# Overview of Backout and Credit Durations in the Phase 6 Model

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## Question: What is "backout?"

- "Backout" is the subtraction of historic land use change practices put in place prior to a fixed baseline for the model's land use.
- In Phase 6, the fixed baseline for land use is currently 2012.
- All land use changes that occurred prior to 2012 are assumed to be represented in the 2012 land use, and thus are "backed out" from impacting land use in 2013 and beyond.
- All NEW land use change post 2012 is not backed out because it is assumed to change the projected land use in some way (e.g., a buffer is expected to take projected grains out of production and replace that land use with forest).

## Question: Can "backout" exceed submitted acres?

- No. Only the acres submitted from NEIEN can be backed out of a scenario.
- But the Submitted V. Credited on CAST currently shows backout greater than submitted for some years.
  - Example: VA 2017 Progress shows backout of 9,560 acres, but only a total submitted of 5,436 acres.
  - The backout value was set to be static in this report, but is not static in the actual calculation. The report will be updated so that the new value equals the amount submitted of 5,436 acres.

## Question: How can submitted acres of a cumulative BMP decrease over time?

- Each cumulative BMP has a credit duration.
- If inspection or maintenance dates are not reported within the credit duration, then the BMP expires.
- If expired BMPs for any given year exceed existing + renewed + new, then submitted BMPs can decrease.

### Examples of Backout in Phase 6

### Scenario 1: Expired acres exceed new acres in implementation year

- 2012 Credited: 100 acres
- 2013 Submitted: 90 acres (110 acres cumulative 20 acres expired due to lifespan = 90 acres)
- 2013 Backout: 90 acres
- 2013 Total Credited for LU Change: 0 acres (90 acres submitted 90 acres backout = 0 acres)
- 2013 Total Credited for Upslope Reductions: 90 acres (90 acres backout + 0 acres LU change = 90 acres)

#### Scenario 2: Expired acres equal new acres in implementation year

- 2012 Credited: 100 acres
- 2013 Submitted: 100 acres (110 acres cumulative 10 acres expired due to lifespan = 100 acres)
- 2013 Backout: 100 acres
- 2013 Total Credited for LU Change: 0 acres (100 acres submitted 100 acres backout = 0 acres)
- 2013 Total Credited for Upslope Reductions: 100 acres (100 acres backout + 0 acres LU change = 100 acres)

#### Scenario 3: New acres exceed expired acres in implementation year

- 2012 Credited: 100 acres
- 2013 Submitted: 110 acres (120 acres cumulative 10 acres expired due to lifespan = 110 acres)
- 2013 Backout: 100 acres
- 2013 Total Credited for LU Change: 10 acres (110 acres submitted 100 acres backout = 10 acres)
- 2013 Total Credited for Upslope Reductions: 110 acres (100 acres backout + 10 acres LU change = 110 acres)