VDH VIRGINIA DEPARTMENT OF HEALTH

Training the Regulatory Workforce

Anne G. Powell
Environmental Health Coordinator
Virginia Department of Health

The materials presented do NOT reflect the opinions of NOWRA.



OVERVIEW

1. Background Information
2. Modernization of Training
3. Efforts in Cost Savings
4. Methods for Inclusivity
5. Conclusion

1. BACKGROUND

a. How does the Virginia Department of Health operate?

b. What's the deal with VDH's Onsite Sewage Program?

c. Who is this "Anne Powell?"

a. How does the Virginia Department of Health operate?



Vision

Become the healthiest state in the nation.



Mission

To protect the health and promote the well-being of all people in Virginia.



Core Values

Our culture values service, equity and making data-informed decisions.



State Health Commissioner

1. Chief Operating Operator
2. Chief Financial Operator
3. **Community Health Services**
4. Chief Information Officer
5. Governmental and Regulatory Affairs
6. **Population Health and Preparedness**

LOCAL HEALTH DISTRICTS

OFFICE OF ENVR HEALTH SERVICES

COMMUNITY HEALTH SERVICES

35 local health districts throughout Virginia

Structured similarly with the following programs:

- Human Resources
- Clinical Services
- Women, Infants, and Children
- **Environmental Health**
- Epidemiology
- Business Operations

WHAT IS ENVIRONMENTAL HEALTH?

- **Onsite Sewage**
- Food Safety
- Grade A Milk
- Shellfish Safety
- **Private Wells**
- Rabies
- Marinas
- Healthy Swimming

What ISN'T Envr. Health?

- Toxicology
- Hotels/Lodging
- Campgrounds / Summer Camps
- Migrant Labor Camps
- Waterborne Hazards
- Bedding and Upholstery
- **Rainwater Harvesting**

ONSITE SEWAGE

PRIVATE WELLS

RAINWATER HARVESTING

PERMITTING
INSPECTIONS
COMPLAINTS

FOIA REQUESTS
ENFORCEMENT
PUBLIC OUTREACH

b. What's the deal with VDH's Onsite Sewage Program?

2006 – Reengineering Report for Business Processes

2016 – HB 558 shifts evaluation and design services to private sector

2018 – Applications must be accompanied by supporting work from private sector consultant

- Means Testing
- Hardship Guidelines

Based on Federal Poverty Guidelines (FPG) for Household

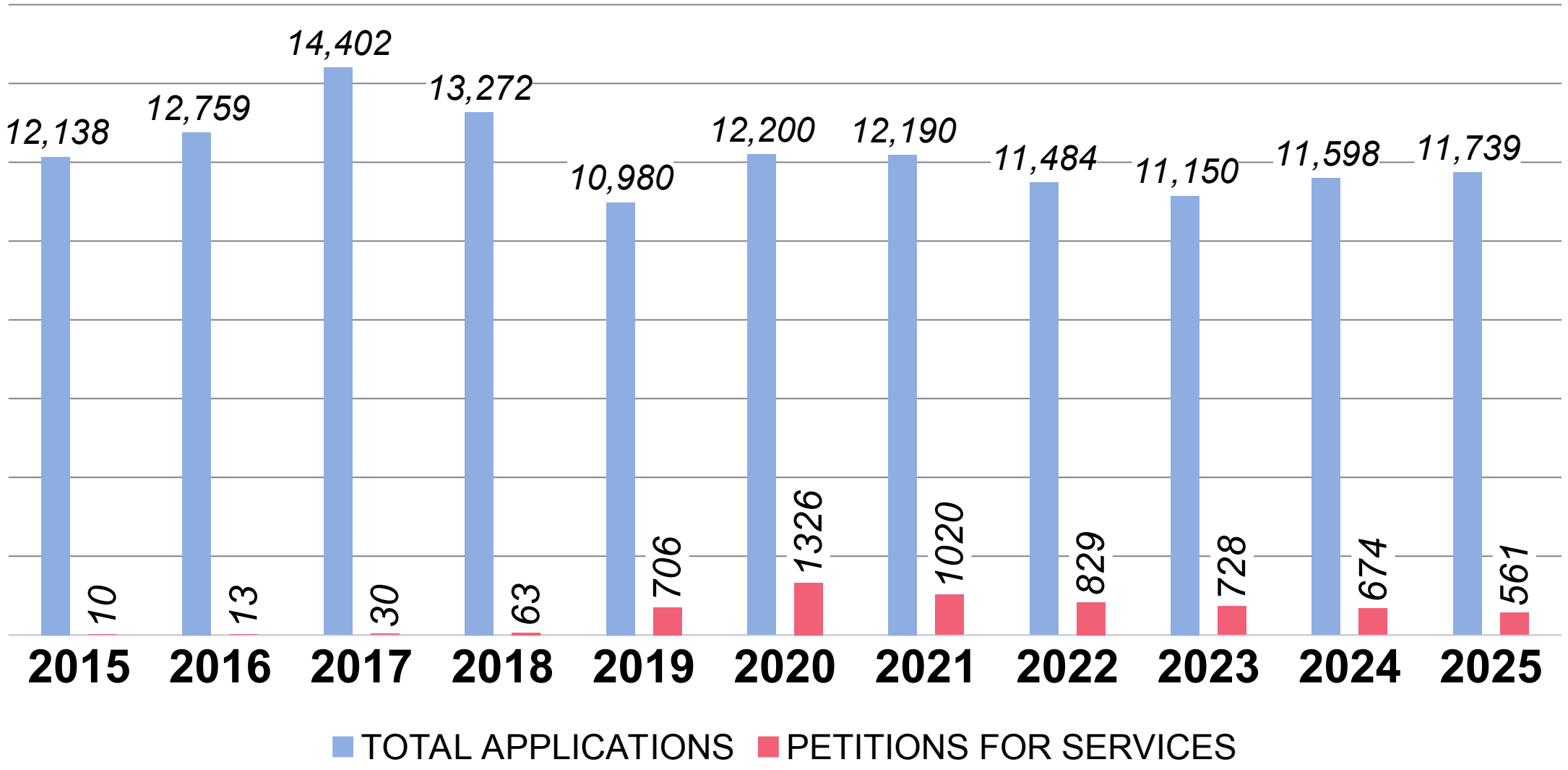
Based on:
(i) Application Type w/ FPG
(ii) Availability of Service Providers

Private Sector Service Providers

Onsite Soil Evaluators and Professional Engineers

Number of Applications	Number of Service Providers
>100	30
50 to 100	44
10 to 49	84
<10	145

Total Applications vs. Petitions for VDH Services



POPULATION HEALTH AND PREPAREDNESS

OFFICE OF ENVIRONMENTAL HEALTH SERVICES

Division of Food and General Services

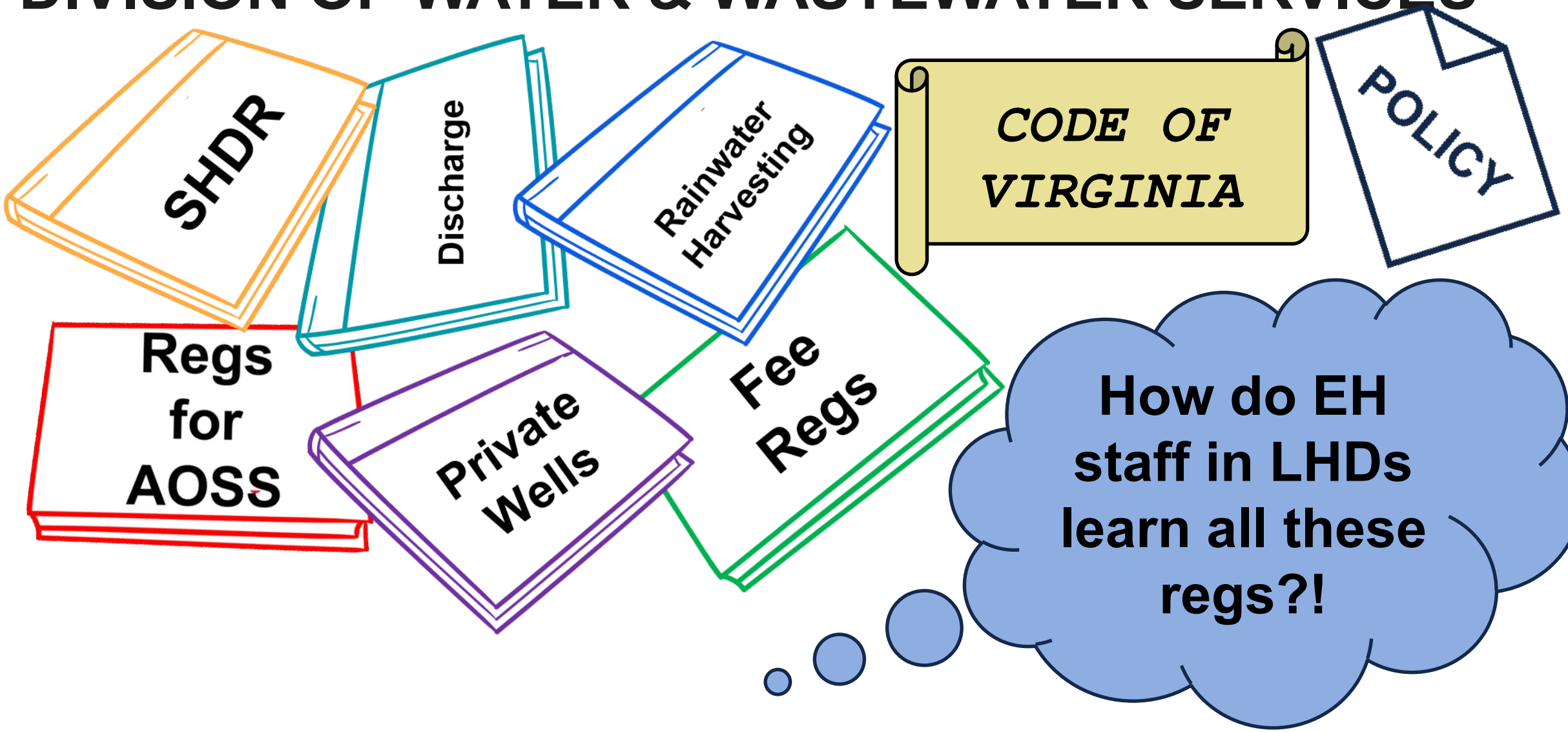
Division of Onsite Water and Wastewater Services

Division of Shellfish Safety & Waterborne Hazards

Division of Data Mgmt. & Process Improvement

Division of Legal Services

DIVISION OF WATER & WASTEWATER SERVICES



DIVISION OF WATER & WASTEWATER SERVICES

- Orientation to EH
- Onsite Water and Wastewater for New EHSs
- Advanced Soils
- EHTS Training Program

DIVISION OF WATER & WASTEWATER SERVICES

Onsite Water and Wastewater for New EHSs

Geology, Well, and Regulations

1. Virginia Geology and Wells
2. Well Components and Classification
3. Private Well Regulations

Introduction to Soils

1. Soil Horizons
2. Soil Structure & Consistence
3. Soil Color
4. Soil Texture

DIVISION OF WATER & WASTEWATER SERVICES

Onsite Water and Wastewater for New EHSs

Onsite Sewage Systems

1. To-Scale Drawings
2. Basic Skills Camp
3. Installing & Inspecting a COSS
4. Absorption Area Design
5. Site Development



6. Administering the Regulations
6. Basic Geometry for Pumps
6. Design Camp 1
6. Soils Week
6. WW Characterization
6. Design Camp 2

c. Who is Anne Powell?

Henrico VIRGINIA



- she/her pronouns
- BS in Environmental Science
- Started with VDH in 2008
- EHS in LHDs until 2019

BRIDGEWATER COLLEGE
Bridgewater, Virginia

- VDH Environmental Health Coordinator
- Member of VOWRA Board of Directors
- Master Alternative Onsite Soil Evaluator



#1 Auntie







Furry Friends

2. MODERNIZATION

a. Self-Guided eLearning Modules

b. Exercises and Training Materials

c. Matching Current Job Duties

d. After-Action Efforts

a. SELF-GUIDED eLEARNING MODULES

Onsite Water and Wastewater for New EHSs

Six 3-hr **LIVE** webinars
Four week-long IN-PERSON sessions

13 ~1-hr **SELF-GUIDED** eLearning
Four week-long IN-PERSON sessions

- Created in Articulate
- Required as trainees work through program
- Accessible for all staff for Continuing Ed and refresher

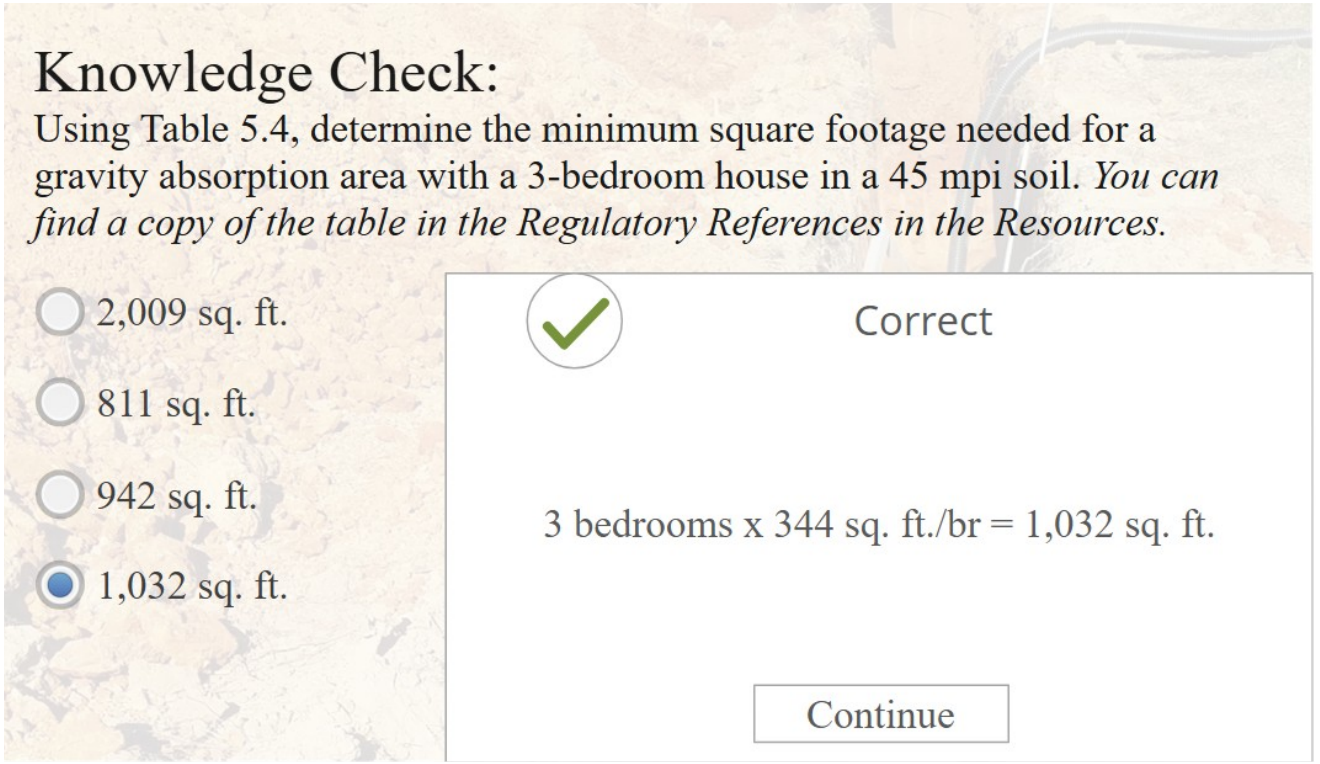


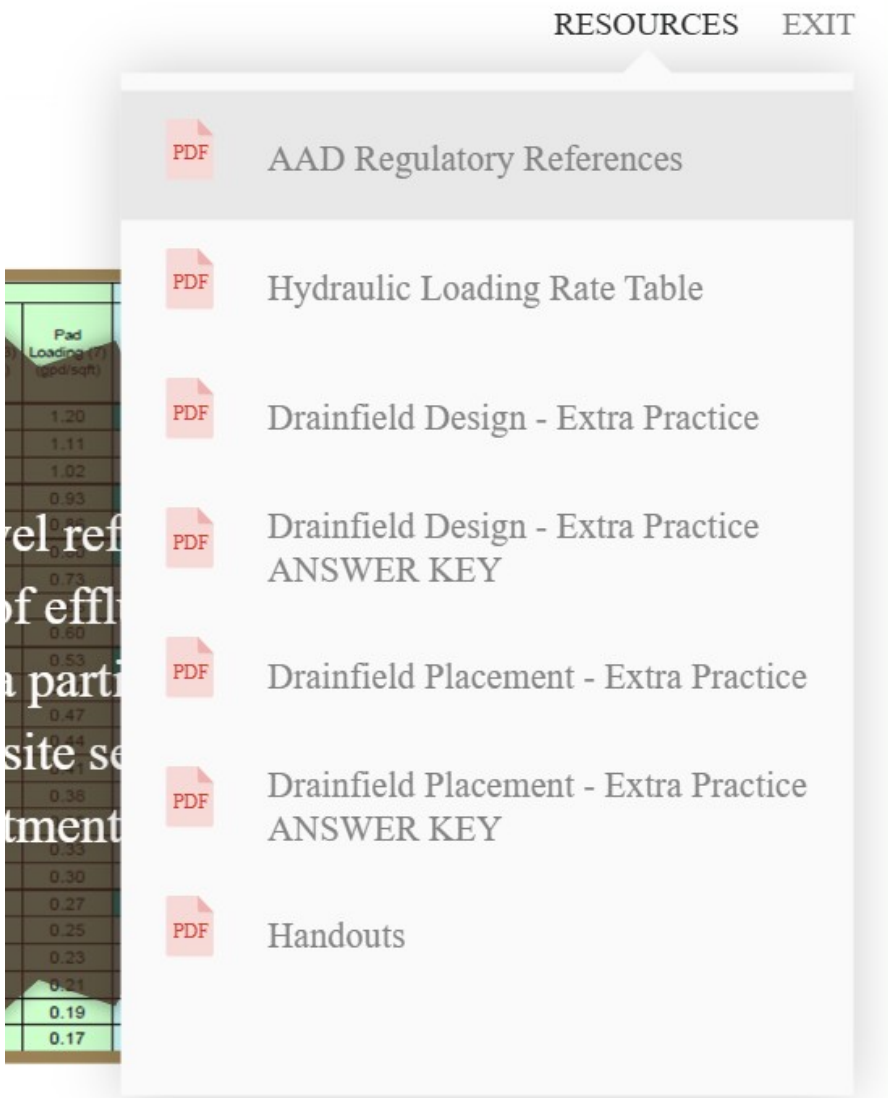
Click the active buttons to learn more about absorption area design.

- What is an absorption area? ☑
- How Big
- How Deep
- How Wide
- Let's design an absorption area
- Drainfield Geometry
- Drainfield Considerations
- Practice center-to-center spacing
- Practice installation depth
- Practice separation distances

Knowledge Checks

- Strategically placed throughout modules
- Answers explained





Resources

- Handouts
- Extra Practice
- Regulations
- Quick References

a. SELF-GUIDED eLEARNING MODULES

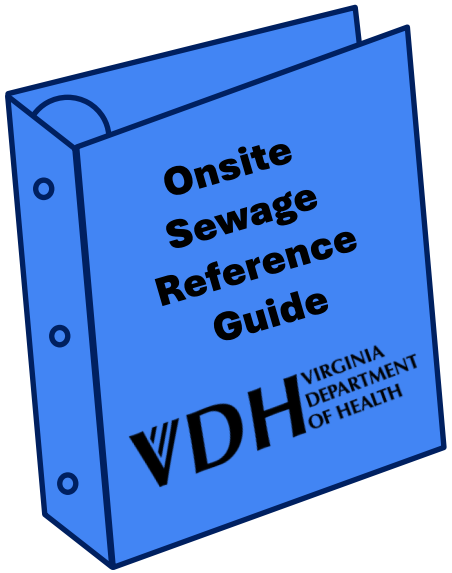
EHTS Training Program

Four **LIVE** webinars
Prerequisite Readings
Homework Assignments

~13 **SELF-GUIDED** eLearning modules
Attend Virginia Tech WWTP Operator Short School

b. EXERCISES AND MATERIALS

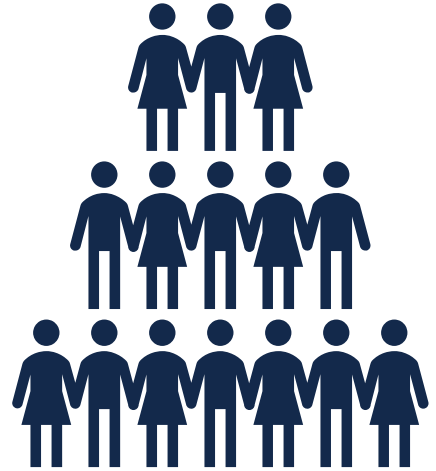
Reference Binders



1. Quick References and Calculations
2. Regulations – SHDR, Wells, AOSS, and DPOR
3. Additional Space for Handouts, etc.

b. EXERCISES AND MATERIALS

Small Group Exercises



1. Mock Sanitary Survey
2. Determining Contour
3. Determining Slope
4. Well Area Triangulation



b. EXERCISES AND MATERIALS

Refresh Training Materials

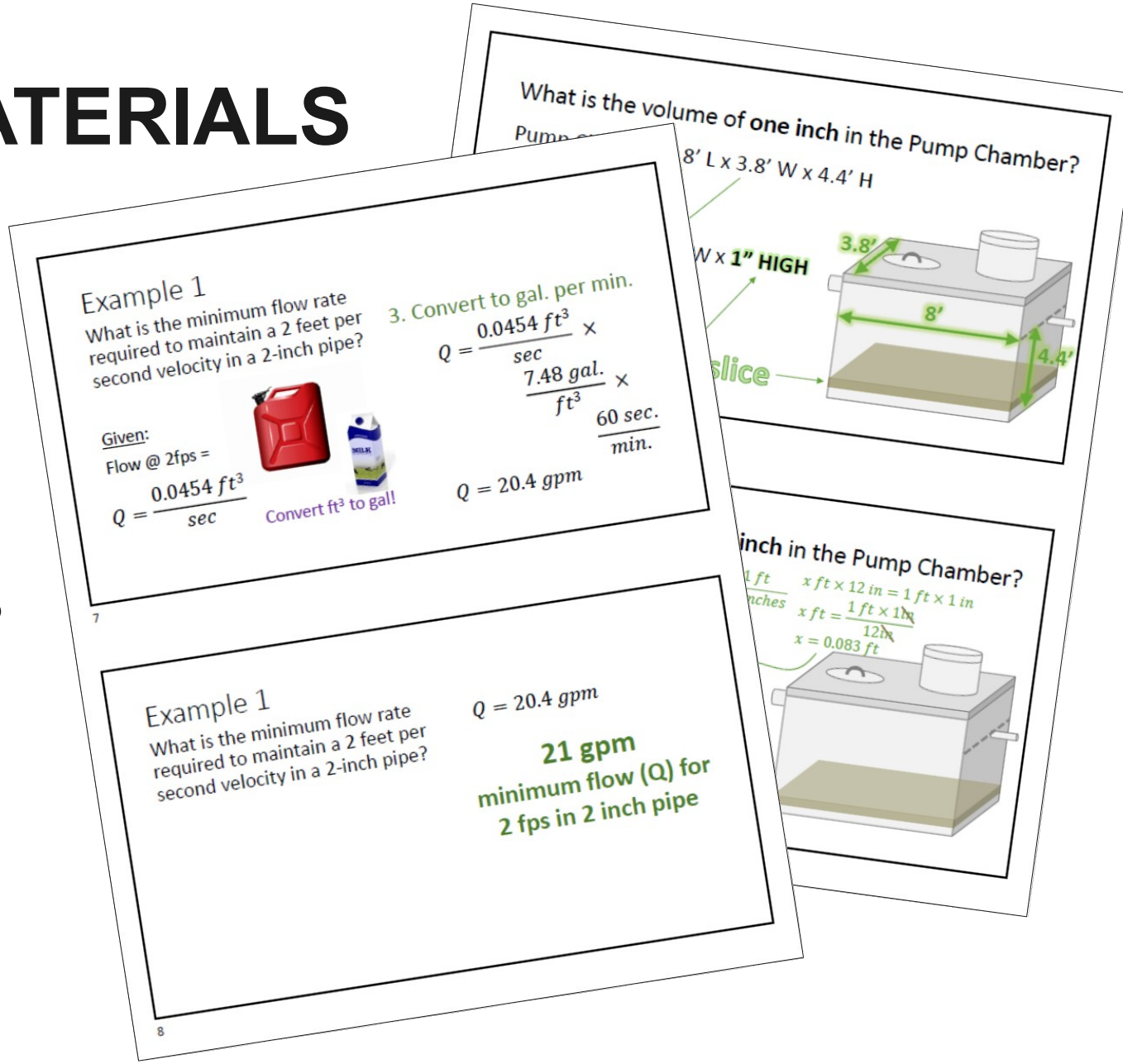
1. Presentations
2. Handouts
3. Worksheets



b. EXERCISES AND MATERIALS

Handouts!

1. 2 slides per page
2. Step-by-Step Calculations
3. Photos and Diagrams



c. MATCHING CURRENT JOB DUTIES

Transition of Services to Private Sector

VDH field work is limited.





Soil evaluations more complicated.



c. MATCHING CURRENT JOB DUTIES

Transition of Services to Private Sector

OEHS instructors initiate a one-day visit with each trainee in their local health districts before training begins.



c. MATCHING CURRENT JOB DUTIES

Enforcement

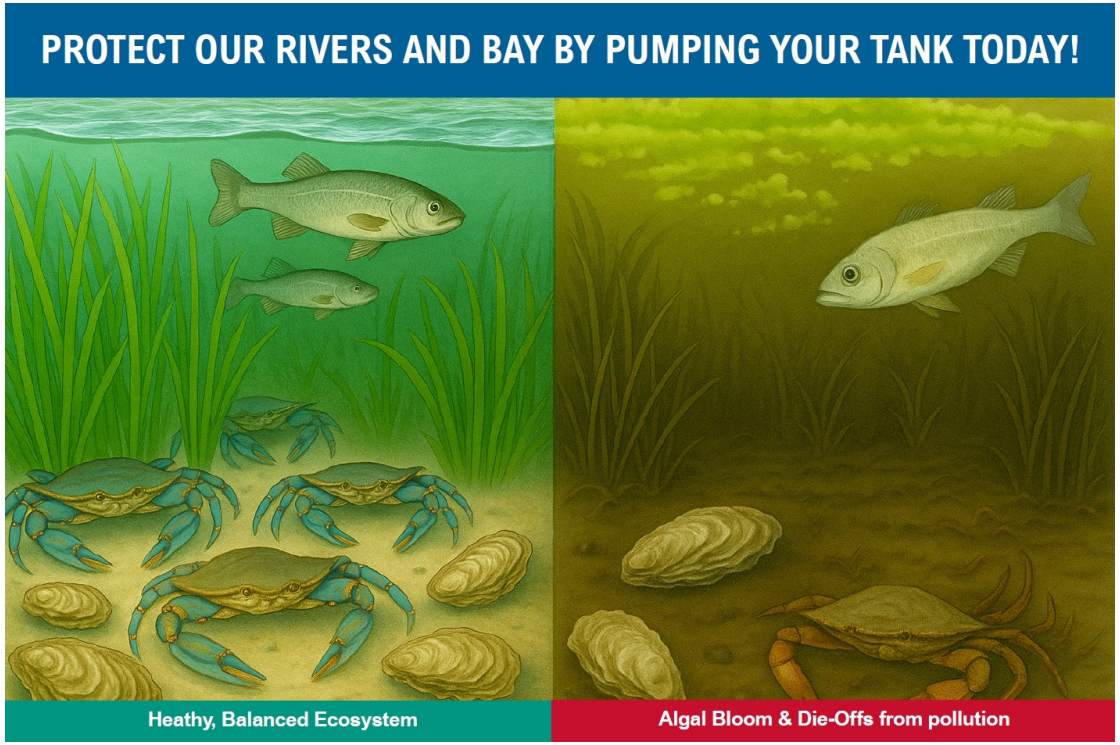






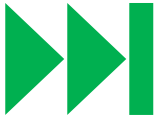
c. MATCHING CURRENT JOB DUTIES

Public Outreach





c. MATCHING CURRENT JOB DUTIES



Advanced Soils

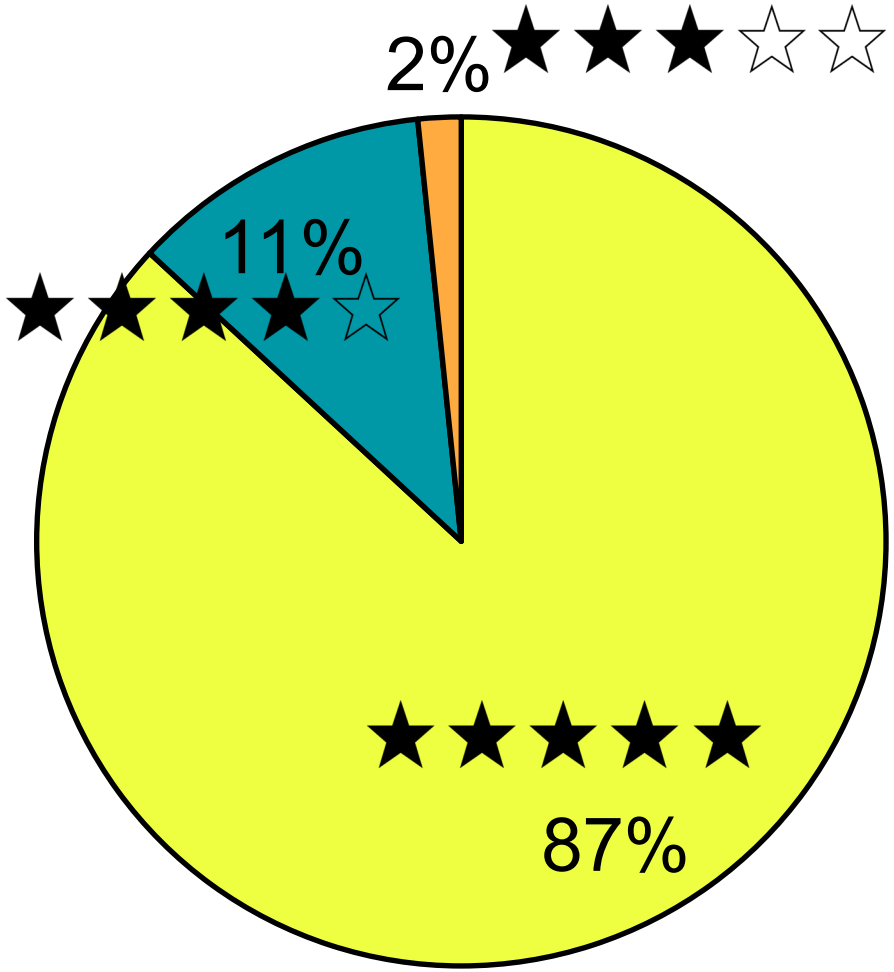
- Offered biannually (Spring and Fall) across Virginia
- Classroom in AM; field work in PM
- Held at Virginia Tech Agricultural Research & Extension Centers (AREC)
- VT Cooperative Extension and VDH instructors

d. AFTER-ACTION EFFORTS

Trainee feedback is invaluable.

Feedback requested:

1. ***Overall Training Program***
2. ***eLearning Modules***
3. ***In-Person Sessions***



d. AFTER-ACTION EFFORTS

Feedback collected electronically after each session.

What was most helpful and what were the strong points of the training?
I found this training to be a good combination of classroom learning, field work, and group work. We turned in assignments daily and received feedback daily.
The most helpful was being able to design our own conventional system out in the field and being able to replicate it on paper.
Great cadre of instructors.
Working as a team was really helpful and made the experience less overwhelming.
The field work and practice math problems for pump calculations were the most helpful.
Efficient time management and quality training.

d. AFTER-ACTION EFFORTS

Feedback collected electronically after each session.

What was least helpful and what do we need to add, remove, or change?
Different versions of practice questions. When I taught public school, I had my students write their own questions to help them study.
I think some of the presentations could have been eLearning, but most were beneficial in person.
Maybe add walking trainees through a Level 2 review.
Make sure calculations are shown and explained step-by-step.

d. AFTER-ACTION EFFORTS

Summary of feedback provided to instructors.





Hot Wash meeting held within 30 days.

d. AFTER-ACTION EFFORTS

Take it seriously.



Make the changes.



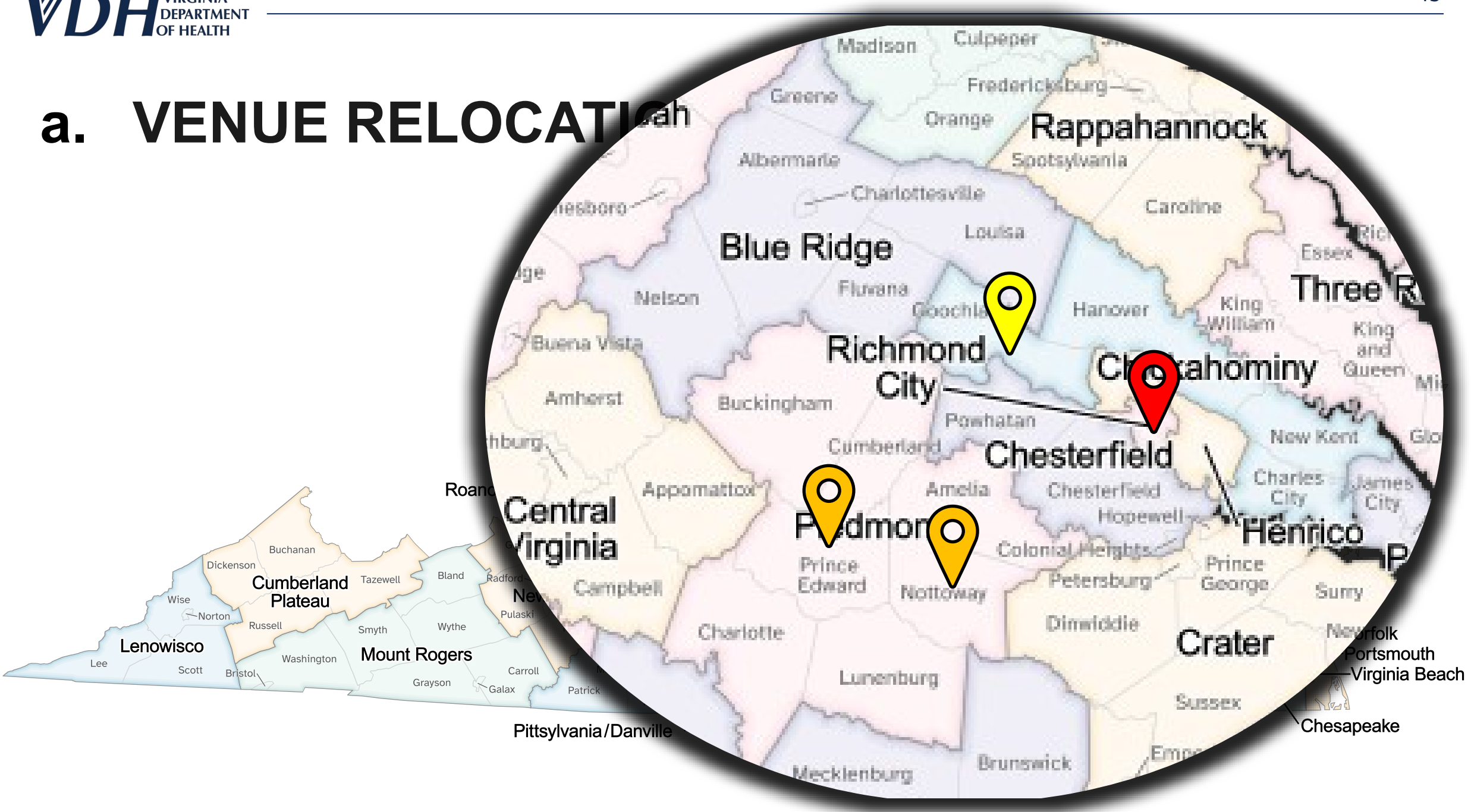
3. COST SAVINGS

a. Venue Relocation

b. Virtual: Self-Guided vs. Live

c. Collaborations

a. VENUE RELOCATIO



Venue Cost

former facility 

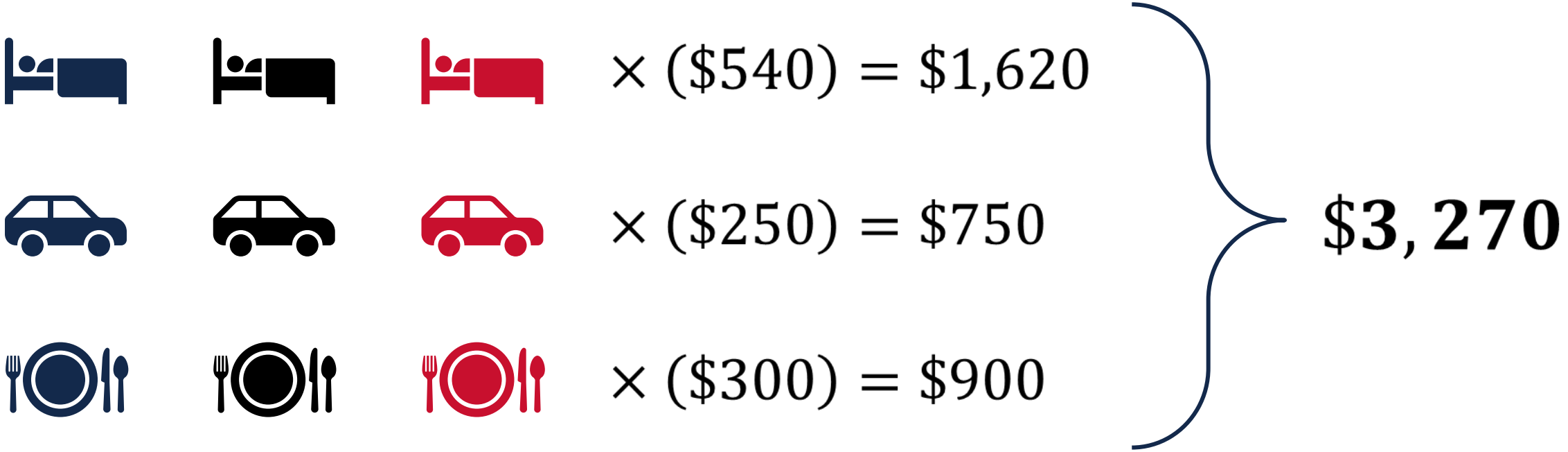
$2,500 *annually*

vs.

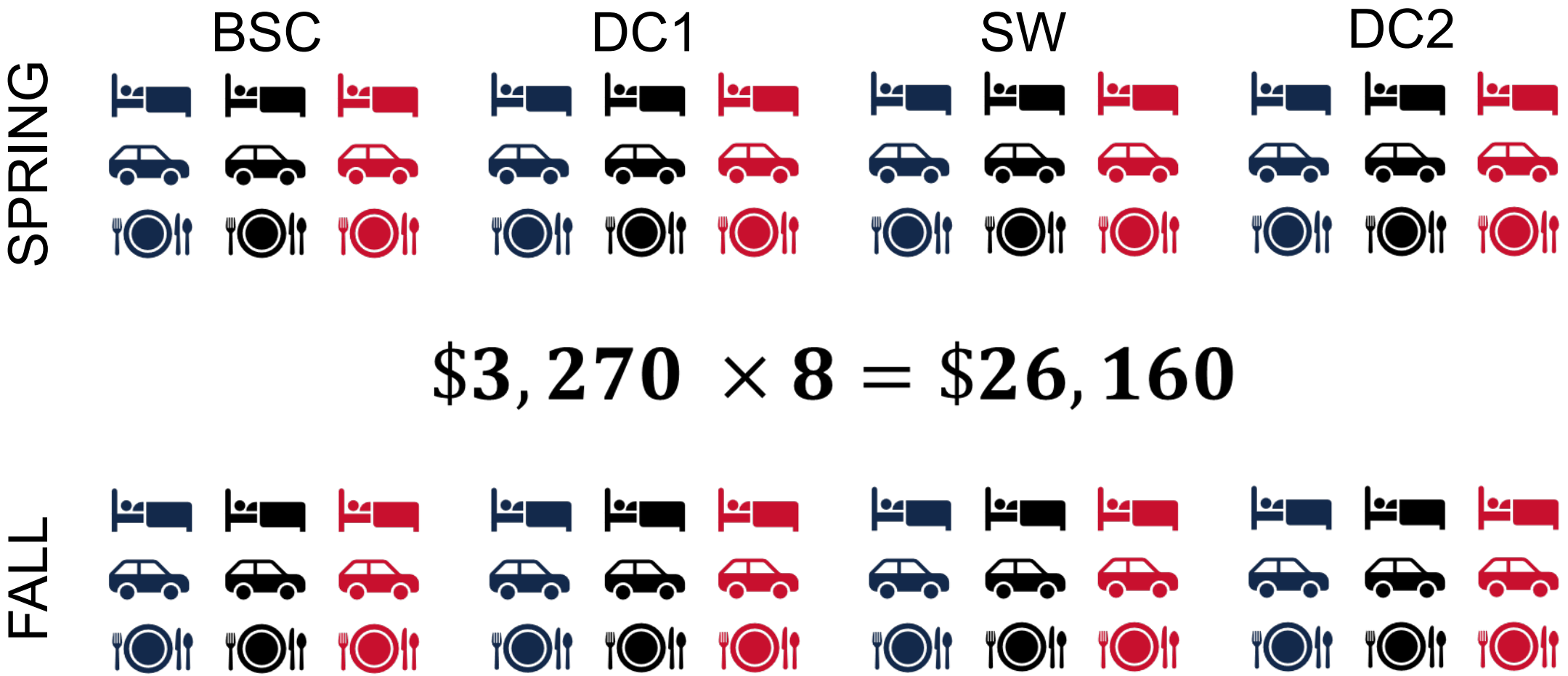
new facility 

$2,700 *annually*

Previous Travel Cost for Instructors

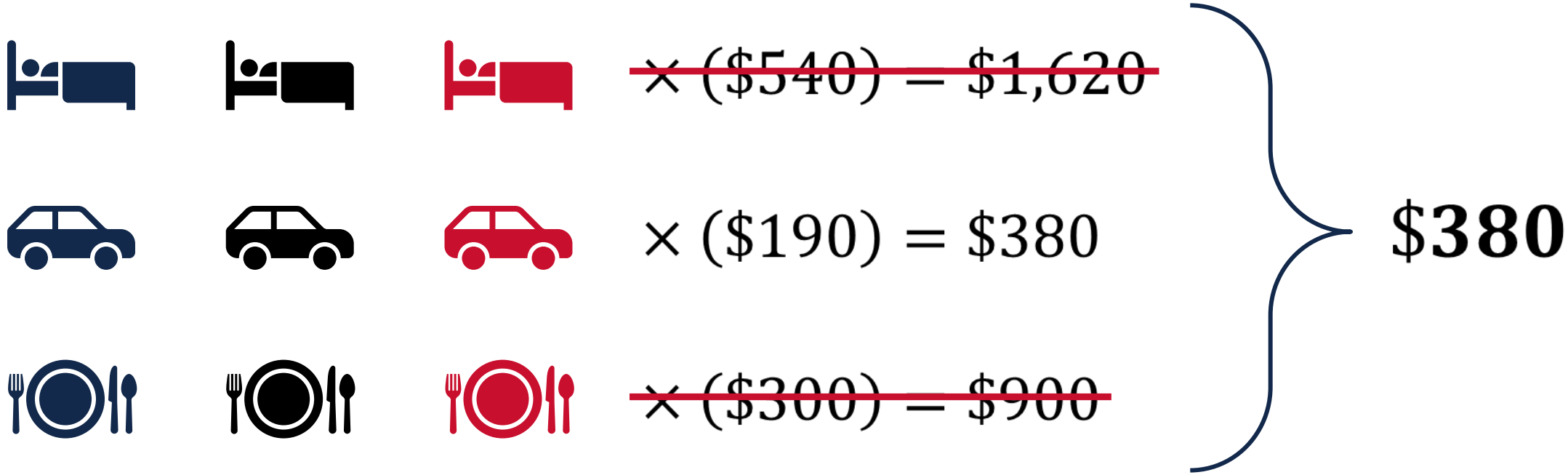


Previous Travel Cost for Instructors



$$\$3,270 \times 8 = \$26,160$$

Current Travel Cost for Instructors



Current Travel Cost for Instructors

SPRING

BSC DC1 SW DC2



$$\$380 \times 8 = \$3,040$$

FALL

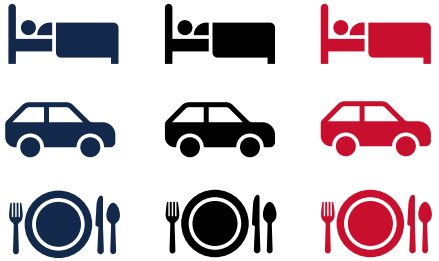


Travel Cost for Instructors

former facility



$2,500 *annually*



$26,160

$28,660

new facility



$2,700 *annually*



$3,040

$5,740

b. VIRTUAL TRAINING: Self-Guided vs. Live

SPRING

3-hr LIVE webinar

X 6 sessions = 18 hours

FALL

3-hr LIVE webinar

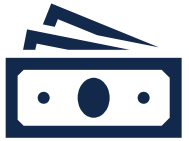
X 6 sessions = 18 hours

36 hours annually





~$1,476 annually



b. VIRTUAL TRAINING: Self-Guided vs. Live

13, 1-hr SELF-GUIDED eLearning modules

- Five instructors shared the workload and peer reviewed.
- Created in Articulate by our “training specialist.”
- Approx. two years to complete and publish.
- Accessible for all staff for continuing ed and refresher

c. COLLABORATIONS

Virginia Tech
School of Plant and Environmental Sciences

Virginia Cooperative Extension

Virginia Department of Forestry

4. INCLUSIVITY

a. Lead with Grace

b. Instructor-to-Trainee Ratio

c. No More Power Dynamic

Change approach to meet trainee needs.

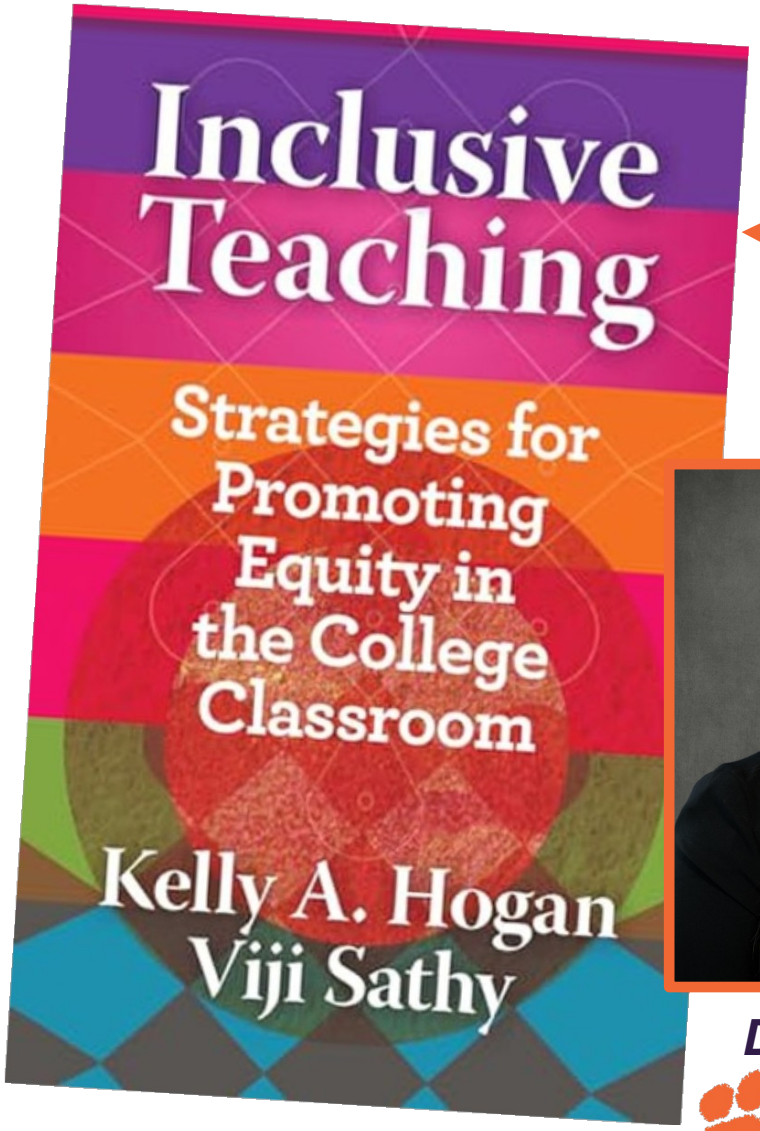
Structure – before, during, & after class

RESPECT.

Icebreakers, ew.

Communication.

Think. Pair. Share.





DR. LIZ BOYD

College of EDUCATION

a. LEAD WITH GRACE

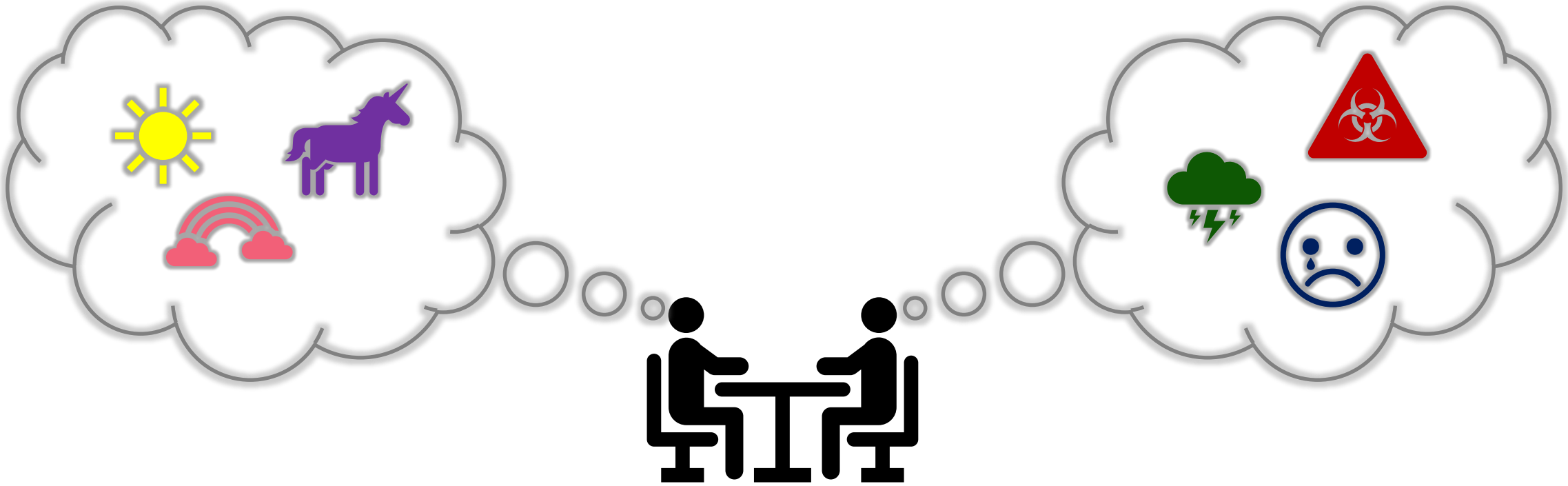
Meet the trainees where they are.

I've sat in your chair.



a. LEAD WITH GRACE

Field partners vary each day.



a. LEAD WITH GRACE

www.pronouns.org

"the act of making an assumption (even if correct) sends a potentially harmful message"

"Using someone's correct personal pronouns is a way to respect them and create an inclusive environment, just as using a person's name can be a way to respect them."

"it can be offensive or harassing to guess at someone's pronouns and refer to them using those pronouns if that is not how that person wants to be known."

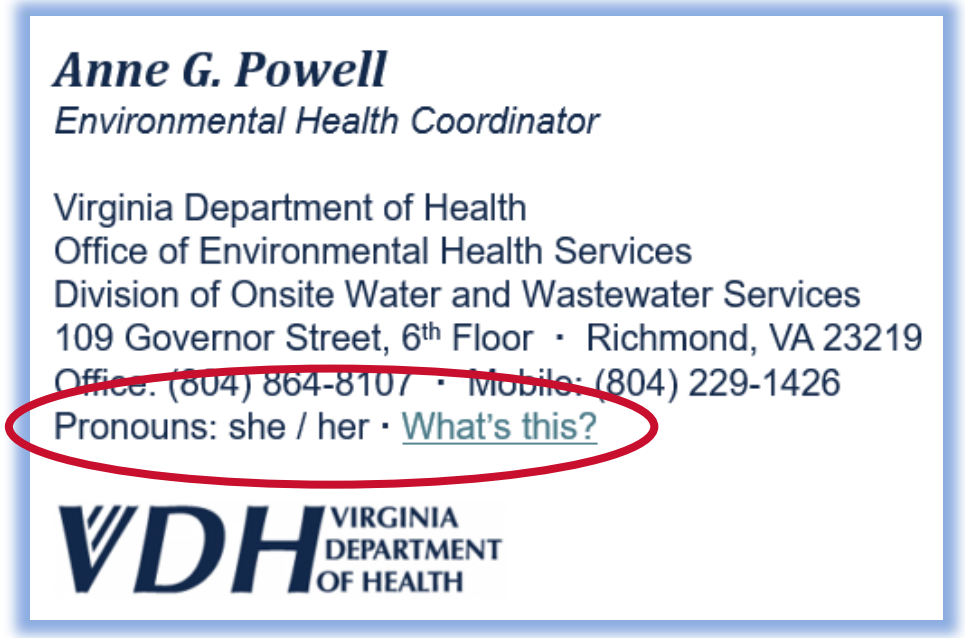
a. LEAD WITH GRACE

Name Tents in Classroom



Addressing your preferred pronouns is always an option!

Email Signatures

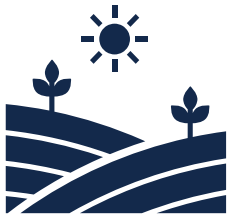


b. INSTRUCTOR-TO-TRAINEE RATIO

roster maximum = 14 trainees
Manageable group size. Positive interactions with peers.



3-4 instructors per session
Teaching styles. Oversee small groups. Multi-tasking.



7-8 field sites available
Variety of groups/partners. Variety of sites.

c. NO MORE POWER DYNAMIC

Successful completion is the goal.

How will each trainee arrive there?



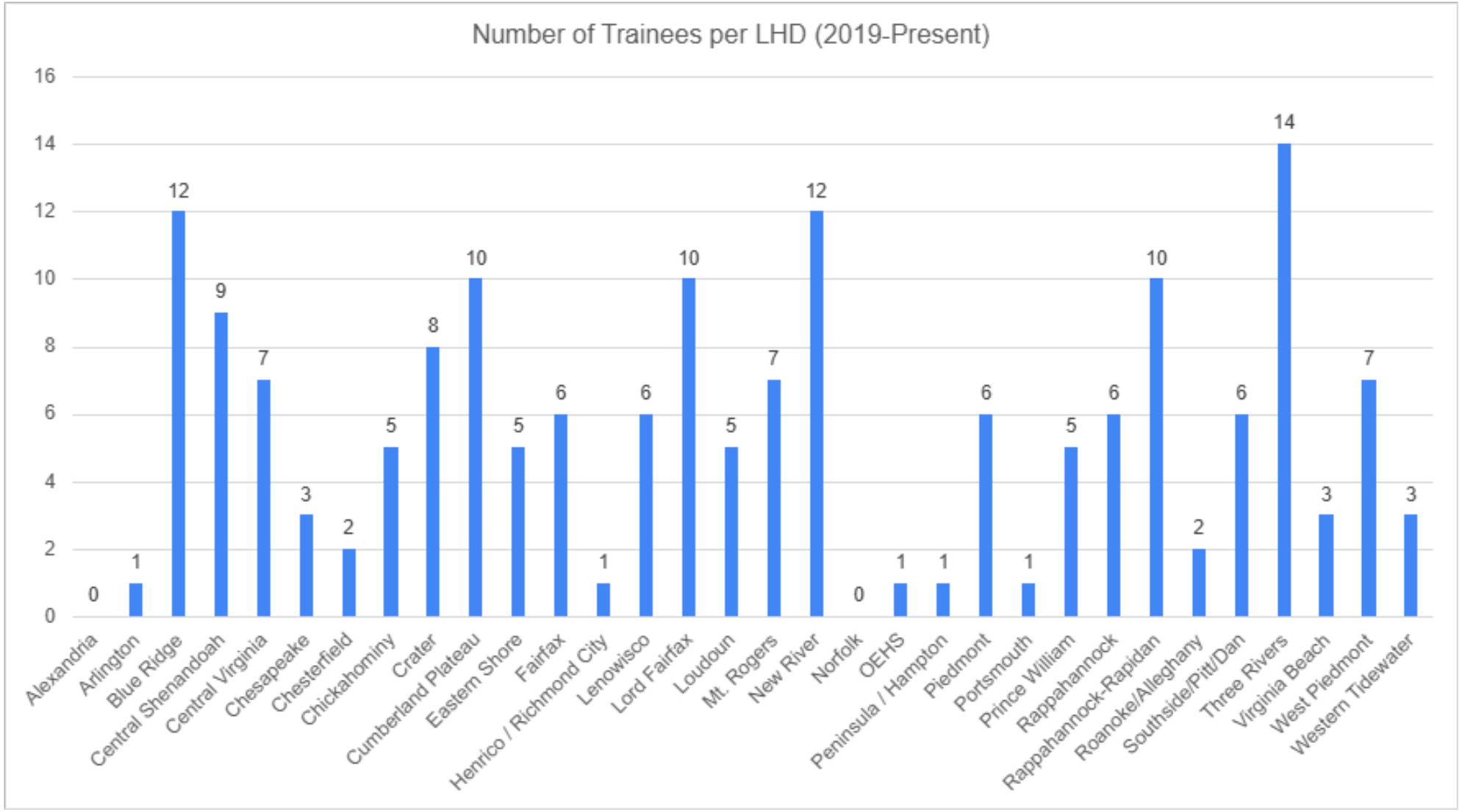








5. IN CONCLUSION



173 successful trainees so far!





No quantifiable data (at this time) to show the training is improving VDH personnel or creating a better agency.

But OEHS hears so many compliments from managers, supervisors, and trainees.

JUNE 2026 – AGENCY STAR



- Exceptional leadership and dedication
- Strengthened every aspect of the training program
- Collaborative leadership has earned widespread praise throughout VDH

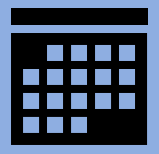
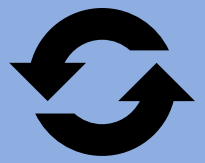


Dr. Webb and Agency Star Anne Powell

Lessons Learned in Curriculum Development

BENEFITS

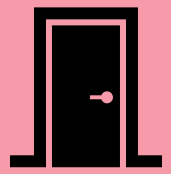
- Meaningful connections between LHDs and OEHS
- Minimal scheduling
- Availability for refresh

CHALLENGES

- Instructors fail to recall order
- Tracking self-guided progress each session
- High rate of turnover





What does this mean for the onsite sewage industry?

- Trusted relationships with regulators
- Open communication with regulators
- Meaningful checks and balances

…for regulators in other states?

- Think outside the box
- Never stop seeking improvements

Sources:

"Inclusive Teaching: Strategies for Promoting Equity in the College Classroom" (Hogan and Sathy, 2022)

https://pronouns.org/what-and-why

VDH Office of Procurement and General Services, Cost of Fleet Vehicle Use and Per Diem Costs

VDH Environmental Health Database (EHD)

VDH GMP 2019-01

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