

# Food Safety Modernization Act:

Connections with SWCDs

April 20, 2016

A big thank you to Joy Waite-Cusic at OSU for the irrigation water sample slides!

# Introduction

- Produce rule will affect many of your customers
- Customers may ask you for assistance especially on irrigation water quality issues
- Many FSMA, conservation goals align
- Others appear to conflict, but “co-management” is possible

# FSMA: a short history

- Federal law passed by Congress
- FSMA passed in 2011
- FDA proposed rules in 2013
- Extensive comment and stakeholder involvement
- FDA tour of the PNW
- 6 final rules adopted
- Public meeting in Portland in December 2015

# Final rules adopted

- Produce safety rule
- Human food preventive controls rule
- Animal food preventive controls rule
- Imported food rule
- Third party certification
- Sanitary transportation

# 1 more final rule in 2016

- Intentional adulteration

# Produce rule

- Agricultural water
- Biological soil amendments of animal origin
- Worker health and hygiene
- Equipment, tools, buildings and sanitation
- Domesticated and wild animals
- Growing, harvesting, packing and holding activities
- Sprouts requirements

# Produce rule: exemptions

- Produce for personal or on-farm consumption
- Produce not a “raw agricultural commodity”
- Certain specified produce rarely consumed raw
- Farms with produce sales of  $\leq$  \$25,000 per year
- Produce that will undergo a “kill step”
- Farms with less than \$500K in annual sales AND majority of food sales to qualified end users

# Agricultural water

- Inspection of water system once per year
- Keep records of this inspection
- To extent under your control:
  - Prevent system from being a source of contamination
  - Maintain the system
  - Reduce potential for contamination
- Standards for treatment of water
- Post-harvest water must have no detectable E. coli



# Irrigation water

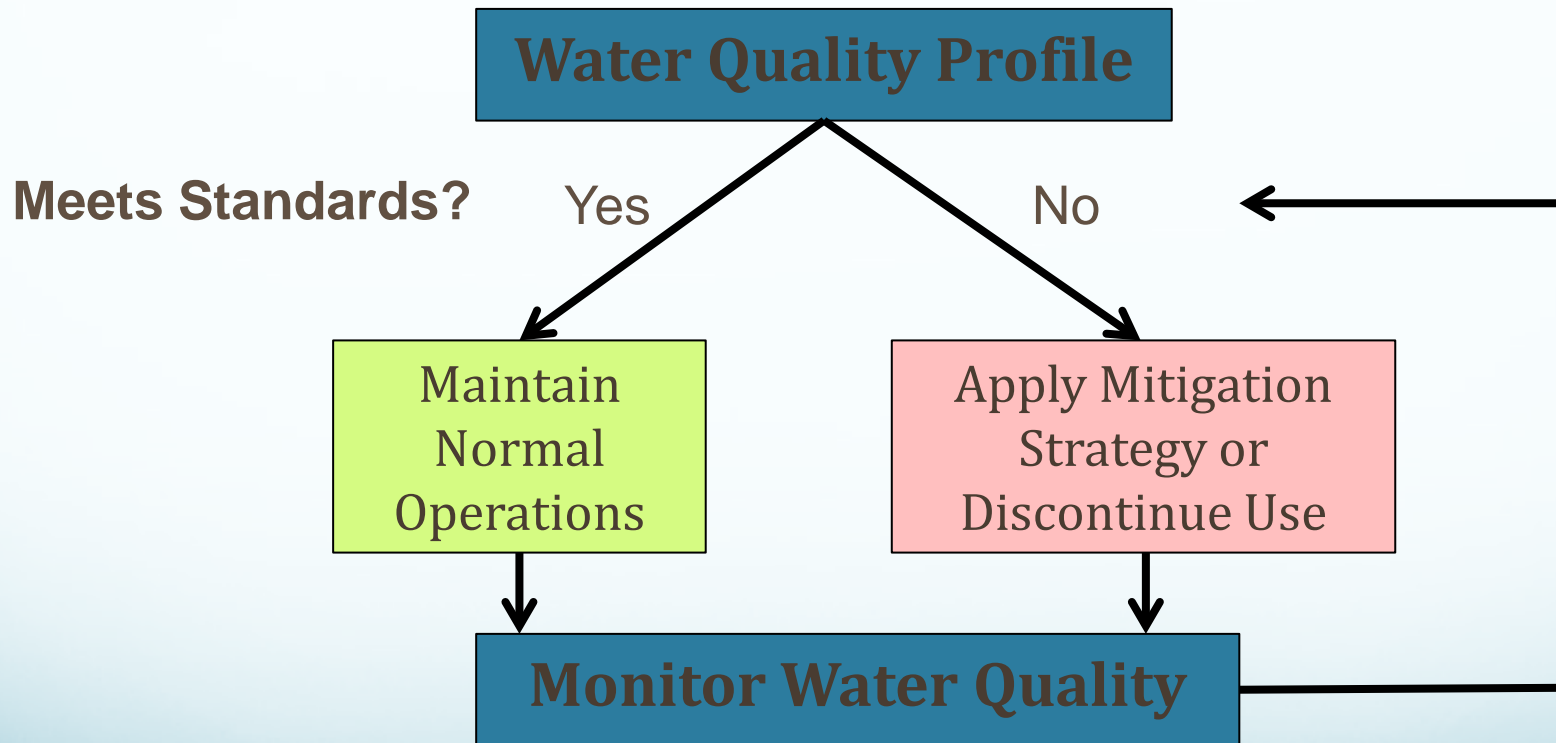
- Initial survey for surface water:
  - Minimum of 20 samples
  - As close to harvest as possible
  - Over a minimum of 2 years
  - Over a maximum of 4 years
- Groundwater:
  - Minimum of 4 samples during growing season or over 1 year
- This profile must be updated every year after initial survey:
  - 5 samples per year for surface water
  - 1 sample per year for groundwater

# Irrigation water standards

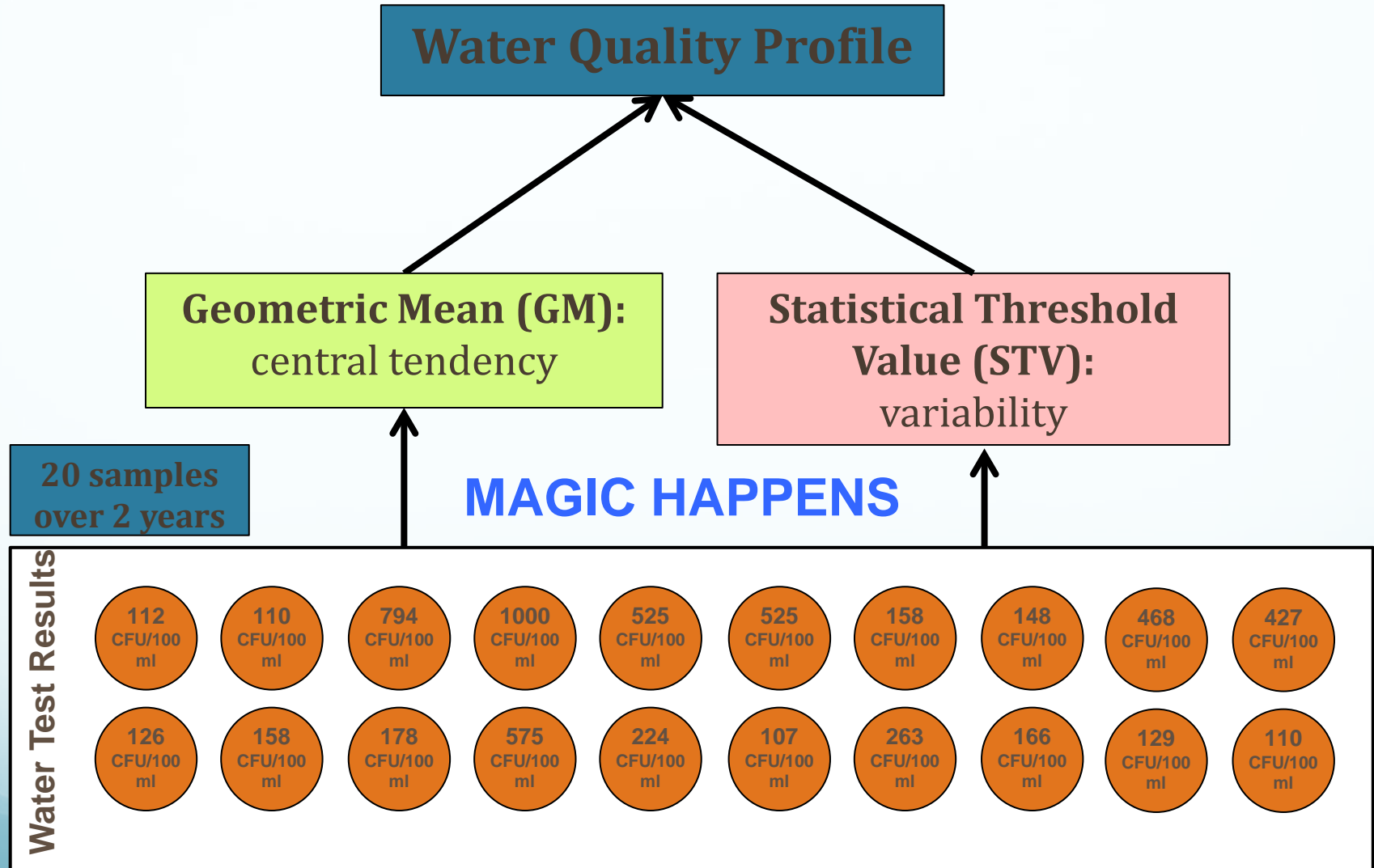
- Statistical threshold value – 410 CFU/100 ml
- Geometric mean – 126 CFU/100 ml
- If your water does not meet these standards, either:
  - Stop irrigating
  - Treat irrigation water
  - Apply interval between last irrigation and harvest
  - Apply interval between harvest and end of storage
  - Identify & remove source of contamination

# Covered Produce AND Direct Application

## **SURFACE OR GROUND WATER**



# What is a Water Quality Profile?



# Farm A's Water Quality Profile

**Water Quality Profile**

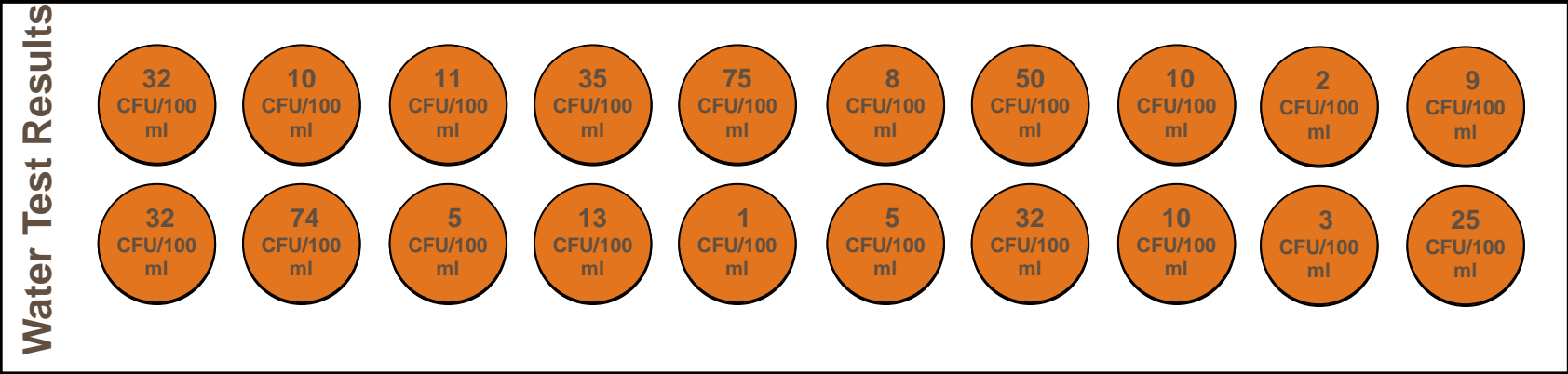
GM: 12.7 CFU/100 ml

STV: 52.3 CFU/100 ml

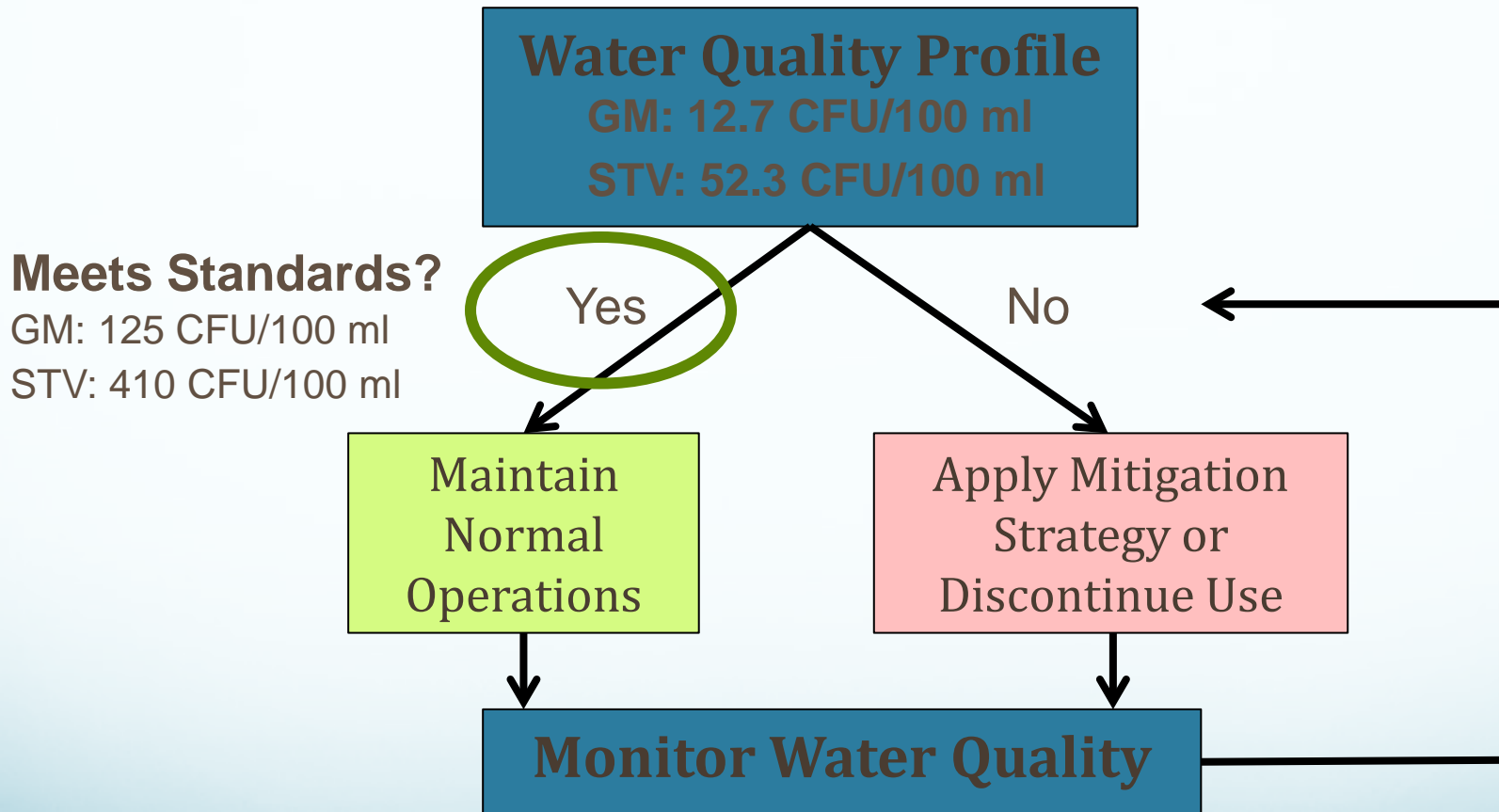
**Geometric Mean (GM):**  
central tendency

**Statistical Threshold Value (STV):**  
variability

**MAGIC HAPPENS**



# Farm A's Water Quality Profile



## Water Quality Profile

GM: 12.7 CFU/100 ml

STV: 52.3 CFU/100 ml

### Monitor Water Quality



### NEW Water Quality Profile





# Farm A's Water Quality Profile

**NEW Water Quality Profile**  
GM: 23.1 CFU/100 ml  
STV: 130.8 CFU/100 ml

**Meets Standards?**

GM: 125 CFU/100 ml  
STV: 410 CFU/100 ml

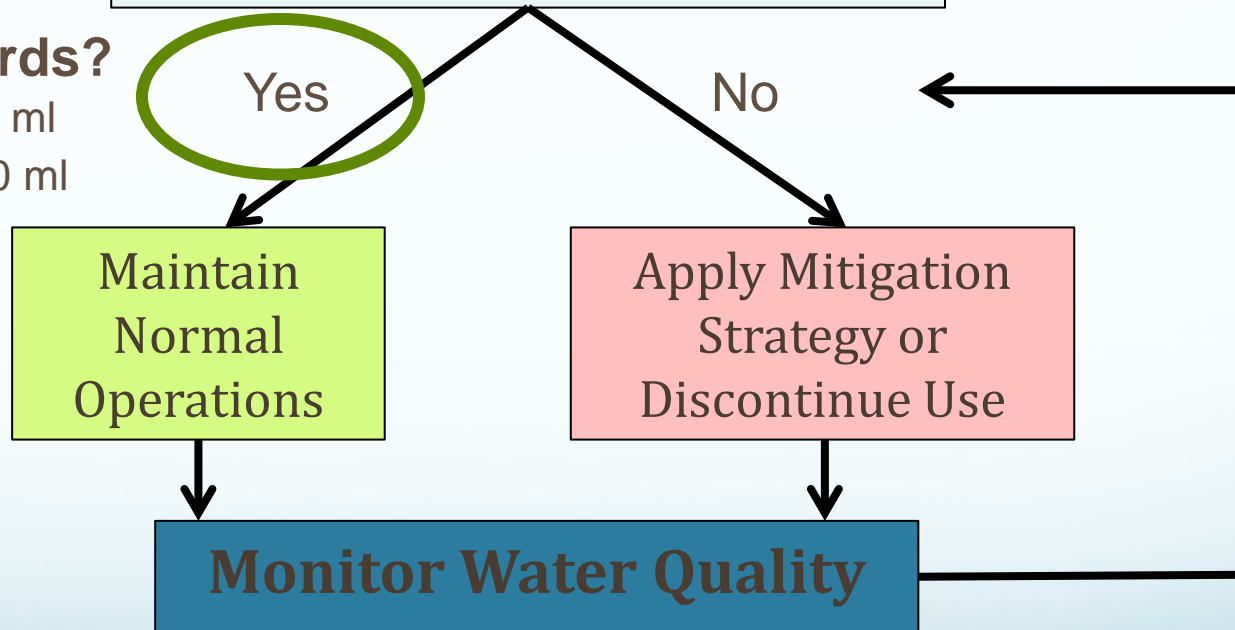
Yes

No

Maintain  
Normal  
Operations

Apply Mitigation  
Strategy or  
Discontinue Use

**Monitor Water Quality**



# Farm B's Water Quality Profile

**Water Quality Profile**

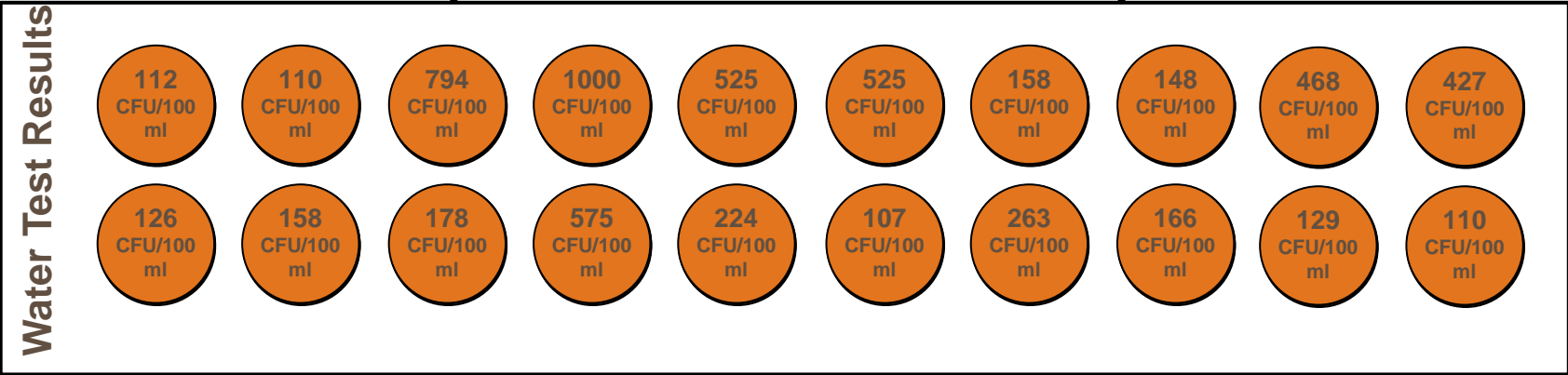
**GM: 241 CFU/100 ml**

**STV: 576 CFU/100 ml**

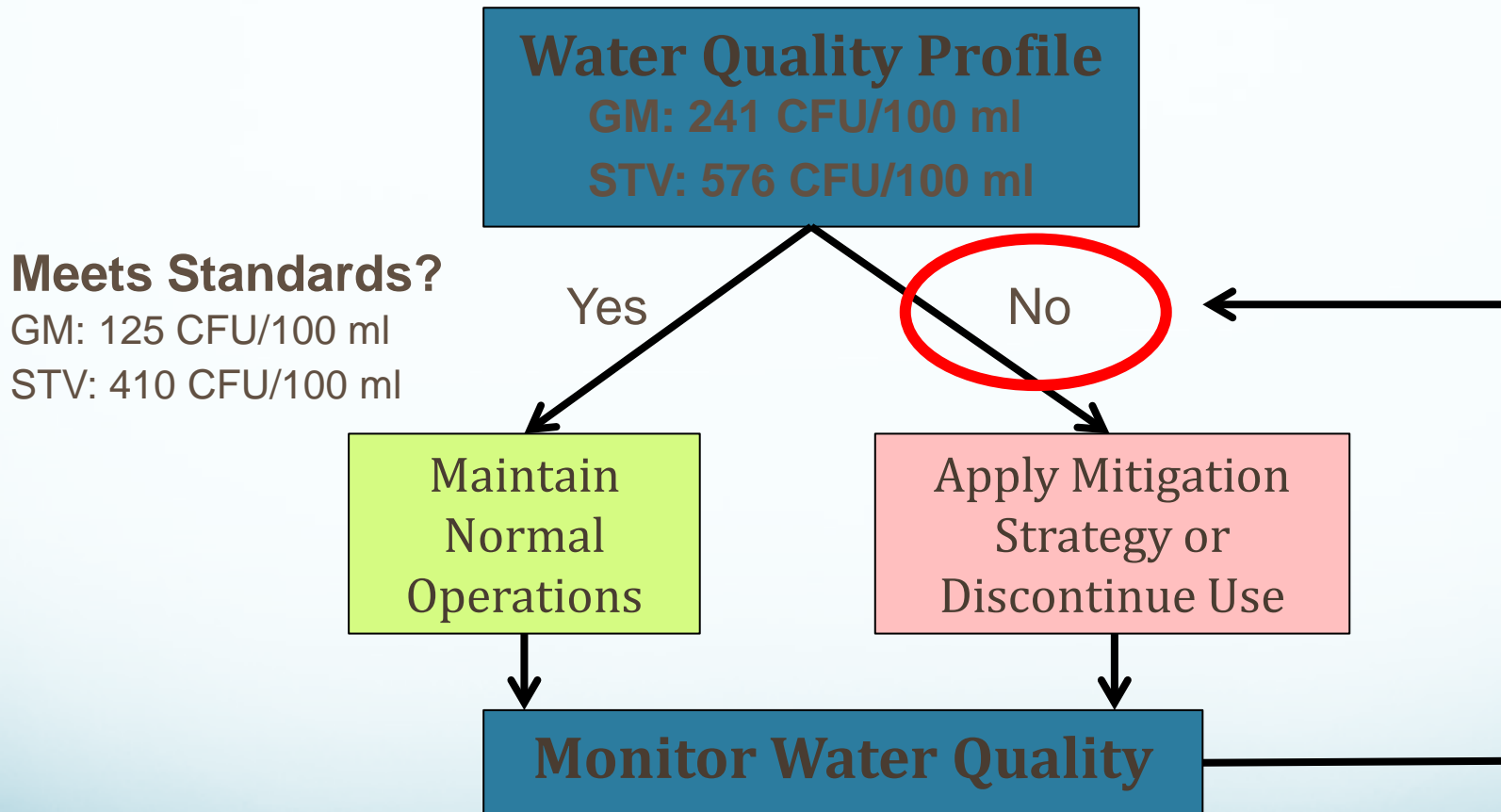
**Geometric Mean (GM):**  
central tendency

**Statistical Threshold Value (STV):**  
variability

**MAGIC HAPPENS**



# Farm B's Water Quality Profile



## Apply Mitigation Strategy

### Time Interval Between Irrigation and Harvest

- **0.5 log reduction per day**
- Alternative data

### Time Interval Between Irrigation and End of Storage

- Must have supporting data
- Recordkeeping

### Water Quality Profile → 1 day die-off

GM: 241 CFU/100 ml → 76 CFU/100 ml

STV: 576 CFU/100 ml → 182 CFU/100 ml

### Treat Water

Goal: Provide same level of public health protection as using irrigation water that met the standard

### Discontinue Use

- Inspect
- Make changes
- Retest

# Can farmers collaborate?

- Is a watershed or drainshed-based irrigation water monitoring approach acceptable?
- Final rule preamble indicates yes
- But we will have more details in the guidance

# Biological amendments

- Interval between application and harvest not included pending further research
- National Organic Program standards acceptable
- Raw manure must not contact covered produce during application and minimize contact after application

# Wildlife & domestic animals

- Minimize wildlife entry into fields when possible
- How to do this while protecting streamside areas and wildlife habitat?
  - Publication on “co-management”
- Prevent livestock & domestic animal movement into fields

# What happens now?

- Staggered compliance dates
  - Produce – 2-4 years to comply with most provisions; 4-6 years to comply with irrigation water provisions
- Training curriculum has been developed & waiting FDA approval, OSU has train-the trainer funds
- FDA received funding for FY 2016
- ODA will be applying for funding
- ODA participation depends on federal funding



# Key considerations - funding

- There are 2 competitions – A and B
  - A is for capacity, education, outreach & inventory
  - B is for inspections
  - Should we apply for just A or for both?
- How do we develop a farm inventory? (required for funding)
  - Registration process?
  - Rely on various sources of information?
- Should we adopt a produce law in Oregon or just operate as FDA commissioned officials?

# Conclusion

- New rule will have huge impact on Oregon's produce industries
- A lot of connections between produce safety and SWCD work