

**Explanation of the Map**

[numbered references listed on the back]  
[all reported averages are geometric means]



Radon is a radioactive gas found naturally in the environment as a decay product of uranium. Radon may contribute to an increased risk of lung cancer, especially in smokers [1;2]. The U.S. Environmental Protection Agency (EPA) has an action guideline of 4 picocuries of radon per liter of air (pCi/l) [1]. Above 4 pCi/l, EPA recommends action to reduce radon levels. Primary radon sources to the home include the surrounding soil and sediment, near-surface bedrock geology, and bedrock well water.

**Appropriate Use and Limitations of the Map**

This map may be used for focusing interest and targeting limited resources toward areas where they will have the most impact. This map has been developed using radon measurements in combination with geological and geophysical factors. Further investigations using additional radon measurements may alter radon potential rating areas. This map is for public education, and is a statewide planning tool for health officials and environmental professionals. This map is the best available tool for evaluating radon potential statewide. The map should not be used for site-specific evaluations or real estate transactions. Determination of radon levels at any particular site requires radon testing. Do-it-yourself radon test kits are available at many home stores [\$10-\$50]. A list of trained professionals offering radon testing and mitigation services is available from the Department of Public Health (860) 509-7367.

**Determination of Radon Potential Ratings**

Area radon potentials are from a computerized spatial analysis of bedrock geology, surficial materials, and surface radioactivity mapping, with indoor air and bedrock well water radon data. The radon data includes 4721 homes and 958 bedrock wells tested for radon statewide between the years 1985-1995. The testing was conducted by the CT Department of Environmental Protection, CT Department of Public Health, U.S. Geological Survey, University of Connecticut, and Stamford Health Department [3; 4; 5; 6; 7; 8; 9; 10]. Radon measurements have been correlated with geological and geophysical factors enabling the mapping of radon potential. Digital resource maps were scored separately for radon potential (see table below), and compared to indoor air analyses to determine the usefulness of each resource map for the prediction of radon. The radon potential map is a summation of radon scores developed from these earlier analyses.

Surface radioactivity measurements [11;12] provide summary information for total gamma emissions from all areas of the state. There is a direct correlation between surface radioactivity and average indoor radon [13;14]. Areas with the highest surface radioactivity correlate with areas of highest average indoor radon and are therefore scored with the highest radon potential. Surficial materials units [15] are used as a measure of surface permeability and potential radon transport to the surface. As such, surficial materials units are assigned radon scores according to their texture. Areas of coarse-grained sediments are assigned higher radon scores than areas of fine-grained sediments. Bedrock well water radon values are used as a measure of the potential radon source in the bedrock. Each bedrock unit [16] is assigned a radon score based on the average radon in the well water of that unit, or by reference to similar geologic units [16;17;18]. The scoring strategies have been tested by comparing radon scores for each component resource map with indoor air radon data (see back of map). Each of these scoring strategies provides a positive correlation between average indoor radon and the assigned radon scores of individual mapping components (below). The areas of more permeable sediments, higher bedrock well water radon, and higher surface radioactivity have higher average indoor radon.

**Scores for Component Resource Maps**

Radon Potential Score	5	4	3	2	1
Surface Radiation (counts per second gamma)	≥ 900 cps	900-700 cps	700-500 cps	500-300 cps	< 300 cps
Surficial Materials	—	gravel & coarse sand	mixed sands	mixed fines	fines & clays
Bedrock Well Water	≥ 10,000 pCi/l	9,999-5,000 pCi/l	4,999-3,000 pCi/l	2,999-300 pCi/l	< 300 pCi/l

The combined scores of component resource maps create a total radon potential score for each area of the state. These scores range from totals of 4 to 13. Frequency analyses show a progressive increase in average indoor radon with total radon potential score. The total scores are grouped into 4 categories by similar average indoor radon. These categories are shown on the map as radon potential ratings. These radon potential ratings describe areas of statistically different indoor radon levels.

Sites of naturally occurring radioactive minerals referenced in the geologic literature [19;20] are approximately located on this map where possible. These sites include an assemblage of various minerals which may produce locally high radon. These sites are included on the map for reference and are not part of the development of the radon potential ratings. These mineral locations may be useful tools in the development of regional and local level radon evaluations.

**Radon Potential Rating\***

The radon potential rating indicates the percentage of tested homes in these areas with basement air radon greater than or equal to 4.0 pCi/l

- Low 6%
- Low - Moderate 16%
- Moderate 22%
- Moderate - High 33%
- High 48%

Water or Wetland

Towns

- Naturally Occurring Radioactive Minerals  
Sites may produce locally high radon levels

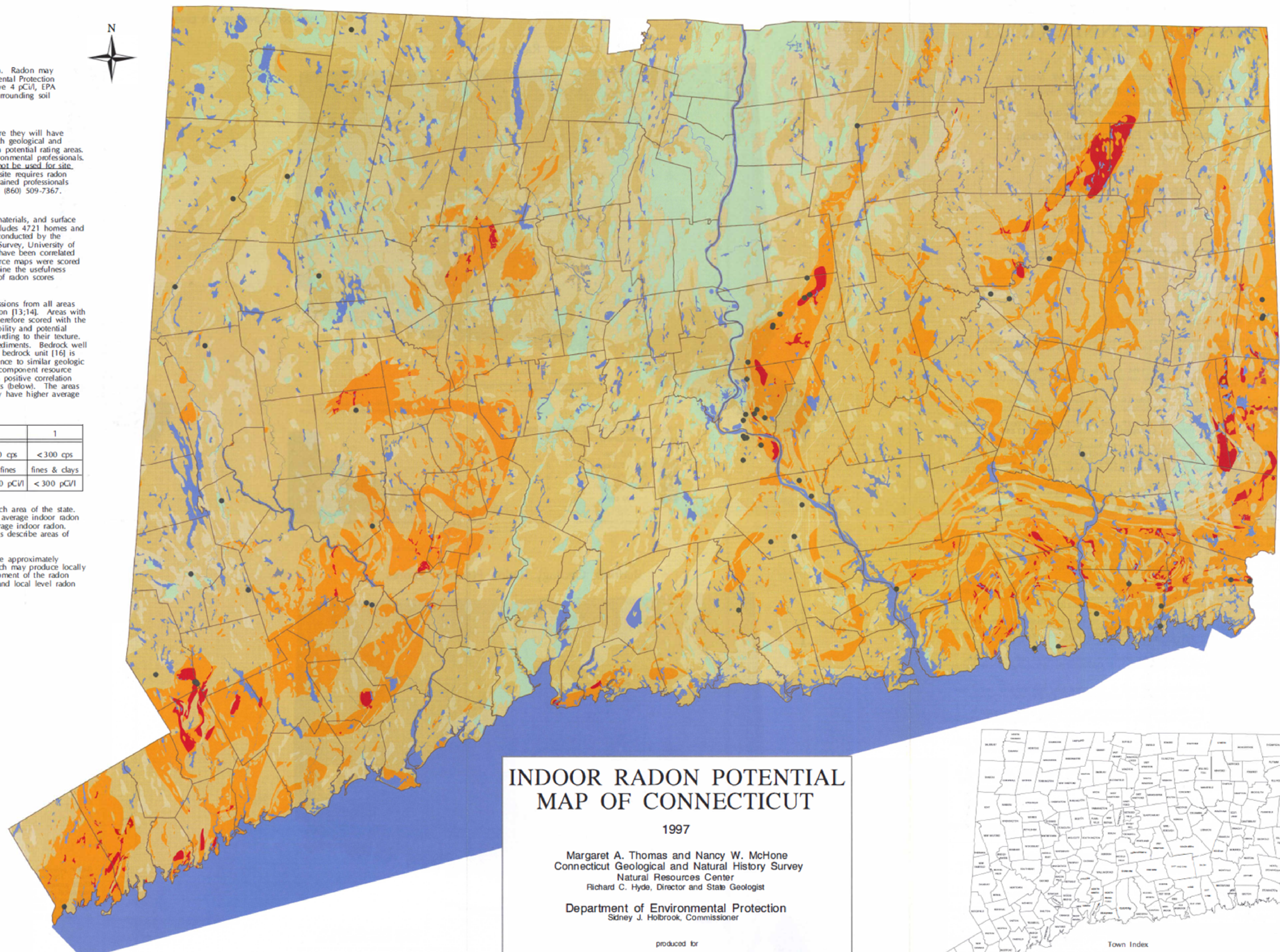
NOTE: Because the presence of radon is very site specific, the Department of Public Health recommends that homes be tested regardless of whether the location is in a low or high radon potential area.

**\* Individual Home Indoor Air Radon Values May Differ**

The area radon potential ratings are developed using statistical analyses which provide information on the likelihood of elevated radon in homes located within particular types of geologic situations. Within area radon potential ratings there will be both low radon homes and high radon homes. Basement (or ground level) sill and winter air radon tests are used in the analyses in order to provide 'worst case' radon potential estimates. Homes with elevated radon in the basement are more likely to have elevated radon in an upstairs living area. An exception to this is in a situation where high radon bedrock well water is a dominant contributor to the indoor air radon of the home. Typically the radon level in the first floor of a home is lower than the basement radon value. Homes served by public water supplies where the water is derived from stratified drift aquifers or held in reservoirs typically have a lower water radon potential [4;21].

**Acknowledgements**

This analysis could not be possible without the work of those who produced the digital data used in the development of this map: these people are Larry Colbert Jr., Paul Davis, Mary D'Giacomo-Cohen, Jeff Hollis, Karl Kras, Bill Penn, John Seibert, and Maria van der Werff. Cindy Barber provided technical expertise in the ways of GIS. The University of Connecticut Center for Environmental Health provided a pilot grant to help digitize surficial materials data and fund student labor for fieldwork. Helpful consultations were provided by many, including Sigrid Asher Bolinder, Gene Boudette, Denis Healy, Richard Hyde, Kip Kolesinskas, Sid Quarter, Roy Shook, Janet Stone, and Zoltan Szabo. Locational verification of indoor air analyses was provided by members of the Yale Radon Study. The Connecticut Department of Public Health supported and promoted this project for several years through administration of the U.S. EPA, State Indoor Radon Grant Program for Connecticut.



**INDOOR RADON POTENTIAL MAP OF CONNECTICUT**

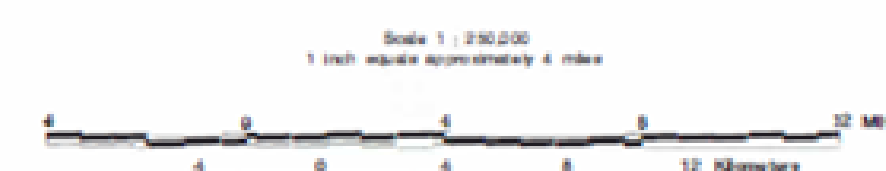
1997

Margaret A. Thomas and Nancy W. McHone  
Connecticut Geological and Natural History Survey  
Natural Resources Center  
Richard C. Hyde, Director and State Geologist

Department of Environmental Protection  
Sidney J. Holbrook, Commissioner

produced for

Department of Public Health  
Stephen A. Harriman, Commissioner



Developed using U.S. EPA State Indoor Radon Grant Program and State of Connecticut funds. This map is available from the Connecticut Department of Public Health, Indoor Air Program, 410 Capitol Avenue, Hartford, CT 06134-0308, (860) 509-7367, or the Connecticut Department of Environmental Protection, Natural Resources Center, 79 Elm Street, Hartford, CT 06106-5127, (860) 424-3555.



# INDOOR RADON POTENTIAL MAP OF CONNECTICUT

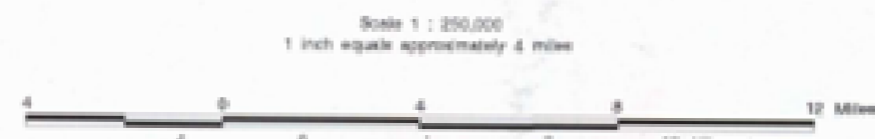
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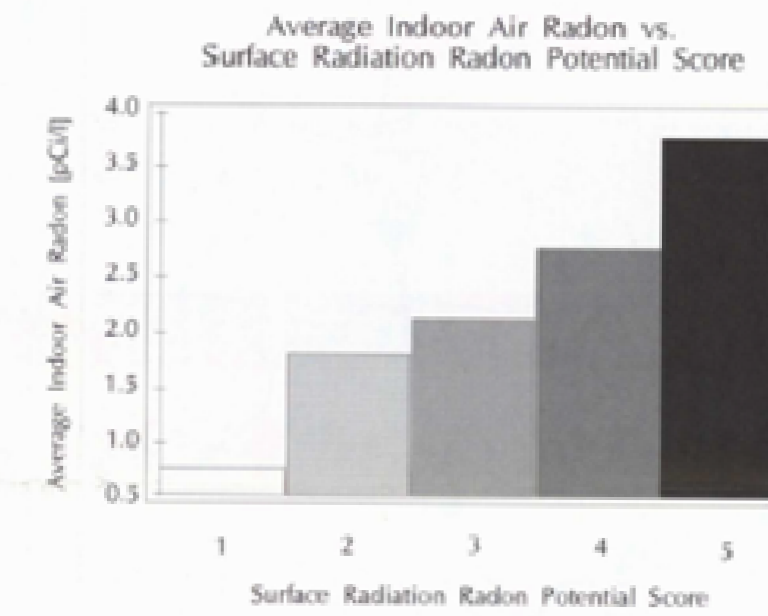
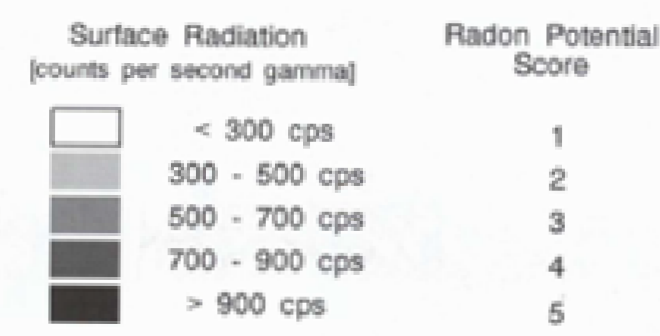
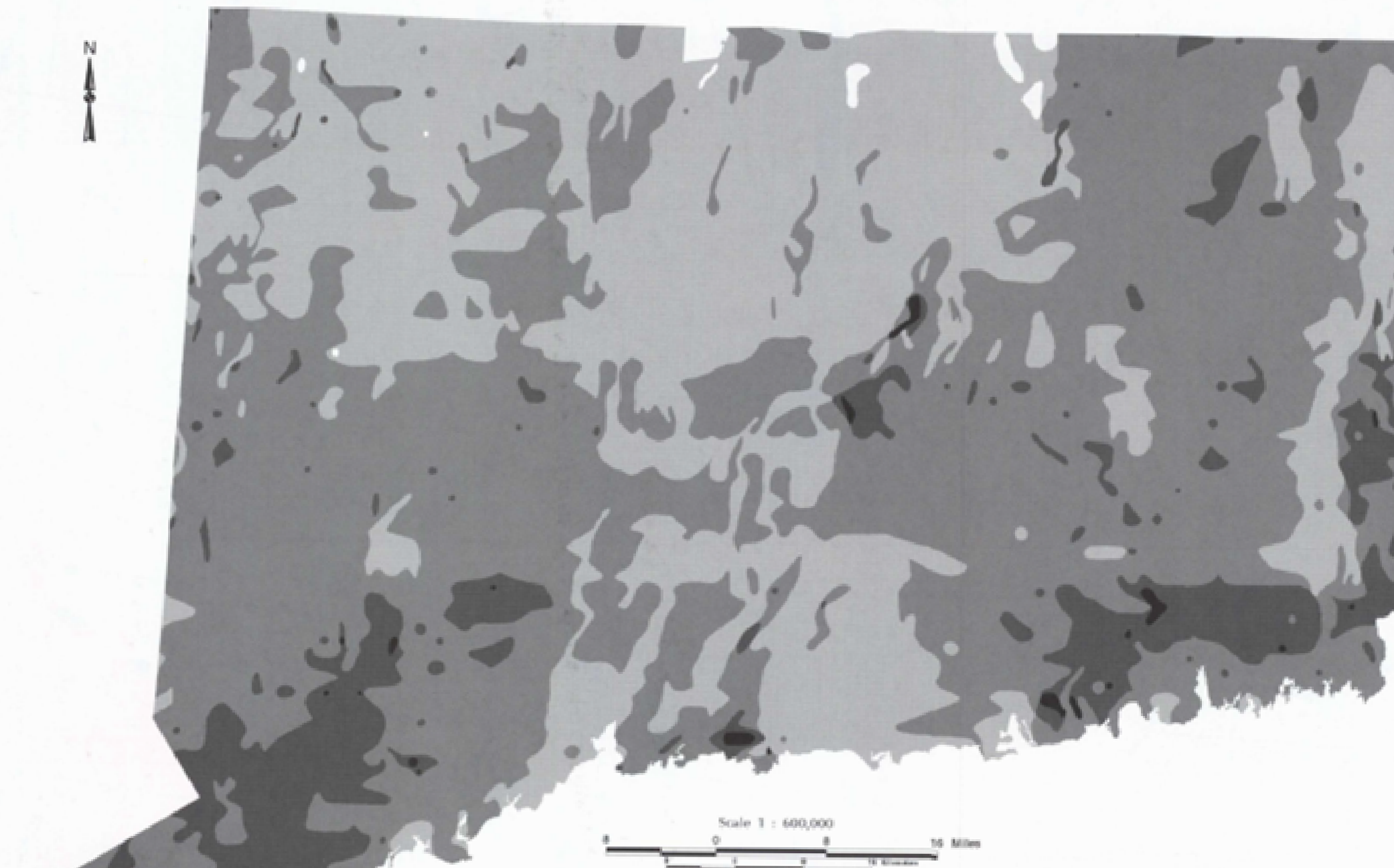
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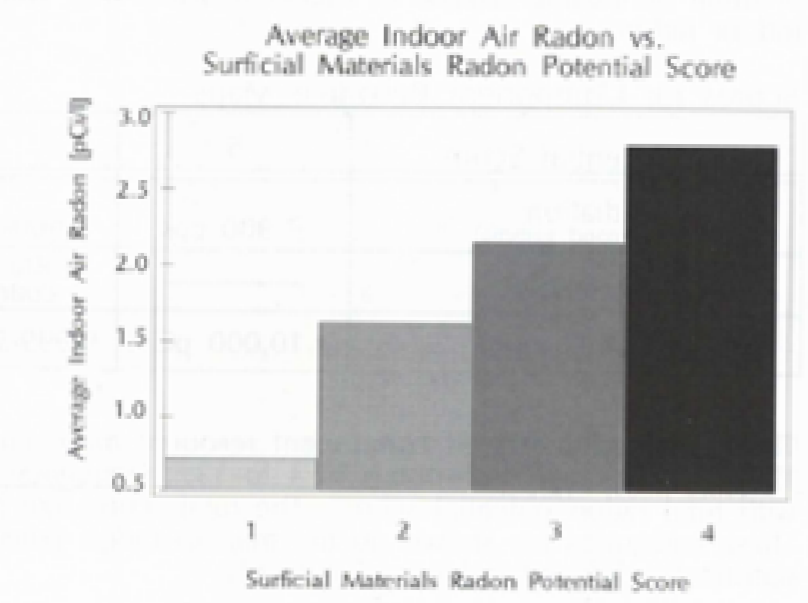
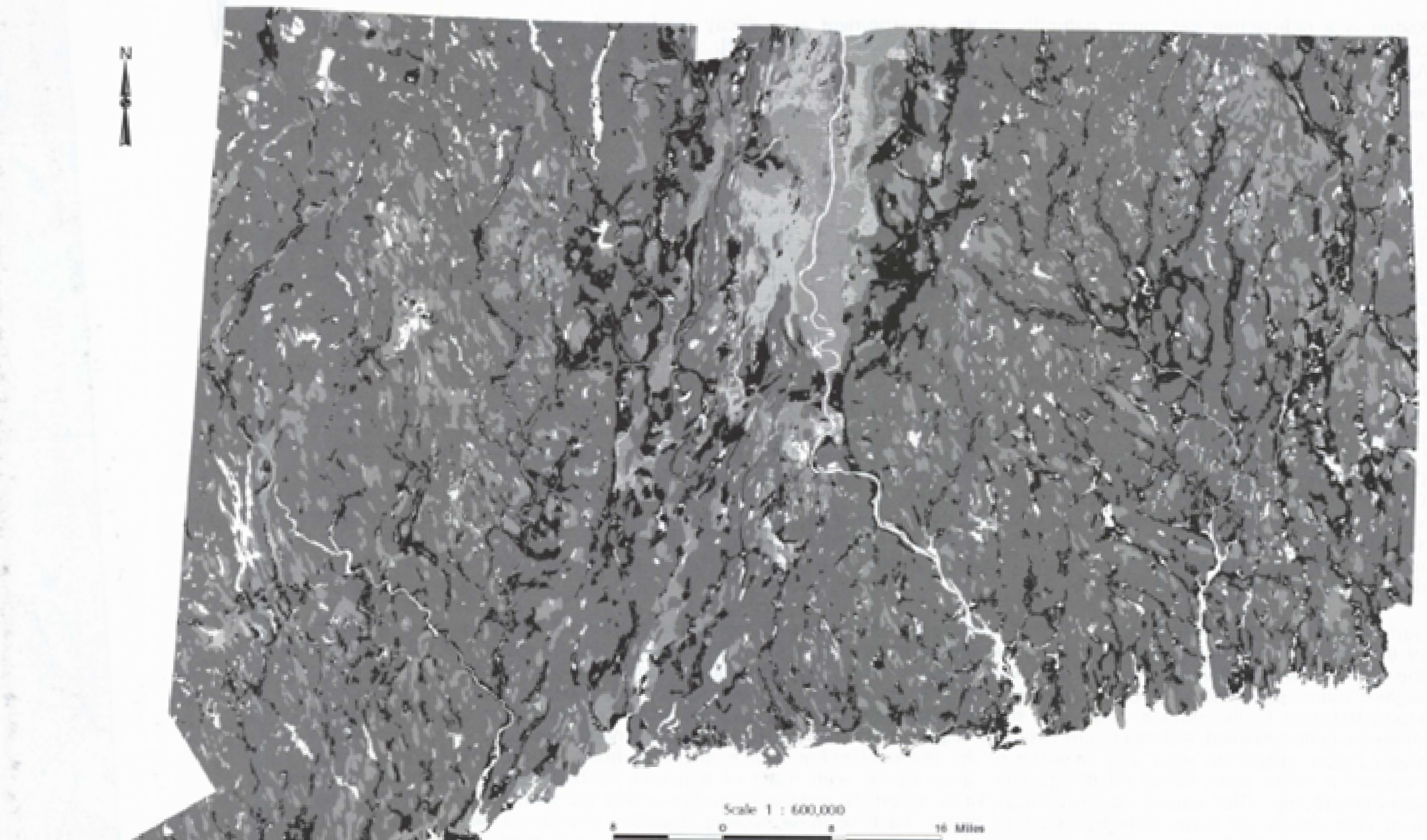
# Radon Potential Scores and Comparison of Scores with Average Indoor Radon

[all reported averages are geometric means]

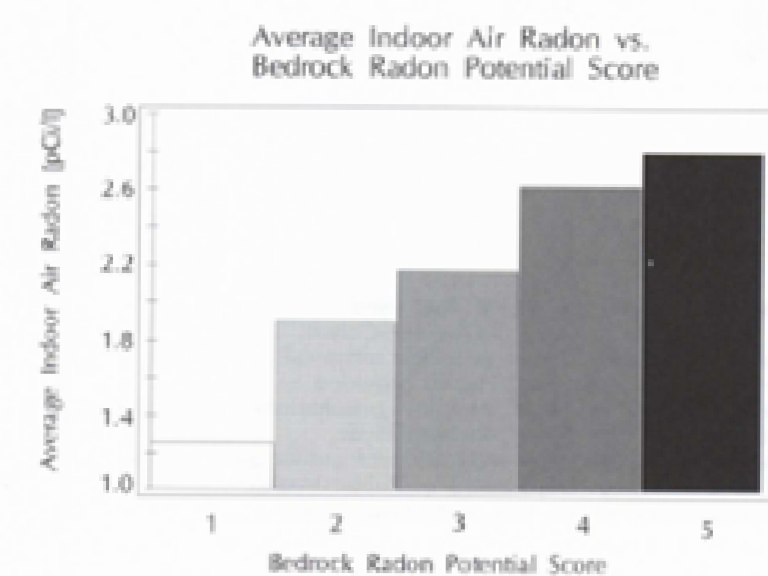
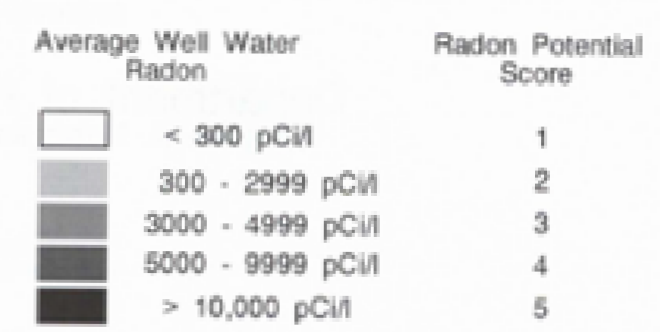
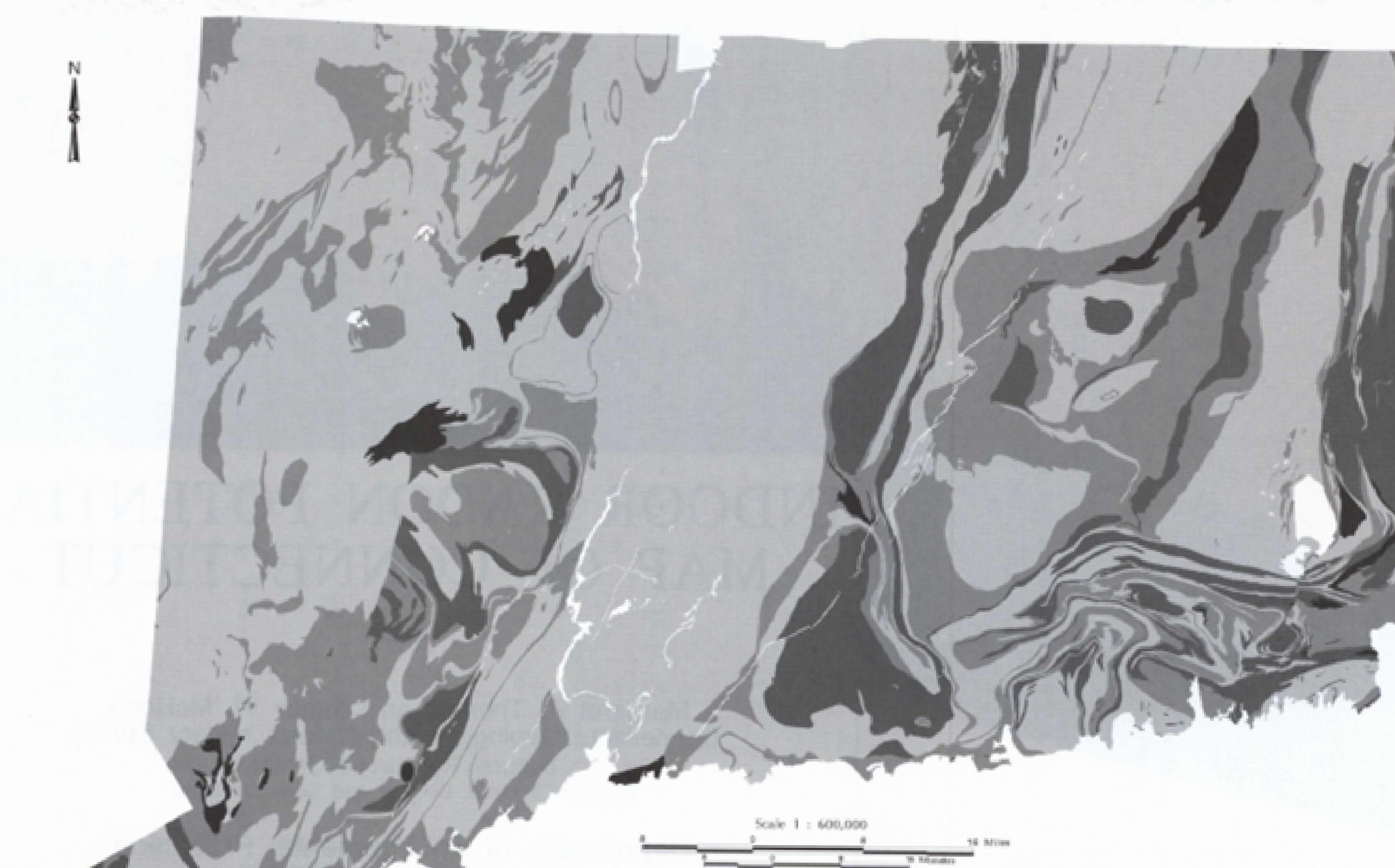
## Surface Radiation Radon Potential Scores



## Surficial Materials Radon Potential Scores

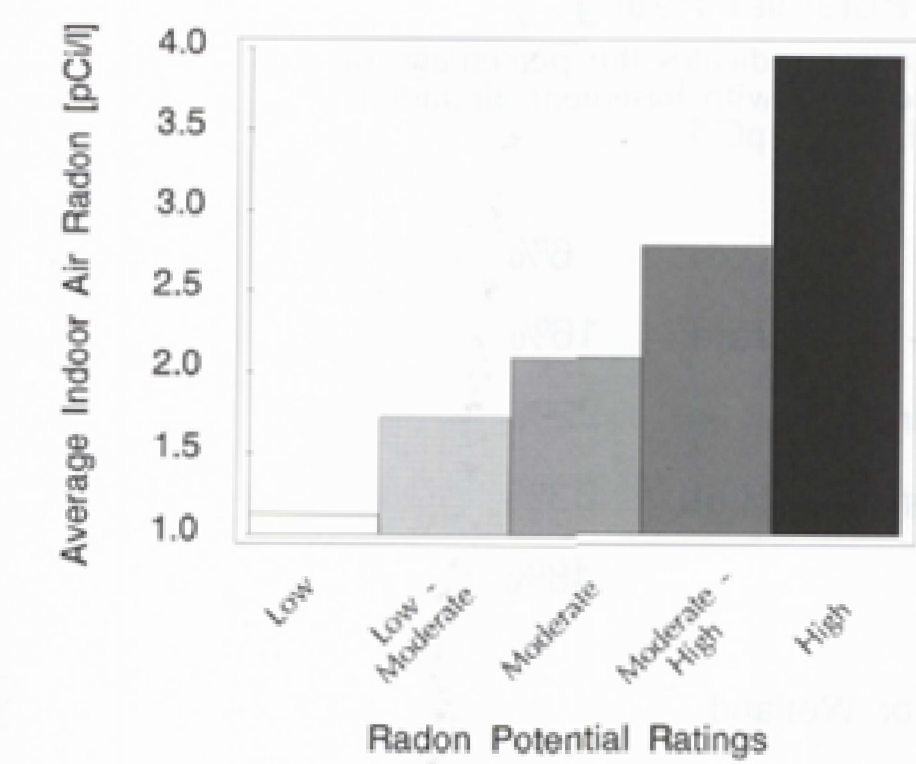


## Bedrock Geology Radon Potential Scores



The overall statewide average bedrock well water radon for 958 wells is 3022 pCi/l. However, temporal variation of radon levels in well water has been found to be as much as 61% of the arithmetic mean. [10]

## Indoor Radon Potential Map of Connecticut Radon Potential Ratings vs. Average Indoor Air Radon



Radon potential ratings were developed from the summation of radon potential scores of component resource maps. The total scores were compared to average indoor radon and grouped according to similar radon levels. These groups comprise the radon potential ratings. Kruskal-Wallis ANOVA and Mann-Whitney Rank Sum numerical tests have shown the radon values within these rating areas to be statistically different from each other. Additionally, there is a progressive increase in the percentage of homes above the EPA action guideline of 4 pCi/l in the areas identified with higher radon potential ratings. This analysis therefore provides a meaningful tool for the statewide assessment of indoor radon potential.

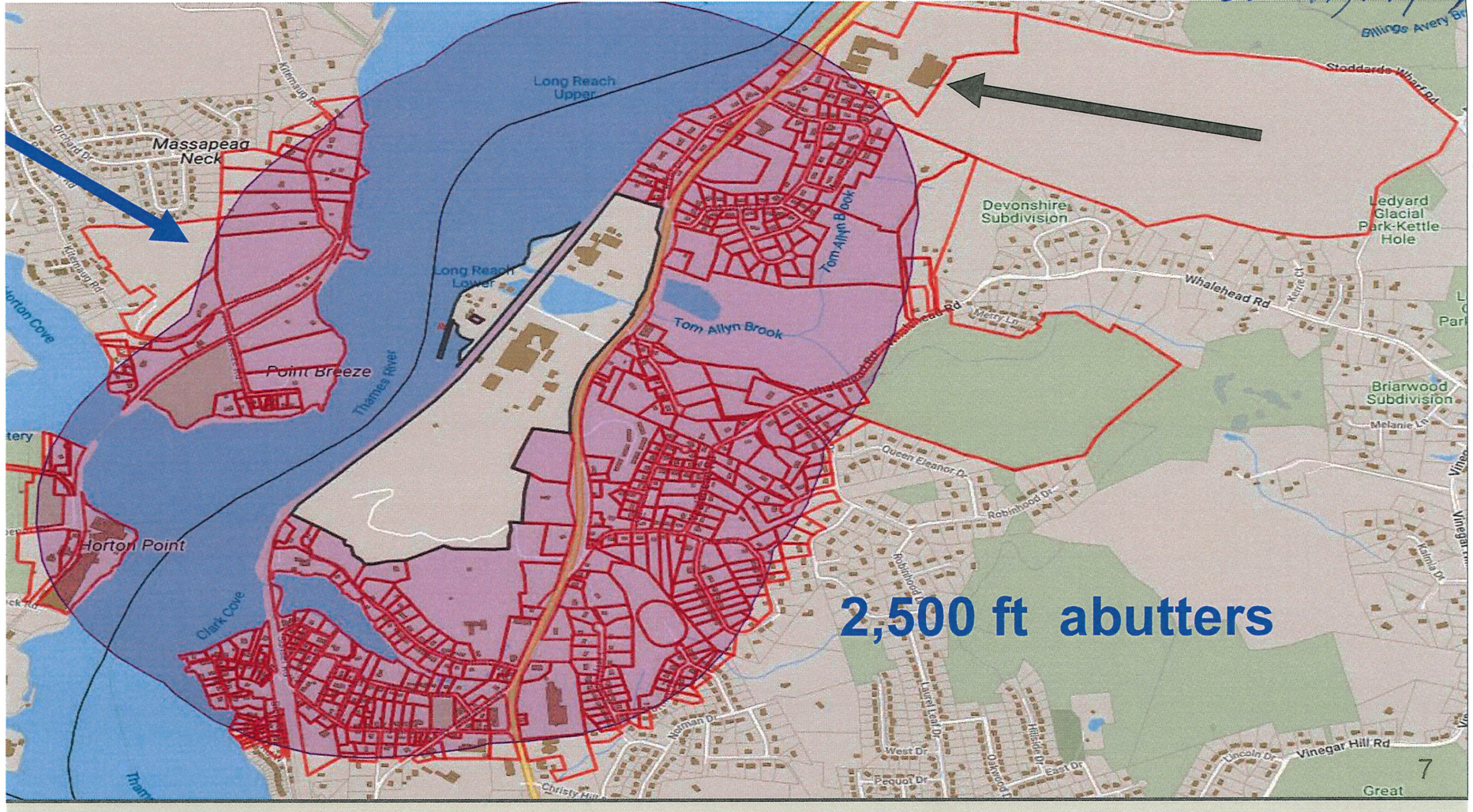
Radon Potential Rating	Average Indoor Radon [pCi/l]	Number of Homes Tested	Percent 4 pCi/l or Above
Low	1.13	214	5.6
Low-Moderate	1.73	768	16.3
Moderate	2.10	2648	21.8
Moderate-High	2.79	1026	33.0
High	3.96	65	47.7

The overall statewide basement air radon average for 4721 homes is 2.12 pCi/l.

Generalized soils mapping [22] and depth to the water table data [23] have been investigated as possible radon potential mapping tools, but have not been included in the scoring strategy because comparisons of soil transmissivity and water table depths with indoor air radon data do not yield discernable trends. Surficial materials thickness mapping [24] shows a significant decrease in radon values overlying sediment greater than 50 feet; however, this finding does not contribute to the radon potential mapping.



MAP TAKEN FROM EXHIBIT #140 SUBMITTED BY JOANNE [unclear] 01/11/15



2,500 ft abutters





(SEE SHEET 2 OF 17 FOR NOTES, LEGEND, AND ABBREVIATIONS.)

PEC PERMIT #	DATE OF APPROVAL	EXPIRATION DATE
PEC CHAIRMAN OR SECRETARY		DATE
DWVC PERMIT #	DATE OF APPROVAL	
DWVC CHAIRMAN		DATE



**INDUSTRIAL SITE PREPARATION PLAN:  
EXISTING CONDITIONS PLAN**

**GALES FERRY INTERMODAL  
1337 & 1761 ROUTE 12, GALES FERRY, CT 06435**  
108 SOUTH STREET, SUITE 400, GALESFERRY, CT 06435

DATE: 02/26/2024  
DRAWN BY: EJP  
CHECKED BY: SSM

1"=120'  
DATE: 04/15/23, 04/26/23  
DRAWN BY: EJP  
CHECKED BY: SSM

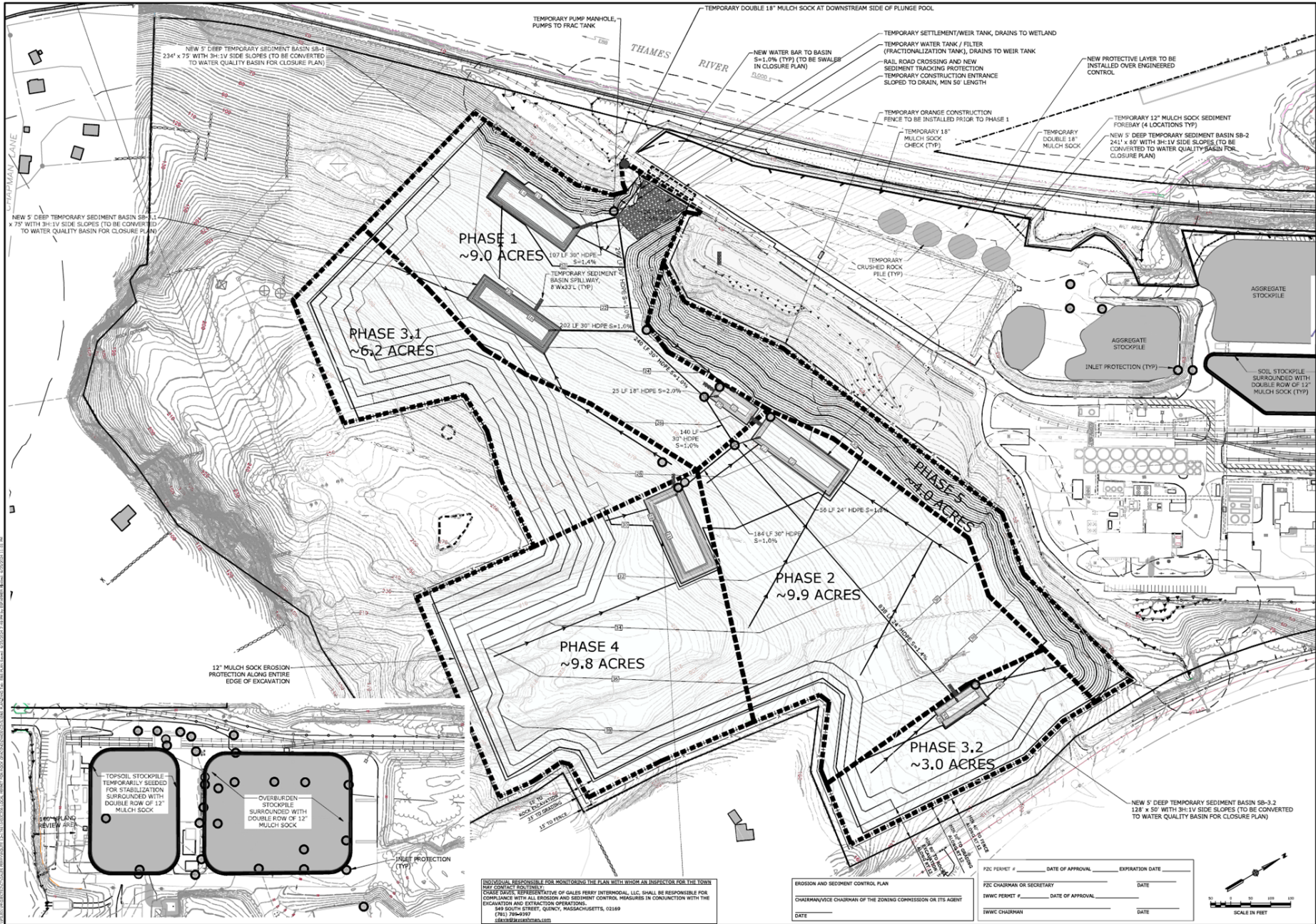
PROJECT: GALESFERRY INTERMODAL  
SHEET: 17 OF 17

1. SEE COMMENTS AND COORDINATION WITH APPLICANT.  
2. SEE COMMENTS AND COORDINATION WITH APPLICANT.  
3. SEE COMMENTS AND COORDINATION WITH APPLICANT.

PROJECT: GALESFERRY INTERMODAL  
SHEET: 17 OF 17

**Loureiro**  
Professional Engineer  
No. 11020  
108 South Street, Suite 400, Gales Ferry, CT 06435  
Tel: 860.439.1100  
www.loureiroengineering.com

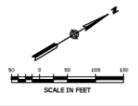




INDIVIDUAL RESPONSIBLE FOR MONITORING THE PLAN WITH INDIAN INSPECTOR FOR THE TOWN OF CHARLOTTE FOR THE CITY OF CHARLOTTE SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL EROSION AND SEDIMENT CONTROL MEASURES IN CONJUNCTION WITH THE EXCAVATION AND EXTRACTION OPERATIONS.  
 648 SOUTH STREET, QUINCY, MASSACHUSETTS, 02169  
 (781) 799-2597  
 GSK@GSKINCORPORATED.COM

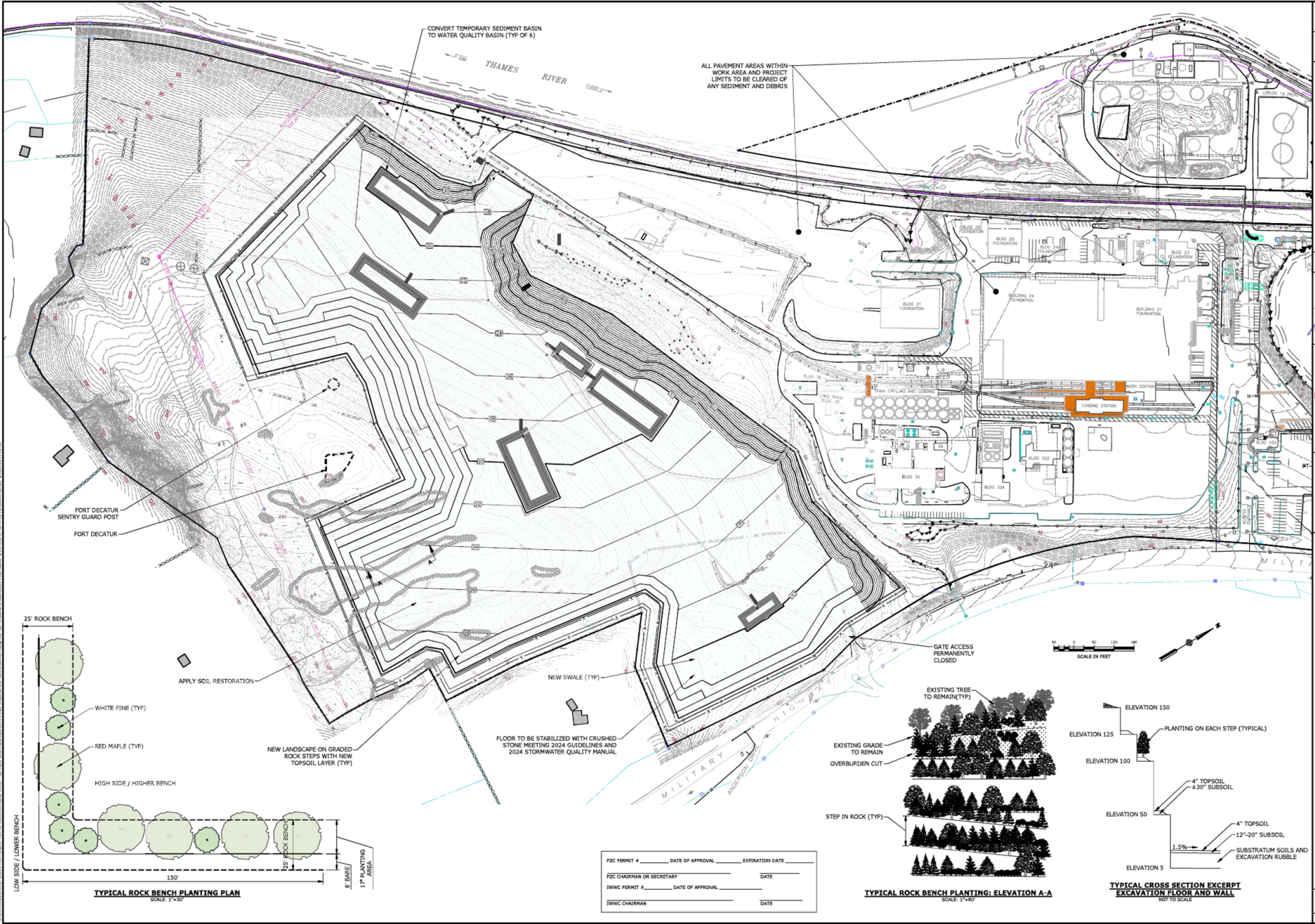
EROSION AND SEDIMENT CONTROL PLAN  
 CHAIRMAN/VICE CHAIRMAN OF THE ZONING COMMISSION OR ITS AGENT  
 DATE \_\_\_\_\_

FZC PERMIT # \_\_\_\_\_ DATE OF APPROVAL \_\_\_\_\_ EXPIRATION DATE \_\_\_\_\_  
 FZC CHAIRMAN OR SECRETARY \_\_\_\_\_ DATE \_\_\_\_\_  
 IWWC PERMIT # \_\_\_\_\_ DATE OF APPROVAL \_\_\_\_\_  
 IWWC CHAIRMAN \_\_\_\_\_ DATE \_\_\_\_\_



INDUSTRIAL SITE PREPARATION PLAN		DATE	1/11/2024
SOIL EROSION & SEDIMENT CONTROL AND PHASING		SCALE	1"=100'
GALES FERRY INTERMODAL		DATE	03/28/2024
GALES FERRY INTERMODAL LLC		DATE	03/28/2024
DRAWN BY: C-6		DATE	03/28/2024
PROJECT NO.: 24010001		DATE	03/28/2024
PROJECT NAME: GALES FERRY INTERMODAL		DATE	03/28/2024
PROJECT LOCATION: 2401 SOUTH STREET, QUINCY, MA 02169		DATE	03/28/2024
PROJECT DESCRIPTION: SOIL EROSION & SEDIMENT CONTROL AND PHASING		DATE	03/28/2024
PROJECT NUMBER: 2024-00000000000000000000		DATE	03/28/2024
PROJECT OWNER: GALES FERRY INTERMODAL LLC		DATE	03/28/2024
PROJECT CONTACT: GSK@GSKINCORPORATED.COM		DATE	03/28/2024
PROJECT PHONE: (781) 799-2597		DATE	03/28/2024
PROJECT FAX: (781) 799-2597		DATE	03/28/2024
PROJECT WEBSITE: GSK.COM		DATE	03/28/2024
PROJECT EMAIL: GSK@GSKINCORPORATED.COM		DATE	03/28/2024
PROJECT ADDRESS: 2401 SOUTH STREET, QUINCY, MA 02169		DATE	03/28/2024
PROJECT CITY: QUINCY, MA 02169		DATE	03/28/2024
PROJECT STATE: MASSACHUSETTS		DATE	03/28/2024
PROJECT COUNTRY: UNITED STATES OF AMERICA		DATE	03/28/2024





FZC PERMIT # \_\_\_\_\_ DATE OF APPROVAL \_\_\_\_\_ EXPIRATION DATE \_\_\_\_\_  
 FZC CHAIRMAN OR SECRETARY \_\_\_\_\_ DATE \_\_\_\_\_  
 IWWC PERMIT # \_\_\_\_\_ DATE OF APPROVAL \_\_\_\_\_  
 IWWC CHAIRMAN \_\_\_\_\_ DATE \_\_\_\_\_

NO. 1	FILE COMMENTS AND COORDINATION WITH APLICANT	DATE
NO. 2	EXCLOSURE OF ACCESS	DATE
NO. 3		DATE
NO. 4		DATE
NO. 5		DATE
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NO. 7		DATE
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NO. 11		DATE
NO. 12		DATE
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NO. 14		DATE
NO. 15		DATE
NO. 16		DATE
NO. 17		DATE

STATE OF CONNECTICUT  
 PROFESSIONAL ENGINEER  
 LICENSE NO. 10000

**Loureiro**  
 Loureiro Engineering Associates, Inc.  
 1000 ROUTE 12, GALE FERRY, CT 06335  
 203-338-1111  
 www.loureiroeng.com

PROJECT NO. 04532.06  
 DATE 03/27/2024  
 DRAWN BY JEP  
 CHECKED BY JEP

INDUSTRIAL SITE PREPARATION PLAN:  
**FINAL CLOSURE & LANDSCAPE PLAN**  
**GALES FERRY INTERMODAL**  
 1377 & 1741 ROUTE 12, GALE FERRY, CT 06335  
**GALES FERRY INTERMODAL LLC**  
 648 SOUTH STREET, GUNNICK, NY 03160

DRAWING  
**C-11**  
 SHEET 16 OF 17



## Surface area of stagnating artificial water bodies:

Gales Ferry Intermodal Industrial Site Preparation Plan: Grading and Drainage Plan.

Sedimentation and treatment ponds in phases 1, 2, 3.1., 3.2, and 4.  
(In Square Feet)

Plan Date: 3/28/2024. Reference Page C-5

### **Phase 1:**

234 x 75 = 17,550 @ 5 ft deep

234x75 = 17,550 @ 5 ft. deep

116 x 50 = 5,000 @ 5 ft. deep

- **49,000**

### **Phase 2:**

241 x 80 = 19,280 @ 5 f.t deep

**19,280**

### **Phase 3.2:**

128 x 50 = 6400 @ 5 ft. deep

**6,400**

### **Phase 4:**

228 x 100 = 22,800 @ 6 ft. deep

**22,800**

**Total : 112,180. (2.57 Acres)**



## ARBOVIRUSES ISOLATED FROM MOSQUITOES IN CONNECTICUT

Mosquito Species	Arbovirus*							
	CV	EEE	FL	HJ	JC	TVT	WEE	WN
<i>Aedes</i>								
<i>Aedes cinereus</i>	X	X		X	X			X
<i>Aedes vexans</i>	X	X		X	X			X
<i>Anopheles</i>								
<i>Anopheles punctipennis</i>	X	X		X	X	X		X
<i>Anopheles quadrimaculatus</i>	X	X		X				X
<i>Anopheles walkeri</i>	X	X			X			X
<i>Coquillettidia</i>								
<i>Coquillettidia perturbans</i>	X	X	X	X	X	X		X
<i>Culex</i>								
<i>Culex pipiens</i>		X	X	X				X
<i>Culex restuans</i>		X	X	X	X			X
<i>Culex salinarius</i>		X	X	X				X
<i>Culex territans</i>		X						
<i>Culiseta</i>								
<i>Culiseta melanura</i>	X	X	X	X			X	X
<i>Culiseta morsitans</i>		X		X	X			
<i>Ochlerotatus</i>								
<i>Ochlerotatus abserratus</i>					X			
<i>Ochlerotatus aurifer</i>					X			
<i>Ochlerotatus canadensis</i>	X	X		X	X			X
<i>Ochlerotatus cantator</i>	X	X		X	X			X
<i>Ochlerotatus communis</i>					X			
<i>Ochlerotatus excrucians</i>					X			
<i>Ochlerotatus provocans</i>					X			
<i>Ochlerotatus sollicitans</i>	X	X			X			X
<i>Ochlerotatus sticticus</i>	X	X			X	X		X
<i>Ochlerotatus stimulans</i>				X	X			
<i>Ochlerotatus taeniorhynchus</i>	X	X			X			X
<i>Ochlerotatus triseriatus</i>	X	X		X	X			X
<i>Ochlerotatus trivittatus</i>	X	X			X	X		X
<i>Psorophora</i>								
<i>Psorophora ferox</i>	X	X		X	X	X		X
<i>Uranotaenia</i>								
<i>Uranotaenia sapphirina</i>		X		X				X

\* CV-Cache Valley, EEE-Eastern equine encephalitis, FL-Flanders, HJ-Highlands J, JC-Jamestown Canyon, TVT-Trivittatus, WEE-Western equine encephalitis, WN-West Nile

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**STATE OF CONNECTICUT**

**DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION**

**GUIDANCE DOCUMENT FOR EVALUATING  
POTENTIAL HYDROGEOLOGIC IMPACTS  
ASSOCIATED WITH BLASTING &  
DEVELOPMENT ACTIVITIES**



**Bureau of Water Protection and Land Reuse  
Remediation Division**

**December 2019**

**(Rev. 12-12-19)**



The following guidance is provided by the Department of Energy & Environmental Protection's Remediation Division for use by municipal land-use officials when evaluating proposed developments, road construction projects, or quarries where significant earth removal and/or blasting activities are likely to occur. Because of those types of activities, there is concern for possible negative impacts to the quality and quantity of water in neighboring drinking water wells, as well as other environmental factors such as erosion, sedimentation, and decreased surface water quality conditions.

One of the primary concerns is acid rock drainage (ARD), which is a natural process, but can be exacerbated when rock is crushed and used for fill or other purposes that expose the freshly crushed rock to precipitation. ARD is caused by the presence of bedrock containing high levels of iron sulfide (which is present in Eastern and Western Highlands and sometimes the central valley of CT), especially such rock that is freshly exposed or crushed and has been subjected to the elements/precipitation. Under these conditions, there is an elevated risk for mobilizing naturally-occurring iron, manganese, and sulfur, which may adversely affect groundwater and drinking water quality. In addition, increased mobilization of arsenic, uranium and/or radon can occur in areas where these naturally-occurring minerals are present in the bedrock formation.

The Department recommends that land use officials consider the following as part of the overall application review process:

1. The developer or applicant (the Applicant) should retain a geologist/hydrogeologist or engineer (Environmental Professional) to evaluate the underlying bedrock in terms of its potential to cause ARD. The town's land-use office should make sure that the Applicant acquires the services of a qualified Environmental Professional that has experience testing the mineralogy and chemistry of the rock material and evaluating the potential impacts of ARD. As such, there needs to be a detailed site plan developed by the Applicant's Environmental Professional that addresses best management practices for minimizing ARD conditions by ensuring proper handling, storage or disposal of the rock material on- and off- site and minimizing its contact with infiltrating precipitation and surface water runoff at the site.
2. After identifying all drinking water wells within a 500-foot radius of the area to be disturbed by proposed construction activities, the Applicant's Environmental Professional should evaluate which drinking water wells need to be sampled in order to establish baseline drinking water quality conditions prior to any active earth work or blasting activity. Consideration should be given to factors such as: well type and construction details; the nature, geologic structure, and mineral make-up of the underlying bedrock; and blasting/rock removal techniques. The town's land-use office, as part of the permit application review process, or as part of the pre-blast survey if blasting is necessary, should also require that the Applicant document the yield and capacity of the wells before the site work or blasting commences. Testing the raw water quality (prior to any water treatment devices) of nearby drinking water wells prior to construction or blasting activities will establish a baseline for comparing post-project test results, in the event a property owner makes a complaint that the project activities negatively impacted their well.



3. In the absence of drinking water wells within 500 feet of the area to be disturbed, the Applicant's Environmental Professional should identify the closest drinking water wells, if any, within a 1,000-foot radius. Depending on the location, proximity, well construction and other factors, consideration should be made as to whether the proposed blasting activity poses a concern to the quantity or quality of water at these locations. Should a concern exist, and in the absence of closer drinking water wells to monitor, the Department recommends a minimum of annual monitoring of water levels and water quality of the closest drinking water well until the development project is completed and the site has been stabilized.
4. The Department recommends that drinking water wells at risk of ARD from proposed blasting and earth removal activities be analyzed for the following drinking water quality parameters:
  - pH
  - odor
  - color
  - turbidity
  - total iron
  - total manganese
  - nitrate
  - nitrite
  - sulfate
  - coliform bacteria
  - arsenic
  - uranium
  - radon
  - ammonia perchlorate (*if the salts ammonium, potassium, magnesium, or sodium perchlorate is an ingredient of the blasting agent*)
  - total petroleum hydrocarbons using the CT extractable total petroleum hydrocarbons test method (*if the blasting materials contain ammonium nitrate fuel oil mixtures*)

All testing should be performed in an approved laboratory certified to test drinking water by the Connecticut Department of Public Health's Laboratory Certification Program.

5. Follow-up well water sampling should occur within one to two months following the blasting activity and again once the site has stabilized and ground cover has been established. The plan for such water sampling should be part of the Applicant's land-use application. Should the development project and site work continue over a prolonged period of time, annual testing of the potentially impacted drinking water wells should be performed to ensure there are no adverse effects to the drinking water quality.
6. If there is a change in drinking water quality during or after the blasting activity, the well owner should notify the Applicant and/or blasting contractor of the condition, and also



notify their local health department and DEEP's Remediation Division (860-424-3705) of the condition.

7. The static water level in potentially affected drinking water wells should also be monitored during and following completion of the site work and blasting activity to determine if the static water level in the well decreases to the extent there is a problem for domestic use. Major site work that significantly alters infiltration rates, diverts surface water flow, or creates deep rock cuts or fractures may seriously deplete the volume of water in nearby overburden or drilled bedrock drinking water wells. Wells accessed for purposes of water level monitoring will require the well to be properly disinfected prior to being reactivated following the Department of Public Health's [Publication #27: \*Disinfection Procedure for Private Wells\*](#).

#### *Other Considerations:*

- There may be additional issues relating to blasting activities that the town, through its Fire Marshal, may need to address by the pre-blast survey. Such issues may include the potential for structural damage to neighboring properties due to air blasts and vibrations, and/or noise and dust control. Additionally, if municipal officials receive complaints regarding fugitive dust emissions due to the blasting and/or earth removal activities, DEEP's Bureau of Air Management (860-424-3436) can be contacted for guidance and possible follow-up inspection.
- The municipality may want to consider having large-scale developments, where significant site work including blasting is planned, be evaluated by the Connecticut Environmental Review Team (CTERT). A request for an ERT review must come from the municipality's chief elected official or the chairperson of one of the town's land-use or economic development commissions. Information regarding the CTERT and applying for an ERT review can be found at [www.ctert.org](http://www.ctert.org) or by calling 860-345-3977.
- Activities with proposed soil disturbances of one (1) acre or more that have not obtained local approval involving an erosion and sediment control review must register for the DEEP's General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. The Applicant can obtain information regarding the general permit at [www.ct.gov/deep/stormwater](http://www.ct.gov/deep/stormwater).



# STATE OF CONNECTICUT

## DEPARTMENT OF PUBLIC HEALTH

Manisha Juthani, MD  
Commissioner



Ned Lamont  
Governor  
Susan Bysiewicz  
Lt. Governor

### ENVIRONMENTAL HEALTH AND DRINKING WATER BRANCH

EHDW Circular Letter #2022-60

**TO:** Commercial Environmental Laboratories, Local Health Directors, Connecticut Association of Realtors

**FROM:** Lori J. Mathieu, Branch Chief *Lori J. Mathieu '22*

**DATE:** 10/05/2022

**SUBJECT:** Changes to Private Well Testing Laws – CGS Sec. 19a-37

Section 60 of Public Act 22-58 made various revisions to Section 19a-37 of the Connecticut General Statutes, which are the laws for testing of private wells and semipublic wells. Provided below is a list of key changes that are required of the new law, effective October 1, 2022.

- Any laboratory or firm that conducts testing on a private well serving a residential property or a semipublic well shall report the results within 30 days to the local health department where the well is located. The law previously only required results associated with a real estate transaction to be reported; however with the current changes effective 10/1/22, all results need to be reported.
- The law requires that results need to be reported to the Department of Public Health (DPH), in a format prescribe by the Department. Effective 10/1/22, commercial laboratories that are approved to test drinking water need to continue to send results all results for private wells and semipublic wells to the local health department and to DPH using a newly created email address: [DPH.PrivateWellTestResults@ct.gov](mailto:DPH.PrivateWellTestResults@ct.gov). Please include the property address in the subject line of the email.

Please note that emailing lab reports to DPH for private and semipublic wells is an interim measure. DPH is actively working on developing an electronic reporting database for reporting of results for private and semipublic wells to DPH. DPH will be coordinating a meeting with Commercial Environmental Laboratories that conduct testing of private and semipublic wells before the end of the year. The meeting will outline the timeframe when Commercial Environmental Laboratories will be expected to start using the new electronic reporting database for reporting results to DPH for private and semipublic wells.



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- The law makes the reported test results confidential, as well as any information obtained from a DPH or local health department investigation concerning the reported results, or any DPH or local health department study of the reported results.
- As of 10/1/22, the law requires all newly constructed private or semipublic wells to be tested for coliform, nitrate, nitrite, sodium, chloride, iron, lead, manganese, hardness, turbidity, pH, sulfate, apparent color, odor, arsenic, and uranium. Required testing for arsenic, uranium, and lead were added to the list of tests that were previously required of newly constructed wells. Testing for lead should be done within the plumbing system of the building supplied by the private or semipublic well. Property owners are required to report results of newly constructed wells to DPH.
  - Lab reports with results from newly constructed private wells and semipublic wells can be emailed to [DPH.PrivateWellTestResults@ct.gov](mailto:DPH.PrivateWellTestResults@ct.gov). The email subject should include the property address and the words “New well test results” to allow DPH staff to distinguish between results from an existing well or a newly constructed well that was recently tested for the first time.
- The law now requires a real estate licensee to provide educational materials on private well testing to a prospective buyer or tenant if the property owner has hired a real estate licensee to facilitate a property transaction. If a real estate licensee has not been hired, then the property owner is responsible for providing educational materials on private well testing. The educational materials need to include information on testing for coliform, nitrate, nitrite, sodium, chloride, iron, lead, manganese, hardness, turbidity, pH, sulfate, apparent color, odor, arsenic and uranium and any other recommendation concerning well testing that the Department of Public Health deems necessary. Recommendations for private well testing are available on the Department’s Private Well Program webpage: <https://portal.ct.gov/DPH/Environmental-Health/Private-Well-Water-Program/Private-Well-Testing>

Please contact the DPH Private Well Program by calling 860-509-8401 or through email [DPH.PrivateWellProgram@ct.gov](mailto:DPH.PrivateWellProgram@ct.gov) with any questions.

c: Heather Aaron, MPH, LNHA, Deputy Commissioner, DPH  
 Jim Vannoy, Section Chief, Environmental Health Section  
 Ryan Tetreault, Supervisor, DPH Private Well Program



**Substitute House Bill No. 5290**

after July 1, 2024,] epinephrine, if available, using such injectors, equipment or prefilled vial and syringe when the use of epinephrine is deemed necessary by the emergency medical services personnel for the treatment of a patient. All emergency medical services personnel shall receive such training [from an organization designated by the commissioner] in accordance with the national standards recognized by the commissioner, except an emergency medical responder, as defined in section 20-206jj, need only be trained to utilize means of administration of epinephrine that is within such responder's scope of practice, as determined in accordance with section 19a-179a.

(c) All licensed or certified ambulances shall be equipped with epinephrine in such injectors, equipment or prefilled vials and syringes to be administered as described in subsection (b) of this section and in accordance with written protocols and standing orders of a licensed physician serving as an emergency [department] medical services medical director.

Sec. 16. Section 19a-37 of the general statutes is repealed and the following is substituted in lieu thereof (*Effective from passage*):

(a) As used in this section:

(1) "Laboratory or firm" means an environmental laboratory registered by the Department of Public Health pursuant to section 19a-29a;

(2) "Domestic purposes" means drinking, bathing, washing of clothes and dishes, cooking and other common household chores;

(3) "First draw sample" means a one-liter sample of tap water that has been standing in plumbing pipes for not less than six hours that is collected without flushing the tap;

[(2)] (4) "Private well" means a water supply well that meets all of the



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following criteria: (A) Is not a public well; (B) supplies a residential population of less than twenty-five persons per day; and (C) is owned or controlled through an easement or by the same entity that owns or controls the building or parcel that is served by the water supply well;

~~[(3)]~~ (5) "Public well" means a water supply well that supplies a public water system;

~~[(4)]~~ (6) "Semipublic well" means a water supply well that (A) does not meet the definition of a private well or public well, and (B) provides water for drinking and other domestic purposes; and

~~[(5)]~~ (7) "Water supply well" means an artificial excavation constructed by any method for the purpose of obtaining or providing water for drinking or other domestic, industrial, commercial, agricultural, recreational or irrigation use, or other outdoor water use.

(b) (1) The Commissioner of Public Health may adopt regulations, in accordance with the provisions of chapter 54, for the preservation of the public health pertaining to (A) protection and location of new water supply wells or springs for residential or nonresidential construction or for public or semipublic use, and (B) inspection for compliance with the provisions of municipal regulations adopted pursuant to section 22a-354p.

(2) The Commissioner of Public Health shall adopt regulations, in accordance with the provisions of chapter 54, for the testing of water quality in private wells and semipublic wells.

(3) The Commissioner of Public Health shall adopt regulations, in accordance with the provisions of chapter 54, to clarify the criteria under which the commissioner may issue a well permit exception and to describe the terms and conditions that shall be imposed when a well is allowed at a premises that is connected to a public water supply system or whose boundary is located within two hundred feet of an approved



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community water supply system, measured along a street, alley or easement. Such regulations shall (A) provide for notification of the permit to the public water supplier, (B) address the (i) quality of the water supplied from the well, (ii) means and extent to which the well shall not be interconnected with the public water supply, (iii) need for a physical separation and the installation of a reduced pressure device for backflow prevention, and (iv) inspection and testing requirements of any such reduced pressure device, and (C) identify the extent and frequency of water quality testing required for the well supply.

(c) (1) Any laboratory or firm which conducts a water quality test on a private well serving a residential property or semipublic well in the state shall, not later than thirty days after the completion of such test, report the results of such test to ~~[(A)]~~ the ~~[public]~~ local health authority of the municipality where the property is located ~~[,]~~ and ~~[(B)]~~ the Department of Public Health in a format specified by the department. Results submitted to the Department of Public Health or the local health authority pursuant to this subsection, information obtained from any Department of Public Health or local health authority investigation regarding those results and any Department of Public Health or local health authority study of morbidity and mortality regarding the results shall be confidential pursuant to section 19a-25, except the local health authority and the department may, if approved by the commissioner, disclose the results or information obtained from an investigation of the results to (A) the owner of the property on which the well is located, (B) a prospective buyer of such property who has signed a contract to purchase such property, (C) other persons or entities, when such disclosure is necessary to carry out a statutory or regulatory responsibility of the local health authority or department, or (D) an agent of a state agency.

(2) On and after October 1, 2022, the owner of each newly constructed private well or semipublic well shall test the water quality of such well.



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Such test shall be performed by a laboratory and include, but need not be limited to, testing for coliform, nitrate, nitrite, sodium, chloride, iron, [lead,] manganese, hardness, turbidity, pH, sulfate, apparent color, odor, arsenic and uranium. If such a well is constructed for an existing structure, a first draw sample collected from the existing plumbing system shall also be tested for lead. The owner shall submit test results to the [Department of Public Health] local health authority where the well is located in a form and manner prescribed by the Commissioner of Public Health. Such local health authority shall determine whether the test results comply with the maximum contaminant levels, as prescribed by sections 19-13-B101 and 19-13-B102 of the regulations of Connecticut state agencies. A newly constructed private well or semipublic well shall not be used for domestic purposes until the local health authority determines that the test results comply with such maximum contaminant levels.

(d) Prior to the sale, exchange, purchase, transfer or rental of real property on which a private or semipublic well is located, the owner shall provide the buyer or tenant notice that educational material concerning private well testing is available on the Department of Public Health web site. If the prospective buyer or tenant has hired a real estate licensee to facilitate the property transaction, such real estate licensee, or, if the prospective buyer or tenant has not hired a real estate licensee, the owner, landlord or closing attorney shall provide to the buyer or tenant an electronic or hard copy of educational material prepared by the Department of Public Health that recommends testing for the contaminants listed in subsection (c) of this section and any other recommendation concerning well testing that the Department of Public Health deems necessary. Failure to provide such notice or educational material shall not invalidate any sale, exchange, purchase, transfer or rental of real property. If the seller or landlord provides such notice or educational material in writing, the seller or landlord and any real estate licensee shall be deemed to have fully satisfied any duty to notify the



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buyer or tenant.

(e) [No regulation may require that a] A certificate of occupancy for a dwelling unit on [such] a residential property shall not be withheld or revoked on the basis of a water quality test performed on a private well pursuant to this section, unless such test results indicate that any maximum contaminant level applicable to public water supply systems for any contaminant listed in the regulations of Connecticut state agencies has been exceeded. No municipality, administrative agency [,] or local health [district or municipal health officer may] authority shall establish regulations or ordinances that withhold, [or] cause to be withheld or revoke such a certificate of occupancy on the basis of a water quality test performed on a well pursuant to this section, except as provided in this section.

(f) (1) The local director of health may require a private well or semipublic well to be tested for arsenic, radium, uranium, radon or gross alpha emitters, when there are reasonable grounds to suspect that such contaminants are present in the groundwater. For purposes of this subsection, "reasonable grounds" means (A) the existence of a geological area known to have naturally occurring arsenic, radium, uranium, radon or gross alpha emitter deposits in the bedrock; or (B) the well is located in an area in which it is known that arsenic, radium, uranium, radon or gross alpha emitters are present in the groundwater.

(2) The local director of health may require a private well or semipublic well to be tested for pesticides, herbicides or organic chemicals when there are reasonable grounds to suspect that any such contaminants might be present in the groundwater. For purposes of this subsection, "reasonable grounds" means (A) the presence of nitrate-nitrogen in the groundwater at a concentration greater than ten milligrams per liter, or (B) that the private well or semipublic well is located on land, or in proximity to land, associated with the past or present production, storage, use or disposal of organic chemicals as



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identified in any public record.

(g) Except as provided in subsection (h) of this section, the collection of samples for determining the water quality of private wells and semipublic wells may be made only by (1) employees of a laboratory or firm certified or approved by the Department of Public Health to test drinking water, if such employees have been trained in sample collection techniques, (2) certified water operators, (3) local health departments and state employees trained in sample collection techniques, or (4) individuals with training and experience that the Department of Public Health deems sufficient.

(h) Any owner of a residential construction, including, but not limited to, a homeowner, on which a private well is located or any general contractor of a new residential construction on which a private well is located may collect samples of well water for submission to a laboratory or firm for the purposes of testing water quality pursuant to this section, provided (1) such laboratory or firm has provided instructions to said owner or general contractor on how to collect such samples, and (2) such owner or general contractor is identified to the subsequent owner on a form to be prescribed by the Department of Public Health. No regulation may prohibit or impede such collection or analysis.

(i) Any water transported in bulk by any means to a premises currently supplied by a private well or semipublic well where the water is to be used for purposes of drinking or domestic use shall be provided by a bulk water hauler licensed pursuant to section 20-278h. No bulk water hauler shall deliver water without first notifying the owner of the premises of such delivery. Bulk water hauling to a premises currently supplied by a private well or semipublic well shall be permitted only as a temporary measure to alleviate a water supply shortage.

Sec. 17. Section 19a-332 of the general statutes is repealed and the following is substituted in lieu thereof (*Effective from passage*):