

# Working with Academics on Program Evaluation

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# Wait...W&M is in Virginia isn't it?

- \* EPA HQ is the eHarmony for the environmental enforcement community.
- \* NH DES had a project they needed help on
- \* I had students who needed a Masters in Public Policy capstone.
- \* Dave Hinden and Jon Silberman brought us together.

# In the beginning...

- \* Relatively general discussion about potential ways to evaluate the Generator Certification Program.
  - \* What changes in behavior or outcomes could we link to participation in the program?
- \* We were limited by the fact that the program was already in operation.
  - \* No way to go back in time and capture additional information from participants on pre-intervention behavior.

# Key Challenges

- \* Pre-intervention data limited, so couldn't easily identify all of the things that changed – could only evaluate changes in observed/documentated behavior and outcomes.
- \* Important confounding events – at around the same time as the certification program, a change in both inspection and evaluation standards.
  - \* Makes it very difficult, if not impossible to tie changes to the certification program as opposed to changes in the new inspection process or evaluation standards.
- \* Small set of facilities, small number of inspections annually meant that some analytical techniques weren't feasible.

# Our Approach

- \* On-line survey of participants in the Generator Certification Program.
  - \* Sought specific feedback on the program, particularly the extent to which the program changed behavior and outcomes.
  - \* Included all past participants in the certification program including facility personnel, transporters, and consultants.
- \* Participants assured confidentiality with respect to responses – only aggregated data shared with NH DES.

# W&M's Policy Research Seminar

- \* As a capstone for our Masters in Public Policy program, students complete policy-related client-driven projects.
- \* Each project has a team of three graduate students who work on average 6-7 hours a week each, starting in early September and running through early December, for about 250 hours of work total. There is also a faculty advisor who provides content-specific expertise.
  - \* The advisor does not work directly with the client.

# Project Timeline

- \* Early September: Students met virtually with NH DES, developed work plan for the project.
- \* Late September: Students worked with NH DES to develop and deploy survey instrument.
- \* October: Data collection.
  - \* 29% response rate, respondents fairly representative of the overall universe.
- \* November: Data analysis.
- \* December: Final report and presentation.

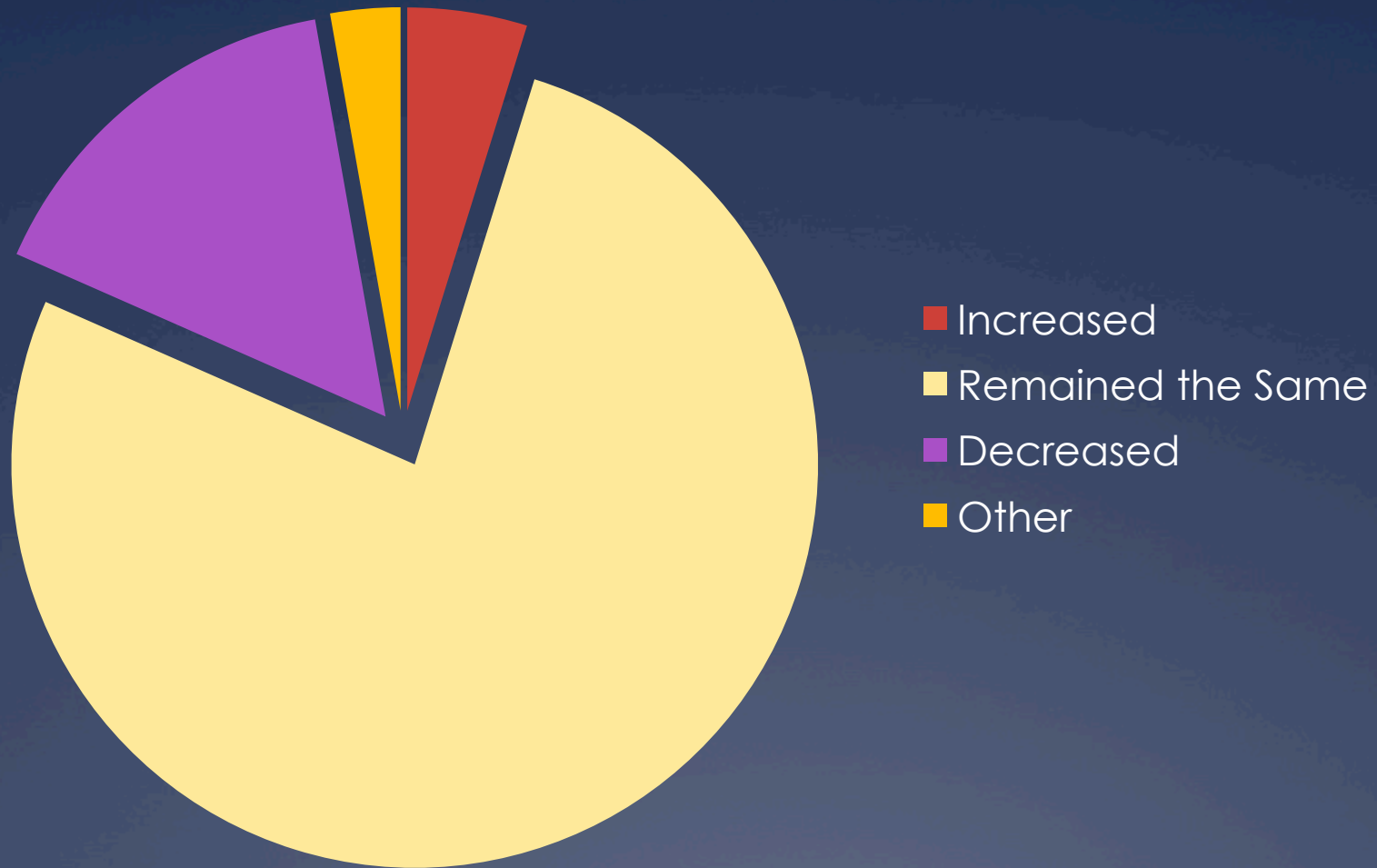


## As a result of the training we have an...





# Generator Size Classification Post-Training

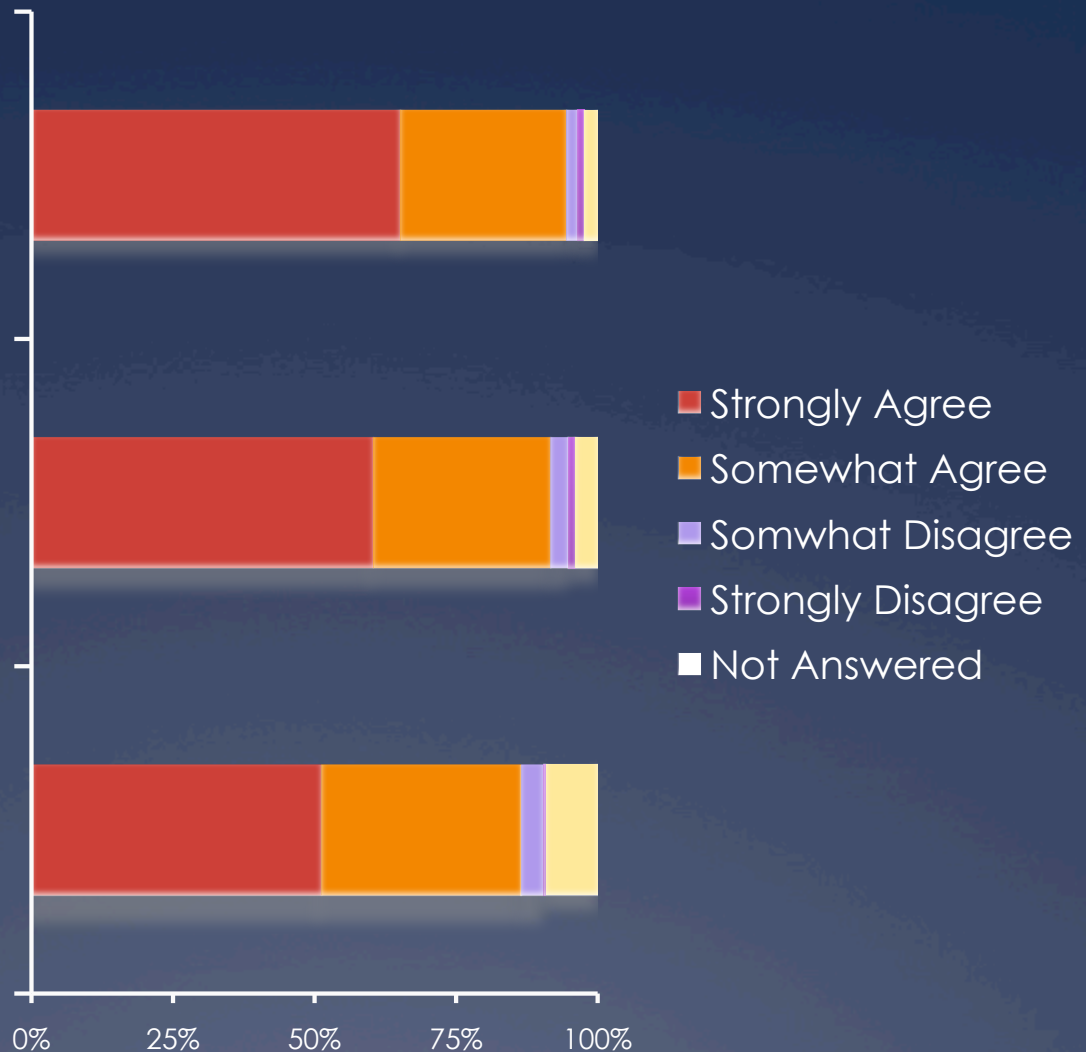


## Following the training...

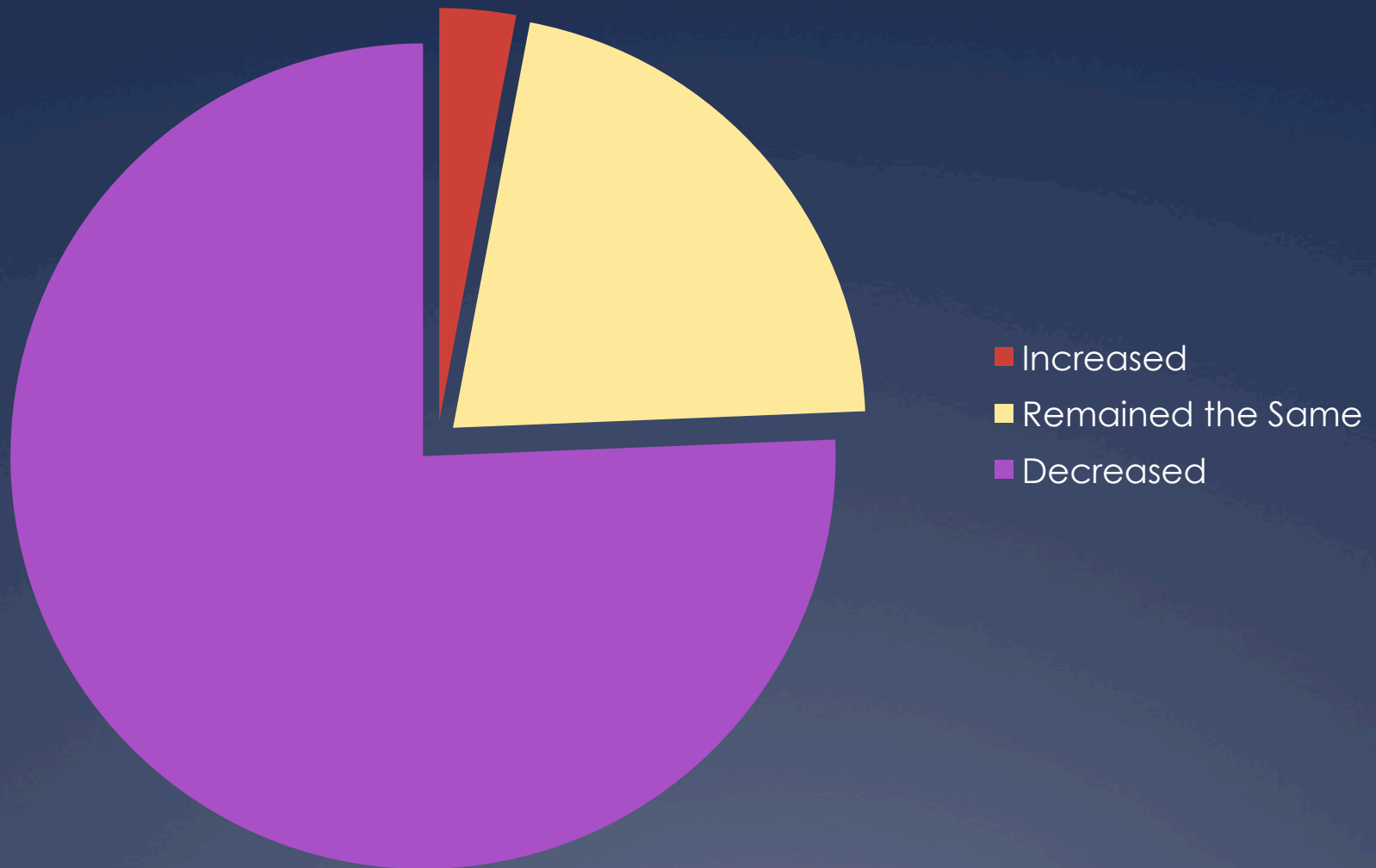
We are more likely to reach out to regulators on questions about hazardous waste

We are more likely to reach out to regulators on questions for other types of media

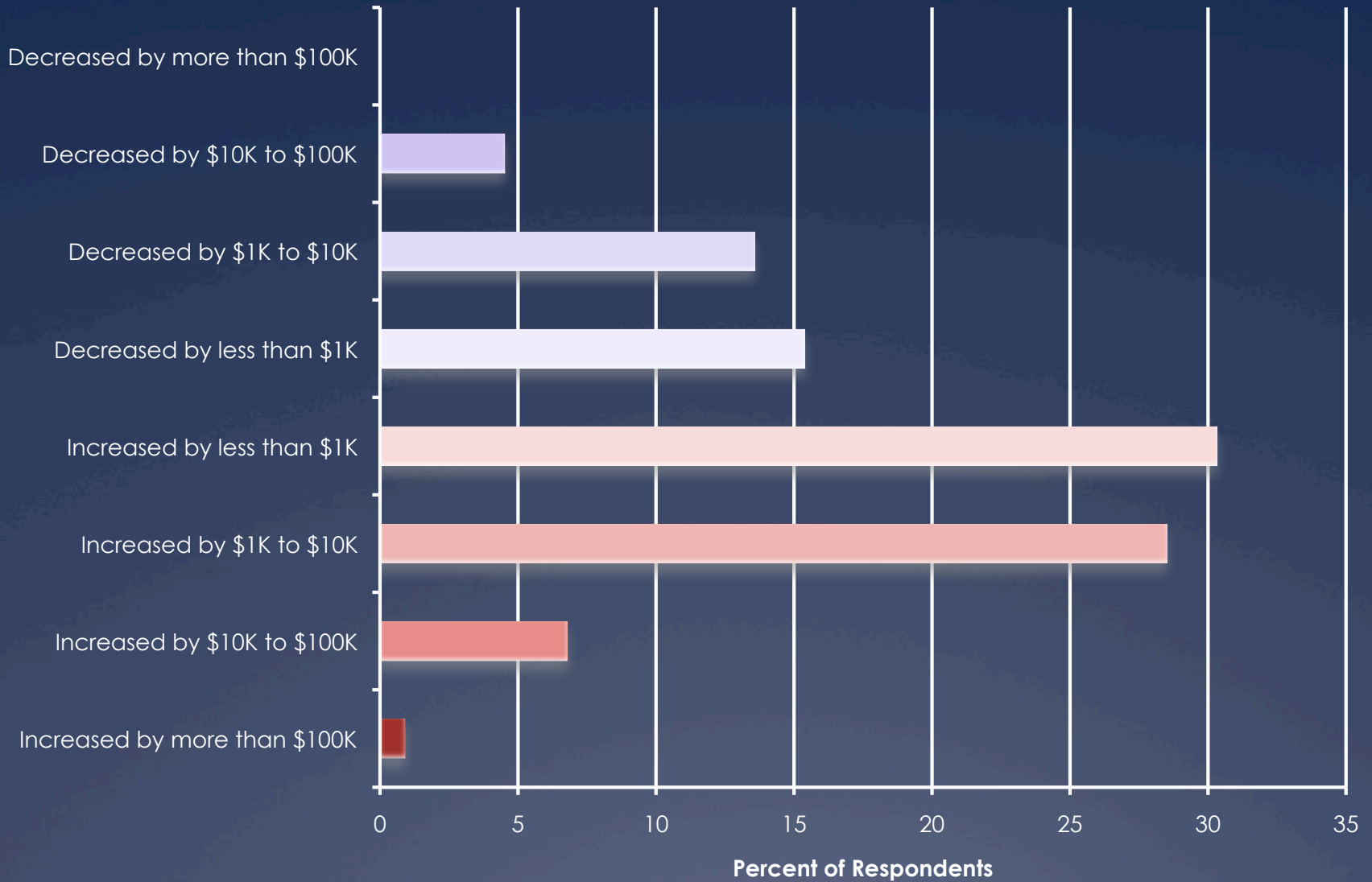
Our facility's relationship with regulators has improved



# Probability of a Violation Post-Training



# Annual Cost Changes due to the HWCC Program



# Limitations to the Study

- \* Self-reported information.
  - \* Are they telling us what we want to hear?
- \* Reports of changes in costs are likely confounded with other enforcement changes, not just the HWCC program.
  - \* Makes it difficult to formally weigh the costs of the program against the benefits.

## If I could go back in time...

- \* Conduct a pre-program survey of attitudes toward regulators, understanding of regulations, etc.
- \* Roll-out the program selectively to look at “differences in differences” across facilities who have completed the program and who have not to isolate effects of the program rather than changes in other aspects of the enforcement regime.
- \* Conduct post-program surveys each year to measure incremental effect of annual attendance.

# Pros and Cons of Working with Academic Programs

## \* Pros:

- \* Low-cost or free.
- \* Access skills/methods that you may not have in house.
- \* 3<sup>rd</sup> Party can ensure confidentiality, may get more or more candid participation than you could get on your own.

## \* Cons:

- \* Working on an academic timeline – typically semester or academic year time-frame.
- \* Project has to be consistent with student learning objectives/interests/abilities.



# Other Options for Working with Academics

- \* Academics need data and will often be willing to work on a particular project in exchange for data that they can use to answer their own research questions.
  - \* Typically Masters and PhD students need to complete one or more research projects during their degree. PhD students can invest more time in a project than Masters students can.
  - \* Professors are also always on the lookout for new projects. They may be more picky about which projects they are willing to work on, but they will often get their students involved in those projects are well and may have a longer time horizon.

# Final Thoughts

- \* The earlier you bring in outside evaluators, the better.
- \* Ideally you would have them work with you prior to implementing a new program/project so that they can develop an evaluation plan prior to roll-out.
  - \* You may need some initial surveys to establish your baseline.
  - \* You may want to develop a randomized control trial to be able to prove causation.

\* If you have any questions about today's presentation, feel free to contact me at [slstaf@wm.edu](mailto:slstaf@wm.edu).