



pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION



Active and Abandoned Mine Operations

New Hope Crushed Stone

Monthly Update

Solebury Communications Group

July 2017

Tom Wolf, Governor

Patrick McDonnell, Secretary

July 2017 Project Status

STATUS AS OF:	August 4, 2017
PROJECT	New Hope Crushed Stone (NHCS) Quarry Reclamation and Stream Restoration
START DATE	Reclamation: January 29, 2016 Stream Restoration: January 29, 2016
ANTICIPATED COMPLETION DATE	Reclamation: March 2019 Stream Restoration: March 2019
CURRENT STATUS	Quarry Reclamation On Schedule Stream Restoration On Schedule

Key Ongoing Factors

- Provisions of the January 29, 2016, letter from DEP to NHCS continue to be in effect.
- Reclamation and stream restoration are required to be completed by March 2019.
- The August 26, 2016, Compliance Order requires NHCS to report on progress by the 5th of each month that includes quantifiable data which is tracked in this monthly status report.
- An improved Corrective Action Plan was approved by DEP on April 13, 2017, which requires catchup work to be completed by July 1, 2017. The plan start date was October 1, 2016.
- Environmental Hearing Board Appeals by NHCS
 - January 29, 2016, DEP letter: Hearing held March 20, 2017. Decision anticipated later this year.
 - August 26, 2016, Compliance Order: Hearing scheduled in Norristown for September 26, 2017.
- The last NHCS related sinkhole was repaired on April 28, 2017 (see February/March 2017 report highlights).
 - A suspected sink hole investigated in July was negative. The depressions found on the Solebury School grounds were found to be caused by mole nests.

July 2017 Highlights

- Settlement Negotiations.
 - Talks between DEP and NHCS have continued.
- An inspection was done on July 10 with other visits made during July.
 - Statutorily required inspection frequency is once per quarter.
 - In conjunction with the inspection, a Compliance Order was issued (*see CAP section below*).
 - In July, NHCS worked exclusively on reclamation work due to the Compliance Order.
 - 500,000 GPD maximum pumping continues.
 - Stream work occurred on one day.
 - The 2nd quarter status report from NHCS by EarthRes reports the water level at -52.6 Mean Sea Level. The bottom two lifts (-85 and -120 MSL) are under water.
- Corrective Action Plan (CAP)
 - As per DEP's letter to NHCS on the CAP, the volume deficiency stated in the Compliance order of August 26, 2016, 76,868 cubic yards of material, must be made up over three sequential quarters which ended July 1, 2017.
 - As of the end of June, 83.3% of the total CAP reclamation material was moved, short of the CAP requirement.

July 2017 Highlights - Continued

- **Corrective Action Plan - Continued**

- A Compliance Order was issued on July 10 because the July 1, 2017, catchup reclamation deadline was not met.
 - Active mining was ceased, reclamation catchup of 18,722 was ordered, and a detailed survey was required to document the amount of reclamation fill placed in the location as per the permit approved final reclamation plan and shows the current highwall slopes, the required cut and fill amounts required for the areas still requiring backfill, grading and reclamation. The survey deadline is 8:00AM, August 7, 2017.
- On July 25 NHCS was allowed to start to crush stockpiled stone and drill due to progress to date. Mining, removal of stone from the pit, and blasting cessation continued.
- Based on a drone survey and information submitted by NHCS and EarthRes indicating the amount of fill placed/moved is above the required amount, DEP lifted the mining cessation on July 31.
- The complete survey, mapping, and placement of cut and fill stakes were completed by August 7.
- DEP reviewed the survey information and conducted site inspections for verification of the mapping, survey, and reclamation fill information.
- On August 9 DEP issued an inspection report to note compliance with both the August 26, 2016 and July 10, 2017, compliance orders have been abated and lifted.

July 2017 Highlights - Continued

- **Corrective Action Plan - Continued**
 - While the reconciled amount of reclamation fill based on the survey is a reduced volume, DEP concludes the reclamation progress is on track for completion by March 2019. This is due to several reasons.
 - Over the past two months NHCS has demonstrated the ability to move the necessary volumes of reclamation fill
 - NHCS has a clear understanding of the performance expectations moving forward.
 - With the completion of the survey and staking of areas with mapping showing reclamation progress and future placement needs, reclamation work moving forward can be done more accurately and efficiently.
 - DEP will require a survey to be done in early 2018 to serve as a benchmark moving toward the March 2019 completion requirement.
- **Reclamation and Stream Restoration Progress**
 - **July Work Days**
 - 9 on reclamation; 1 on stream; 3 lost to inclement weather and conditions; 5 days on removing Hazemag (old crusher), and 1 day on the planned well (Well #1) abandonment required by DEP.
 - NHCS staff worked extra hours towards reclamation work.

July 2017 Highlights - Continued

- Reclamation and Stream Restoration Progress - Continued
 - 1,103 truck trips were made in July with 39,811 cubic yards of overburden trucked and 14,716 cubic yards pushed; based on the drone survey results (detail on next slide), the total to date was revised to 220,128 cubic yards.
 - Berm pushed material was through July 13.
 - As of the end of July 35.4% of the total reclamation material has been moved.
 - Truck trip efficiency decreased to 36.1 cubic yards per load from 43.6 in June.
 - Reclamation work on the western and northwestern walls is near completion. Work on the north wall is ongoing. Reclamation of the southwest wall adjacent to Primrose Creek is being done in conjunction with inlet work and stream restoration.
 - Stream work was done on one day, July 31.

Drone Survey Results

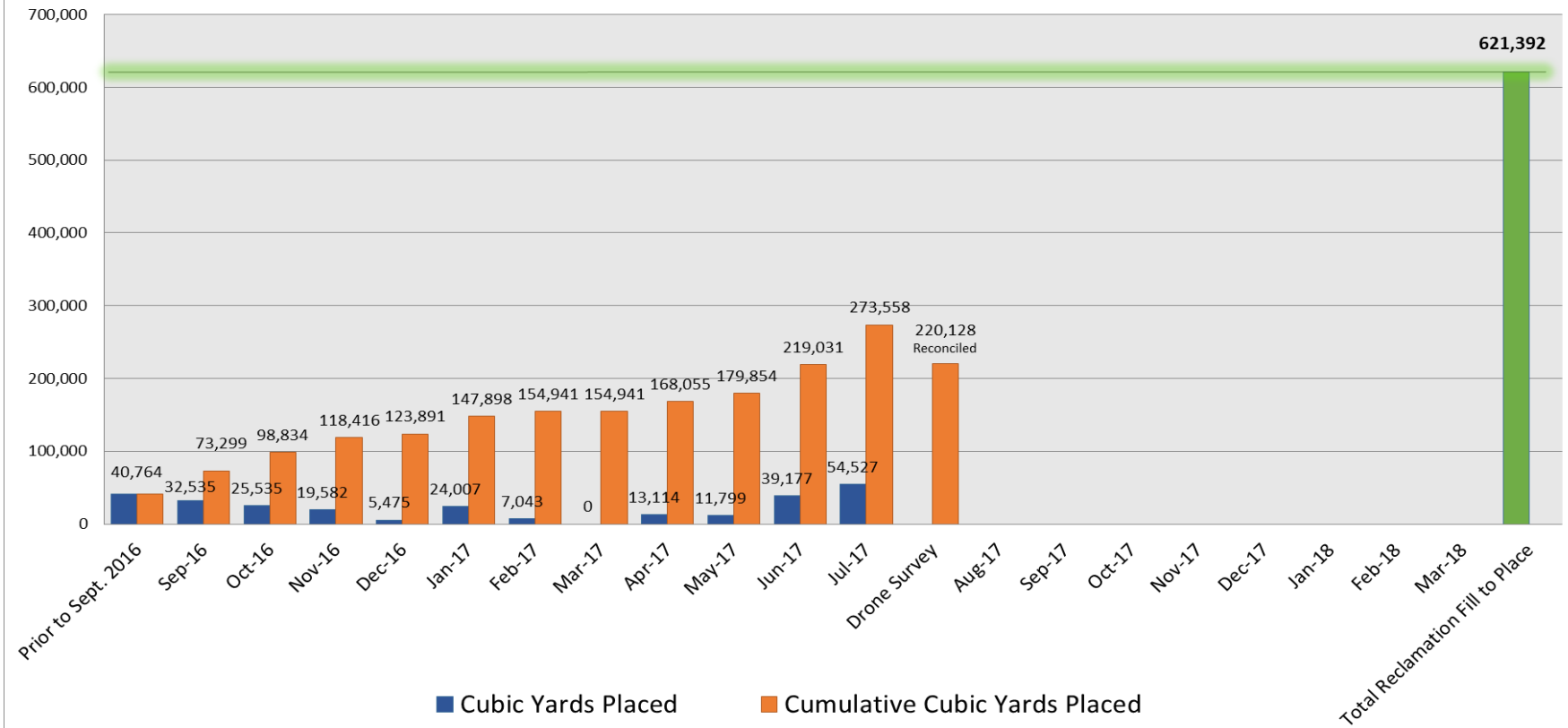
- On July 17 a drone survey was conducted to generate topographic information from which reclamation volumes were calculated.
 - July 17 result 184,000 cubic yards
 - Material moved for MSHA violations 10,000 cubic yards
 - Spillover material from Feb/March event 1,300 cubic yards
 - Total placed as of drone survey 195,300 cubic yards
 - Estimated material placed July 17-31 24,828 cubic yards
 - Reconciled total as of the end of July 220,128 cubic yards

Monthly Progress Data

Month	Cubic Yards Placed Overburden	Corrective Action Plan, Portion of Catchup Cubic Yards Placed	Corrective Action Plan, Total Towards 76,868 Catchup Placed	Cubic Yards Placed Overburden, Cumulative	Truck Loads	Reclamation Work Days	Stream Restoration Work Days	Inclement Weather Work Days Lost
Prior to Sept. 2016	40,764			40,764	237			
Sep-16	32,535			73,299	940			
Oct-16	25,535	4,535	4,535	98,834	531	15.0	6.0	0.0
Nov-16	19,582	12,582	17,117	118,416	367	5.0	13.0	2.0
Dec-16	5,475	1,975	19,092	123,891	128	2.5	0.0	15.5
Jan-17	24,007	1,607	20,699	147,898	588	16.0	0.0	1.0
Feb-17	7,043	4,157	24,856	154,941	186	8.0	0.0	4.0
Mar-17	0	0	24,856	154,941	0	0.0	0.0	11.0
Apr-17	13,114	0	24,856	168,055	365	13.0	0.0	3.0
May-17	11,799	0	24,856	179,854	301	9.0	1.0	4.0
Jun-17	39,177	39,177	64,033	219,031	126	0.0	6.0	2.0
Jul-17	54,527	18,722	82,755	273,558	1,103	9.0	1.0	3.0
Drone Survey				220,128				
Aug-17								
Sep-17								
Oct-17								
Nov-17								
Dec-17								
Jan-18								
Feb-18								
Mar-18								
Total Reclamation Fill to Place	621,392	Total CAP Required	76,868					
Percentage of total placed to date	44.0%	Percentage of CAP completed	107.7%					

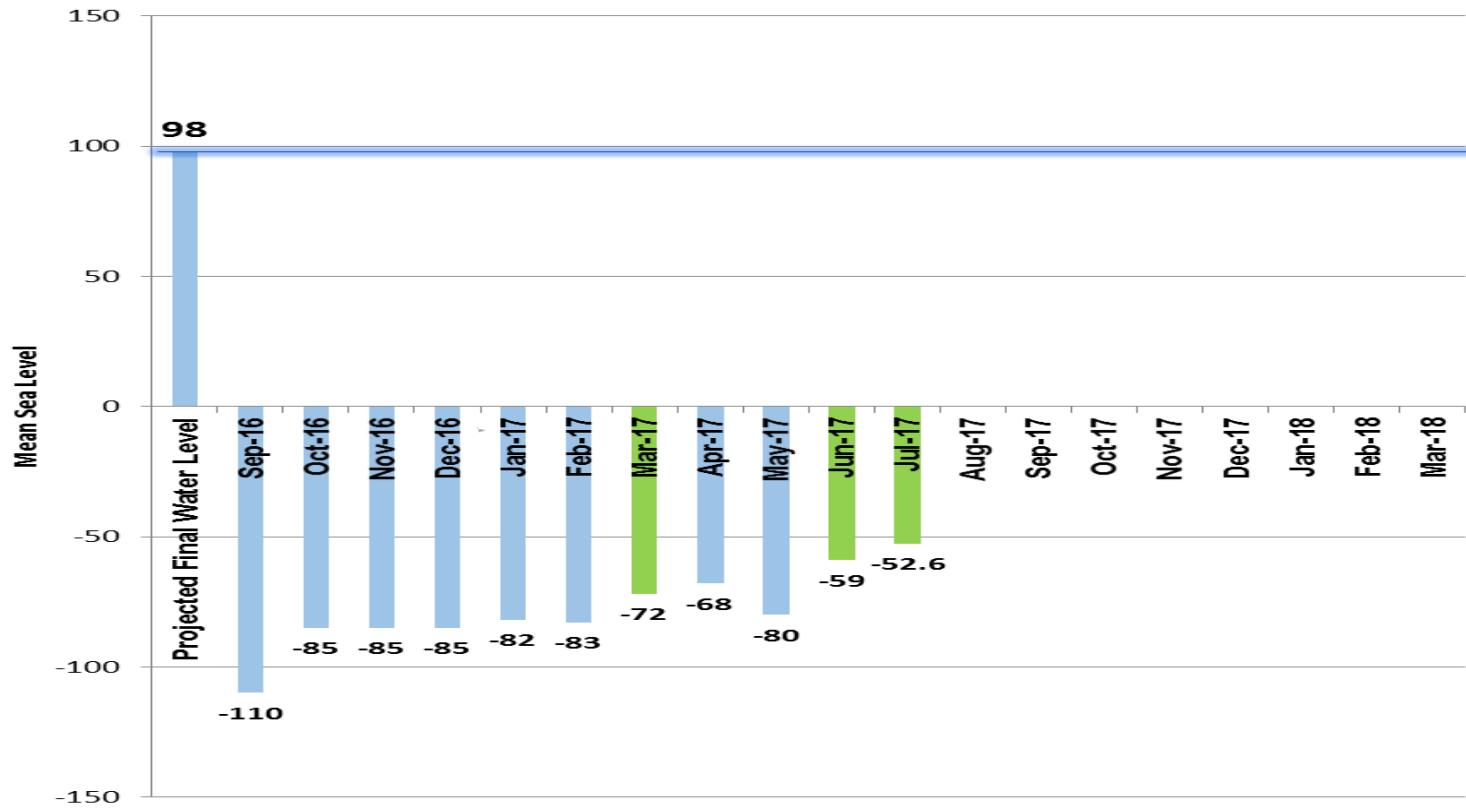
Reclamation Fill Progress

Reclamation Fill Tracking



Water Level Tracking

Water Level Status



Blue bar = Estimated

Green bar = NHCS quarterly report by their consultant, EarthRes



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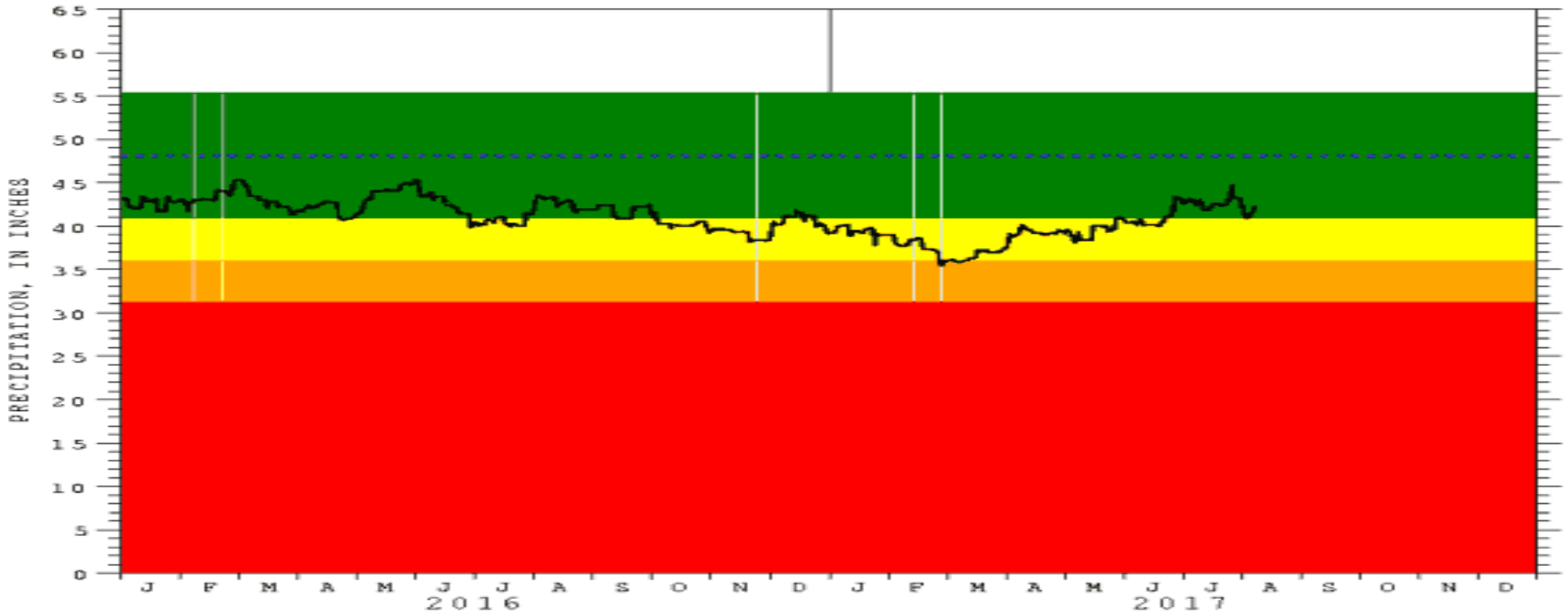
NHCS Monitoring Well Locations



Monitoring well locations are noted by MW1 and MW2 to the right and MW8 at the top center. The fourth in the center is for the plants water use.

Bucks County Precipitation: 2016-2017

BUCKS COUNTY PRECIPITATION
 USGS PLOT OF NATIONAL WEATHER SERVICE DATA
 MOVING 365-DAY TOTAL PRECIPITATION
 DATE OF PLOT=08/06/17



COLORED BANDS REPRESENT DROUGHT INDICATOR CRITERIA USED BY THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION FOR DROUGHT MONITORING

SOLID LINE = CURRENT MOVING 365-DAY TOTAL, IN INCHES
 DASHED LINE = MOVING AVERAGE 365-DAY TOTAL FOR 1981-2010, MARFC 2013

GREEN (TOP) BAND = 15 PERCENT ABOVE TO 15 PERCENT BELOW AVERAGE (NORMAL)
 ORANGE BAND = 10 PERCENT ABOVE TO 10 PERCENT BELOW AVERAGE (WATCH)
 YELLOW BAND = 5 PERCENT ABOVE TO 5 PERCENT BELOW AVERAGE (WARNING)
 RED (BOTTOM) BAND = GREATER THAN 5 PERCENT BELOW AVERAGE (EMERGENCY)

The overall status for Bucks County has changed to the normal level (as of June 25, 2017).

NHCS Bench Levels

- Bench 2 60' MSL
- Bench 3 10' MSL
- Bench 4 -35 MSL
- Bench 5 -85 MSL
- Bench 6 -120 MSL



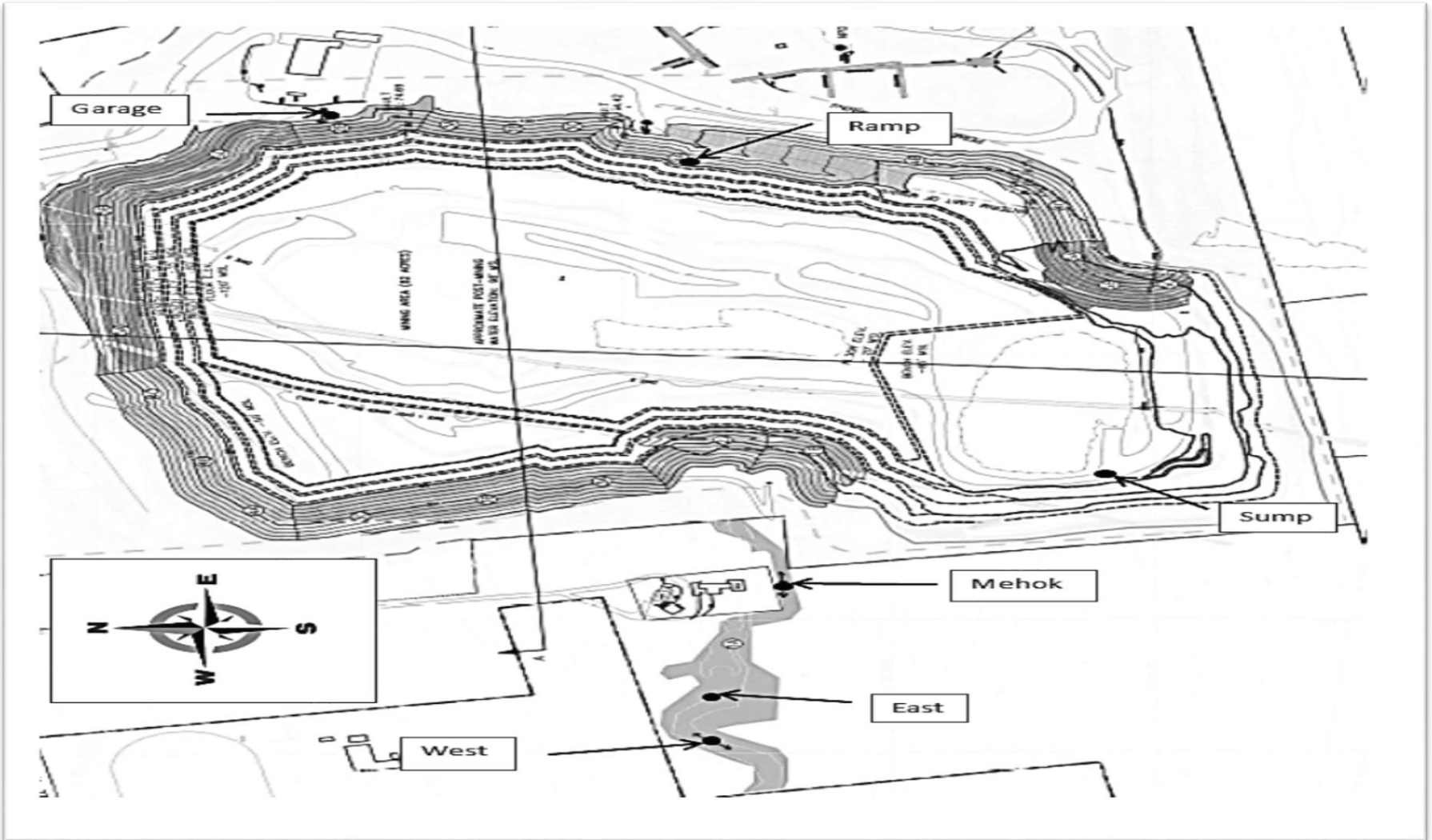
Establishing Photo Vantage Points

To the extent possible with changing conditions at the quarry, photos will be taken from these geographic locations during each inspection. Progress summaries will be included with each monthly update.

Please refer to the map on the next slide.

- West looking east, west
- East looking east, west
- Mehok looking east, west
- Sump (Location now underwater)
- Ramp looking south, west
- Garage looking north, south

Photo Vantage Points



Stream Restoration

- During July one work day was spent on the stream (July 31) as efforts concentrated on catching up with reclamation.

Sump Area



06/26/17

Slight rise in water level.



8/7/17

Ramp, Looking South



Rise in the water level can be seen as well as reclamation impact over the past month.



North Views – West and East



8/7/17



8/7/17

Views West



North (Garage is to right)



8/7/17



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For More Information

Monthly Updates, Inspection Reports,
Communications and more, posted as available.

Please visit: www.dep.pa.gov

Regional Resources > Southeast Region > Community Information

Tom Wolf, Governor

Patrick McDonnell, Secretary