



Community Planning & Permitting

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BOULDER COUNTY PLANNING COMMISSION PUBLIC HEARING

September 1, 2022 at 1:30 p.m.

Hearing to be Held Virtually due to COVID-19

SUPPLEMENTAL MEMO TO STAFF RECOMMENDATION

STAFF PLANNER: Pete L'Orange, Planner II

Docket SU-22-0003: Dowe Flats Mining and Reclamation Extension

Proposal: Special Use/Site Specific Development Plan review to amend an existing Special Use approval (SU-93-14) for limestone/shale open mining/quarrying located at the Dowe Flats quarry as follows: extend approved mining activities for an additional 15 years; reduce permit area from 1,911 acres to 709 acres; conclude cement plant operations at the facility located south of Highway 66 within the same 15-year timeframe; conduct concurrent reclamation of wildlife habitat.

Location: 13301 55th Street, Parcel #120316000050, located approximately 0.5 mile north of the intersection of N. 53rd Street and state Highway 66, in Sections 9, 10, 15, and 16, Township 3N, Range 70W.

Zoning: Agricultural (A) Zoning District

Owner: CEMEX Inc.

Applicants: Pamela Franch Hora (Primary); Tetra Tech
John Heffernan; CEMEX, Inc.
Therese Glowacki; Boulder County Parks & Open Space

SUMMARY

On August 17, 2022, the Boulder County Planning Commission heard this application at a public hearing. At this hearing, the Planning Commission heard presentations from staff and the applicants' representatives, and public testimony from members of the public. After closing the public hearing, the Planning Commission deliberated on the application. The Commission decided it needed additional information and clarification on several items related to the Special Use review criteria as set forth in Article 4-600 of the Boulder County Land Use Code. In order to give County staff and the applicant an opportunity to compile the requested information, the Planning Commission voted unanimously to table the docket to 1:30 p.m. on September 1, 2022.

Specifically, the Planning Commission requested the following information from County staff: (1) the legal nonconformity of the operations at the Lyons Quarry site; (2) the cumulative public health effects of 15 more years of operations; (3) details and data on CO₂ emissions; (4) the relationship between the Dowe Flats mining operations and the operations at the Lyon Quarry site.

The information compiled by County staff is included in this supplementary memo.

Legal Nonconforming Status of Lyons Quarry/Cement Plant

In carrying out research and analysis of the legal nonconforming status of the Lyons Quarry and cement plant, staff have determined that they are considered a legal nonconforming use under Article 4-1000 of the Boulder County Land Use Code. Article 4-1000 of the Land Use Code addresses nonconforming structures and uses. A nonconforming use is defined as:

Any existing use which does not conform to the use regulations of this Code for the zoning district in which such nonconforming use is located, as a result of either

- 1. the adoption or amendment of this Code, or*
- 2. a final administrative or judicial decision precluding the County from enforcing this Code specific to a use on the basis of estoppel, laches, or waiver.*

[Article 4-1003.A]

Both the cement plant and the Lyons Quarry open mining activities were established in accordance with the applicable Boulder County zoning regulations in effect at the time.

The cement plant pre-dates the opening mining use at the Lyons Quarry. The earliest record on file for the cement plant is a 1965 building permit (BP-65-8040) for earthwork and site preparation for the construction of a “modern cement plant”. A subsequent building permit was issued for the construction of the cement plant in 1967 (BP-67-10137). At the time, the property was zoned General Industrial. Mining and mineral processing uses, which include a cement processing plant, were allowed by right in the General Industrial zoning district under the land use regulations in effect in 1965. The cement plant became legally non-conforming in 1994, when the Boulder County Land Use Code was amended to include a requirement that industrial uses in the General Industrial district be subject Special Use review.

When the mining use was established in 1977, it was also allowed by right in the General Industrial district under the Boulder County Zoning Resolution (which is what the Land Use Code was called at the time). Mining operations at the Lyons quarry became legally non-conforming under the Land Use Code in 1978, when the Special Use review requirement was added for open mining in the General Industrial district. While the mining operations at the Lyons Quarry did not require review under the Boulder County Zoning Resolution in 1977, the operations required a permit from the State of Colorado. This permit (M1977-208) approved open mining of limestone at a total of six (6) pits at the Lyons Quarry. At the time, the State permitting process required mine operators to consult with local officials but did not require any local approvals in order for the State permit to be issued. The State permit for the Lyons Quarry includes a specific Reclamation Plan. The Lyons Quarry reclamation plan requires that, once mining activities at the Lyons Quarry cease, the operator “put the land back to as near the original land use as possible” and remove the structures on site. Although the cement plant pre-dates the Lyons Quarry mining permit, when that permit was issued, the plant (and its removal during reclamation) became part of the mining activities allowed under permit M1977-208. As such, the cement plant is tied to the Lyons Quarry permit from the State, and the two are now considered a single operation.

As discussed above, both the cement plant and open mining at the Lyons Quarry were allowed at the time they were established and became nonconforming as the result of “the adoption or amendment” of the Boulder County Land Use Code. Article 4-1003.B goes on to state, “a nonconforming use may be continued and normal or routine maintenance of a structure containing a nonconforming use shall be permitted. Normal or routine maintenance shall include any maintenance or repair which does not impermissibly enlarge or alter the structure containing a nonconforming use...” As such, the Lyons Quarry and cement plant may continue to be used, provided they maintain their status as legally nonconforming by not altering or enlarging the use or structures containing the use.

Because the Lyons Quarry and cement plant have legal nonconforming status, staff has reviewed the application under the assumption that the Lyons Quarry and cement plant would continue to operate

until such a time as the operator decides to voluntarily cease operations, provided the use is not altered or enlarged as defined by the Boulder County Land Use Code. The applicants have offered to voluntarily cease operations at the Lyons Quarry and cement plant at the end of the requested extension as a mitigating factor for being allowed to continue operations at Dowe Flats for an additional 15 years. If the extension for Dowe Flats were denied, the applicants would be under no obligation to cease operations at the Lyons Quarry, including the cement plant, absent an alteration or enlargement of the nonconforming use.

Relationship between Lyons Quarry/Cement Plant and Dowe Flats Quarry

The Dowe Flats quarry property and the Lyons Quarry property are considered separate uses under the Boulder County Land Use Code. The uses on the two sites were established separately and at different times.

As discussed above, the Lyons Quarry and the cement plant are legally nonconforming uses, which were established well in advance of the Dowe Flats quarry open mining use. As a legally nonconforming use, the Lyons Quarry can continue to operate independently of the Dowe Flats quarry. Staff does not have sufficient information to determine whether it is economically viable for the cement plant to continue to operate without access to materials from Dowe Flats as part of this application. The Commission may raise this question to the applicants during the hearing as the applicants are in the best position to information on this issue.

Mining at the Dowe Flats quarry was not approved until 1994. By this time, the Boulder County Land Use Code required that open mining operations be reviewed and approved through the Special Use review process. The Dowe Flats quarry completed this process and was approved under SU-93-14, which include a number of conditions of approval (included in Attachment E of the staff packet provided for the August 17, 2022 Planning Commission). The Dowe Flats quarry also has a separate State of Colorado mining permit (M1993-041). Both the State permit and the Boulder County special use approval require reclamation on the Dowe Flats property. While the materials from the Dowe Flats quarry are transported to the Lyons Quarry/cement plant via the conveyor system, this does not change the fact that the use at Dowe Flats is separately approved.

County staff have confirmed with staff from the Colorado State Division of Natural Resources that the State permit for the Lyons Quarry and cement plant (M1977-208) would not need to be terminated if the Dowe Flats Quarry permit (M1993-041) ended.

In summary, the Lyons Quarry and cement plant are legally nonconforming uses with their own state permit, and the Dowe Flats Quarry operates under its own local and state approvals. The Lyons Quarry and cement plant could continue to operate under both their legal nonconforming status and the existing state permit (M1977-208) in the absence of the open mining at the Dowe Flats quarry.

As such, staff find that the two are separate operations. Since the submitted application is for an extension of the local approval for the Dowe Flats quarry, staff's review and analysis focused on the impacts of the continuation of operations at Dowe Flats.

Impacts of Extension on Public Health and CO₂ Emissions

As the operations at the Lyons Quarry, including the operation of the cement plant, are separate from the open mining operations at Dowe Flats and are not subject to review under this application, staff analysis of the public health impacts of requested extension are limited to that requested extension of open mining at Dowe Flats.

Open mining activities do have an impact on public health, as open mining is an inherently dangerous undertaking. Per the most recent available Technical Review Document for the applicant's Colorado Department of Public Health and Environment Operating Permit (95OPBO082, revised 2017), the

operations at the Dowe Flats quarry have the following limits on emissions and actual emission levels:

Emission Type	Permit Limits (tons/year)	Actual Emissions (tons/year)
Blasting combustion by-products: Sulfur Dioxide (SO ₂)	1.2	0.44
Blasting combustion by-products: Nitrogen Oxides (NO _x)	10.0	3.78
Blasting combustion by-products: Carbon Monoxide (CO)	39.6	14.91
Fugitive Particulate Matter	134.2	97.3
Fugitive Particulate Matter <10 microns	58.4	31.7
Conveyor & Crusher Point Source emissions	0.16	0.12
Conveyor & Crusher Point Source emissions <10 microns	0.07	0.05

An extension of mining activities at the Dowe Flats quarry would mean that these emissions could continue for an additional 15 years.

The health impacts that are of greater concern are related to the operations at the Lyons Quarry site, which includes the cement plant. As set forth in their commitments of record, the applicants have offered to voluntarily cease operations at the cement plant in 15 years. At this time the structure would be deconstructed. This would terminate the legal nonconforming status of the plant. As discussed above, as the cement plant is considered legally nonconforming, so without this voluntary commitment of record, the plant could continue to operate absent alteration or enlargement of the use.

While the Lyons Quarry and cement plant are not being reviewed as part of this application, the public health impacts of the Lyons Quarry and cement plant are relevant in considering whether the applicant's commitment of record to close the plant is sufficient mitigation for the impacts of extending mining operations at Dowe Flats.

Based on numbers reported on the Environmental Protection Agency's (EPA) website, between 2012 and 2020 (the last year numbers are available) the Lyons Quarry and cement plant produced an average of 307,044 MTCO₂e (Metric tons of carbon dioxide equivalent – the standardized reporting unit for carbon dioxide emissions). The numbers reported over this nine-year period are relatively consistent, with a high of 372,672 in 2012 and a low of 211,682 in 2015. As such, for the purposes of evaluating the level of potential CO₂ emissions in the future, it is reasonable to assume a continued average of 307,044 MTCO₂e per year. Community Planning & Permitting staff would defer to staff from Boulder County Public Health and the Boulder County Office of Sustainability, Climate Action & Resilience on how these emissions impact the health of the residents of Boulder County.

If the commitment of record to close the cement plant in 2037 as mitigation for the continued mining operations at the Dowe Flats quarry is accepted, the emissions would cease at that point. Without that voluntary commitment of record, emissions from the cement plant could continue until some undetermined date in the future. The commitment of record offered through this application would establish a date when closure of the cement plant, and cessation of emissions from the plant, would occur.

From: [Ebert - DNR, Jared](#)
To: [L'Orange, Pete](#)
Cc: [Lennberg - DNR, Patrick](#)
Subject: Re: [EXTERNAL] Question re: CEMEX operations near Lyons and Longmont
Date: Thursday, August 18, 2022 1:52:45 PM
Attachments: [image.png](#)
[image001.png](#)

Hello Mr. L'Orange,

The Lyons Quarry DRMS permit (M-1977-208) would not need to be terminated if the mining operations at the Dow Flats Quarry (M-1993-041) ended.

Thank you,

Jared

On Wed, Aug 17, 2022 at 9:23 PM L'Orange, Pete <plorange@bouldercounty.org> wrote:

Patrick,

We've had this question come up regarding the CEMEX operations near Lyons and whether the cement plant at the Lyons Quarry (M1977-208) would have to close if mining operations at the Dowe Flats Quarry (M1993-041) were to end.

Members of the public are saying they have been told this by State staff, but County staff have not seen anything in either state permit that says this. We really need a definitive answer – "If Dowe Flats closes, does CEMEX have to close the cement plant at Lyons Quarry?"

Thanks!

Pete L'Orange | Planner II
Boulder County Community Planning & Permitting

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Jared Ebert

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