



*DELAWARE HEALTH
AND SOCIAL SERVICES*
Division of Public Health

DELAWARE DIVISION OF PUBLIC HEALTH

OFFICE OF ENVIRONMENTAL HAZARDS &
TOXICOLOGY

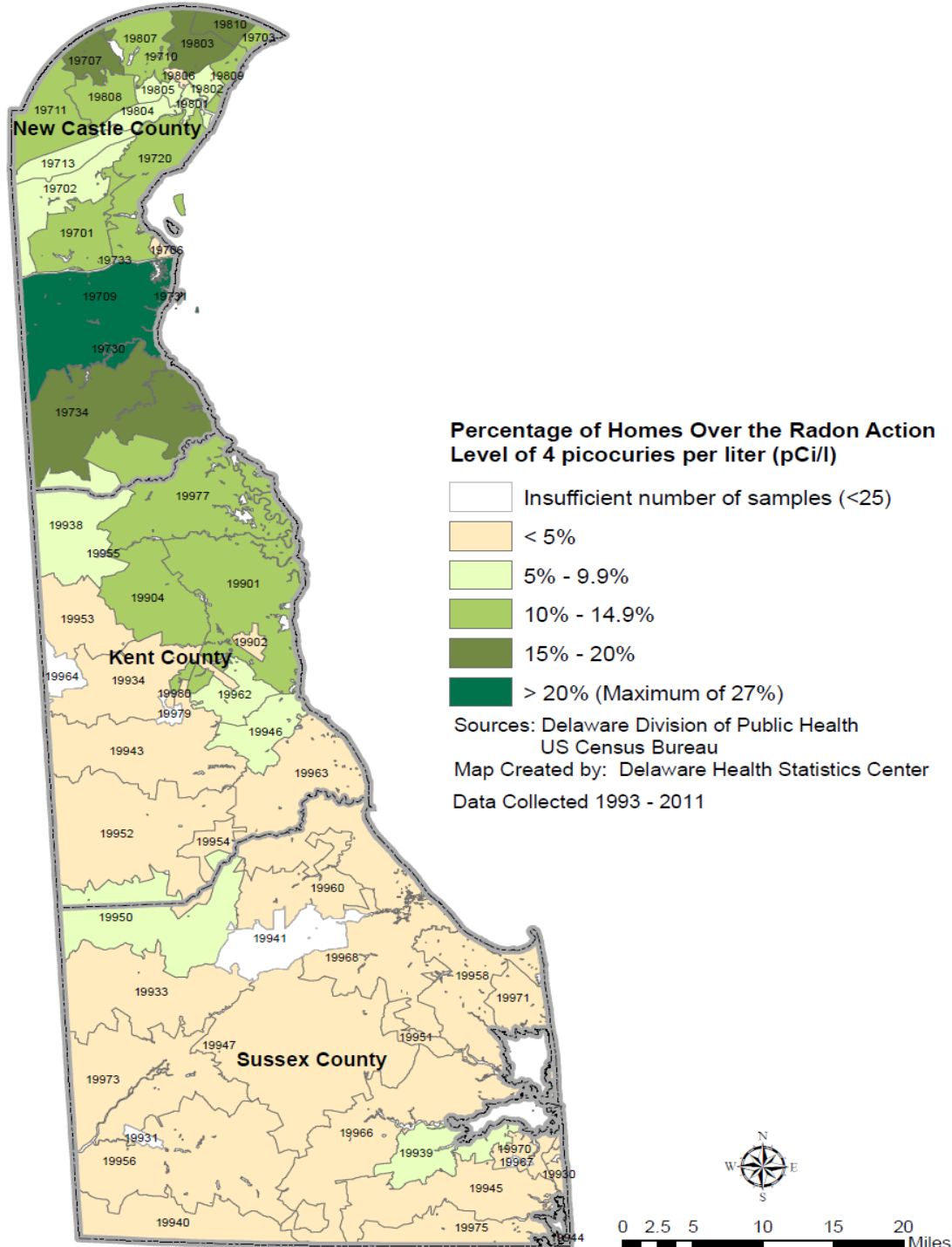
RADON PROGRAM

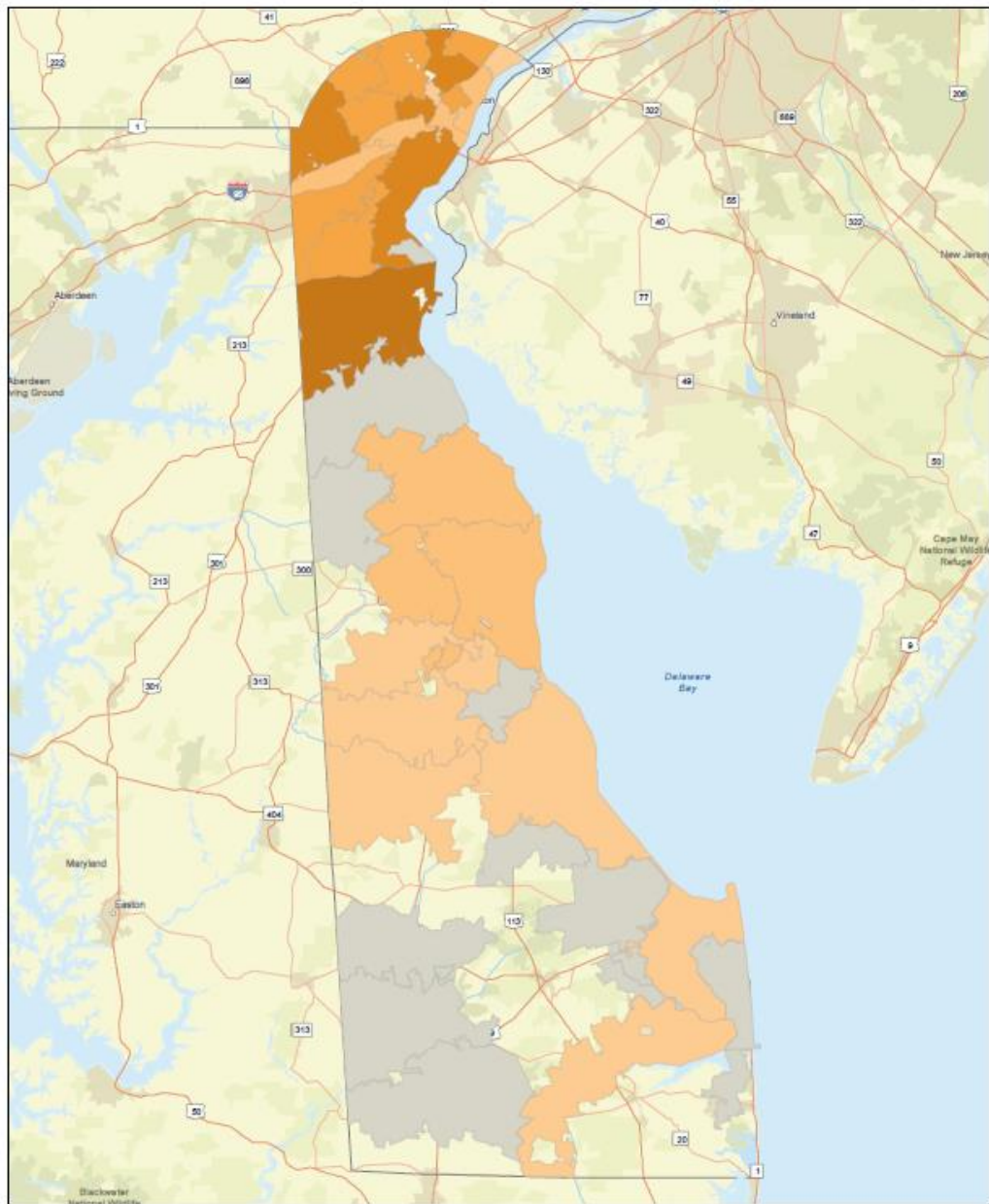
EVOLUTION OF RADON DATA IN DELAWARE 1993 – 2025

- INTRODUCTION
 - EVOLUTION OF TESTING RESULTS, MAPS, & ANALYTICAL TOOLS
 - COMPARISON OF DE RADON MAPS & NEW DATABASE, EQUIS
 - ENGAGING WITH RESIDENTS TO UTILIZE THE FREE RADON TEST KITS
- ACKNOWLEDGING CO-CONTAMINATION OF HAZARDOUS ENVIRONMENTAL SUBSTANCES
 - FUTURE GOALS TO PROTECT PUBLIC HEALTH
 - COLLABORATIVE EFFORTS AND SUPPORT



PERCENTAGE OF HOMES OVER THE RADON ACTION LEVELS OF 4 PICOCURIES PER LITER 1993 – 2011

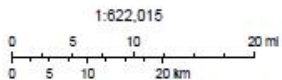




9/24/2025

Sample Count (n =)

- 1 - 5
- > 5 - 15
- > 15 - 30
- > 30 - 50
- > 50 - 75
- > 75 - 105

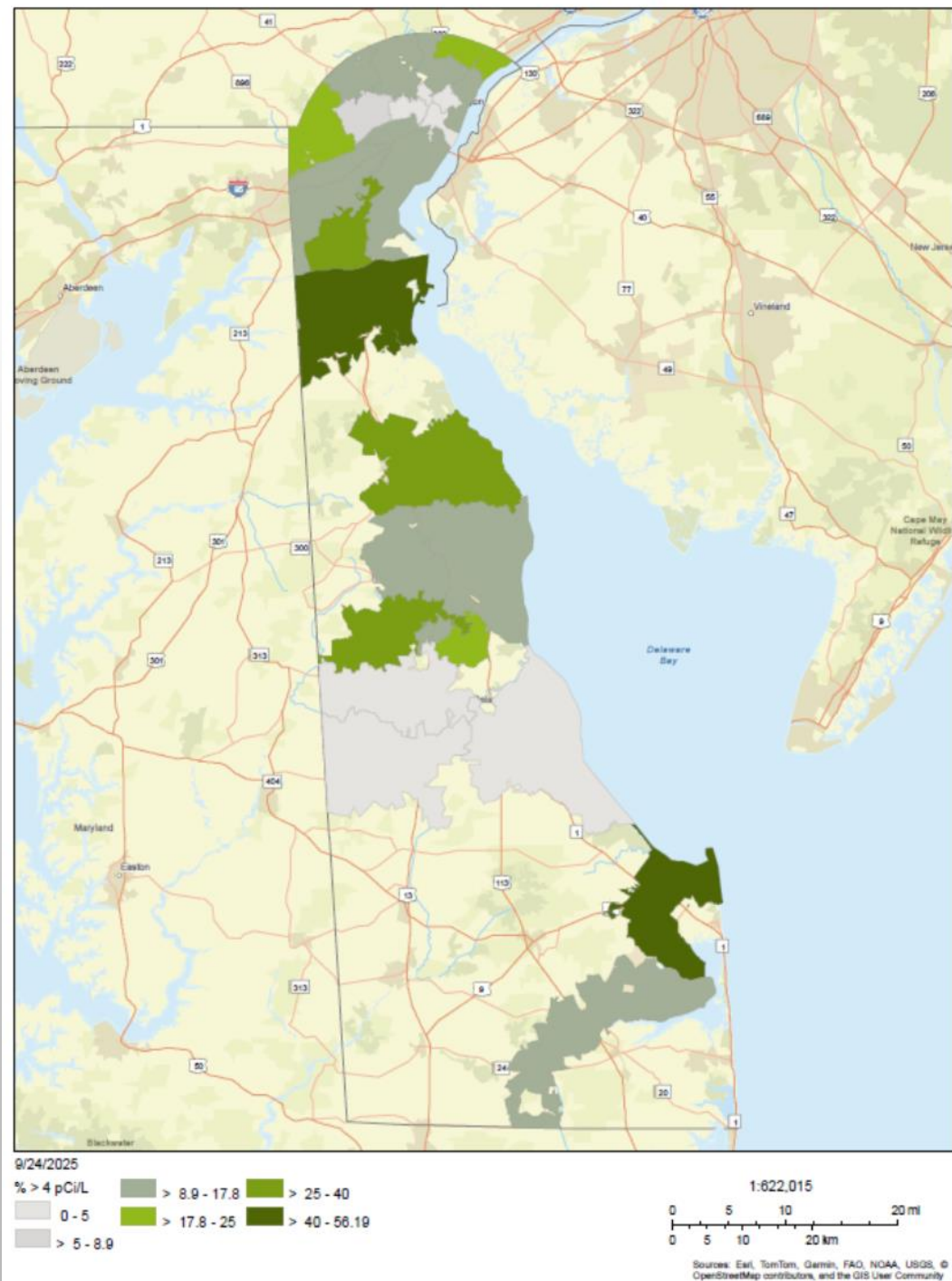
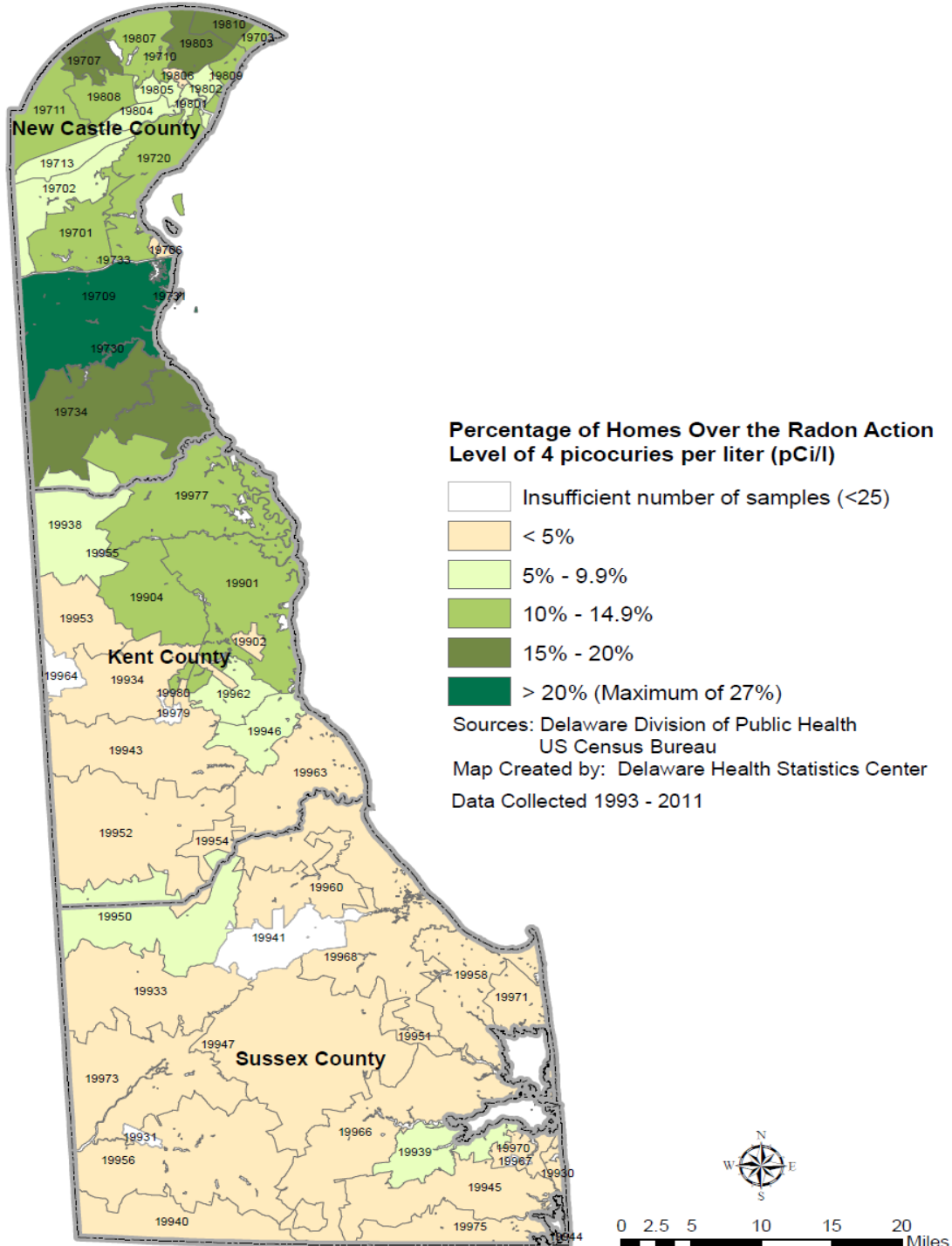


Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

PERCENTAGE OF HOMES THAT HAVE TESTED IN THE LAST TWO YEARS 2023 - 2025



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ENVIRONMENTAL QUALITY INFORMATION SYSTEM



EQulS Solutions

Environmental Data Management

EQulS is the most widely used environmental data management software solution in our industry and is widely considered to be the de facto industry standard. EQulS clients gain control of their environmental data, automate workflows for project and task management, field data collection, analytical data loading, processing, verification, and validation.

- Project planning and task management
- Field data collection tools
- IoT / Data logger integration (time series data)
- Electronic chain of custody (eCOC)
- Analytical data processing, QA/QC checks
- Reporting toolbox:
 - Hundreds of standard reports
 - Ad hoc queries and query-building tools
- Visualization tools:
 - Charts, graphs, and maps
 - EnviroInsight – data visualization software
 - API's to Esri's ArcGIS, Microsoft's Power BI, Rockworks and others

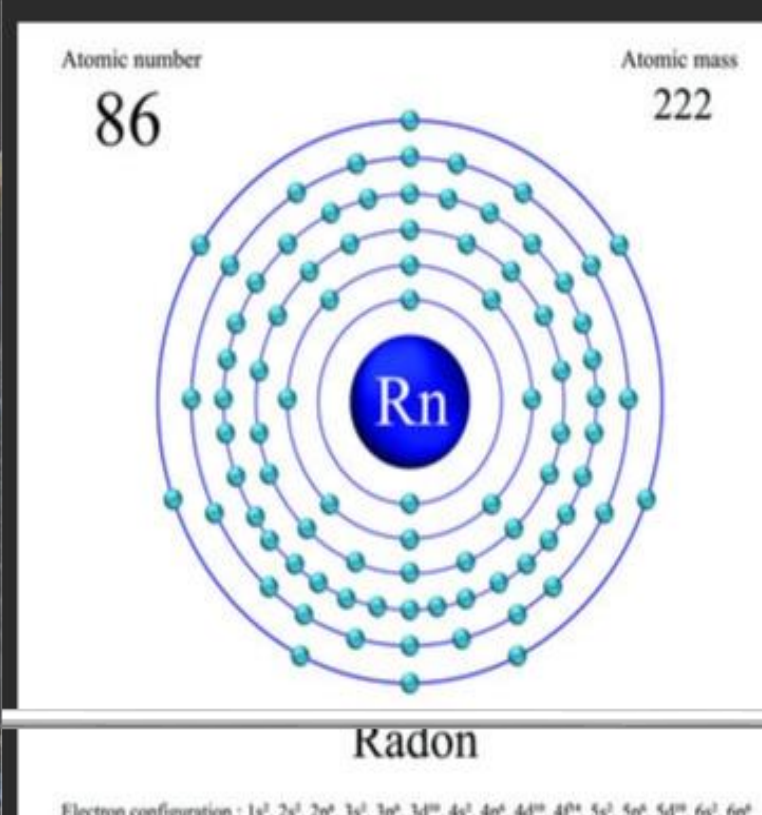
Geotechnical Data Management

EQulS Geotech is a comprehensive solution for geotechnical data collection, analysis, and reporting. This new solution modernizes and automates geotechnical data management workflows with web forms for data entry, customizable reporting templates, and geotechnical-specific workflow components. EQulS Geotech improves data quality and streamlines project workflows for large-scale geotechnical data management.

- Project planning and task management
- Field activities and data collection
- Boring log and CPT data review
- Lab assignments and testing
- Instrument data
- Data exchange formats (gINT, AGS4, DIGGS)
- Built-in analytical, visualization tools, and industry standard reports
 - Boring Logs
 - Subsurface Profile
 - Atterberg
 - Grain size, UC/UU

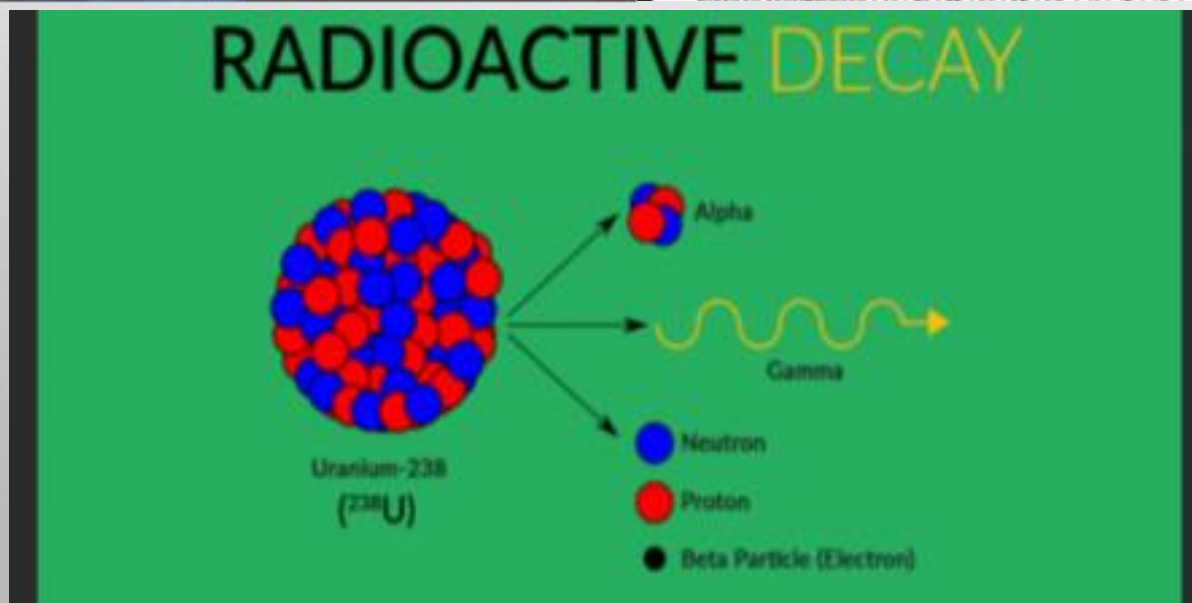


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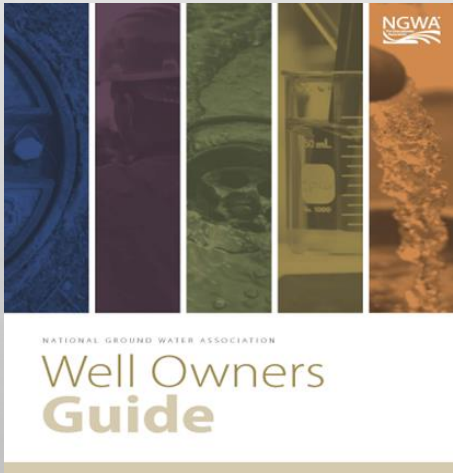
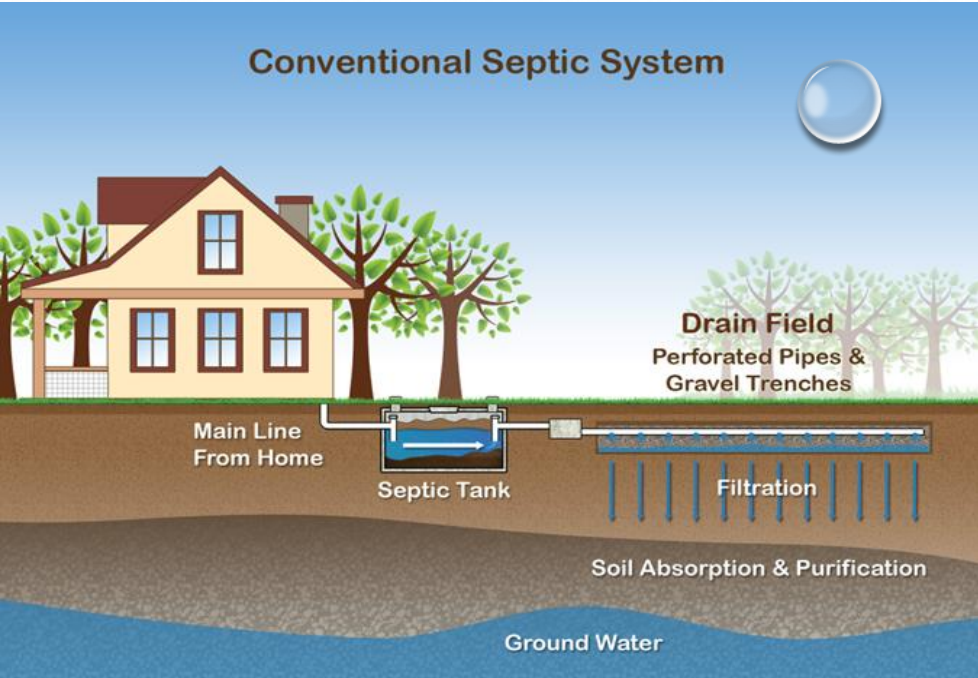
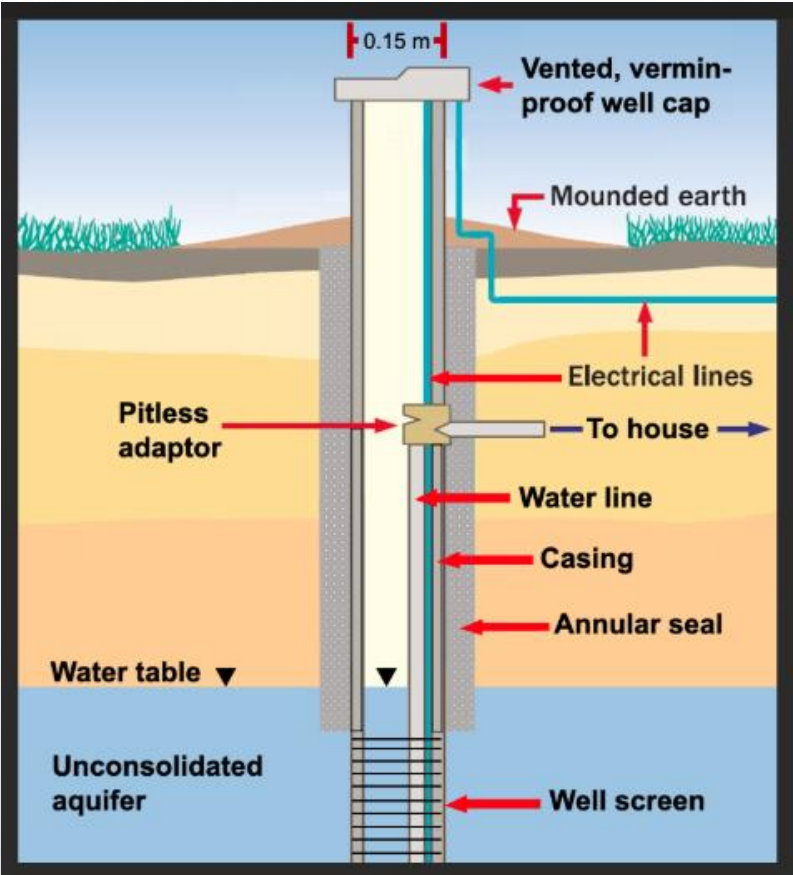
RADON IN PRIVATE WELL WATER

- CO-CONTAMINANTS TO CONSIDER BACTERIOLOGICAL AND OTHER CHEMICALS.
- INCREASE EXPOSURE RISK ASSOCIATED WITH PATHWAYS: PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS).
 - HOUSEHOLD WATER
 - AIR
 - SOIL
- RADIOACTIVE RADON DECAY PRODUCTS BEING ABSORBED BY WATER AND RELEASED DURING SHOWERS AND COOKING.
- CHEMICAL INTERACTIONS WITH ALPHA PARTICLES. ACKNOWLEDGING CHEMICAL INTERACTIONS ARE RARELY ISOLATED TO JUST ONE CONTAMINANT OF CONCERN.



MITIGATION SYSTEMS FOR PRIVATE WELL WATERS WITH ELEVATED RADON LEVELS

- GRANULAR ACTIVATED CARBON OR AERATION TOOLS.
- SCREENING FOR OTHER CONTAMINATION.
- LESS THAN 2,000 PCI/L = **NO ACTION REQUIRED**
- BETWEEN 2,000 PCI/L AND 10,000 PCI/L = RECOMMEND CHECKING THEIR AIR FOR RADON
- THEN USE BOTH RESULTS TO DETERMINE IF MITIGATION IS NEEDED.



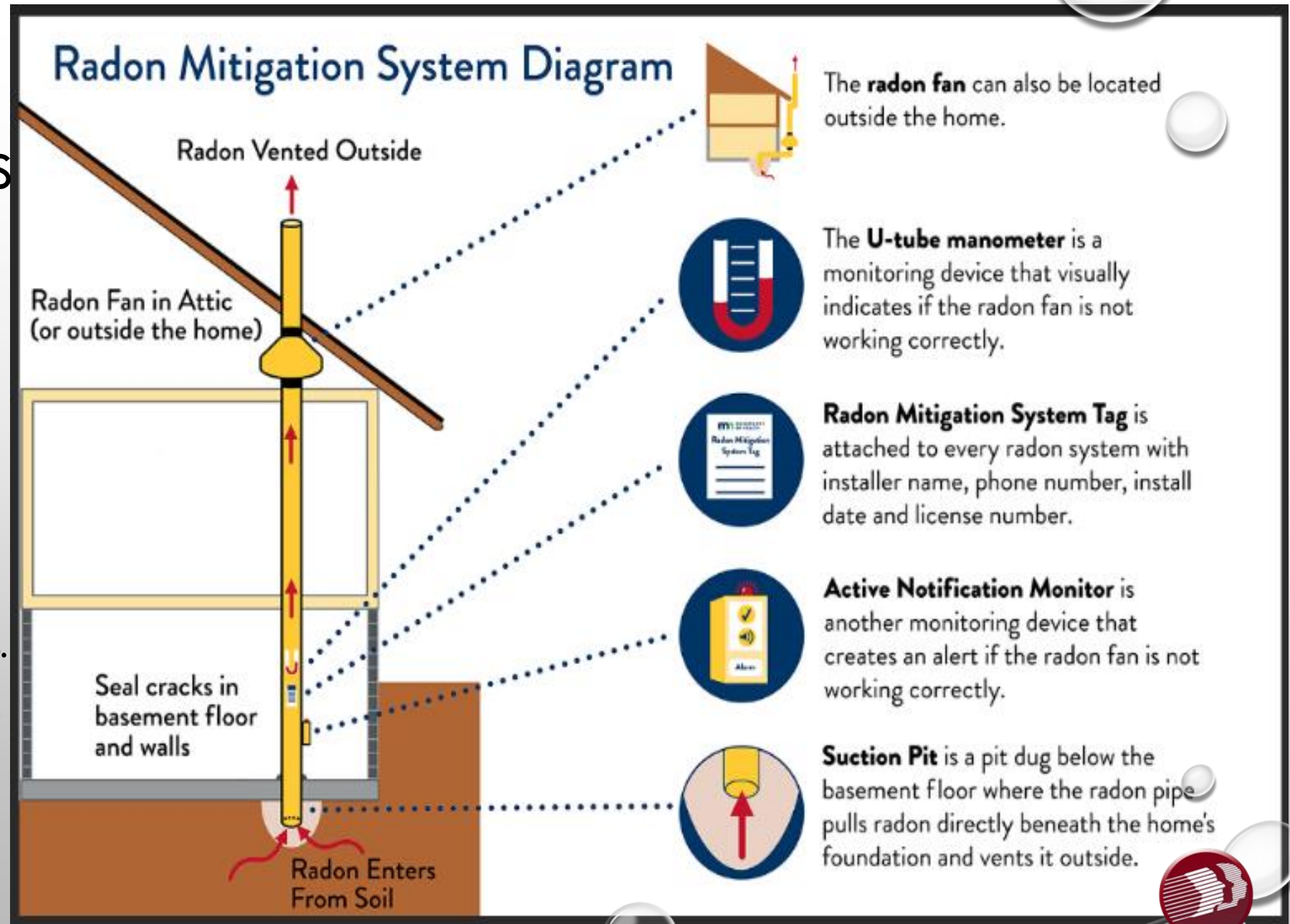
LEARNING FROM OTHER STATES

Radon Testing method	Measurement	MCL	Mitigation if levels are equal to or over
3-day test kit - Air	Pico Curies per Liter	4.0 pCi/L	Less than 2.0 pCi/L. No action required. Between 2 – 4.0 pCi/L. Action recommended.
3-month test kit - Air	Pico Curies per Liter	4.0 pCi/L	Less than 2.0 pCi/L. No action required. Between 2 – 4.0 pCi/L. Action recommended.
Private Well - Water	Pico Curies per Liter	Less than 2,000 pCi/L – no action required	Less than 2,000 pCi/L – No action required. Between 2,000 pCi/L and 10,000 pCi/L = Recommend checking their air for radon. Then use both results to determine if mitigation is needed.



MITIGATION OPTIONS & SYSTEMS IN DELAWARE

- PASSIVE MITIGATION SYSTEMS FOR HOME INDOOR AIR:
- NEW CONSTRUCTION MIGHT HAVE PASSIVE SYSTEMS.
- OLD CONSTRUCTION MIGHT HAVE OLD MITIGATION DEVICES.
- DELAWARE IS AN UNREGULATED STATE. THIS MEANS RADON MITIGATION ACTIVITIES CAN ONLY BE ENCOURAGED AND NOT ENFORCED.



EFFECTIVE COMMUNICATION STRATEGIES

- PARTNERING WITH NON-PROFIT & COMMUNITY ORGANIZATIONS
 - THE **LATIN AMERICAN COMMUNITY CENTER**
 - PUBLIC OUTREACH EVENTS, HEALTHY HOMES ASSESSMENTS, AND COMMUNICATIONS ONLINE
- UTILIZING CURRENT PARTNERSHIPS TO INCREASE AWARENESS
 - **KANSAS STATE UNIVERSITY**
 - [HTTPS://KANSASRADONPROGRAM.ORG/](https://kansasradonprogram.org/)
 - RADON HOTLINE: 1-800-693-5343
 - **SHARPWATER CULLIGAN INC. & PFAS SOLUTIONS** PROMOTING THE FREE RADON TEST KITS DURING HEALTHY HOMES ASSESSMENTS
 - **DRINKING WATER STATE REVOLVING FUND (DWSRF)**
 - **DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL (DNREC)**
- EDUCATIONAL OUTREACH AND SPEAKING EVENTS
- DIGITAL RESOURCES:

- [INSIDE HEALTHY HOMES – RADON – DELAWARE HEALTH AND SOCIAL SERVICES – STATE OF DELAWARE – DIVISION OF PUBLIC HEALTH](#)



FUTURE DE RADON PROGRAM GOALS

INCREASE TESTING, AWARENESS, AND OUTREACH CONSISTENTLY.

- **PROMOTE RADON TEST KITS:** <https://states.aelabs.com/#/DE>
 - *ZIP CODES THAT DO NOT COMMONLY TEST.*
 - *ZIP CODES THAT DO TEST AND HAVE HIGH AVERAGE LEVELS.*
- **PRODUCE EDUCATIONAL MATERIAL FOR OUTREACH EVENTS.**
- **MEET PEOPLE WHERE THEY ARE.**
- **AIM TO REDUCE EXPOSURE TO HARMFUL TOXINS ON A MULTITUDE OF FRONTS BY COLLABORATING WITH OTHER HEALTHY HOMES ORGANIZATIONS.**
- **PROVIDE OPTIONS TO IMPROVE THE INDOOR ECOSYSTEM TO BE AS ROBUST AND HEALTHY AS POSSIBLE.**
 - *FILTERS, HEALTHY PRODUCTS, AND REASONABLE APPROACHES TO A HEALTHY LIFESTYLE.*
- **HEALTH INSURANCE COVER LUNG CANCER SCREENING FOR RESIDENTS WITH HIGH LEVELS OF RADON IN THEIR HOMES OR PREVIOUS EXPOSURE.**



THANK YOU



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RADON & HEALTHY HOMES PROGRAMS



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