GALES FERRY INTERMODAL

PRESENTATION TO LEDYARD PLANNING & ZONING COMMISSION

Introduction of Applicant's team members

- Harry Heller, Esq. & Andrew McCoy, Heller, Heller and McCoy, Counsel
- David George, Heritage Consultants, Cultural Resources Coordinator for the Project
- George Andrews, PE/LEP, Loureiro Engineering Associates, Principal Engineer
- Jeff Slade, Senior Geologist, PG, Continental Placer/Adirondack Geologic Services
- Tim Harmon & Kevin Godfrey, Maine Drilling and Blasting
- Scott Hesketh, PE, F.A.Hesketh & Associates, Inc.
- Steven E. MacCormack, MacCormack Appraisal Services
- Ken Kaliski, PE, INCE Board Cert., RSG
- Suzanne Pisano, PE, and Dr. John Martin, CIH, Verdantas
- Scott McKenna, Health & Safety
- Dr. Cathy Aimone Martin, Aimone Martin Associates LLC
- Gregory Poole, Sauls Seismic
- Alan Perrault/Chase Davis, Gales Ferry Intermodal LLC
- Mike Cherry, Community Liaison

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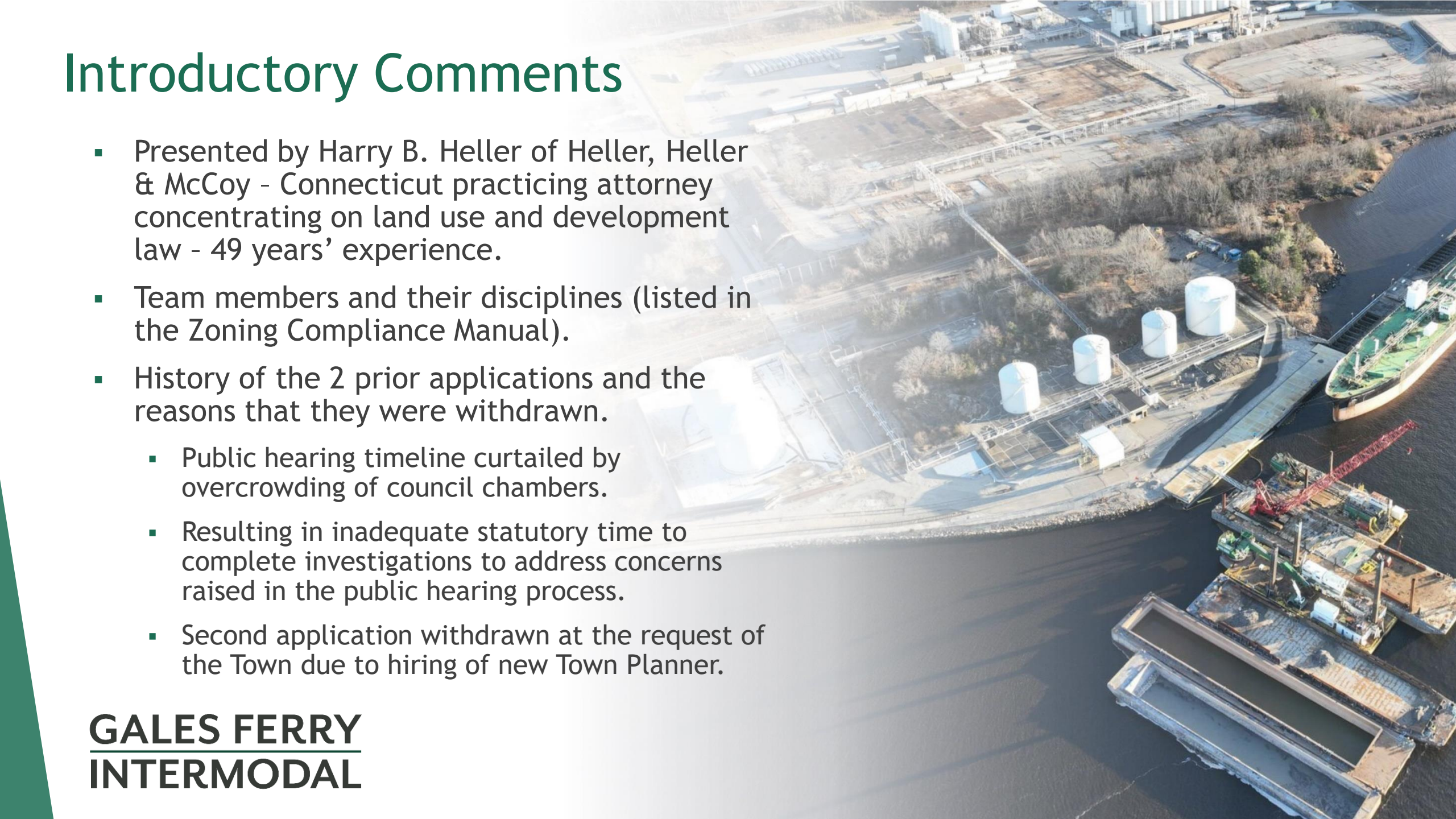
Today’s vision is tomorrow’s reality.

Opportunities are a **moment in time.**

Introductory Comments

- Presented by Harry B. Heller of Heller, Heller & McCoy – Connecticut practicing attorney concentrating on land use and development law – 49 years' experience.
- Team members and their disciplines (listed in the Zoning Compliance Manual).
- History of the 2 prior applications and the reasons that they were withdrawn.
  - Public hearing timeline curtailed by overcrowding of council chambers.
  - Resulting in inadequate statutory time to complete investigations to address concerns raised in the public hearing process.
  - Second application withdrawn at the request of the Town due to hiring of new Town Planner.



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Introductory Comments

- Current application differs from original application in the following respects:
  - Current application contains a proposal for a payment in lieu of taxes to the municipality during the period of industrial regrading.
  - Highly qualified consultants have been retained to address and dispel community concerns raised in proceedings with respect to original application.
  - Applicant has committed to reimbursing the Commission for reasonable costs to be incurred in hiring its own professional consultants to evaluate the applicant's findings on stormwater, dust, sound and vibration.
  - Comprehensive monitoring and reporting plan for dust, sound and vibration incorporated.
  - Truck traffic limited to 50 round trips per day.
  - Town, at applicant's expense, has retained a consultant to evaluate the fiscal impact of the project to the Town.

Introductory Comments

- The redevelopment of the Allyn's Point property has become a focal point for elements of the Gales Ferry community to coalesce in opposition to sound economic development.
- The development team's perception is that the opposition to the redevelopment of this property has been fueled by fear; fear of the unknown, fear of traffic generation, fear of noise, fear of dust, fear of blasting impacts, fear of adverse impact to residential property values. None of these fears are supported by site specific empirical analysis conducted with respect to this project.
- Gales Ferry Intermodal, LLC has engaged numerous industry professionals to assist it in testing these perceptions; and where necessary, modifying project methodologies, incorporating monitoring plans and formulating mitigation measures if regulatory exceedances are encountered.
- Regulatory standards exist for sound, dust, vibration and stormwater management. The project has been designed to operate within the limits of these standards.
  - For each objectionable element identified in the special permit general evaluation criteria, the applicant has developed a specific monitoring and reporting plan and mitigation strategies to address any exceedances that may occur.

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Introductory Comments

- This is a site specific application which requires the Commission to evaluate the application based on probative evidence in the administrative record, not based on hyperbole, conjecture or internet research that is unrelated to the project site.
- The applicant, at significant expense, has agreed to reimburse the Commission for expenses required to retain professional consultants to review and comment upon the conclusions reached by the applicant's professional consultants with respect to special permit general evaluation criteria potentially objectionable impacts.
- This is a site specific application and the physical characteristics of the site are critical to that evaluation.
  - Presence of rail and deep water for material transport.
  - Southerly ½ of Allyn's Hill which will be left undisturbed.
  - Characteristics of the stone to be extracted.
  - Change in elevation from Route 12 to the material handling and processing area.
  - Lack of visibility of the site.
  - Lack of contributing groundwater.

Introductory Comments

- The comprehensive plan and how it impacts this industrial regrading application.
- Site is industrially zoned and has been for over 50 years.
- This application is a component of the restoration of a shuttered industrial site to vibrant and productive use.
- Purpose of industrial zoning – spatially organize industrial functions while promoting economic growth and sustainability.
- Exhibits a legislative determination of site stability for industrial uses.
- Exclusion of the 8-30g process from industrial zoning districts evidences a state legislative policy of preserving industrially zoned land for industrial development to ensure a balanced community growth to further the general welfare of the community.

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Introductory Comments

- Excavation of stone is a use permitted by special permit in any zoning district (§8.16).
- Conflict between Section 9.2(C)(4) and 8.16(I) and 9.2(C), each of the Ledyard Zoning Regulations.
- Interpretation of Section 8.16(N)(4).
  - Drafter's interpretation of this regulation.
  - Commission proceedings with respect to the Terra-Firma rock excavation on Baldwin Hill Road and Cockerham v Montville Zoning Board of Appeals 146 Conn. App. 355.
- Adoption of the 2022 Zoning Regulations. Reliance on representations of legislative intent of former planner.

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Introductory Comments

- The use proposed is evaluated pursuant to the following sections of the Zoning Regulations:
  - 6.4 Excavation Major
  - 8.16 Excavation (filling or removal of soil, gravel and stone)
  - 8.23 Mixed Use (Commercial and Industrial)
  - 9.0 – 9.12 Development Standards
  - 11.3 Special Permit Evaluation Criteria
- The applicant has retained competent professionals to analyze regulatory requirements and formulate an application that complies with all evaluation criteria.
- The evaluation of a special permit use is an administrative function. The Commission reviews the plan for compliance with the adopted Regulations. If the Regulations are satisfied, the application must be approved.

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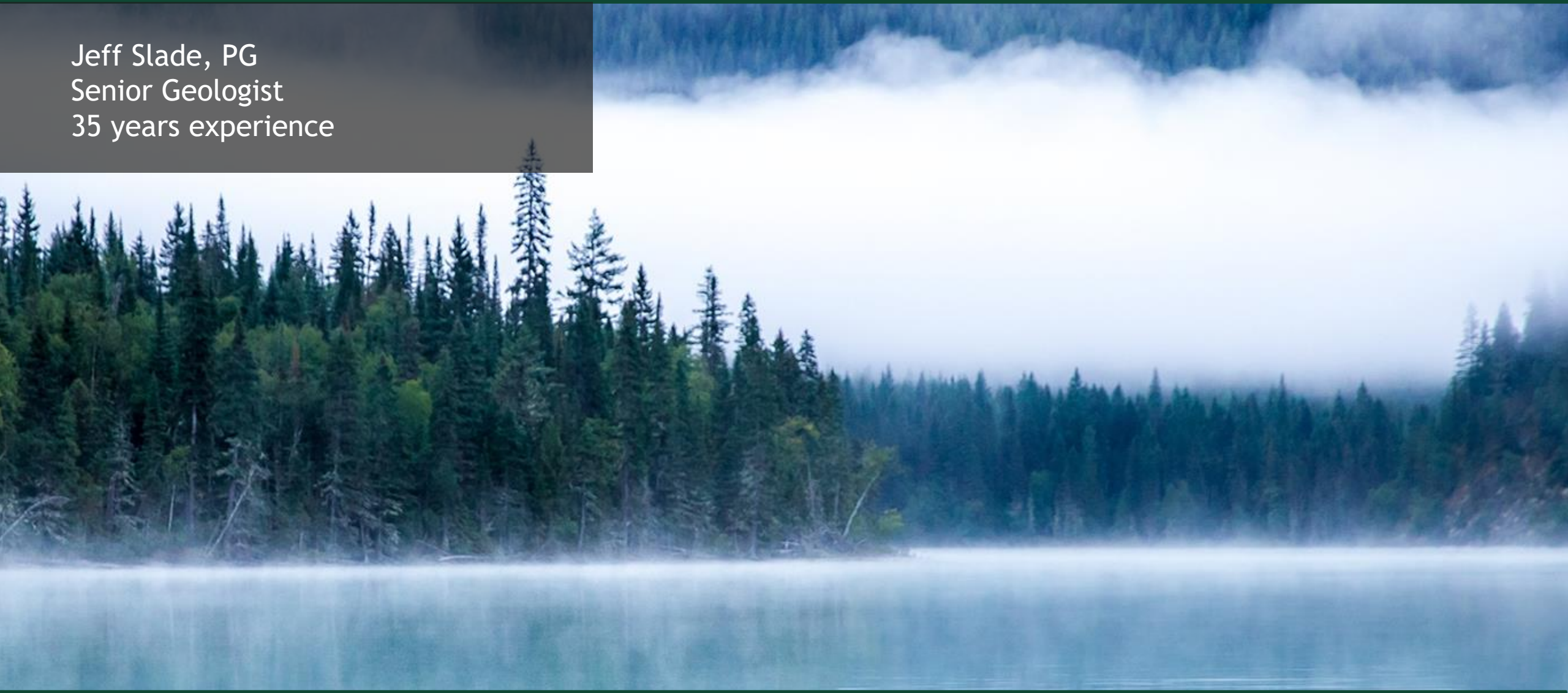
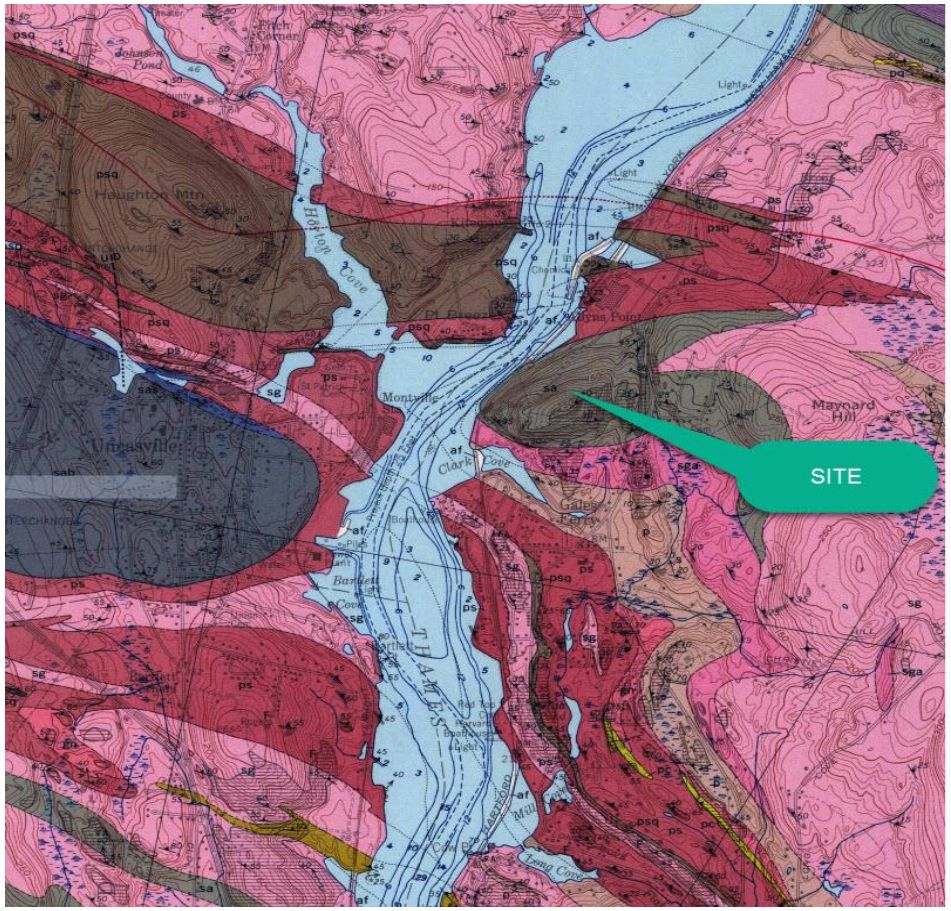
ADIRONDACK GEOLOGIC SERVICES

Jeff Slade, PG
Senior Geologist
35 years experience



Bedrock Geologic Map



gn

Nodular granite

White to light-gray, rarely pink, microcline-rich, mafic-poor granite containing similarly oriented ellipsoids of quartz and sillimanite. Probably of metasomatic origin

Sterling Plutonic Group

Orange-pink, gray to white, locally reddish granite gneiss; foliation typically marked by parallelism of alternate flat lenses of gray quartz and feldspars, as well as by parallelism of biotite flakes where present; biotite tends to be concentrated on boundaries of lenses. Magnetite with ilmenite and hematite, and biotite are the common accessory minerals

sa | san | sab | sas

Alaskite gneiss

sa, *orange-pink to light-gray, fine- to medium-grained, equigranular gneissic granite composed of about equal amounts of quartz, microcline, and albite to sodic oligoclase, and about 1 percent magnetite or as much as 2 percent magnetite and biotite*

san, *fine- to medium-grained, equigranular gneiss similar to* sa *in composition except that it contains more oligoclase than microcline, and locally contains hornblende. Increasingly sheared towards Honey Hill fault. Mass southwest of Baldwin Hill light gray, medium grained, composed of oligoclase=quartz >microcline and contains accessory hornblende*

sab, *white- to cream-colored, medium-grained gneiss composed of microcline≥quartz >oligoclase with 1–2 percent biotite and magnetite, near edges contains garnet. Locally contains sillimanite on foliation planes* (s)

sas, *white, fine-grained indistinctly foliated granite containing equal amounts of quartz, microcline, perthite, and albite, with accessory tourmaline and rosettes of sillimanite or nodules of quartz and sillimanite*

sg | sgm | sga

Granite gneiss

sg, *orange-pink to light-gray, medium-grained, gneissic biotite granite; main constituents quartz=microcline ≥oligoclase with 2–7 percent biotite and iron oxides. Locally contains muscovite and garnet; somewhat uneven in mineral distribution. Foliation typically marked by parallelism of alternate flat lenses of quartz and feldspars, and parallelism of biotite flakes. Biotite tends to be concentrated on surfaces between lenses. Some masses have slightly coarser grained streaks rich in orange-pink microcline in finer grained gray quartz-microcline-plagioclase rock. Locally mafic-poor similar to biotitic phases of the alaskite gneiss* (sab)

sgm, *gray, fine- to medium-grained, equigranular gneissic granite with evenly distributed biotite, locally inequigranular with small megacrysts of pink microcline. Oligoclase more abundant than microcline. Rock in many places has pink mafic-poor streaks and patches. Many inclusions. Resembles granitoid phases of the Mamacoke Formation*

sga, *gray, inequigranular gneiss with augen and lenses of microcline, and microcline, plagioclase, and quartz*

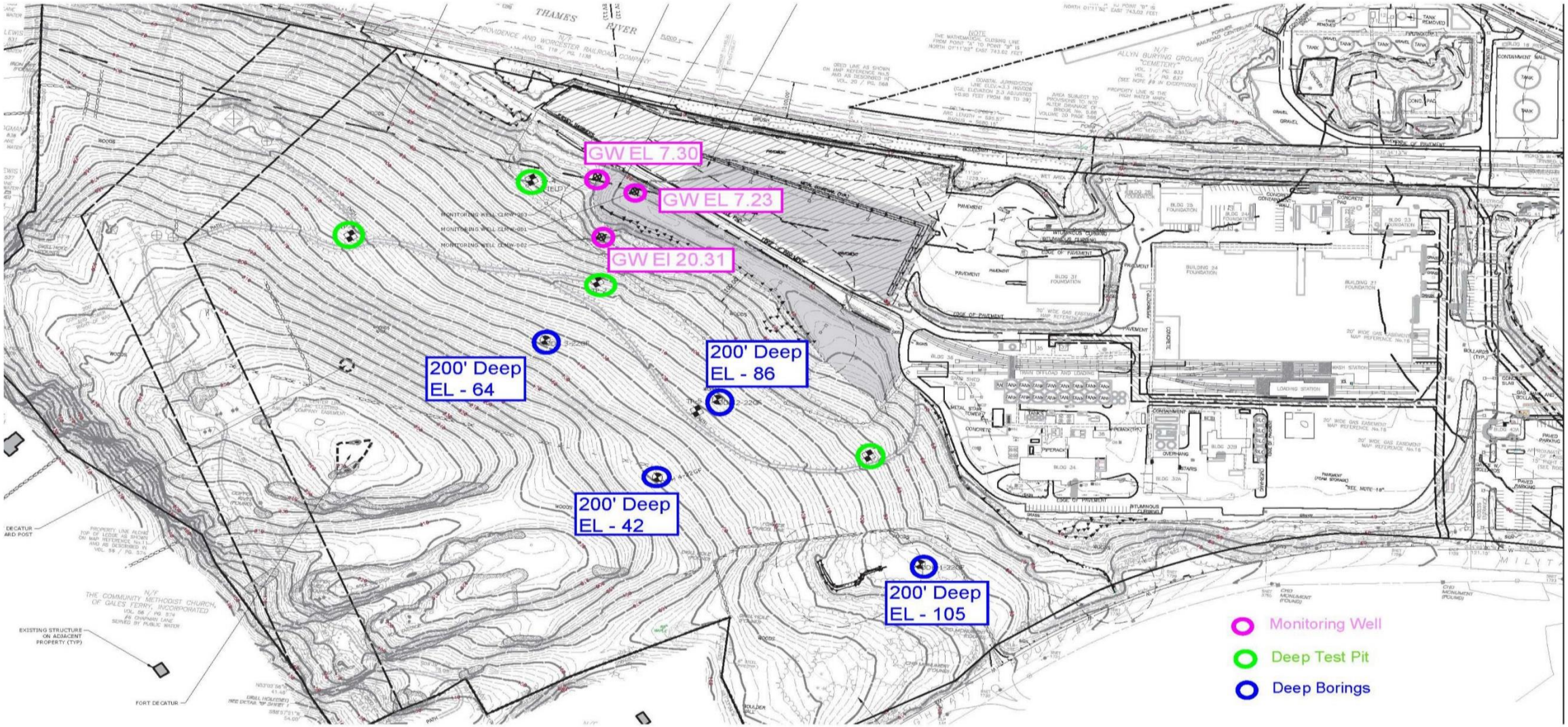
Sterling Plutonic Group

PRE-PENNSYLVANIAN

XML | JSON | Shapefile

Sterling Igneous Suite - alaskite gneiss

Pale pink, orange, or gray, fine- to medium-grained granite gneiss, rarely with porphyroclasts of microcline/orthoclase. Composition is granite with generally less than 3% dark minerals. Composed of sodic plagioclase, quartz, microcline/orthoclase, minor biotite, and opaque minerals; minor muscovite (in part secondary), and rare garnet and sphene in some rocks; accessory apatite and zircon; secondary chlorite. Varies from massive to layered. Strongly foliated and locally well lineated. Includes most rock mapped formerly as Hope Valley Alaskite Gneiss.


GW EL 7.30
GW EL 7.23
GW El 20.31
200' Deep
EL - 64
200' Deep
EL - 86
200' Deep
EL - 42
200' Deep
EL - 105
Monitoring Well
Deep Test Pit
Deep Borings

Core Samples from Site

Geotech Information

- Four 200’ depth core holes drilled to determine the type of rock present in the area to be excavated.
- Drilling confirmed two types of granite present.
- Bedrock present exhibits extremely low yield of groundwater.
- Hydrogeology of the Site limits the contribution of groundwater to the regional water table from the northern half of the Allyn Mountain is limited by the hydrogeology of the site.
- No significant water bearing zones or faults present.
- Core samples show the rock type and Rock Quality Designation are favorable for development of a stable rock cut face.
- No pyrrhotite or chalcopyrite present in the rock to support acid rock drainage – nothing present in any of the core samples.

Bedrock Mineralogy & Chemistry

Chemical analyses (XRF & XRD methodology) on the granite core samples was completed by The Mineral Lab.

Mineral Name	Chemical Formula	Approx. Wt %
Quartz*	SiO_2	33
Cristobalite*	SiO_2	<0.1
Tridymite*	SiO_2	<0.1
K-feldspar	$KAlSi_3O_8$	35
Plagioclase feldspar	$(Na,Ca)Al(Si,Al)_3O_8$	25
Mica/illite	$(K,Na,Ca)(Al,Mg,Fe)_2(Si,Al)_4O_{10}(OH,F)_2$	<5
"Unidentified"	?	<5

	Wt %												
IDENT	Na_2O	MgO	Al_2O_3	SiO_2	P_2O_5	S	Cl	K_2O	CaO	TiO_2	MnO	Fe_2O_3	BaO
GFI-1C	2.53	< 0.05	10.0	72.8	< 0.05	< 0.05	< 0.02	6.23	0.76	0.10	0.03	1.54	0.02
Quality Control - Replicate (R) sample and standard reference material (GSP-2) analyzed with samples													
GFI-1C(R)	2.62	< 0.05	11.5	73.0	< 0.05	< 0.05	< 0.02	6.21	0.76	0.10	0.03	1.51	0.01
GSP-2-XRF	3.18	1.06	14.2	66.1	0.32	< 0.05	0.04	5.41	2.12	0.59	0.04	4.41	0.14
GSP-2-known	2.78	0.96	14.9	66.6	0.29	----	----	5.38	2.10 ±	0.66	0.04	4.90	0.15

	PPM												
IDENT	V	Cr	Co	Ni	W	Cu	Zn	As	Sn	Pb	Mo	Sr	U
GFI-1C	11	107	< 10	< 10	< 10	< 10	14	< 20	< 20	27	< 10	43	< 10
Quality Control													
GFI-1C(R)	< 10	100	< 10	< 10	< 10	< 10	15	< 20	< 20	26	< 10	42	< 10
GSP-2-XRF	36	11	< 10	< 10	< 10	55	105	23	< 20	31	< 10	212	< 10
GSP-2-known	52	20	7	17	--	43	120	--	--	42	--	240	2

Acid Rock Drainage (ARD)

- ARD is an environmental concern in Connecticut due to the presence of iron sulfide in bedrock.
- ARD can occur when freshly exposed or crushed bedrock is subjected to precipitation and the elements.
- This can lead to the mobilization of certain elements such as iron, manganese, arsenic, and sulfur, which can negatively impact stormwater runoff, groundwater and drinking water sources.
- Based on the mineralogic examination of the granite bedrock at the GFI site NO SULFIDE minerals (pyrrhotite or chalcopyrite) have been noted.
- Based on the chemical analysis of the bedrock at the GFI site NO SULPHUR was detected in the granite bedrock sampled.
- **ARD or leaching of heavy metals from the granite rock mass is not going to happen because they are not present to start with.**

Excavated Materials End Uses

- Granite from the GFI project is suitable for use as construction aggregates for use in Portland Cement Concrete and bituminous asphalt. The granite meets the crushed stone specifications for use by Connecticut, Massachusetts, and New York state Departments of Transportation.

- Crushed stone aggregates will be utilized by towns and municipalities for regional infrastructure projects.

- Army Corp. of Engineers Coastal Protection Projects have created the need for large granite blocks for use as armor stone, rip-rap, and jetty stone for shoreline and harbor protection. The granite from the GFI project meets all the specifications for this use.

RESOURCE SYSTEMS GROUP

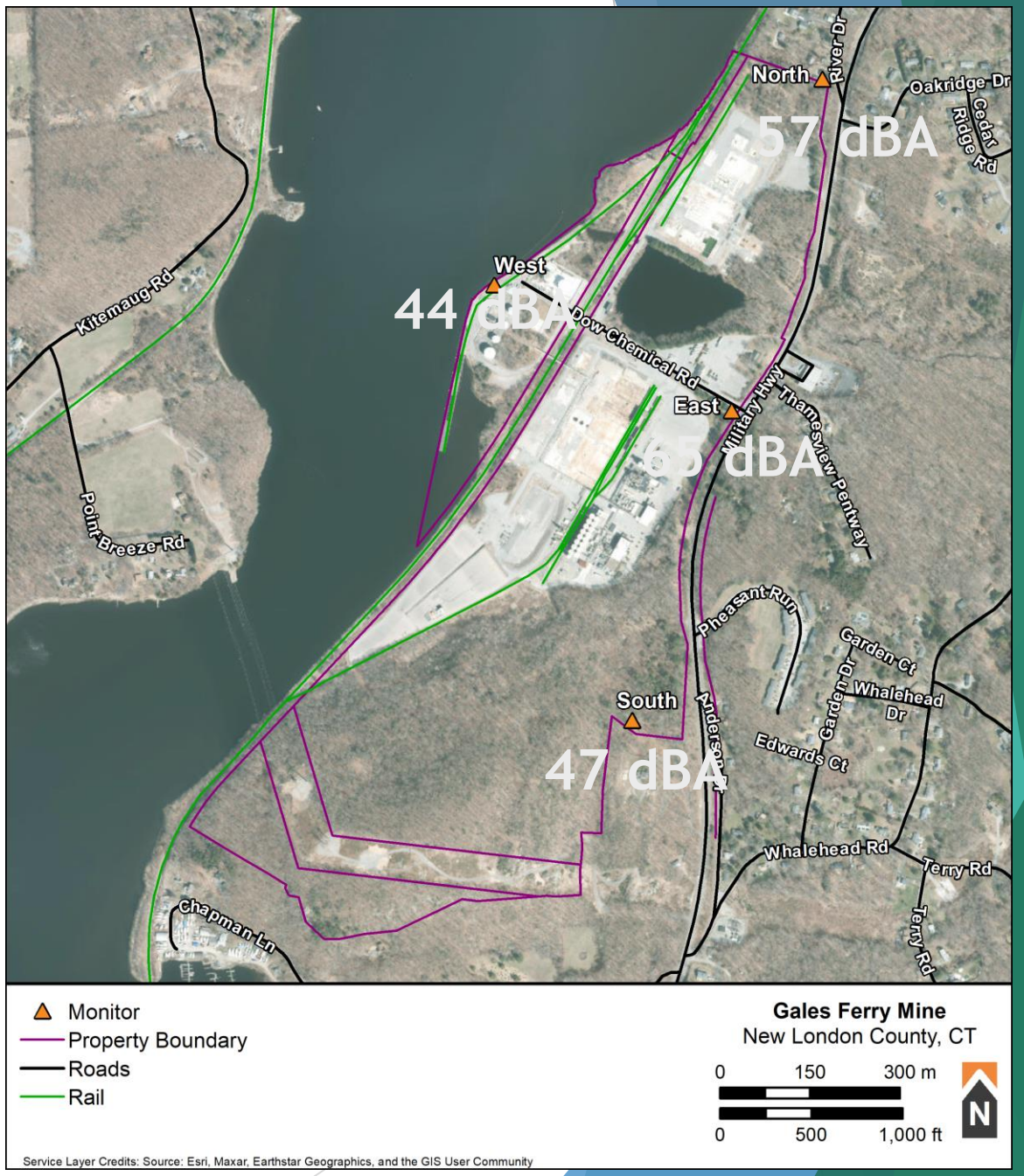
GALES FERRY SOUND STUDY

Ken Kaliski, PE, INCE Board Cert.
38 years experience

RSG®
the science of insight®

Noise Standards & Existing Background Levels

- Noise is subject to Connecticut §§ 22a-69-1—22a-69-7.4 regulations
- 61 dBA at residential properties during the day
- Continuous sound monitoring was conducted at four locations over 9+ days around the site
- Measured daytime average sound levels are shown to the right.



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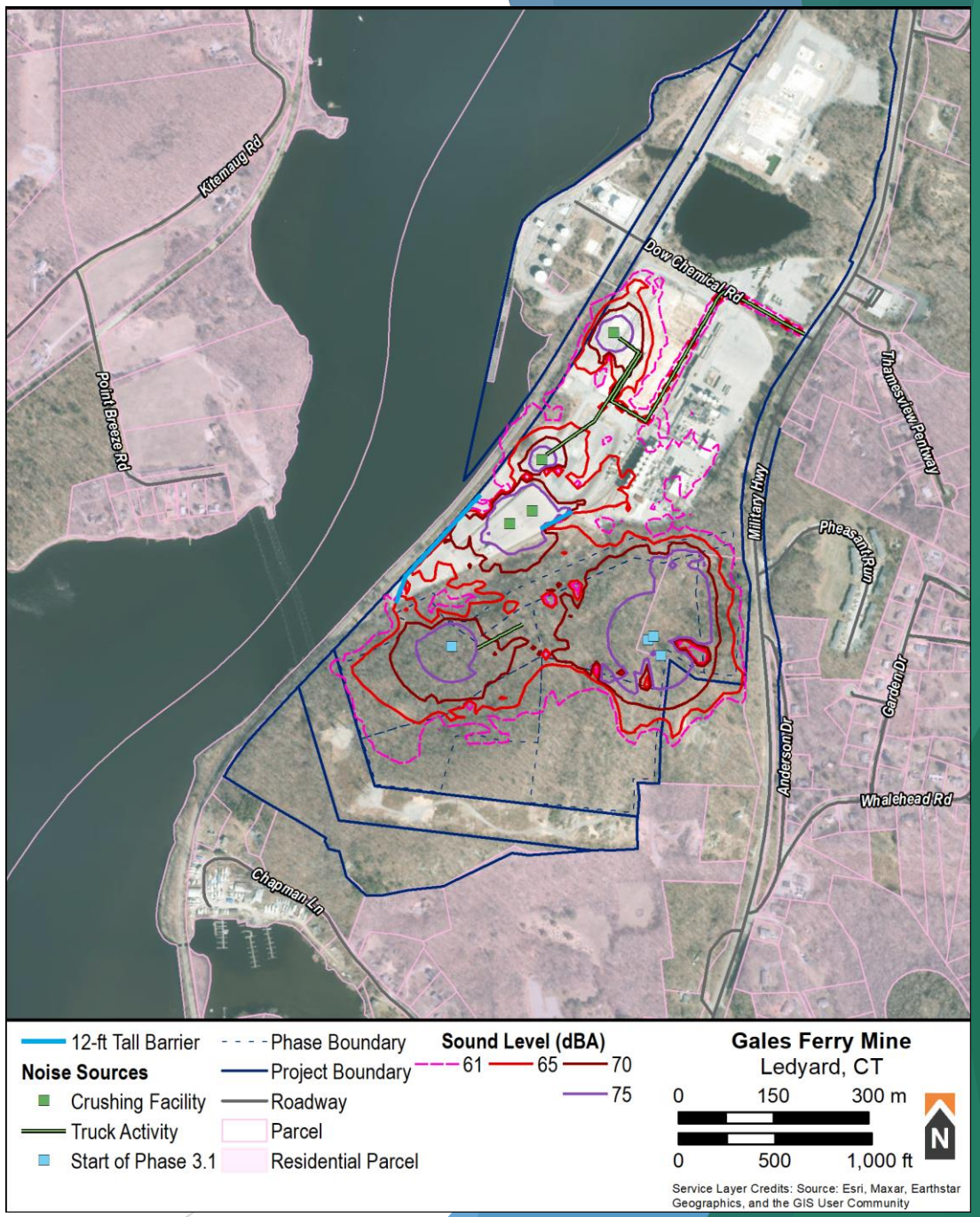
Sound Modeling

- Modeled sound of all major sources - crushing plant, rock drill, excavators, loaders, trucks, etc.
- Used the ISO 9613-2 methodology, with worst-case meteorology.
- Considered all six phases of the excavation
- Mitigation will include strategic placement of storage piles as berms, sound walls, and low-impact backup alarms
- Results: Noise limits can be met at all residential properties for all phases



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