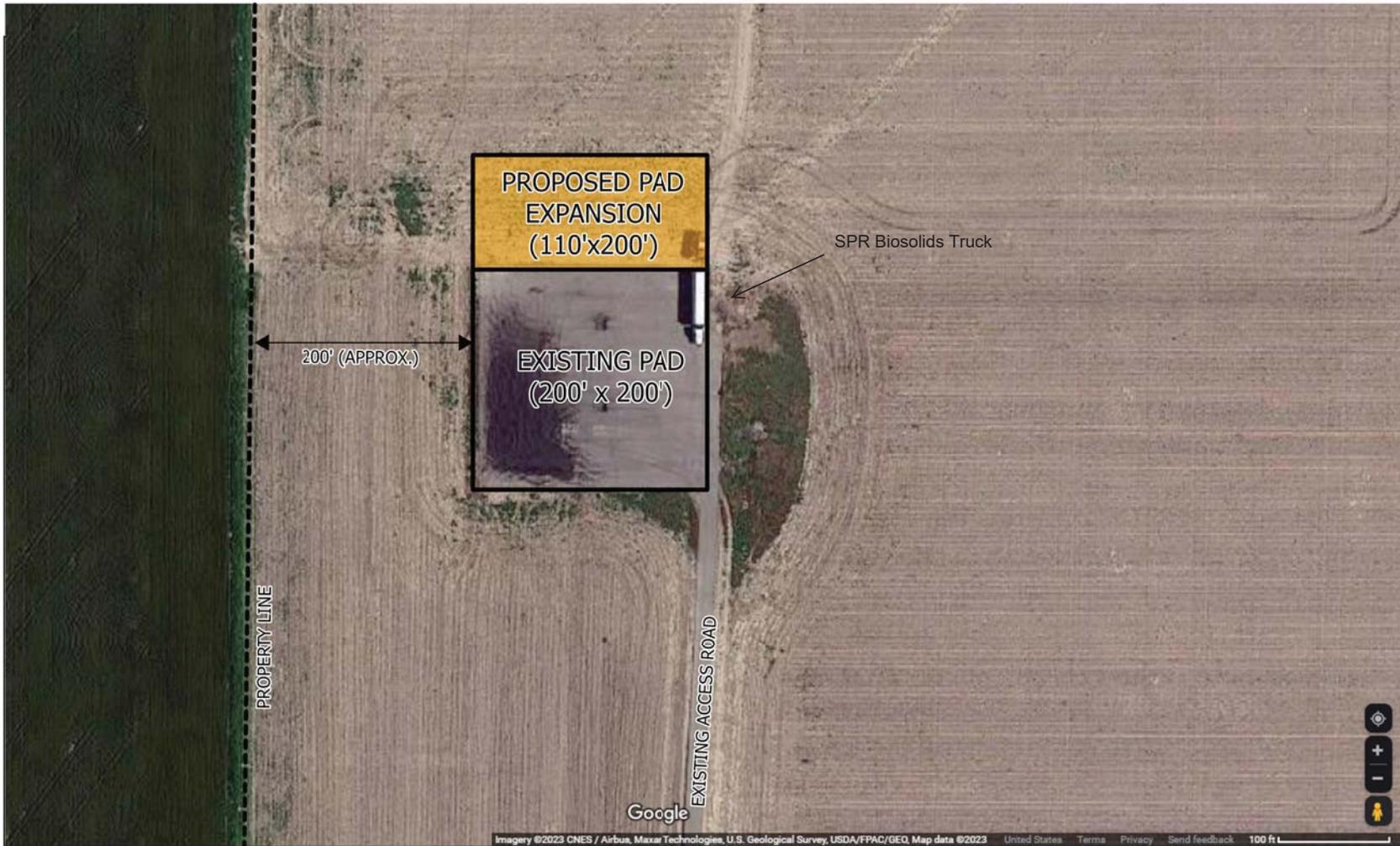
11.0 EASEMENT REQUIREMENTS

SPR intends to utilize the proposed berm for the pad to control stormwater runoff within the pad site. It would be helpful to better understand specific requirements related to access and drainage easements if stormwater runoff is not increased from the permitted site.

Please feel free to reach out to me with any further questions (ddelaughter@englewoodco.gov, 303-762-2605).

Sincerely,

Dan DeLaughter, P.E.
South Platte Renew
Data and Regulatory Programs Manager



- GENERAL NOTES:**
1. PROPOSED EXPANSION AND EXISTING PAD FOOTPRINT SHOWN ARE APPROXIMATE.
 2. PROPERTY BOUNDARY AND OFFSET SHOWN ARE APPROXIMATE BASED ON GIS DATA RETRIEVED FROM ADAMS COUNTY.
 2. BERM TO BE INSTALLED SURROUNDING ENTIRE EXISTING PAD AND PROPOSED PAD.
 3. GRADING OF PROPOSED PAD TO MATCH EXISTING PAD GRADING AND MAINTAIN 3% SLOPE.
 4. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES PRIOR TO CONSTRUCTION. ALL UTILITIES SHALL BE PROTECTED IN PLACE.
 5. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO EXISTING STORAGE PAD DURING PAD EXPANSION CONSTRUCTION. AT NO TIME SHALL THE PAD BE UNAVAILABLE FOR SPR OPERATIONS.

**CONCEPTUAL -
NOT FOR
CONSTRUCTION**

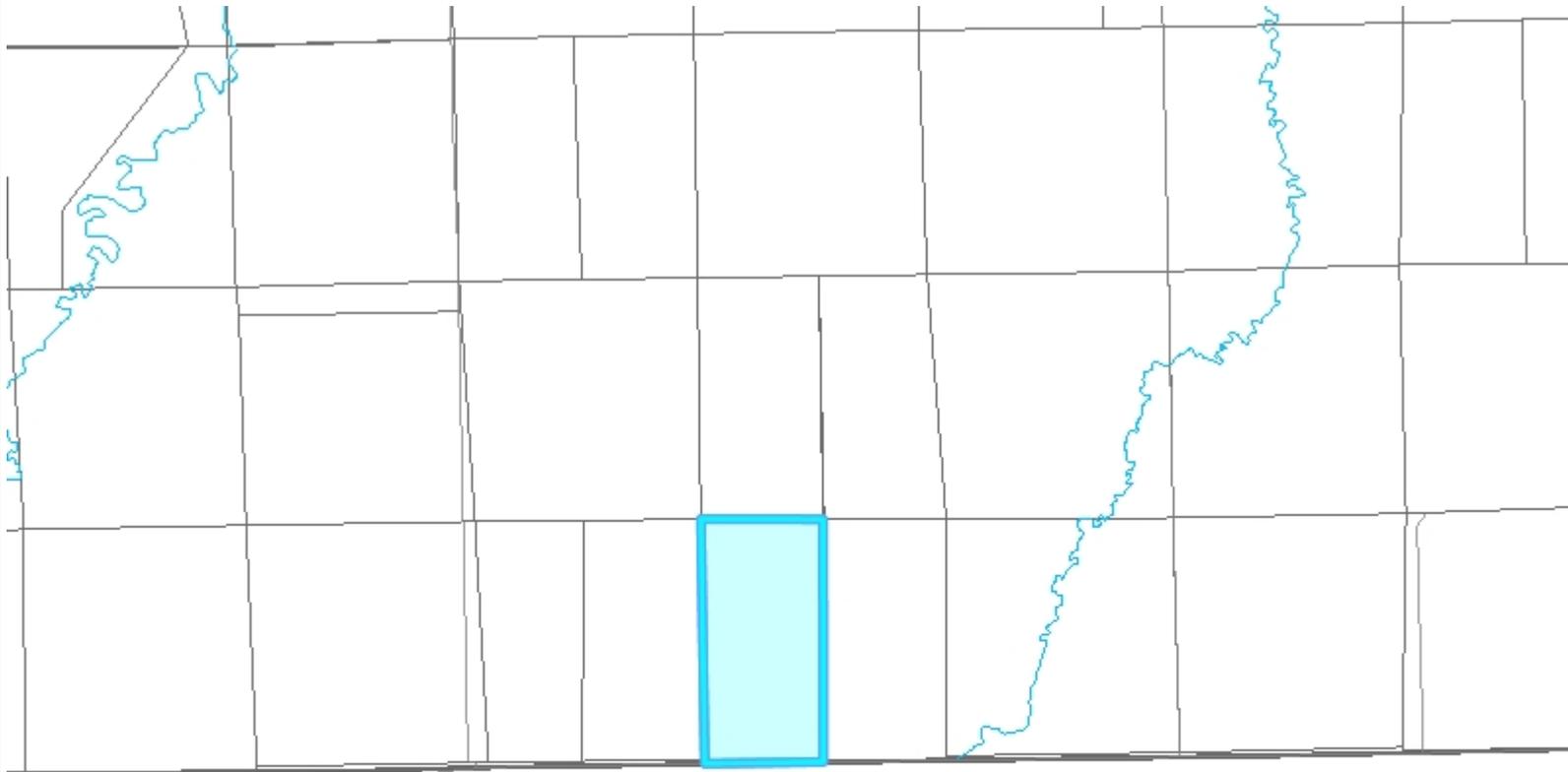


Site Plan - Biosolids Pad Expansion





Adams County Map



Legend

- Highways**
 - Interstate
 - Highway
 - Tollway
- Streets**
 - Streets
 - Ramp
- County Parks and Open Space
- Small Lakes
- Major Lakes
- Rivers**
 - Canal
 - Ditch
 - Primary Creek
 - River
 - Secondary Creek
 - Stream
- Parcels
- County Boundary

1: 49,248



1.6 0 0.78 1.6 Miles

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION

Notes

Simple Map