



U.S. DEPARTMENT OF  
**ENERGY**

OFFICE OF  
**ENVIRONMENTAL  
MANAGEMENT**

# **Nuclear Regulatory Commission-Licensed Disposal Area (NDA) Armoring Project**

**Stephen Bousquet**

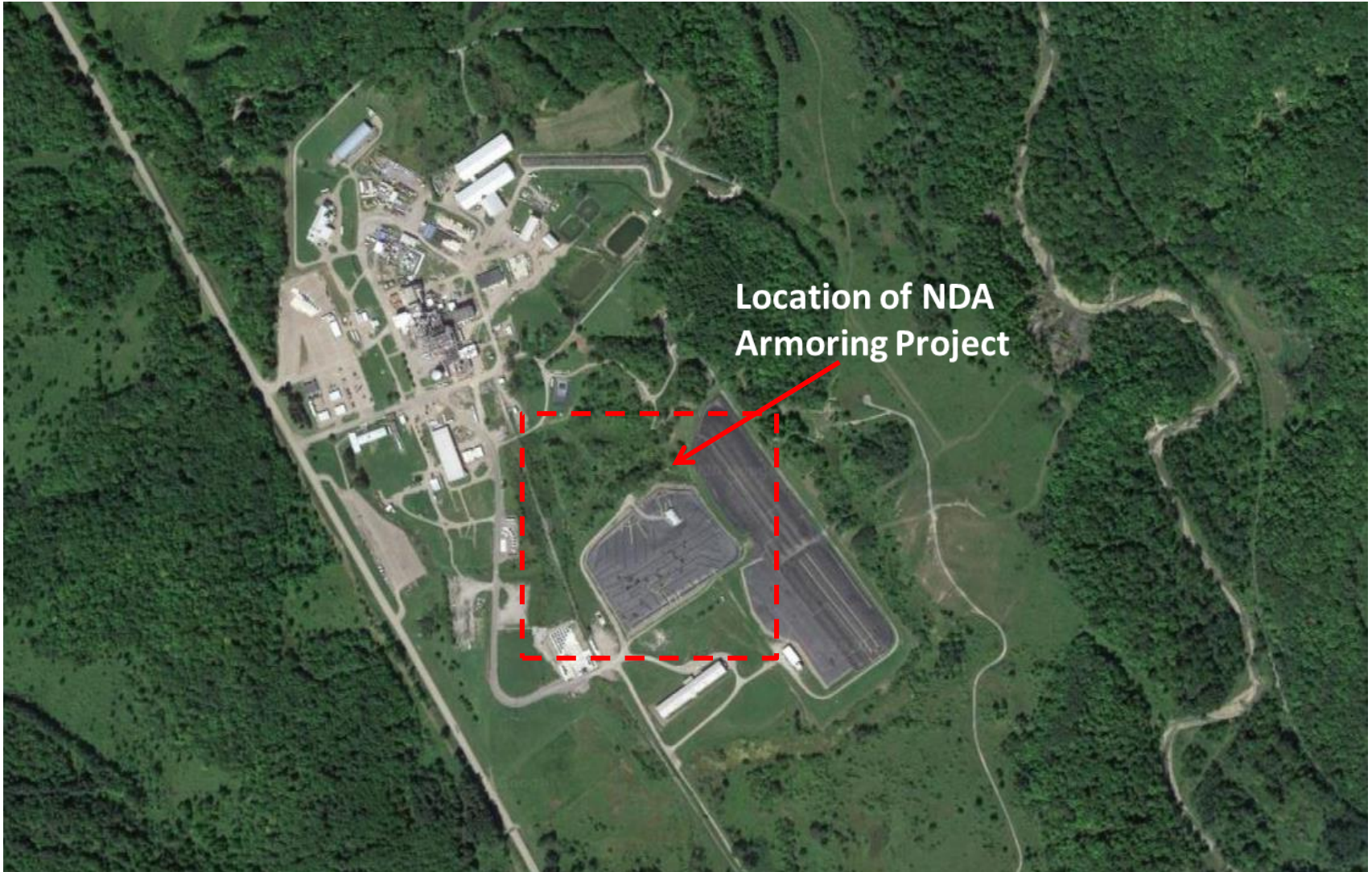
*Federal Project Director*

**Quarterly Public Meeting  
February 26, 2020**

# NDA Armoring Project

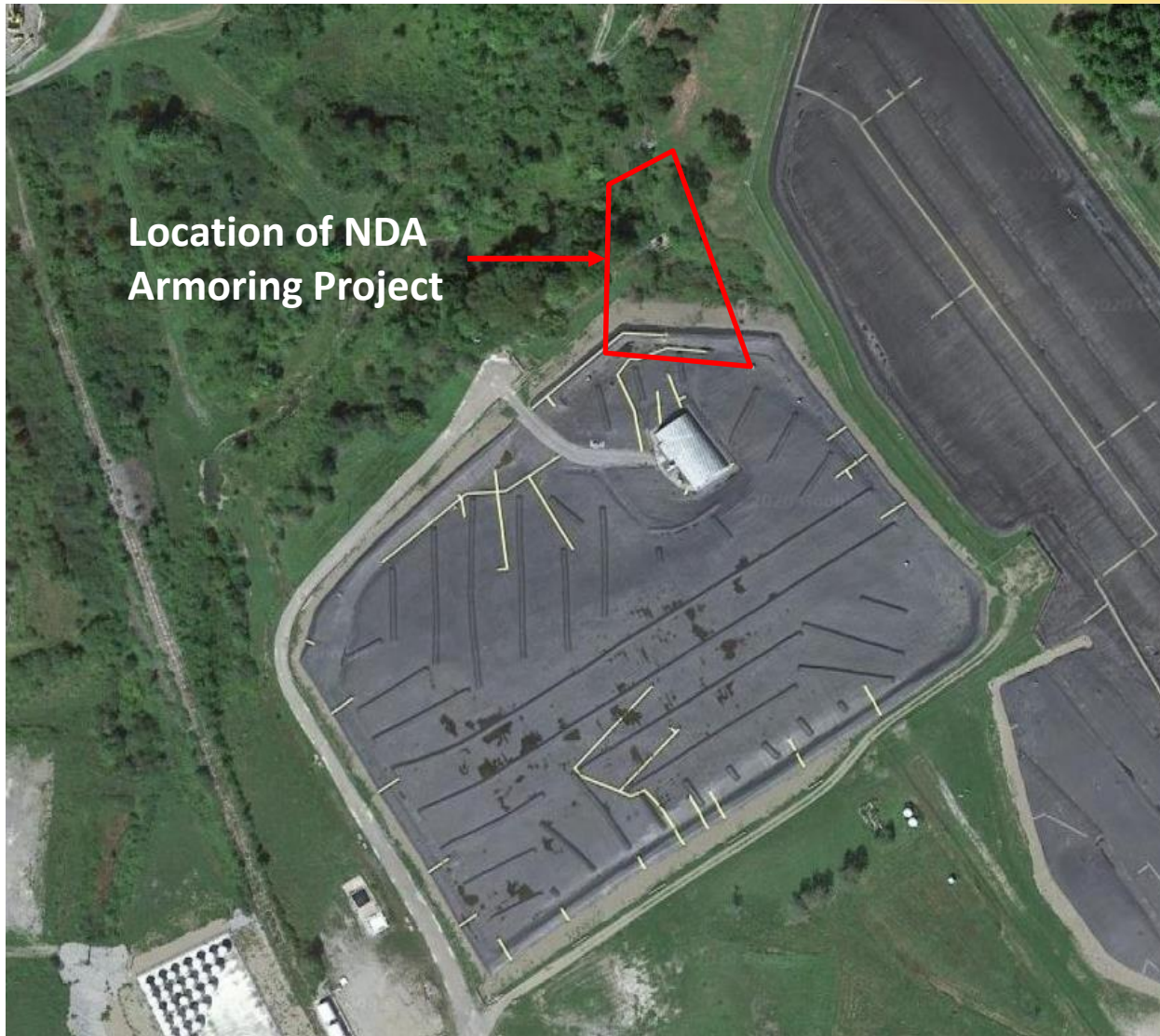
- Purpose of the NDA Armoring Project:
  - Reduce future erosion risk if NDA Cap's design basis is exceeded with the resulting potential overtopping and erosion of the NDA north slope.
- Design Basis:
  - The design flood was chosen based on precipitation from 1/2 Probable Maximum Precipitation (PMP) per NRC recommendation, in accordance with NUREG-1623, Design of Erosion Protection for Long-Term Stabilization, Section 2.2.
- Design Review: Multi-agency design review (DOE, NRC, NYSERDA, U.S. Army Corp of Engineers, NYSDEC)
- Installation: June 3, 2019 – September 20, 2019
- Inspections: Annually and after rain events exceeding 1" over 24 hours

# WVDP Aerial View





# NDA Armoring Project Aerial View





# Armoring Project Progress Photos



Before Armoring Excavation Initiated



Early Stages of Excavation



# Armoring Project Progress Photos (Cont.)



Continuing Excavation



Temporary Stormwater Bypass Pipes



# Armoring Project Progress Photos (Cont.)



Stormwater Bypass Pipe Outlets  
and Erosion Control



Final Stages of Excavation



# Armoring Project Progress Photos (Cont.)



Final Stages of Excavation



Placement of Articulated  
Concrete Block (ACB)  
Mats



# Armoring Project Progress Photos (Cont.)



Placement of ACB Mats





Grouted seams



# Armoring Project Progress Photos (Cont.)



Backfill placement



Tying in North Slope of NDA Cap with Armoring

# Armoring Project Progress Photos (Cont.)



Vegetation starting within ACB on North Slope



Grass growing



# NDA Armoring Project Summary & Conclusion

- Installation from June 3, 2019 – September 20, 2019
- 18,000 cubic feet of soil excavated with 90% reused within the project boundary with the remainder disposed of, or waiting disposal offsite
- 35,000 cubic feet of new backfill placed
- 13,000 square feet of ACB placed (each block in the mat weighing 100 lbs.)
- 7,000 hours of work without an injury
- Conclusion: If the NDA's north slope berm were to ever overtop, the now armored north side slope of the NDA would not be prone to erosion.





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# Questions?