



# Rerunning Model Load History

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## 2017-2025 Milestones Rerunning Model History

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### Proposal at the December, 2015 WQGIT meeting:

- Update tools with new data and methods every 2 years
- Within a milestone period, won't introduce new data and methods that don't represent on-the-ground changes
- Update historical progress (back to model year 2009 for TMDL purposes) when new data/methods are incorporated
- Begin with 2017 Milestone development

### Today's Proposal:

- Introduce formal rerunning of model history (to accommodate new data and methods) with Phase 6, not Phase 5



# 2017-2025 Milestones

## Rerunning Model History

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### Where are we now?

- End of Milestone period was 2015 (model Progress)
  - EPA evaluations are published
  - 2015 numeric progress was compared to 60% reduction trajectory + jurisdictions' 2015 Milestone scenarios
  - Data and methods set at the beginning of this 2013-2015 milestone period were not held constant over the two year period as this was not (yet) the rule





# 2017-2025 Milestones

## Rerunning Model History

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### Where are we now?

- 2017 Milestone scenarios are published and include latest data and methods agreed to by partnership. Some of the new information included:
  - Urban Nutrient Management, 3/11/13 approval = 2013 Progress
  - Stream Restoration, 1/17/14 = 2013 Progress
  - State Stormwater Performance Standards, 10/9/12 = 2014 Progress
  - Urban Stormwater Retrofits, 10/9/12 = 2014 Progress
  - Enhanced Erosion and Sediment Controls, 4/14/14 = 2014 Progress
  - Shoreline Erosion Control Practices, 7/13/15 = 2014 Progress
  - 2012 Agricultural Census + urban acres update = 2014 Progress
  - Grey Infrastructure, 11/10/14 = available 2014 Progress but no data
  - Agriculture Nutrient Application Management Tiers, 2015 Progress
  - Urban Filter Strip, 6/9/14 = available 2015 Progress but no data
- These data and methods will be held constant for 2016 Progress and 2017 Progress scenarios



# 2017-2025 Milestones

## Rerunning Model History

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### The Issue

- For evaluations, 2017 Milestone scenario loads were compared to original 60% reduction goals (from original 2009 scenario starting point), not revised 60% reduction goals from a revised 2009 Progress with latest data and methods
  - Should not revise goals just prior to evaluation of meeting/missing the goals
- Most “new” data and methods can be applied to the history (2009) but not all, i.e., Nutrient Application Management
  - Could not revise history without new data and decisions that could have taken considerable time
  - For example, Nutrient Application Management Tiers + compliance levels introduced with 2015 Progress



# 2017-2025 Milestones Rerunning Model History

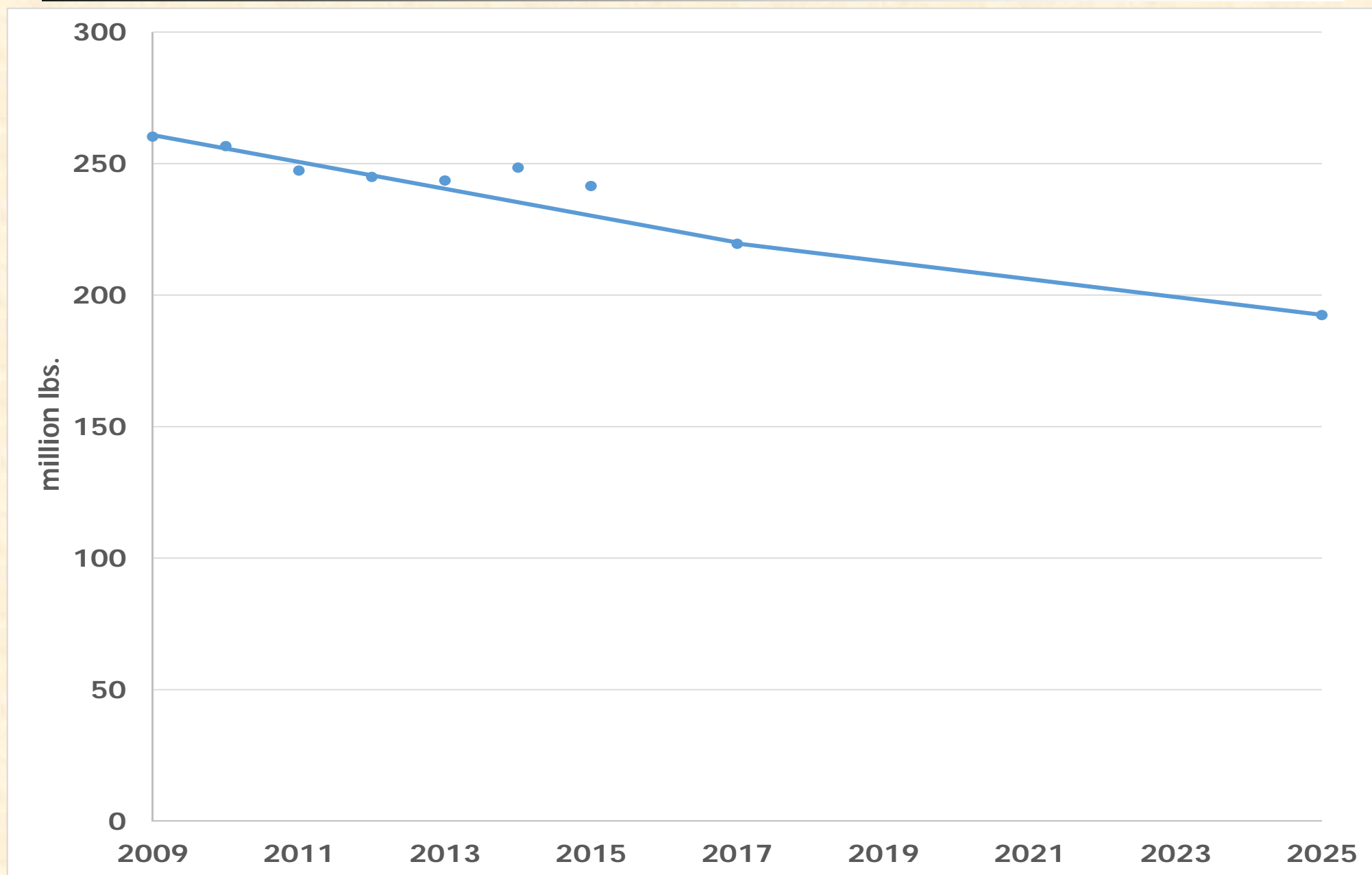
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## The Issue

- Will continue to be unable to explain progress with “official” Phase 5.3.2 scenarios in terms of: To what degree are loads improving? – since model history is not always measuring on-the-ground changes

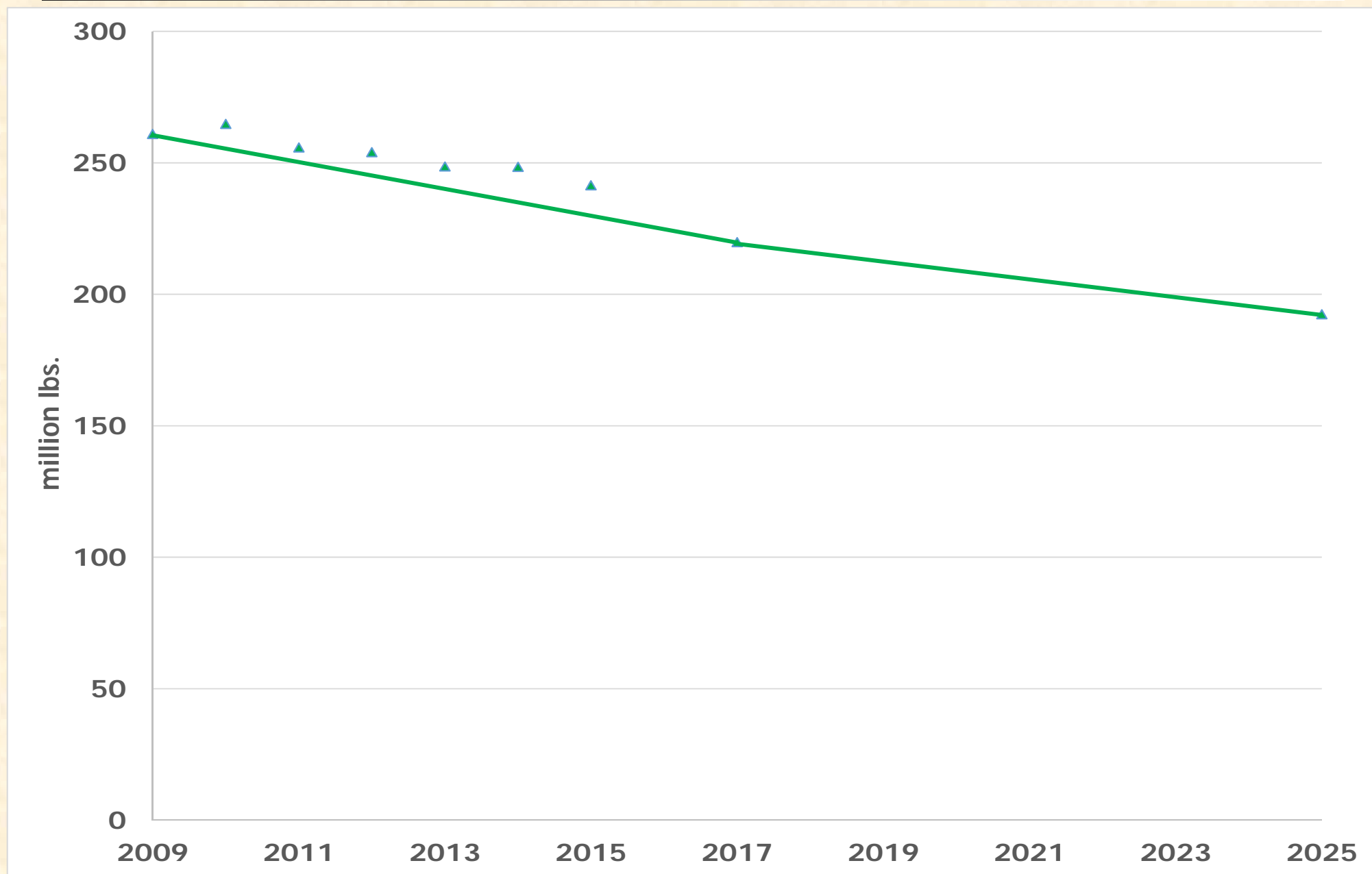


# Nitrogen Loads and Goals, Watershed-Wide "Official" Progress Assessments





# Nitrogen Loads and Goals, Watershed-Wide Progress w/ Revised History







# 2017-2025 Milestones

## Rerunning Model History

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### Today's Proposal:

- Introduce formal rerunning of model history (to accommodate new data and methods) with Phase 6, not Phase 5



# 2017-2025 Milestones Rerunning Model History

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## Sequence

- 2017 Progress on Phase 5.3.2
- Assess 2017 Progress on Phase 6
- ➔ Develop 2019 Milestones w/ latest data and methods
  - No new data and method changes 2017-2019
- 2018 Progress = Milestone mid-point
- Assess 2019 Progress against 2017-2025 trajectory
- ➔ Introduce new data and methods for 2021 Milestone development and re-version 2019 Progress with new data and methods
  - Rerun history back through 2009
  - No new data and method changes 2019-2021
- 2020 Progress = Milestone mid-point



# 2017-2025 Milestones

## Rerunning Model History

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### Sequence

- Assess 2021 Progress against 2019-2025 trajectory
- ➔ Introduce new data and methods for 2023 Milestone development and re-version 2021 Progress with new data and methods
  - Rerun history back through 2009
  - No new data and method changes 2021-2023
- 2022 Progress = Milestone mid-point
- Assess 2023 Progress against 2021-2025 trajectory
- ➔ Introduce new data and methods for 2025 Milestone development and re-version 2023 Progress with new data and methods
  - Rerun history back through 2009
  - No new data and method changes 2023-2025
- 2024 Progress = Milestone mid-point
- Assess 2025 Progress against TMDL-tracking for practices on the ground to meet WQ Standards