INFORMATIONAL PACKET

REQUEST FOR EXTENSION OF SOIL REMOVAL
AND MINING OPERATIONS AND AMENDMENT OF THE BOULDER CREEK PUD

For

GRAND RAPIDS GRAVEL COMPANY

By: Grand Rapids Gravel
2700 28th St,
SW Wyoming, MI 49519
(616) 538-9000
# TABLE OF CONTENTS

COVER MEMO........................................................................................................................................

REQUEST FOR 3 YEAR EXTENSION THROUGH 2021........................................................................

2012 REQUEST FOR EXTENSION THROUGH 2018........................................................................

CURRENT STATUS ..............................................................................................................................

  NARRATIVE BOULDER CREEK PUD HISTORY ..............................................................................
  CURRENT OVERVIEW FROM NOV. 2018 MEETING......................................................................

OVERVIEW OF OPERATING CONDITIONS .........................................................................................

  1996 OPERATING CONDITIONS WITH EXPLANATION AND PROPOSED NEW CONDITIONS RE: TIME FOR CLOSING, WINTER HAULING, DUST CONTROL, MONITORING COMMITTEE, COMPLAINT RECIPIENTS, BERM COMPLETION, SEEDING AND ‘HARD DATE’ FOR COMPLETION GUARANTEED BY RESTRICTIVE COVENANT..............................................................
  OPERATIONS PLAN ..........................................................................................................................

ADDITIONAL PLANNED UNIT DEVELOPMENT ................................................................................

  ORIGINAL END OF USE DRAWING ..............................................................................................
  UPDATED END OF USE DRAWING ...............................................................................................
  REMAINING MINING OPERATION DRAWING ................................................................................

BOULDER CREEK HISTORICAL IMAGERY ........................................................................................

TIMELINE OF EVENTS ......................................................................................................................

  SUMMARY BY YEAR ......................................................................................................................
  DIAGRAM BY YEAR ......................................................................................................................

DUST CONTROLS ..............................................................................................................................

  MSHA PERSONAL HEALTH SAMPLING RESULTS ........................................................................
  PROPOSED PAVING AREA .............................................................................................................
  PROPOSED WATER TRUCK / SWEEPER OBLIGATIONS (CONDITIONS 16 & 17) ................................

DEED RESTRICTIVE COVENANT ........................................................................................................

MINING 101 ........................................................................................................................................

MDEQ GROUNDWATER DISCHARGE PERMIT ................................................................................

  LETTER OF COMPLIANCE FROM MDEQ ....................................................................................

STATISTICS OF EMAILS RECEIVED BY PLAINFIELD TOWNSHIP .....................................................
Cover Memo
INTRODUCTION

In 2012, Grand Rapids Gravel Company ("GRG") requested an extension for mining operations because it was unable to meet the December 31, 2011 completion date set by the original PUD approval. In a letter to the Township dated February 9, 2012, GRG set out the reasons necessitating that request for an extension of time. A copy of that letter is attached.

Subsequently, on or about October 23, 2018 GRG once again requested an extension of three (3) additional years for completion of the mining operations and detailed the reasons for that request. A copy of that letter is also attached.

On November 19, 2018 at a meeting with the Township and various area residents, GRG participated by laying out the basis and reasons for its extension request and listened to the extensive comments of the area residents.

Recognizing the concerns raised by those comments, GRG now supplements and modifies its request for extension with additional and/or changed amendments to the request for extension which would result in an amendment of the PUD. The materials contained in this packet are presented in support of that request for extension and amendment of the Boulder Creek PUD, consistent with Chapter 25 of the Townships zoning ordinance.
REQUEST FOR 3 YEAR EXTENSION THROUGH 2021
October 23, 2018

Mr. Robert Homan
Plainfield Township Supervisor
Plainfield Township Offices
6161 Belmont Avenue, NE
Belmont, MI 49306

Dear Mr. Homan:

Re: Boulder Creek - PUD Gravel Mining Extension
Section 23 & 24, T 8 N, R 11 W
Plainfield Township, Kent County

We would like to request our being placed on the agenda for the Township’s meeting on November 19, 2018. Our purpose is to discuss an extension of the gravel mining completion date for the gravel mining operation at Boulder Creek. Our application together with appropriate fees is being filed contemporaneously with the presentation of this letter. As you know, in 2012 we requested an extension because we were unable to meet the December 31, 2011 completion date set by the original PUD approval. In a letter to the Township dated February 9, 2012, we set out the reasons necessitating our request for an extension as of that time. A copy of that letter is attached for your convenience.

We now find ourselves in the situation where we will once again be unable to meet the completion date granted by our original extension.

As we did in our February 9, 2012 letter requesting the original extension, we would once again like to offer an explanation to the board for this extension request. As you know, when the original PUD and request for mining operations was presented to the Township, the applicant was very frank in discussions with the Township that the completion proposed in the original PUD was highly dependent upon the state of the West Michigan economy and the need for that economy to stay strong in road building and construction during the years of the proposed mining operation.

As you will recall from our February 9, 2012 letter in the first nine (9) years of the mining operation, the economy remained strong and the company averaged 418,500 tons per year of processed material. However, in 2006 as problems in the economy began to develop while construction mortgage money and road building funds became increasingly short, we experienced a 40% drop in volume in one year. Over the next six (6) years from 2006 until December 2011, the average volume of production was only 210,660 tons per year which translates to a 50% reduction in the production rate. In 2009, the company only processed 137,460 tons of material at the height of the recession.

The years 2016 and 2017 reflect the improved economic conditions in West Michigan both in terms of availability of construction mortgage money and investment. Secondly, is the increase
in funding availability for road repairs, road construction, and road building in West Michigan. The numbers for those two years (2016 and 2017) reflect the numbers anticipated during the life of this project as well as the number achieved in the first nine (9) years of the operations. In the year 2016, we processed 427,279 tons of material and in 2017 we processed 473,593 tons of material for an average of 450,436 tons of material produced for those two years. Based upon economic projections, the availability of construction money, and road building funds, we anticipate that our production numbers will remain in the 400,000 ton range and permit us to accomplish completion of excavation and processing operations by the expiration of a three (3) year extension which we are now requesting.

Because of the several years of economic decline, the continued slump and the unavailability of road funding, Grand Rapids Gravel never recovered back to the higher numbers of the first nine (9) years until we began approaching those numbers in the past two years. There is no question that without the economic slump we would have made the goals for completion of construction well within the time set by the first period of extension. However, when that initial extension was requested, we once again were frank and forthcoming with respect to the production being dependent upon demand and upon economic conditions in West Michigan. Those economic conditions have now favorably recovered, and we are confident in our belief that we can, with a three (3) year extension, complete mining extraction operations at Boulder Creek.

Accordingly, the primary reason in support of this extension request is simply this:

The economic crash and continuing economic decline in the construction and road building industries from 2006 through 2015 made it impossible to not only complete operations during the time of the original PUD approval, but also effected the subsequent extension period with the recovery coming and being firmly in place starting in 2016.

While our extension request remains “West Michigan economy dependent”, we are confident that with the availability of road funding dollars in the next several years, we will be able to make our completion goals within the time period of our impending extension request. A second and important reason in support of this extension request is that the sand and gravel mineral resources available at this site are valuable and needed by the company and will be extremely beneficial to the public as increased road repair, road building, and road construction funds continue to pour into the economy over the next few years. This important mineral resource is not only supportive of continuing Grand Rapids Gravel as a functioning company and all of its employees who contribute greatly to our local economy, it is also similarly necessary to support continued road repair and construction. This deposit of sand and gravel represents a rapidly diminishing resource in our area. Grand Rapids Gravel Company has completed mineral extraction at four (4) sites over the past seven (7) years and anticipates shutting down additional sites in the near future. In particular, Grand Rapids Gravel will complete its mining operations at its Jenison facility in 2019 which will remove 450,000 tons of material from the local marketplace. That will be a significant reduction in materials available in the market.
Boulder Creek remains a strong and viable site for the continued production of these needed materials, as an important and valuable mineral resource both to the company and the economy and will produce a public benefit from continued production.

Finally, in addition to the economic factors that have prevented completion, there is continuing need for the material, and we would like to point out that the PUD itself has been very beneficial to the Township and its citizens. In the years since production began at this site for sand and gravel materials, we have completed more than 100 condominiums, 70 free-standing single family homes, have increased property tax values, and overall increased value of the land in the area with the construction of these $250,000 – $500,000 homes. The increased tax base alone has been and will continue to be a boon for the Township with a number of new units still to be built with a strong continuing demand for all of those units.

We look forward to being on your agenda for the November 19, 2018 meeting and would be happy to provide any additional information that you might request.

Very truly yours,

Gary Bos, Vice President
Grand Rapids Gravel Company

Enclosure
2012 REQUEST FOR EXTENSION THROUGH 2018
February 9, 2012

Mr. George Meek, Supervisor
Plainfield Township
6161 Belmont Avenue NE
Belmont MI 49306

Dear George

RE: Boulder Creek PUD Gravel Mining Extension
    Section 23 & 24, T 8 N, R 11 W
    Plainfield Township, Kent County

We would like to request being placed on the Township's Board agenda for the February 20th meeting. The purpose of our request is to discuss an extension of the gravel mining completion date. According to the original PUD approval the mining was to be completed by December 31, 2011. Obviously, we did not make that date and for a couple reasons that we would like to offer the Board members.

As spelled out in the conditions imposed on Grand Rapids Gravel Company by the Township Board back in 1996, we needed to advise the Township before December 31, 2010 if we felt we would not complete the mining operation by December 31, 2011. (See enclosed letter to Mr. Bill Fischer, dated December 16, 2010).

As previously stated in our 2010 letter w would like to offer an explanation to the Board for our extension request. We would like to re-state the following:

The reason and rational for our requested extension of the completion for the mining operation can be summarized as follows:

1. Delays resulting from our efforts to negotiate with MDOT regarding the rebuilding of the West River Drive westbound loop. The relocation of Cannonsburg Road was delayed by 3 years because the MDOT's unwillingness to address the redesign of the intersection of Northland Drive & West River Drive/Cannonsburg Road. Their delay in approval did not allow Grand Rapids Gravel access to the gravel deposits located under the old Cannonsburg Road. The gravel mining in the right of way was necessary to match the Township's approved grading plan for the end use plan to the PUD.

2. Perhaps a bigger factor impacting our overall progress in the mining operation is the West Michigan economy. The demand for our gravel product has dramatically been reduced in the last 4 to 5 years. As you are already aware the amount of new construction has come to a virtual stand still in West Michigan. This slow down is easily demonstrated by the few number of construction permits being issued in all local municipalities.
While much of the gravel is utilized by Grand Rapids Gravel Company/Coit Avenue Gravel Company in their redi mix concrete production. Our redi mix sales have been reduced by 40% from the peak production in 2005. If necessary we can provide statistical data of our actual sales demonstrating the reduced volume. Our gravel sales outside the internal companies are also way below the peak.

These are two reasons for requesting the extension in the mining completion schedule. We certainly would have preferred staying on the approved timeline, however, these circumstances are beyond the control of Grand Rapids Gravel.

Since the 2010 letter was sent we have researched our records and put facts and figures to the production volume. We will summarize and make comparisons along with a projection of time needed to complete.

The original anticipated volume of bank run material to be mined was approximately 6 million cubic yards. Based on some rough estimates of the remaining material we calculate 1.5 million cubic yards still need to be processed.

In the first 9 years we averaged 418,500 cubic yards per year of processed material. When we compared 2005’s volume to the year 2006’s volume we experienced a 40% drop in one year.

The average volume for the years between 2006 and December 2011 was only 210,660 cubic yards per year. So if you compare the average for the first nine years to the last 6 years our production rate has been reduced by 50%.

Our best year was 1999 when the economy was good and healthy in Western Michigan. That year we processed 510,000 cubic yards of material. Our worst year occurred in 2009 when we only processed 137,460 cubic yards of material.

With all the factors involved, many of which are beyond our control, we would like to request an extension of seven (7) years to complete the gravel mining. Let us explain how we have estimated the time period of the extension request.

If we look at the averages for the last 6 years of 210,660 cubic yards per year divided into the remaining volume of 1.5 million you get

\[
\frac{1.5 \text{ million}}{210660 \text{ Average Year}} = 7 \text{ Years ±}
\]

However, if the economy continues to improve in Western Michigan and construction industry rebounds to the average production for the first 9 years of the operation we can significantly reduce the time period of the mining operation. We are all hopeful that the economy does improve, but it is unlikely to reach the same level of 2005.

We have also prepared a narrative about the Boulder Creek PUD highlighting how far we have come together with the Township’s help, in building a community we all can be proud of as an addition to Plainfield Township.
We plan to bring an oversized aerial photo to the Board meeting to better illustrate our progress and the area remaining to be mined. Due to the size we have not provided copies for the Board packets. It will serve as a visual aid for our presentation. Also the photos should be helpful for those new Board members who were not involved in 1995 PUD review.

Hopefully the agenda will allow us to present our request to the Township Board on February 20. Please let us know either way and thank you in advance for your consideration.

Sincerely

Michael R. Berg

MRB:ald

Enclosures

CC: Andrew Dykema
    James Dkema
    Reg Klooster
CURRENT STATUS
NARRATIVE
BOULDER CREEK PUD
Update From 2012 to 2018 See Page 5

History:
Grand Rapids Gravel Company has owned this property since the late 1960's with a vision of mining the gravel deposit as evident by a 1968 submittal from Belmont Farms Development Company for the Township's consideration.

The Boulder Creek PUD application was originally submitted to the Township for consideration in the Fall of 1995 by Grand Rapids Gravel Company. Several public hearings and Committee meetings were held in early 1996 before the Planning Commission and the Township Board. The PUD approval was obtained in May of 1996 and the journey begins.

As agreed upon with the approved Boulder Creek PUD, we have collectively made significant progress in the past 15 years. It is our opinion the PUD has and will be a win/win for both Plainfield Township and Grand Rapids Gravel Company.

We would like to summarize some of the more significant components of the project to date:

Development and Street Improvements:
Built in 1997-98, a 18 hole golf course with pro-shop, restaurant and banquet facility including cart storage building, driving range and a concrete cart path for the entire length of the course.

Built in 1997/98 Boulder Creek Site Condo with 53 single family units, private street access from 7 Mile Road on a boulevard street with a landscaped median. Total street length = 3650 ft ±, 42 homes complete, 11 units unsold.

Built in 2005, Prestwick Condominium Conventional Duplex Condo with private drives, 3 ponds. Total length of streets = 1950 ft ±, 44 units -- 42 sold and 2 units un-built.

2005 Relocated Cannonsburg Road from Northland Drive to the golf course maintenance building 5650 lin ft with 3 lanes and 6 ft wide paved shoulders including future curb cuts at KCRC approved locations.

2005 Rebuilt MDOT left turn loop for North bound Northland Drive to West bound West River Drive. Original length 800 ft, new length 1100 ft with a larger turning radius.

2005 Relocated Brewer Avenue from 7 Mile Road to relocated Cannonsburg Road 2500 lin ft with left hand turn lanes at intersections.

2007 Rebuilt 7 Mile Road East of Brewer East to cross culvert at toe of the steep slope 2500 lin ft. Improving sight distance by cutting down hill and filling in the sag. Including reworking 4 existing driveways to existing homes in order to match new 7 Mile grades.

2007 Rebuilt intersection of 7 Mile Road and Brewer Avenue constructing a round-about intersection to improve safety without a negative impact to traffic flow. This project was in cooperation with the KCRC as a model/test location of the new design standard.
2006 Expand Oakwood Township Cemetery by deeding 4.4 Acres to Township also building a new access drive from relocated Cannonsburg Road.

2005 Deeded new or expanded Right Of Way for road relocations:

- Relocated Expanded Cannonsburg from 100 ft to 120 ft
- Relocated Brewer Avenue from 66 ft to 86 ft.
- Northland Drive (easement only) from 100 ft to 140 ft (deeded)
- from Cannonsburg to 7 Mile Road and additional Right Of Way for larger diameter left turn loop on Northland Drive.

Built 2011 – The Preserve Phase #1. 24 Units conventional condominiums on Grand River, 3 units completed. Total length of street 1550 lin ft.

**Public Utility Improvements Summary**

**Offsite Watermain**

1998

1. 12" High Pressure 4200 lin ft ±
   Old Northland Drive off Kutshill Drive to and under Wolverine Blvd. (Bore and jack MDOT ROW) crossing CEC fee strip to Boulder Ridge (Private Dr Cul-de-sac) Site Condo project

1998

2. 16" Intermediate Pressure 2700 lin ft ±
   Kutshill Dr at Rogue River Dr under Northland Dr (bore and jack MDOT ROW) along 7 Mile Rd to Brewer Ave, North on Brewer to Boulder Meadow Dr (Private Dr Cul-de-sac) Site Condo project

2003

3. 16" and 12" Intermediate Pressure 24" – 2340 lin ft 16" 1335 lin ft.
   From ex. 30° @ Rogue River Campground crossing Rogue River under West River Dr (bore and jack) along West River Dr to Northland Dr (bore and jack MDOT ROW)

**On Site Watermain**

1998

1. 12" High Pressure 3000 lin ft
   Boulder Ridge (Private Drive) Cul-de-sac to 7 Mile Road, East to Grand Rapids Gravel's East property line,

2007

2. 16" Intermediate Pressure 1900 lin ft.
   Boulder Meadow (Private Dr) Cul-de-sac to 7 Mile Rd East to future street South

2006

3. 16" Intermediate Pressure 6035 lin ft.
   Brewer Ave to proposed Boulder View Dr West to The Preserve (Phase 1) West to Northland Dr loop. Completing a much desired looping of intermediate pressure district easterly of the Rogue River.
   Total off-site 11,585
   Total on-site 10,935

Grand total of watermain improvements 22,520 lin ft or 4 ¼ miles of watermain
This work was done in accordance with the original agreement between Grand Rapids Gravel and Plainfield Township regarding the water system upgrades.
Off-site Trunk Sanitary Sewer

2003  15" Trunk sanitary sewer  3177 lin ft
From Rogue River lift station at Mall St along West River Drive under Northland Dr (bore and jack MDOT ROW)

On-site Trunk Sanitary Sewer

2007  15" Trunk sanitary sewer  
12" Trunk sanitary sewer  
355 lin ft
3074 lin ft

2011  8" Boulder View Sanitary Sewer to eliminate temporary Brewer Lift Station  
2820 lin ft.

Total Off-site  3,177 lin ft
Total On-site  6,250 lin ft
Grand Total  9,427 lin ft or 1.8 miles

The trunk sanitary sewer along the Grand River will ultimately allow for the Leisure Meadow Mobile Home Village to have access to public sanitary sewer. This trunk sewer will service the remaining vacant underdeveloped land in Plainfield Township South 7 of Mile Road and East of Northland Drive.

Private Utility Improvements

Grand Rapids Gravel has also installed private utilities (underground) to service all existing development.

Consumers Energy Company (CEC)
Boulder Creek Site Condos  4,000 lin ft
Prestwick Condos  2,000 lin ft
Club House  1,500 lin ft
The Preserve  1,700 lin ft

DTE/MichCon Gas
Boulder Creek Site Condos  4,000 lin ft
Prestwick Condos  2,000 lin ft
Club House  1,600 lin ft
The Preserve  3,270 lin ft

AT&T
Boulder Creek Site Condos  4,000 lin ft
Prestwick Condos  2,000 lin ft
Club House  1,500 lin ft
The Preserve  3,270 lin ft
Cannonsburg/Brewer Relocation  8,050 lin ft

ComCast
Boulder Creek Site Condos  4,000 lin ft
Prestwick Condos  2,000 lin ft
Club House  1,500 lin ft
The Preserve  Not Installed
2005 Grand Rapids Gravel Company worked with CEC and granted an easement along the Grand River Wetlands for the construction of overhead transmission. This allowed CEC to upgrade the reliability of their power grid by interconnecting the Spaulding Substation (near Ada) with the Airway Substation (near Plainfield Ave). This system upgrade will provide adequate electricity for the future development on the Northeast side of Grand Rapids.

2011 Grand Rapids Gravel also granted another easement to CEC for a transmission line to interconnect the 2005 transmission line at the Grand River and Northland Drive to the 7 Mile Substation. The existing poles on Northland Drive will be removed after the new poles have been installed.

We would like to point out that with the relocation of Cannonsburg Road and Brewer Avenue we have constructed all the future intersections according to the KCRC standards. This additional effort during the relocation road construction will avoid disruption of the existing roadway when we develop the future residential projects in the PUD.

At the future intersections along Cannonsburg and Brewer we have already installed sleeves for both public and private utilities for extending all utilities into the future phases of our development avoiding the need to bore and jack or open cutting the roadway.

As part of the public roadway relocation, Grand Rapids Gravel installed 4 tunnels for cart path crossing:

1 – 7 Mile Road
1 – Brewer Avenue @ Club House
2 – Cannonsburg Road
   a. East of Oakwood Cemetery
   b. West of Oakwood Cemetery

These tunnels will allow all residents in the PUD to access the Club House without crossing the County’s major roadways.

Along with the roadway grading, Grand Rapids Gravel has built earthen berms in order to screen and buffer the future homesites from the major roadways. This includes planting evergreens along the East side of Northland Drive three fourths of the way to 7 Mile Road.

The residential layout has been designed so the individual homesites will not have driveways accessing 7 Mile Road, Brewer Avenue, Cannonsburg or Northland Drive (M-44).

These screening berms will be irrigated and landscaped with the development of each phase.

A good example of the landscape would be to look at the Prestwick and The Preserve street frontage.

This highlights the major construction activities that we have undertaken in our effort to develop the Boulder Creek PUD in accordance with the approved plan. We should point out there have been minor revisions that have occurred during the last 14 years, but they have been incorporated as part of our site plan submittals and review by the Planning Commission prior to any construction.

We are certain as we move forward through the future phases, there will be additional modifications necessary.

We would like to confirm our commitment to the original and overall PUD plan as approved back in 1996, and subsequently updated. If the economy in Western Michigan continues to improve in 2012, we hope to complete the infrastructure construction of the first phase of Boulder View Estate. This will be a subdivision with 29 single family homesites adjacent to Hole #18 connecting to Brewer Avenue on the West and Cannonsburg on the South.
Update From 2012 to 2018

Boulder Creek Site Condo
53 Units Single Family Homesites
2 Unsold as of December 2018

Prestwick Condo Duplex Building
44 Units
2013 Completely Sold Out

The Preserve of Boulder Creek
2011 Phase #1 Units 1 to 24 Sold Out
2014 Phase #2 Units 25 to 42 Sold Out
2016 Phase #3 Units 43 to 67 Final 4 Under Construction
2018 Phase #4 Units 68 to 97 Infrastructure Complete

Boulder View Single Family Subdivision
2014 Phase #1 29 Lots Sold Out
2018 Phase #2 25 Lots 6 Sold
Total 54 Lots

Landscape Berms with irrigation along Cannonsburg Road
The Preserve Phases 1 - 2 - 3 (Southside)
Boulder View Phases 1 & 2 (Northside East of Brewer)
7 Mile Road – Southside Northland Dr to GRG Driveway

Cart Paths
Tunnel Under Cannonsburg Road
Preserve Phase #3
Tunnel under Brewer Avenue with Cart Path to Boulder View Park & Tunnel to Clubhouse

MDOT Loop @ Northland Boulder Creek
Signage on Berm with Irrigation

Utility Extension
2018 16" Watermain Cannonsburg Road
Boulder View #2 to Grace Church
1350 lin ft

2018 12" Sanitary Sewer Cannonsburg Road
The Preserve #4 to Boulder Creek Maintenance Building
1150 lin ft

2018 Boulder View West Phase #1
Single Family Subdivision
24 Lots (Preliminary Plat Submittal to Township)

2013 Outside Boulder Creek PUD Northland Drive & 7 Mile
Mercy Health Medical Center
Boulder Creek Assisted Living including upgrade of intersection
Northland Drive, 7 Mile Road East and Rogue River Drive West
Overview of current status
Narrative produced by Mike Berg for
November 19, 2018 Township Meeting

*PLEASE NOTE THIS OVERVIEW WAS BASED ON THE ASK FOR A 3 YEAR MINING EXTENSION WITH A 2 YEAR HAUL OUT AND DOES NOT REFLECT THE ADJUSTMENT TO A 2 YEAR MINING EXTENSION WITH A 1 YEAR HAUL OUT PERIOD*

Current Space
Overall space remaining: 130 Ac
Ex Pond: 2.5 Ac
Proposed pond expansion: 10 Ac
Remaining area to be mined: 30 Ac

Existing Processed Material (November 2018)
Ex volume of processed material= 236,000 Tons
14 Different types of material

New Findings
- Original basis of gravel volume was based on 100 Plus 6” Borings 60 ft deep over 150 Acres
- Recently, an excavator dug 11 test holes 20’ deep in the proposed mining area, finding very high quality gravel

Operating Plans
The plant location has been relocated approx. 800 ft. west and lowered 35 ft
Sand in NE corner will not be mined and not included total remaining material
Mining extension for 3 years of processing gravel 2019 – 2020 – 2021
Stockpiled material removed by 2023
Site clean-up and equipment removal 180 days during 2024 complete by September 1

Economy and Supply
The improved economy in Western Michigan has allowed us to get back to the volumes we were able to achieve before the downturn. In last couple years we have processed an average of 450,000 ton/yr of gravel.

The availability of gravel getting smaller with several operations having closed or soon to be closed:
1. Grand Isle
2. Jenison Plant
3. Cedar Lake
4. Cedar Valley
5. Ottawa Aggregate

GRG provides a number of West Michigan companies with gravel beside their 5 Redi Mix Plants in Grandville, Holland, Dutton, Cedar Springs and Muskegon
Coit Avenue Gravel Co
Dykema Excavators

Total volume since January 1, 2012 to date 1,574,860 Tons

GRG also provides MDOT projects like
Rebuilding US 131 (10 Mile to 14 Mile)
Toebe Construction 40,000+ ton
Kent County Road Commission
Plainfield Township Water Department
Private Paving Companies
The remaining volumes of gravel is 1,312,000 tons divided by 3 years = 437,500 tons/year to complete the Boulder Creek Mining operation. We are comfortable of finishing the gravel mining in this time frame.

This is an important natural resource with a limited amount available to fix the existing and new roads, along with the growing need for housing in West Michigan.

**GRG PERMITS**
GRG maintains various MDEQ permits as required by law:
1. Water Discharge
2. Air Quality
3. Water Volume Usage

**PUD UPDATE**
We would like to provide an update of the Boulder Creek PUD since 2012. We completed the Prestwick Condo project, as well as the first three phases of The Preserve (67 units); Boulder View Phases 1 & 2 are complete (54 homesites).

The infrastructure is in for the final phase of The Preserve (30 units)

We continue to work the landscape berms and irrigation with each phase.

The current total number of housing units in Boulder Creek is 250+, includes all projects since 1996. This has been a great addition to the Plainfield Township tax base which will continue to grow as we complete future phases.

We have submitted the new subdivision to be known as Boulder View West (24 single family homesites) on the North side of Cannonsburg West of Brewer Avenue.
OVERVIEW OF OPERATING CONDITIONS
1. A soil removal permit shall be in effect prior to and during any soil removal operations or mineral mining activities on the site. (GRG recommends to keep condition as written)

A soil removal permit was initially obtained and thereafter, was folded into and included in the PUD approvals. So long as the operator complies with the terms of this PUD, and within the time periods set within the Operations Plan, this PUD approval shall constitute compliance with the soil removal permitting requirements of Chapter 16, Article II of the Township Code.

2. The permittee shall comply with all provisions of the plans submitted with the application for a soil removal permit. (GRG recommends to keep condition as written)

This was done in keeping the Plan submitted and updated PUDs as mining and reclamation progressed.

3. The permittee shall comply with all provisions of the Plainfield Charter Township Soil Removal Ordinance and all other provisions of applicable Township ordinances and state and federal statutes, and shall obtain any and all approvals required by the Kent County Road Commission and any other agency having jurisdiction over the site. (GRG recommends to keep condition as written)

We have complied.

4. The permittee shall comply with all requirements of the Michigan Clean Air Act, Public Act 348 of 1965, as amended, and the rules and regulations adopted thereunder. (GRG recommends to keep condition as written)

We have complied. In fact, in addition to compliance with the Michigan Clean Air Act, we have been required to monitor dust by the Mining Safety Health Administration (MSHA) and from the beginning of sampling as required by MSHA, from 11/2000 to 11/2018 have been in compliance with the health and safety requirements and there have been no citable over-exposures. The health records are available within this packet of information.
5. All soil removal operations and mining activity on the site shall be subject to the provisions of Section 3.10, Commercial District, of the Noise Control Ordinance of Plainfield Charter Township, Ordinance No. 382. (GRG recommends to keep condition as written)

We are in compliance.

6. The applicant shall comply with all of the Township Engineer's recommendations which recommendations shall be subject to Township Board approval regarding soil erosion, storm water management, ground water, wetlands, and other applicable engineering concerns. (GRG recommends to keep condition as written)

We are in compliance.

7. The Township may require performance standards where, because of peculiar or unforeseen conditions, it deems them necessary for the protection of the health, safety, and wellbeing of the residents of the Township. (GRG recommends to keep condition as written)

We are in compliance provided, however, that we are unaware of any additional performance standards because of peculiar or unforeseen conditions. We have not been asked to institute any exceptional protections based upon this standard. We also have a Surety Bond that will remain in place until the reclamation.

8. The banks along the proposed ponds and landscape berms shall be graded and stabilized pursuant to plans submitted and approved by the Township Planning Commission and Engineer. (GRG recommends to keep condition as written)

We are in compliance.

9. All disturbed areas with proposed finished slopes of greater than one on three will be stabilized with topsoil (min. 4” depth) and seeded as soon as possible and no later than the first growing season following final grading of the extracted area. (GRG recommends to keep condition as written)

We are in compliance.

10. Fencing to meet Township requirements shall enclose all mining areas on the perimeter with a locked gate to such mining areas while active mining is being conducted. (GRG recommends to add to the end of condition, "as shown and not required where berms are established."

Fencing in compliance with Township requirements does enclose all mining areas on the perimeter with a locked gate where active mining is being conducted. In many areas
fencing has been replaced upon completion of mining in those areas by construction of the final berm along such areas. For example, the fencing along 7 Mile has been replaced by the final berm, fencing along Northland Drive has been replaced by a final berm and as the berm is completed on the west side of Brewer, all fencing located in that area will also be replaced by the berm.

11. Hours of operation shall be as follows: (GRG recommends to keep condition as written)
   a. Soil mining and processing shall be permitted only between the hours of 7:00 a.m. and 5:00 p.m., Monday through Friday, and 7:00 a.m. until 2:00 p.m. on Saturdays; provided however, that for the first three (3) years of mining and processing operations or until the processing plant is placed below ground in the permanent processing area, such operations shall be limited to two (2) Saturdays only per year.
   b. Loading of materials onto vehicles used to transport soil and materials is permitted only between the hours of 7:00 a.m. to 5:00 p.m., and Saturdays from 7:00 a.m. until 2:00 p.m.
   c. The Township shall continually monitor operating hours and the Township specifically reserves the right to shorten such operating hours based upon its continual review and inspection.
   d. There shall be no soil removal, processing or transport on the following holidays: New Years Day (January 1), Memorial Day (last Monday of May), Independence Day (July 4), Labor Day (first Monday in September), Thanksgiving Day (fourth Thursday in November), and Christmas Day (December 25). There shall be no Sunday operations.

We are in compliance.

12. The permittee shall construct berms as shown on its filed operating plan as follows: (GRG recommends this condition be marked as completed as of July 1, 2019)
   a. Along the east side of Northland Drive.
   b. Along the west side of Brewer Avenue adjacent to all active mining areas.
   c. Along the south side of Seven Mile Road adjacent to all active mining areas.
   d. Along westbound Cannonsburg Road from the West property line of Northeast Gravel Company, westerly to the cemetery.

Berms will be as shown on the approved plan and will be a minimum of six to eight feet in height measured from the centerline of the adjacent roadway, except in the vicinity of the intersection of the Seven Mile Road and Northland Drive where the berm will be a minimum of eight (8') feet in height. All berms located on private property unless the Kent County Road
Commission or Michigan Department of Transportation require adjustment. Where indicated, the berms will be landscaped in accordance with the landscaping plan supplied for the construction of berms.

All berms delineated on the plan (including those berms which are described as “temporary” berms) shall remain in place until the conclusion of mineral mining operations at the site. If a berm is required by any public agency to be moved for any reason, a replacement berm will be constructed, subject to the approval of the Township.

Berms have been constructed in accordance with the Operating Plan and in some cases completion of the final berms are in process.

a. A berm has been installed along the east side of Northland Drive as required by the Plans.

b. A berm has been completed in a portion of the west side of Brewer Avenue and a final berm will be created this winter and spring with fencing continuing to contain the mined stock piles.

c. The final berm has been installed along the south side of 7 Mile Road.

d. A berm had been in place along westbound Cannonsburg Road as required by this condition. However, water main construction has resulted in removal of the berm after mining was completed in the area. The completion of a final berm to replace said berm is in process.

13. The mining area shall contain an entrance and exit on Seven Mile Road and an entrance and exit on Brewer Avenue. The exit and entrance areas and roads shall be as shown upon the approved plan, subject to approval by the Kent County Road Commission.

Trucks entering from the north and exiting to the north on Northland Drive shall enter and exit the site via the Seven Mile Road entrance and northbound trucks, upon leaving, shall proceed only northbound from the intersection of Seven Mile Road and Northland Drive. Traffic destined for the site from Cannonsburg Road, and from the south and departing to those areas shall enter and exit from the Brewer Avenue entrance to the site. The direction for these traffic movements shall be carried out by providing to each of the carriers arriving at and departing from the site with an initial letter making such request and with onsite signage designating the preferred routes.

The Permitee shall design the entrance/exit point on Seven Mile Road (subject to approval by the Kent County Road Commission) so as to eliminate right turns on Seven Mile Road, and shall also (subject to Kent County Road Commission approval) design the entrance/exit point on
Brewer Avenue to eliminate left turns. (GRG recommends the truck route be modified to the current routes used based on the below logic.)

The major conditions of paragraph 13 have been met and are being complied with. However, Grand Rapids Gravel has deviated from the traffic flow pattern for southbound traffic outlined in the condition of paragraph 13 of the Operating Conditions due to the following reasons:

a. Loaded trucks turning west onto Cannonsburg Road from Brewer Avenue create a safety and traffic issue because they cannot gain speed quickly enough to not impose a strain on a high volume traffic route.

b. It is not realistic or possible to have a gravel train make a left turn from Cannonsburg Road to Northland Drive due to the size of the intersection.

c. The light for westbound traffic on Cannonsburg Road is too short for a loaded train to safely and completely clear the intersection. In addition, because of the inability to gain speed, the tightness of the intersection, and the shortness of the light, a traffic bottle-neck is created for a high volume intersection if used in the manner prescribed by condition #13. Our consultation with a traffic expert resulted in a different recommendation which was to utilize 7 Mile for southbound traffic.

d. Utilizing the 7 Mile for southbound traffic is best due to the following reasons:
   a. The light at 7 Mile and Northland Drive creates a safe turn condition for the trucks.
   b. The intersection is wider.
   c. The route allows the trucks to gain speed quicker.
   d. Westbound headed trucks are able to utilize a longer light (Northland Drive to West River) in order to safely and completely make the turn.

e. The only trucks to utilize Brewer Avenue are eastbound headed trucks on Cannonsburg Road / 7 Mile because it is the only route available for any traffic.

14. On site loading equipment shall be equipped with discretionary back-up alarms. All back-up alarms shall be of a type and design that cause minimum noise; provided, however, that such alarms shall be permitted to meet all requirements of the Mining Safety and Health Administration (MSHA) of the State of Michigan, and to meet any other federal or state requirements. (GRG recommends to keep condition as written)

We meet all MSHA noise requirements with respect to our alarm systems and utilize the best alarms available.

15. Fueling of vehicles shall be in accord with the requirements of the Department of Environmental Quality. (GRG recommends to keep condition as written)

We are in compliance.
16. In order to minimize the deposit of dirt and gravel from trucks onto the public highway, the applicant shall provide the following: (GRG recommends that the condition be noted that GRG will pave the entire truck route from the 7 Mile entrance/exit to the Brewer entrance/exit.)
   a. A paved access drive shall extend from 200' in front of the scales to the Seven Mile Road entrance (total paving from the scales out to Seven Mile Road of approximately 1100') and a paved access drive shall extend from the same area (200' in front of the scales) out to the Brewer Avenue exit (total paving from the scales out to Brewer of 700') as shown on the PUD plan.
   b. The applicant shall take reasonable measures including sweeping to prevent the accumulation of dirt and gravel on the public roadways.

We are in compliance with the provisions of paragraph 16a. Furthermore, we are willing and agree to complete an additional patching and paving project as soon as the asphalt companies open in the spring of 2019 to have a completely paved route for trucks to both the 7 Mile and Brewer entrance/exit from the scale house. We believe this will help with dust control for all area neighbors.

As to paragraph 16b of the conditions, while we believe that we have been in compliance with the requirements, the Permittee intends to improve and enhance the measures taken by having a full-time water truck, sweeper and driver on the premises to further minimize dust conditions.

In addition, we will also offer the three individuals designated to receive traffic complaints in condition 25 to also be available to receive any complaints of deposit of dirt and gravel on the public roads. All complaints will be listened to and given immediate attention.

17. The owner of the site shall use all reasonable efforts to control and minimize the escape of dust beyond the boundaries of the mineral mining areas. Methods include but are not limited to: (GRG recommends that the condition is modified to be held accountable for having a pick up-sweeping / water truck be onsite and operating full-time as needed. GRG also recommends that this condition be a topic that can be acknowledged in the meetings referenced in condition 22.)
   a. Sprinkling
   b. Water truck
   c. Pick up-sweeping

We are implementing actions to improve the sprinkling, water truck activities and pick-up sweeping activities (see above), including either signing a contract with Sani-Sweep to assist with roadway clean-up or purchasing a pick up-sweeping and staffing the sweeper with the water truck.

Furthermore, we are committed to having the berm along the west side of Brewer from the active entrance/exit south to the underground tunnel giving the future development access to the golf course constructed and seeded by July 1, 2019. We also commit to topsoiling
and seeding the area directly west of the berm as far as possible (where the gravel has been removed) by this year instead of waiting for the following growing season.

We believe these commitments will help further reduce any dust on the site. We will also offer the three individuals designated to receive traffic complaints in condition 25 to also be available to receive any complaints of dust escaping beyond the boundaries of the property. All complaints will be listened to and given immediate attention.

18. The Permittee, as part of its dust control planning, shall conduct mining on the project in phases as set forth on the approved PUD plan. The Permittee shall have open for mining purposes a maximum of 30 acres, with no more than 13.5 acres open at a time, at any one location. In order to accomplish that objective, when an area in a phase has been excavated to its bottom grade, the Permittee will require 200 linear feet adjacent to the active mining face for the purpose of conducting its mining operations. Accordingly, at the end of each mining season, the Permittee shall conduct reclamation of the disturbed areas from the previous season in an annual reclamation process by spreading topsoil and seeding the area to within 200 feet of the active mining face. The following season, the 200 foot area will be utilized as a working area and mined material will be conveyed across the seeded and restored area by conveyor and each subsequent season, the disturbed areas will be top soiled and seeded to within 200 feet of the active mining face as described above. (GRG recommends this condition be modified to reflect the logic stated below.)

In the main, the requirements of paragraph 18 have been complied with. Please remember this project is down to the last 100 acres of 632 area. However, as the project is near completion, Grand Rapids Gravel has deviated from a portion of these requirements for the following reasons:

a. The major reason for deviation is that Grand Rapids Gravel, as it has neared completion of the project is doing development work on the project at the same time which requires final grading and open areas before development is complete.

b. As part of the final operations, we have needed to clear space for the stock piles on the site and this requires additional room for an open area. However, no mining is being conducted in the area of the stock pile.

c. Due to improvements in the area and as we near completion of the mining operations, we expect a major portion of the open areas to be cleaned up, leveled and seeded this winter and spring including particularly in the area along the west side of Brewer Avenue. A large part of the open areas will be top soiled and seeded by July 1, 2019 as shown on the Diagram by Year map attached as part of this submittal. We can further make the commitments proposed as part of this application (e.g., the “hard date”) by final development as shown on the Updated End of Use Drawing.
19. Any topsoil stockpiled on the site shall be surface seeded as per the requirements of condition No. 9 to control dust. (GRG recommends to keep condition as written)

We are in compliance.

20. The soil removal permit shall not be effective until a corporate surety bond acceptable to the Township Clerk and in an amount that shall insure the timely and faithful compliance with the Plainfield Township Soil Removal Ordinance and these conditions is filed with the Township Clerk. (GRG recommends to keep condition as written)

We are in compliance. We have a $100,000 bond posted with the Township. The bond has been adjusted based on the KCRC standard of $1,000 per acre as we have 100 acres of disturbed area remaining for the project.

21. The corporate surety bond shall remain in place until the soil removal operations and activities, land reclamation or restoration, and all other required activities have received final inspection and approval by Plainfield Charter Township; provided, however, that the amount of the surety bond shall be subject to annual review by Plainfield Charter Township and may be adjusted upward or downward as site conditions dictate. (GRG recommends to keep condition as written)

We are in compliance and will remain in compliance.

22. All mining operations shall terminate not later than December 31, 2011 (revised to 2018). This condition is subject to review commencing no later than one year prior to the date of termination. Following cessation of mining operations, the permittee shall be allowed two (2) additional seasons within which to sell or otherwise remove any materials stockpiled on site. During the period that stockpiled materials remain on site for sale or other disposition, the permittee shall not be entitled to conduct mineral mining operations or gravel crushing operations on site. (GRG recommends to amend this condition to state that all mining operations shall terminate not later than December 31, 2020. As well as decreasing the allowed additional seasons within which to sell or otherwise remove any materials stockpiled on site to one (1)).

As you know we are seeking an extension for this condition and are committed to a 3-year “hard date” for the extension. Under current PUD, GRG would have until 12/31/2020 to complete hauling and 180 days thereafter to remove associated equipment and buildings.

Mining is considered to be the entire process of taking unprocessed material from below the ground, being washed and processed, stockpiled for sale, and sold. In order to ensure that the operation will be completed by the end of the proposed extension: GRG
haling this gravel to the GRG plant in Jenison for processing. All material that is
currently being removed from the site that will NOT be crushed and/or processed at the
Boulder Creek site. If the extension is granted, GRG is committed to removing an
average of 150,000 tons of unprocessed material from the site each of the next three
years between December 1 and March 15. This is an expense that would not be
incurred by GRG if we were to process all material on site. Again, none of this material
will be crushed or processed on site. It will simply be removed and taken elsewhere for
processing during the winter months. As a consequence of taking this material out
during the winter months without processing or crushing, GRG is confident that it can
complete all of its mining operations within 2 years (normal crushing and process will
occur during the warm months) with an end date for mining at 12/31/20 with the plant
and equipment not needed to be removed from the site. Thereafter any remaining
stockpiled materials will be removed by the end of the 3rd year (12/31/21). After that,
consistent with existing PUD approval, an additional 180 days will be required to remove
all remaining equipment used for removing the stockpiles. The “hard date” for the end of
all mining operations will be 12/31/21 and clean-up operations will be finished by July 1,
of the following year.

GRG also views this expense as a positive for the neighbors that have expressed
dissatisfaction with our operation. GRG believes that the majority of complaints focused
on dust, noise, and traffic. GRG believes the winter hauling will help minimize some of
these concerns. The concern of dust in the winter is eliminated due to the frozen ground
and snow holding the dust on site. Dust and noise will also be reduced because there
will be no crushing/processing of material during the winter hauling. The concern of
noise is also reduced because there is a much lower percentage of people enjoying the
outdoors or opening their windows in the freezing temperatures. Lastly, we may be
increasing traffic for the winter months, but this will decrease the traffic in and out of the
site during the busier spring, summer, and fall months. Furthermore, this winter hauling
will be less than 100 loads per day, or two hundred trips between the pit entrance and
the light at 7 mile and Northland Drive. The Board of County Road Commissioners
provided the following statistic, “The existing traffic volumes on 7 Mile Road east of
Northland Drive are approximately 1800 vehicles per day. The capacity of a typical two-
lane road can exceed 6,000 or 7,000 cars a day. GRG does not believe that traffic is
burdened by roughly 3% of capacity for that short distance.

GRG also commits that the area south of the current service drive and on the east side
of the pit (next to Brewer) will have berms with trees and be top soiled by July 1, 2019
with irrigation provided if the extension is approved. We are currently removing the bank
run material from this area, but we will need the extension approved so we can remove
the valuable material that is currently below grade and then shape the site to meet the
end use. This will also allow GRG to finish the berm on the west side of Brewer giving
more protection to the neighbors to the east of the pit.

23. Within 180 days of completion of removal of the soil for which a permit is
   granted for the site, all equipment used for extraction and processing of
   soil, shall be removed. (GRG recommends to keep condition as written)
24. **Upon completion of removal of stockpiled materials from the site, all buildings and equipment used for mining, processing, loading and hauling of any product shall, within 180 days, be removed from the site. (GRG recommends to keep condition as written)**

We will be in compliance.

25. **The permittee shall designate an individual from the permittee’s company to receive any traffic complaints, either directly from local citizens or from the Township, and the permittee shall promptly respond to such complaints. Where an offending party can be identified, the permittee agrees that it shall attempt to advise the offending party of the problem and in the event that the problem continues, the permittee shall agree to bar the offending party from the site. A letter stating this condition of the permit shall be given to each customer hauling material from the site. (GRG recommends to keep condition as written)**

Previously, the Permittee had designated Mr. Regg Klooster as the designated individual for complaints. Mr. Klooster has retired and in his place, the company has decided to appoint three (3) individuals to make certain that someone is available at all times to receive complaints and those three (3) individuals are as follows:

1. Gary Bos;
2. Denny Baskin; and,
3. Chad Rose.

Any of the designees may be reached at the company’s main number: 616-538-9000.

In addition, GRG agrees to participate in a monitoring or review committee consisting of a GRG representative, a representative of the homeowner’s association, a representative of the Township, and the Township Engineer for the purpose of discussing and reviewing any issues regarding operations.

26. **There shall be no broken concrete or other waste materials brought onto this site. (GRG recommends to keep condition as written and will agree that it be memorialized into the restrictive covenant as a means for immediate shutdown if not complied by.)**

We are in compliance. There was a deviation in the past from this requirement for a brief period because local contractors needed these materials for activities.

27. **Natural stone, sand and landscaping limestone may be obtained from offsite sources solely for the purpose of mixing materials extracted from the site or for providing landscaping limestone to customers. There shall be no storage of offsite materials except for natural stone, one-half inch or**
larger, and except for small quantities of landscaping limestone. (GRG recommends this condition be eliminated as there is/will be no imported material to the site.)

We are in compliance.

28. In the event that excavation at the Boulder Creek site causes the loss, failure or contamination of wells on any properties located near the site, and there is a demonstrable connection between such loss, failure or contamination and the Boulder Creek operations as determined by the Plainfield Township Engineer, the Permittee will restore water by either drilling a new well to replace such lost, failed or contaminated well, or by connecting such residents to the water main for a fresh water supply. The Permittee shall perform background water tests, which tests shall be conducted by a certified laboratory on wells adjacent to the property. The substances tested for shall be determined by the Township Engineer. These background water tests shall be conducted prior to the commencement of construction. (GRG recommends to keep condition as written)

We are in compliance.

29. No soil removal shall occur below elevation 630 except for the area occupied by the proposed pond where no soil removal shall occur below elevation 610. (GRG recommends to amend this condition based on the logic below.)

After reviewing the 100 year floodplain information and working with the MDEQ, Kent Country Drain Commission, and Township Engineer following a heavy rainstorm in the 2000’s. The Developer has modified the PUD to have walkout basements 2’ above the Grand River floodplain at approx. 626 with backyard areas graded below 630. This will make the area a floodway to accommodate future rainstorms. Consistent with Chapter 16, Article II of the Township Code, GRG shall provide a Certification of Compliance to the Township annually prepared by an outside engineering firm such as Fishbeck, Thompson, Carr and Huber. The annual certificate shall be sealed, stamped, and filed by 1/31 of each year affirming that as of previous 12/31, milestones was accomplished consistent with approved plan, etc.

30. The Developer shall complete golf course construction in accordance with the approved plan by the end of 1998. In the event that the golf course development has not been completed by such time, mineral mining operations shall cease until the golf course is complete, unless, in the Township’s discretion it shall determine that satisfactory progress is being made toward completion of the golf course. (GRG recommends to mark as completed and eliminate this condition moving forward.)

We are in compliance.
OPERATIONS PLAN
GRAND RAPIDS GRAVEL COMPANY

REQUEST FOR PLAINFIELD TOWNSHIP PERMIT EXTENSION
and PUD AMENDMENT

INTRODUCTION
As of the date of Grand Rapids Gravel’s modified request for a two year extension of its mining permit and an additional one year to remove stockpiled material as an amendment to the existing PUD, the remaining undeveloped land at Boulder Creek is 100 acres, more or less or 15% of the original PUD area of 632 acres. Of that 100 acres, the remaining area to be mined is 30 acres or 5% of the total PUD area (including the proposed pond). The following narrative explains the proposed Operations Plan for the mining and removal portion as part of the Amended PUD. The “Operating Conditions” which are part of this proposal and the provisions of this Operations Plan arise from the original “Operating Conditions” (30 in number) set at the time of the original PUD. The proposal presents proposed modifications to update the principal conditions of the original PUD approval as part of GRG’s modified request for an extension of the permit. As seen below, they also significantly modify the request for an extension.

Three Year “Hard Date” Operating Plan

- Grand Rapids Gravel Company (“GRG”) is committed to being responsive to the concerns of area residents relative to its request for an extension of mining operations at Boulder Creek. At the public informational hearing held by the Township on November 19, 2018 a common and reoccurring question was whether or not GRG would commit to a “hard date” with respect to the termination of mining operations. As a result of that discussion, Grand Rapids Gravel has developed this post-December 31, 2018 Operations Plan. We believe that this Operations Plan is in keeping with the existing permit which permits us to remove onsite stockpiled material for two (2) years following the December 31, 2018 expiration of the existing permit. Accordingly, if the post-December 31, 2018 Operations Plan is approved and the Permit extended as an amendment to the PUD, GRG commits to a “hard date” for the cessation of operations by 12/31/21 and in addition, GRG commits to the cessation of all crushing and processing operations within a two (2) year period (ceasing not later than December 31, 2020).
• Further, GRG will agree to execute a Restrictive Covenant Deed prepared by the Township which will be fully enforceable to assure completion of mining operations within the period specified by this Operations Plan (two (2) years for crushing and processing; one (1) additional year for removing stockpiles and associated mineral extraction equipment plus, 180 days for site clean-up.

**SCHEDULE**

• Accordingly, the scheduling will be as follows:

  ➢ Two (2) years of mining and processing during the regular mining and processing months (warm weather). With all mining, crushing and processing completed by 12/31/2020.

  ➢ All other remaining stockpiled materials removed and to be completed by the end of the third year (12/31/2021 – the “hard date”).

  ➢ Final removal of any remaining equipment and clean-up completed by July 1, 2022.

  ➢ Based on this proposal, all Processing and Crushing of any material will be completed within the two (2) years (12/31/2020).

  ➢ All material except that needed for reclamation, completing our infrastructure, restoration, and building of the remaining development will be removed from the site as well as mining extraction equipment by the end of the three (3) year period (12/31/2021) plus 180 days for clean-up and final removal (July 1, 2022).

The dates will be memorialized in a Restrictive Covenant Deed prepared by the Township.

**DISCUSSION**

In order to accomplish each of the highlights as set out above, GRG will continue to haul material which has not been processed out of the site during the winter months of December,
January, February, and March. Again, this material will NOT be either crushed or otherwise processed but merely loaded on to trucks and removed from the site. Taking material offsite at that time of the year will have the advantage of reducing the impact for area residents. Windows are normally closed during the winter months and as a result, noise will be reduced. In addition, the absence of crushing and processing of the material will also reduce noise. Cold weather removal will further reduce the impact of any fugitive dust on area residences. Finally, traffic around Boulder Creek is also significantly less in the winter time. Removal of these materials in the winter time will be conducted under favorable conditions to area residents.

GRG can haul unprocessed material during those months and remove an average of 150,000 tons of material each year for the next three (3) years (i.e., 2019-2021) during the winter and take that material to other plants for processing and use. The removal of 450,000 total tons over the next three (3) winters will enable GRG to remove all of their stockpiled material and material processed during the warmer months and enable GRG to meet the three (3) year “hard date” (12/31/21).

As of date, the hauling of unprocessed material is in compliance of condition 22, “the permittee shall be allowed two (2) additional seasons within which to sell or otherwise remove any materials stockpiled on site.” It is what is in the bank (unprocessed stockpiled material) and can be loaded directly on to trucks to be removed off-site and allows GRG to skip the processing, crushing, and final stockpiling for sale steps of the operation on this site with respect to such materials. This will enable GRG to END ALL CRUSHING AND PROCESSING WITHIN THE NEXT TWO (2) YEARS as well to get much of the area to final grades and much of the area seeded and restored.
With the completion of all crushing and processing at the end of the two (2) year period, much of the buildings and equipment will be able to be removed from the site as well relocating the scale and using a portable scale house for the last year of operation.

Also included in the Operations Plan is the fact that by this spring (as soon as seeding can take place) we will complete and reshape the berm on the Westside of Brewer from 7 Mile Rd to the underground tunnel south of the club house, and will have planted trees at the top of the berm for additional screening. Similarly, the area at the Southwest corner of Service Drive along Brewer will be completed and seeded by spring thereby removing a possible source of dust. Also, in the Operations Plan as noted elsewhere, it is planned to complete the paving and re-paving of the roads from the scale house to both entrances/exits being used to reduced dust and assist in dust capture and dust control measures.

**ADDITIONAL MATTERS REGARDING AMENDMENTS TO OPERATING CONDITIONS OF THE PUD**

1. **Monitoring Committee** – GRG will participate in a formation and use of a “monitoring committee” consisting of representatives of a Homeowners Association (two (2) members), a representative of GRG, a Township representative, and the Township Engineer for the purposes of discussing any issues involving the mining operations with a requirement of at least one (1) annual meeting.

2. **Designated Complaint Recipient** – GRG will and does hereby designate the following individuals who will be dedicated to receiving any complaints as provided in Operating Condition 25:

   1. Gary Bos
   2. Denny Baskin
3. Chad Rose

At least one of those designees will be on call at the company’s main number and if not immediately available, will respond promptly to complaints. The Company's main number is (616) 538-9000.

3. Modified Operating Conditions – The Modified Operating Conditions which are presented as part of this submittal are presented in recognition of the fact that subject to compliance with terms of the amended PUD, actions of operators will be deemed in compliance with the Township’s Soil Removal Permitting Process in accordance with Chapter 16, Article 2 of the Township Code. The modified operating conditions would apply during the remaining term of this approval.
AMENDED PLANNED UNIT DEVELOPMENT
BOULDER CREEK HISTORICAL IMAGERY
Operation Historical Imagery
Grand Rapids Gravel Boulder Creek

Imagery taken from Google Earth Pro
Key Notes
1. Aerial photo of the site before GRG started mining the Boulder Creek Operation.
April 12, 1999

For Grand Rapids Gravel at location:

Key Notes:

1. Very beginning stages of operation.
Boulder Ridge Development.

1. Roughly 40 acres of current

2. Houses are beginning to form the
Boulder View is disturbed.

Key Notes

October 5, 2003
2. Cemetery is N of Cannonshure Rd.
3. Prestwick Development is has (shown by green area on map).
4. Boulder Ridge has continued to Grown to a road and two ponds.
5. Mining has continued to the SW.

Key Notes

August 27, 2005
Key Notes

1. Cannonsburg Rd has been relocated.
2. Bower Avenue has been relocated.
3. Prestwick development continues.
4. Boulder Ridge continues to expand.
5. Cemetery is expanded by 5 acres as single family homes.
6. The berm on the W side of Bower a gift to the township.

side of the gravel operation.

is more visible, protecting the E

August 19, 2006
Preserve Development can be seen.

3. The beginning stages of the new brewery is turned into a roundabout.
2. The intersection of 7 Mile Rd and Main Street.
1. Mining operations has continued to deepen and expand the pond.

Key Notes

May 29, 2009
Key Notes

1. Mining operations have shifted to...the NW.
2. The area N of 7 Mile Rd is under development for the new medical center.
3. The Preserve Development is underway.
4. The Boulder Ridge Development is completed.
5. The Prestwick Development has added single family homes.

August 22, 2013
1. There is a community area already growing and being reclaimed.

2. The Boulder View Development is to finish grade.

3. This will allow us to finish placement of the stock piles.

4. The Preserve Development is seeded in the Boulder View.

Key Notes

September 9, 2017
December 13, 2018

Key Notes:
1. Updated picture of still unfinished
2. Please see next slide for further part of R.U.D.
Pretxtwick Condo Development will be developed similarly to the and has not / will not be mined but
1. The NE corner is roughly 15 acres
account for 2 acres
2. The Plant scale house, and barn
3. Stock Piles account for 10+ acres.
4. The PC for approval and is 16 acres.
(5E corner) has been submitted to
5. Boulder View West Development
(5%) acre
6. Remaining acreage for mining is 30
7. Remaining acreage 632 acres (13.8%)
8. Remaining undeveloped land is 100

**Key Notes**

Current Status of Remaining Area
Total of Roughly 478.1 Acres or 20,797,350 Sq Ft

- Golf Course (include open water): 247 Acres
- Approved Boulder View West Development: 16 Acres
- Boulder Ridge Development: 40.3 Acres
- Additional Cemetery Space: 6 Acres
- Flood Plains (Untouched): 92 Acres
- Preserve Development: 28 Acres
- Boulder View Development: 34 Acres
- Preakness Association: 14.8 Acres

Reclamation Area
TIMELINE OF EVENTS
TIMELINE OF OPERATIONS PER EXTENSION

2019

- January – Mid-March
  - Remove roughly 150,000 tons of material from the site to be processed at the Jenison location.
  - The material will be taken from the east side of the pit and south of the current service drive.
  - Concurrently a smaller amount of gravel (less than 20,000 tons) will be removed from the NW quadrant of the site and processed elsewhere.

- Mid-March
  - The timing of this is weather dependent but historically in mid-March, the plant is turned on again and the processing operation begins.

- Mid-March – June 30
  - The area from which roughly 150,000 tons is being removed by Mid-March will be graded, stabilized, top soiled, and seeded.
  - The Berm along the west side of Brewer will be constructed from 7 Mile to the location of the existing underground tunnel that connects the future developments to the golf complex. We will also be getting the irrigation system set up during this time.
    - There will be a break of the berm where the current road and future road will be.

- Mid-March – November 30
  - The plant will continue to run within the operation conditions and create 14 different products.
  - The products will be stockpiled onsite as they have been and sold year round.

2020*

- December 1, 2019* – Mid-March 2020
  - The plant will be shut down and no processing will take place on site.
  - Roughly 150,000 tons will be removed from the site and trucked where it will be processed at the Jenison location.
  - The plant, conveyors, and materials will be adjusted in order to excavate the proposed pond.

- Mid-March – November 30
  - The plant will continue to run within the operation conditions and create 14 different products.
  - The products will be stockpiled onsite as they have been and sold year round.
o Any additional acreage that has exhausted all gravel to be mined though the means of winter hauling will be graded and stabilized as soon as weather is permitting.

2021*

- December 1, 2020* – Mid-March 2021
  o The plant will be shut down and no processing will take place on site.
  o Roughly 150,000 tons will be removed from the site and trucked where it will be processed at the Jenison location.
  o The plant, conveyors, and other processing equipment will be broken down and removed from the site.
  o The scale house, clarifier, and garage will be broken down and removed from the site (Process to start December 2020 and will be completed throughout 2021).
- Remainder of 2021
  o The remaining stockpiles of processed material will be sold and removed from the site.
  o The remaining bank run gravel will be removed from the site, but will not be processed at the site.
- 12/31/2021
  o Operations separate of final clean up and execution of approved end use plan are ceased.

2022

- For 180 days past the expiration of the permit, there will be a final clean-up phase to remove any equipment needed to load materials and prep the area for development.
- Please note, there will be a pile of 22A gravel left on site that will only be used on site for the future road construction.
- July 1, 2022
  o All clean-up operations have been completed and the site is turned over specifically to The Developer to complete the PUD with approved end use plan.
DUST CONTROL
Metal/Nonmetal
Personal Health Sampling Results

Current Mine Information

Mine ID: 2003013
Operator: Grand Rapids Gravel Company
Ope: Begin Date: 6/1/1997
Mine Name: PLANT-18
Current Controller: Andrew Dykema
Mine Status: Active
Status Date: 5/14/2015
Mined Material: Construction Sand and Gravel
Type of Mine: Surface
Location: Kent County, MI
State: MI

Operator History for Mine ID: 2003013
Operator Name: Grand Rapids Gravel Company
Begin Date: 6/1/1997
End Date: 

How do I use this information? Click Here

Please note that the information provided by the MSHA Mine Data Retrieval System (MDRS) is based on records gathered from various MSHA reporting systems. There may be a delay in data entry on the MDRS, and therefore, there may be a delay in the availability of some sampling results.

MSHA became aware of a problem with the display of DPM sampling data at the 160 \( \mu \text{m}^3 \) PEL on the MDRS. MSHA determined that a decimal conversion error in the computer program that processes enforcement sampling results caused the DPM data to be displayed inaccurately on the MDRS. MSHA inspectors utilize the DPM Analytical Report to identify violations of the PEL, and not the data displayed on the MDRS. Therefore, no citations were issued in error and all citable overexposures were addressed. MSHA has corrected the computer program and reprocessed the results using the Agency's original laboratory analytical data. All DPM sampling data at the 160 \( \mu \text{m}^3 \) PEL currently displayed on the MDRS are correct.

Samples taken from: 01/01/2000 to 01/01/2019.
Some samples taken during this time period may not appear because of the time required to generate analytical results.

Note: Data for Samples only available from October 1996 on.

<table>
<thead>
<tr>
<th>Code</th>
<th>Action</th>
<th>Code</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Citation or Order issued</td>
<td>E</td>
<td>Exceeds the PEL, but not the PEL \times \text{Error Factor}</td>
</tr>
<tr>
<td>P</td>
<td>All feasible engineering controls completed</td>
<td>T</td>
<td>Citation or order terminated</td>
</tr>
<tr>
<td>X</td>
<td>Citation or order extended</td>
<td>N</td>
<td>No Citation or Order issued</td>
</tr>
<tr>
<td>L</td>
<td>Lab Results Indicate Exposure Limit Exceeded</td>
<td>N/C</td>
<td>Not cited (additional controls determined to be infeasible)</td>
</tr>
<tr>
<td>H</td>
<td>Hearing Conservation Program</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MSHA Action Code Translation Table

Personal Health Sampling Results

The current operator Grand Rapids Gravel Company has been the operator since 6/1/1997

PEL: Permissible Exposure Limit

<table>
<thead>
<tr>
<th>PEL: Permissible Exposure Limit</th>
<th>Shown in Red if concentration exceeds PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust expressed in ( \text{mg/m}^3 ); Noise expressed in % noise dose; DPM expressed in ( \mu \text{m}^3 ); Fume expressed in ( \mu \text{g/m}^3 ) or \text{mg/m}^3 ); \text{CO}_2 expressed in %; other mine gases expressed in ppm; Asbestos and Mineral Fibers expressed in fibers/mL.</td>
<td></td>
</tr>
</tbody>
</table>

For DPM, the miner is overexposed when:

a) EC on the personal sample exceeds 160 \times \text{EF}; or

b) EC on the personal sample is less than 160 \times \text{EF}, TC on the personal sample exceeds 160 \times \text{EF}, and EC on the personal sample times the ratio of TC to EC from the area sample exceeds 160 \times \text{EF}.

PPE: Personal Protective Equipment Used:

Action: MSHA enforcement action taken:

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Job</th>
<th>Contaminant</th>
<th>Concentration</th>
<th>PEL</th>
<th>PPE</th>
<th>Contractor ID</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/24/2015</td>
<td>S. Active Production</td>
<td>Front-end Loader Operator</td>
<td>Noise dosimeter, 90dBA threshold dose</td>
<td>1.04</td>
<td>100.0</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/24/2015</td>
<td>S. Active Production</td>
<td>Front-end Loader Operator</td>
<td>Noise dosimeter, 80dBA threshold dose</td>
<td>3.93</td>
<td>50.0</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/24/2015</td>
<td>S. Active Production</td>
<td>Front-end Loader Operator</td>
<td>Noise dosimeter, 90dBA threshold dose</td>
<td>6.38</td>
<td>100.0</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/24/2015</td>
<td>S. Active Production</td>
<td>Front-end Loader Operator</td>
<td>Noise dosimeter, 80dBA threshold dose</td>
<td>34.32</td>
<td>50.0</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/24/2015</td>
<td>S. Active Production</td>
<td>Laboret, Bullgang</td>
<td>Noise dosimeter, 90dBA threshold dose</td>
<td>14.00</td>
<td>100.0</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/24/2015</td>
<td>S. Active Production</td>
<td>Laboret, Bullgang</td>
<td>Noise dosimeter, 80dBA threshold dose</td>
<td>41.67</td>
<td>50.0</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/24/2015</td>
<td>S. Active Production</td>
<td>Washer Operator</td>
<td>Noise dosimeter, 90dBA threshold dose</td>
<td>18.85</td>
<td>100.0</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/24/2015</td>
<td>S. Active Production</td>
<td>Front-end Loader Operator</td>
<td>Respirable dust, &lt;1 mg</td>
<td>0.00</td>
<td>0.00</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/24/2015</td>
<td>S. Active Production</td>
<td>Front-end Loader Operator</td>
<td>Respirable dust, &lt;1 mg</td>
<td>0.00</td>
<td>0.00</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/24/2015</td>
<td>S. Active Production</td>
<td>Laboret, Bullgang</td>
<td>Respirable dust, &lt;1 mg</td>
<td>0.00</td>
<td>0.00</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/12/2011</td>
<td>S. Active Production</td>
<td>Truck Driver</td>
<td>Noise dosimeter, 90dBA threshold dose</td>
<td>52.41</td>
<td>100.0</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/12/2011</td>
<td>S. Active Production</td>
<td>Truck Driver</td>
<td>Noise dosimeter, 80dBA threshold dose</td>
<td>87.42</td>
<td>50.0</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/12/2011</td>
<td>S. Active Production</td>
<td>Truck Driver</td>
<td>Quartz, respirable, &gt;1% Qtz</td>
<td>0.19</td>
<td>1.29</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/6/2010</td>
<td>S. General</td>
<td>Utility Man</td>
<td>Noise dosimeter, 90dBA threshold dose</td>
<td>14.90</td>
<td>100.0</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/6/2010</td>
<td>S. General</td>
<td>Utility Man</td>
<td>Noise dosimeter, 80dBA threshold dose</td>
<td>26.67</td>
<td>50.0</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/6/2010</td>
<td>M. Washing &amp; Screening</td>
<td>Washer Operator</td>
<td>Noise dosimeter, 90dBA threshold dose</td>
<td>15.07</td>
<td>100.0</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/6/2010</td>
<td>M. Washing &amp; Screening</td>
<td>Washer Operator</td>
<td>Noise dosimeter, 80dBA threshold dose</td>
<td>29.44</td>
<td>50.0</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/6/2010</td>
<td>S. Active Production</td>
<td>Front-end Loader Operator</td>
<td>Noise dosimeter, 90dBA threshold dose</td>
<td>4.26</td>
<td>100.0</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/6/2010</td>
<td>S. Active Production</td>
<td>Front-end Loader Operator</td>
<td>Noise dosimeter, 80dBA threshold dose</td>
<td>9.32</td>
<td>50.0</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/6/2010</td>
<td>M. General</td>
<td>Bobcat Operator</td>
<td>Noise dosimeter, 90dBA threshold dose</td>
<td>20.80</td>
<td>100.0</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/6/2010</td>
<td>M. General</td>
<td>Bobcat Operator</td>
<td>Noise dosimeter, 80dBA threshold dose</td>
<td>54.85</td>
<td>50.0</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/6/2010</td>
<td>S. General</td>
<td>Utility Man</td>
<td>Respirable dust, &lt;1 mg</td>
<td>0.00</td>
<td>0.00</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/6/2010</td>
<td>S. General</td>
<td>Utility Man</td>
<td>Quartz, respirable, &gt;1% Qtz</td>
<td>0.18</td>
<td>1.02</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/6/2010</td>
<td>M. Washing &amp; Screening</td>
<td>Washer Operator</td>
<td>Respirable dust, &lt;1 mg</td>
<td>0.00</td>
<td>0.00</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/6/2010</td>
<td>S. Active Production</td>
<td>Front-end Loader Operator</td>
<td>Unlisted Particulate, respirable, &lt;1% Qtz</td>
<td>0.19</td>
<td>0.00</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/6/2010</td>
<td>M. General</td>
<td>Bobcat Operator</td>
<td>Quartz, respirable, &gt;1% Qtz</td>
<td>0.15</td>
<td>1.47</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/12/2006</td>
<td>S. Active Production</td>
<td>Cleanup Man</td>
<td>Noise dosimeter, 90dBA threshold dose</td>
<td>63.51</td>
<td>100.0</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/12/2006</td>
<td>S. Active Production</td>
<td>Cleanup Man</td>
<td>Noise dosimeter, 80dBA threshold dose</td>
<td>94.40</td>
<td>50.0</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/12/2006</td>
<td>S. Active Production</td>
<td>Cleanup Man</td>
<td>Noise dosimeter, 90dBA threshold dose</td>
<td>22.19</td>
<td>100.0</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/12/2006</td>
<td>S. Active Production</td>
<td>Cleanup Man</td>
<td>Noise dosimeter, 80dBA threshold dose</td>
<td>38.17</td>
<td>50.0</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/12/2006</td>
<td>S. Active Production</td>
<td>Cleanup Man</td>
<td>Respirable dust, &lt;1 mg</td>
<td>0.00</td>
<td>0.00</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/12/2006</td>
<td>S. Active Production</td>
<td>Cleanup Man</td>
<td>Respirable dust, &lt;1 mg</td>
<td>0.00</td>
<td>0.00</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/7/2004</td>
<td>S. Active Production</td>
<td>Laborer, Bullgang</td>
<td>Noise dosimeter, 90dBA threshold dose</td>
<td>10.58</td>
<td>100.0</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/7/2004</td>
<td>S. Active Production</td>
<td>Laborer, Bullgang</td>
<td>Noise dosimeter, 80dBA threshold dose</td>
<td>17.41</td>
<td>50.0</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/7/2004</td>
<td>S. Active Production</td>
<td>Crusher Oper/Worker</td>
<td>Noise dosimeter, 90dBA threshold dose</td>
<td>16.79</td>
<td>100.0</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/7/2004</td>
<td>S. Active Production</td>
<td>Crusher Oper/Worker</td>
<td>Noise dosimeter, 80dBA threshold dose</td>
<td>33.34</td>
<td>50.0</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/7/2004</td>
<td>M. General</td>
<td>Cleanup Man</td>
<td>Noise dosimeter, 90dBA threshold dose</td>
<td>31.25</td>
<td>100.0</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/7/2004</td>
<td>M. General</td>
<td>Cleanup Man</td>
<td>Noise dosimeter, 80dBA threshold dose</td>
<td>58.10</td>
<td>50.0</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/7/2004</td>
<td>M. General</td>
<td>Cleanup Man</td>
<td>Quartz, respirable, &gt;1% Qtz</td>
<td>0.27</td>
<td>0.64</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/7/2004</td>
<td>S. Active Production</td>
<td>Laborer, Bullgang</td>
<td>Respirable dust, &lt;1 mg</td>
<td>0.00</td>
<td>0.00</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/7/2004</td>
<td>S. Active Production</td>
<td>Crusher Oper/Worker</td>
<td>Quartz, respirable, &gt;1% Qtz</td>
<td>0.22</td>
<td>0.53</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/15/2003</td>
<td>S. General</td>
<td>Bobcat Operator</td>
<td>Noise dosimeter, 90dBA threshold dose</td>
<td>45.81</td>
<td>50.0</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Department</td>
<td>Title</td>
<td>Test Parameter</td>
<td>Value 1</td>
<td>Value 2</td>
<td>Result</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------</td>
<td>--------------------------------</td>
<td>-----------------------------------------</td>
<td>---------</td>
<td>---------</td>
<td>--------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/15/2003</td>
<td>S - General</td>
<td>Bobcat Operator</td>
<td>Noise dosimeter, 90dBA, Threshold dose</td>
<td>20.44</td>
<td>100.00</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/15/2003</td>
<td>S - Ore Processing</td>
<td>Crusher Op/Worker</td>
<td>Noise dosimeter, 90dBA, Threshold dose</td>
<td>60.50</td>
<td>50.00</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/15/2003</td>
<td>S - Ore Processing</td>
<td>Crusher Op/Worker</td>
<td>Noise dosimeter, 90dBA, Threshold dose</td>
<td>30.39</td>
<td>100.00</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/15/2003</td>
<td>S - Active Production</td>
<td>Front-end Loader Operator</td>
<td>Noise dosimeter, 90dBA, Threshold dose</td>
<td>26.31</td>
<td>50.00</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/15/2003</td>
<td>S - Active Production</td>
<td>Front-end Loader Operator</td>
<td>Noise dosimeter, 90dBA, Threshold dose</td>
<td>11.51</td>
<td>100.00</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/15/2003</td>
<td>S - Ore Processing</td>
<td>Crusher Op/Worker</td>
<td>Respirable dust, &lt;1mg</td>
<td>0.00</td>
<td>0.00</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/15/2003</td>
<td>S - General</td>
<td>Bobcat Operator</td>
<td>Quartz, respirable, &gt;1% Qoz</td>
<td>0.22</td>
<td>0.59</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/15/2003</td>
<td>S - Active Production</td>
<td>Front-end Loader Operator</td>
<td>Respirable dust, &lt;1mg</td>
<td>0.00</td>
<td>0.00</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
16. In order to minimize the deposit of dirt and gravel from trucks onto the public highway, the applicant shall provide the following: (GRG recommends that the condition be noted that GRG will pave the entire truck route from the 7 Mile entrance/exit to the Brewer entrance/exit.)

a. A paved access drive shall extend from 200’ in front of the scales to the Seven Mile Road entrance (total paving from the scales out to Seven Mile Road of approximately 1100’) and a paved access drive shall extend from the same area (200’ in front of the scales) out to the Brewer Avenue exit (total paving from the scales out to Brewer of 700’) as shown on the PUD plan.

b. The applicant shall take reasonable measures including sweeping to prevent the accumulation of dirt and gravel on the public roadways.

We are in compliance with the provisions of paragraph 16a. Furthermore, we are willing and agree to complete an additional patching and paving project as soon as the asphalt companies open in the spring of 2019 to have a completely paved route for trucks to both the 7 Mile and Brewer entrance / exit from the scale house. We believe this will help with dust control for all area neighbors.

As to paragraph 16b of the conditions, while we believe that we have been in compliance with the requirements, the Permittee intends to improve and enhance the measures taken by having a full-time water truck, sweeper and driver on the premises to further minimize dust conditions.

In addition, we will also offer the three individuals designated to receive traffic complaints in condition 25 to also be available to receive any complaints of deposit of dirt and gravel on the public roads. All complaints will be listened to and given immediate attention.

17. The owner of the site shall use all reasonable efforts to control and minimize the escape of dust beyond the boundaries of the mineral mining areas. Methods include but are not limited to: (GRG recommends that the condition is modified to be held accountable for having a pick up-sweeping / water truck be onsite and operating full-time as needed. GRG also recommends that this condition be a topic that can be acknowledged in the meetings referenced in condition 22.)

a. Sprinkling
b. Water truck
c. Pick up-sweeping
We are implementing actions to improve the sprinkling, water truck activities and pick-up sweeping activities (see above), including either signing a contract with Sani-Sweep to assist with roadway clean-up or purchasing a pick up-sweeping and staffing the sweeper with the water truck.

Furthermore, we are committed to having the berm along the west side of Brewer from the active entrance/exit south to the underground tunnel giving the future development access to the golf course constructed and seeded by July 1, 2019. We also commit to top soiling and seeding the area directly west of the berm as far as possible (where the gravel has been removed) by this year instead of waiting for the following growing season.

We believe these commitments will help further reduce any dust on the site. We will also offer the three individuals designated to receive traffic complaints in condition 25 to also be available to receive any complaints of dust escaping beyond the boundaries of the property. All complaints will be listened to and given immediate attention.

18. The Permittee, as part of its dust control planning, shall conduct mining on the project in phases as set forth on the approved PUD plan. The Permittee shall have open for mining purposes a maximum of 30 acres, with no more than 13.5 acres open at a time, at any one location. In order to accomplish that objective, when an area in a phase has been excavated to its bottom grade, the Permittee will require 200 linear feet adjacent to the active mining face for the purpose of conducting its mining operations. Accordingly, at the end of each mining season, the Permittee shall conduct reclamation of the disturbed areas from the previous season in an annual reclamation process by spreading topsoil and seeding the area to within 200 feet of the active mining face. The following season, the 200 foot area will be utilized as a working area and mined material will be conveyed across the seeded and restored area by conveyor and each subsequent season, the disturbed areas will be top soiled and seeded to within 200 feet of the active mining face as described above. (GRG recommends this condition be modified to reflect the logic stated below.)

In the main, the requirements of paragraph 18 have been complied with. Please remember this project is down to the last 100 acres of 632 area. However, as the project is neared completion, Grand Rapids Gravel has deviated from a portion of these requirements for the following reasons:

a. The major reason for deviation is that Grand Rapids Gravel, as it has neared completion of the project is doing development work on the project at the same time which requires final grading and open areas before development is complete.

b. As part of the final operations, we have needed to clear space for the stock piles on the site and this requires additional room for an open area. However, no mining is being conducted in the area of the stock pile.
c. Due to improvements in the area and as we near completion of the mining operations, we expect a major portion of the open areas to be cleaned up, leveled and seeded this winter and spring including particularly in the area along the west side of Brewer Avenue. A large part of the open areas will be topsoiled and seeded by July 1, 2019 as shown on the Diagram by Year map attached as part of this submittal. We can further make the commitments proposed as part of this application (e.g., the "hard date") by final development as shown on the Updated End of Use Drawing.

19. Any topsoil stockpiled on the site shall be surface seeded as per the requirements of condition No. 9 to control dust. (GRG recommends to keep condition as written)

We are in compliance.
DEED RESTRICTIVE COVENANT
GRG agrees to execute a Restrictive Covenant Deed prepared by the Township which will be fully enforceable to assure completion of mining operations with the period specified by this Operations Plan (two(2)) years for crushing and processing; one(1) additional year for removing stockpiles and associated mineral extraction equipment, plus 180 days for site clean-up (consistent with existing PUD approval). GRG is currently waiting to receive the Deed from the Township.
MINING 101
Mining 101

Minning Process at GRG Plant 18
Step 1: Material into Hopper

- A front end loader loads the stone material into the hopper.
- The hopper removes boulders which are then sold by the ton.
- The first conveyor belt feeds the stone material to the wash plant.
- The first conveyor belt takes the stone to the wash plant.

*Image from gettyimages
Step 2: Material reaches first screen
\[ \text{Step 3: Material over 1.5"} \]

1\(^{\text{/8}}\) crushed and smaller is used for ball diamonds and horse arenas.

3\(^{\text{/8}}\) to 1\(^{\text{/8}}\) crushed is used by the asphalt industry.

1\(^{\text{/8}}\) to 3\(^{\text{/8}}\) crushed is used in landscaping and concrete.

Size:

The stones are then sent to a second screen and are separated by:

The stones are then crushed to 1\(^{\text{/8}}\) or smaller.

Material that is greater than 1.5" is sent to the crusher.
• 3/8" to %” is used for landscaping / drainage / etc.
• 5/8" to 3/8" is used for concrete aggregate.
• 1" to 5/8" is used for concrete aggregate and drain fields.

Sanitary Landfills:
• T.5" to T." is used for landscaping, ballast for flat roofs, and underdrains in separated by size.

After they are washed, they are sent to a second screen and are

These are the natural round stones that are being washed

Gravel:
• Log washers are really coarse material washers that scrub and rinse the
  These stones are taken from the first screen to the "log washers;

Step 4: Material between 1.5" and %”
onto the conveyor belt to be stored as a final product (concrete sand).

The sand screw uses water to wash the material and then loads it into the sand screw.

Material that makes its way through the bottom deck of the first screen is sent to the sand screw.

Step 5: Material smaller than \( \frac{3}{4} \)
Step 6: Sell final products
MDEQ GROUNDWATER DISCHARGE PERMIT
PERMIT NO. GW1810133

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

GROUNDWATER DISCHARGE PERMIT

In compliance with the provisions of Michigan's Natural Resources and Environmental Protection Act, 1994 P.A. 451, as amended (NREPA), Part 31, Water Resources Protection, and Part 41, Sewerage Systems,

Grand Rapids Gravel Company
2700 28th Street, SW
PO Box 9160
Grand Rapids, MI 49509

is authorized to discharge 87,665 gallons per day, 24,100,000 gallons per year of sand and gravel washing process wastewater from the Grand Rapids Gravel-7 M located at

3800 7 Mile Road
Belmont, MI 49306

designated as Grand Rapids Gravel-7 M

to the groundwater of the State of Michigan in accordance with effluent limitations, monitoring requirements and other conditions set forth in this permit.

Rule Authorization: Rule 2218 Authorization
Wastewater Type: Sand and Gravel Washing Process Wastewater
Wastewater Treatment Method: Chemical Clarification
Wastewater Disposal Method: Seepage Bed- Slow/ Medium Rate

The issuance of this permit does not authorize violation of any federal, state or local laws or regulations, nor does it obviate the necessity of obtaining such permits, including any other Michigan Department of Environmental Quality (Department) permits, or approvals from other units of government as may be required by law.

This permit is based on an original application submitted on August 5, 2015 as amended through August 6, 2015.

This permit takes effect on July 1, 2016. The provisions of this permit are severable. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term in accordance with applicable laws and rules.

This permit and the authorization to discharge shall expire at midnight, July 1, 2021. In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit an application which contains such information, forms, and fees as are required by the Department by January 2, 2021.

Issued June 14, 2016

______________________________
Rick D. Rusz, Chief
Groundwater Permits Unit
Permits Section, Water Resources Division
September 21, 2015

Mr. Gary Bos
Grand Rapids Gravel Company
P.O. Box 9160
Grand Rapids, Michigan 49509

Dear Mr. Bos:

SUBJECT: Groundwater Compliance Evaluation Inspection (CEI)
         Groundwater Discharge Permit No. GW1810133
         Designated Name: Grand Rapids Gravel-7 Mile

On July 28, 2015, staff of the Department of Environmental Quality (DEQ), Water Resources Division (WRD) conducted a Groundwater CEI at the Grand Rapids Gravel Company, 7 Mile Road Site, 3800 7 Mile Road, Belmont, Michigan 49306, Kent County. The purpose of the inspection was to evaluate the facility’s compliance with Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), MCL 324.3101 et seq. and the Administrative Rules promulgated there under being 2006 AACS R 323.2101 et seq., as amended, and Groundwater Discharge Permit No. GW1810133.

Mr. John Barszewski of Fishbeck, Thompson, Carr and Huber, the certified operator, Mr. Mark Dunbar of Grand Rapids Gravel, you and I participated in the inspection which included an interview, records review, and site inspection.

The facility was found to be generally in compliance with conditions in the groundwater discharge permit. The effluent weir troughs in the clarifier appeared to have accumulated solids and require cleaning. Mr. Dunbar mentioned that the weir troughs are cleaned as needed and he would make sure that this is done soon. No other compliance issues were identified during the inspection.

We appreciate your efforts to maintain compliance with Groundwater Discharge Permit No. GW1810133. If you have any questions or comments regarding this letter, please contact me at 616-356-0233; sorensenl@michigan.gov; or at the address below.

Sincerely,

Leslie N. Sorensen
Leslie N. Sorensen, P.E.
Senior Environmental Engineer

cc: Mr. John Barszewski, FTCH
STATISTICS OF EMAILS RECEIVED BY PLAINFIELD TOWNSHIP
Email Comments Received by Plainfield Township
November 8, 2018 – December 19, 2018
Prepared by Grand Rapids Gravel

Explanation
The following are the statistics of the emails received by Plainfield Township and forwarded to Grand Rapids Gravel regarding the mining permit extension of the Boulder Creek Pit. Emails included are from November 8, 2018 through December 19, 2018.

There were a total of 44 email comments received. 3 were excluded because the comment could not be read as either in favor or opposed. 1 additional comment was excluded because it was not related to the mining permit extension.

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Favor</td>
<td>25</td>
<td>64.1%</td>
</tr>
<tr>
<td>Opposed</td>
<td>14</td>
<td>35.9%</td>
</tr>
<tr>
<td>Grand Total</td>
<td>39</td>
<td>100.0%</td>
</tr>
</tbody>
</table>