

Statistical Sampling Approach for Initial and Follow-Up BMP Verification (DRAFT)

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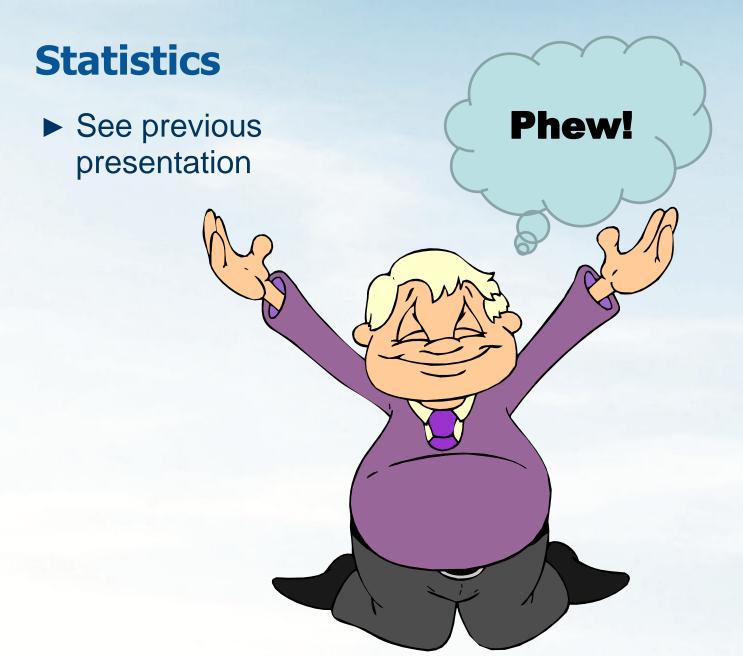


Purpose

- Statistics-based approach for selecting sites for BMP verification
 - Present
 - Functioning
 - BMP-by-BMP basis









Practical Sampling Considerations

- ▶ Defining population units
 - Support simple enumerations
 - Structures, contracts, plans
 - Fit the BMP
- Stratified sampling
 - Focus on priority BMPs
 - Reflect relative contributions to overall pollutant loads
- Grouping
 - Increase N for BMP(s)
 - Group "similar" BMPs
 - Grouping discussed in agricultural BMP verification guidance



Practical Sampling Considerations

- ► Field verification methods
 - Decide "YES" or "NO"
 - Consistency
 - Field test
- ▶ Sampling timeframe
 - Observe features that show BMPs there and working
 - Multiple visits possible (e.g., cover crops)
- ► Level of effort (cost)
 - Efficient scheduling of staff
 - Piggyback
 - SOPs





Simple Approach

- Estimate sample sizes for the priority BMPs,
- Choose the largest "n" value from the set of priority BMPs,
- Randomly select the farms to inspect for the priority BMPs,
- ► Check records for the non-priority BMPs at the selected farms to determine the respective "n" values for non-priority BMPs,
- Estimate confidence intervals for the non-priority BMPs based on the "n" values
- ▶ Do either:
 - Increase random sample size for priority BMPs as needed to reach suitable confidence intervals for the non-priority BMPs and repeat steps 3-5 until a suitable confidence interval is reached for all BMPs of interest, or
 - Develop a separate sampling approach for non-priority BMPs by carrying out steps 1-3 for the non-priority BMPs. This creates two sampling approaches, but there may be overlap on sites visited.

