Disclaimer: the information on the manual of Microbial or Cooling Towers category may not give you the complete information as it is based on the data collected by AAPCO survey. Not every state/tribe who has this category participated in this survey.

Antimicrobial or Microbial Pest Control or Cooling Towers	
Not a Federal category	
Are any existing manuals/exams available?	There is no national standard manual on this category.
Research notes: - Anything identified in the AAPCO survey? - What did you find online? - What did you learn contacting others?	- Only 4 states participated in the AAPCO survey. Currently, 15 states have this nonfederal category. Based on the survey results and by contacting SLAs/PSEPs, we realized this category manual is not a priority for them at this point in time. - Some states have electronic version available to share with others. It seems that Vermont has revised their manual in 2020 and here is the online copy of it. New York is planning to revise this category manual and is interested in producing the National manual on Cooling towers.
How many states/tribes use this category?	It is a nonfederal category. Currently, 15 states use this category.
How national, regional, or local is the training material likely to be, for this category? For example, would you expect the training material to be similar in each state, or tailored to local pests/conditions?	This category manual is not likely to vary significantly from region to region.
How is the category lumped with other categories and/or split into several categories?	It is a standalone category and is not lumped or splitted with any other category.
What are some sample competencies in this category? For example, what does the table of contents include?	***This is not a Federal category and there are not any Federal competencies for this category; hence, the competencies may vary from region to region.*** Here is a list of competencies and this is NOT a comprehensive list and may not include each and every state/tribe's competencies: Pest identification, Knowledge of microorganisms, Method of microorganisms control, Knowledge of antimicrobial pesticides including formulations, dosage, groups/types, etc., Knowledge of factors affecting use of antimicrobial pesticides; Knowledge of pesticide toxicity, Knowledge of proper storage, handling, & transport, proper cleaning, spills clean-up, & waste disposal, Knowledge of laws & regulations, Proper measurement & calibration calculations, Knowledge of label interpretation,

	Appropriate procedures for mixing, loading, & applying antimicrobial pesticides; Application methods, Information necessary for safe & adequate application of antimicrobial pesticides; Knowledge of worker safety, notice, posting, and REI, Potential for phytotoxicity, Hazards associated with pesticide use; Knowledge of building science, moisture, and mold pathways; Remediation of moisture damage; Mold remediation; Knowledge of cooling towers, cooling water organisms and problems; IPM, selection and application of pesticides for mold, Hazards associated specific to SO2 gas; Proper handling, storage, and security of SO2 cylinders, Assure the barrels and wooden tanks for hole/cracks prior to SO2 application, Knowledge of Emergency or Incident response plan, Knowledge of methods for disinfecting water lines, Pesticide and biocide fate
Are there emerging regulations or science in this area?	There is not much change in this category except the use of antimicrobials have increased significantly due to COVID-19.
Are there opportunities to reduce duplication of effort?	A couple of comments to reduce duplication- Within regions, form a joint working group or collaboration among interested PSEPs and SLAs who want to update the study materials. States should work together and are willing to share their manuals.
Are there critical items or methods needed to ensure accuracy/quality? Are there tripping hazards on the path to adopting the new/revised manual?	This category content is unique to each state, for example, some states have more focus on Cooling towers than viruses. Some states have manuals that are focused on mold remediation in HVAC and Cooling towers and may not cover content or knowledge check on viruses. To ensure the accuracy/quality, states/tribes get the study materials from a reliable source (PSEP, SLA, or organizations where PSEP/SLA/EPA work in collaboration) and get study materials in a modifiable version to change it to meet their needs.
Need or interest for workgroup?	There is some interest in collaborating on a national shared manual.
Interested parties	Stephen Vantassel — svantassel@mt.gov Lauren Gott — gottl@michigan.gov

Researched/summarized by CTAG member Gurinderbir Chahal	

Summary (1-3 paragraphs): Antimicrobial or Microbial or Cooling Towers

There is no national manual on this category, most of the states that have this category have developed their own study material. This category manual may vary from region to region because some states have content more focused on antimicrobials and others have it on mold remediation and/or control of microorganisms in water lines. In a recent AAPCO survey, revising this manual is not a priority for most of the states/tribes because there is not significant change in pesticide technology and regulations related to this category.

Not every state/tribe/territory uses this category because it is not federally required. There is not a great deal of variation in the approach to lumping/splitting this category. In most states, it is a standalone category. “Antimicrobial or Microbial or Cooling Towers” is the most common category name for this category.

In an effort to reduce duplication, SLA/PSEP leads should work collaboratively to revise the study materials. In states/tribes that have this category, pesticide applicators certified in this category will be exposed to some or all of this content. This category applies to commercial applicators who use or supervise the use of restricted use antimicrobial pesticides to control microorganisms.