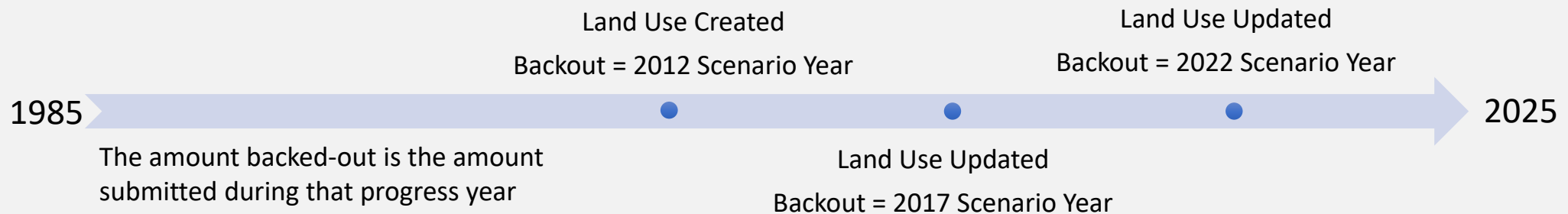


Backout Discussion

3/4/2020

What is Backout?

- Total units of a **land use change BMP** in a specific geography that are part of the cumulative record, but no longer receive land use change credit for the reported amount as the **model now captures the benefit** from the on-the-ground change in land use detected by additional years of imagery data.
- The backout date for land use change BMPs from 2017-2025 is 2017.



Submitted vs Credited Report in CAST

Amount Submitted	Total units of a BMP submitted in a specific geography
Amount Backed Out	Total units of a land use change BMP in a specific geography that are part of the cumulative record, but no longer receive land use change credit for the reported amount as the model now captures the benefit from the on-the-ground change in land use detected by additional years of imagery data. The efficiency portion of the credit is still applied.
Amount Not Backed Out	Total units of a land use change BMP in a specific geography that were submitted and receive credit in the model because the area is not incorporated with the land use projection. The efficiency portion of the BMP credit is applied even when the land use change portion was backed out.
Total Credited	The total units of a BMP that received credit – includes backed out BMPs efficiency portion

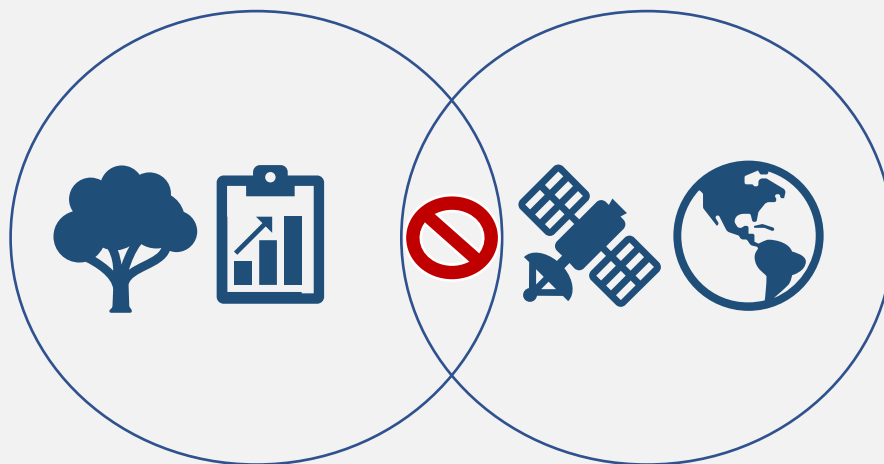
BMPs affected by Backout – Land Use Change BMPS

- Abandoned Mine Reclamation
- Alternative Crops
- **Forest and Grass Buffers**
- **Forest Planting**
- Impervious Surface Reduction
- Land Retirement
- Septic Connection
- **Tree Planting**
- Wetland Restoration and Creation



Purpose of Backout

- Avoids double counting in the model for both BMP land use change credit and aerial imagery land cover/land use updates



Lifespan/Credit Duration expiration is not backout

- Through NEIEN, BMPs are removed from the model due to lack of verification and/or expired credit duration. This is separate from backout, which is done in CAST.
- Every BMP has a lifespan or credit duration in the model
- BMPs that have not been verified within their credit duration are removed from the model through NEIEN.



NY Progress and Backout

BMP	2017 Progress	2018 Progress	2019 Progress	2020 Progress
Alternative Crops	353	353	383	457
Forest Buffer	3,039	3,179	3,298	3,098
Grass Buffer	1,442	1,482	1,542	1,571
Land Retirement	1,450	1,551	2,938	3,346
Tree Planting	6	6	8	201
Wetland Restoration	630	637	637	643

Back out is equal to or less
than 2017 Progress

BMP	2017 Backed Out	2018 Backed Out	2019 Backed Out	2020 Backed Out
Alternative Crops	353	347	341	336
Forest Buffer	3,039	3,028	3,020	2,836
Grass Buffer	1,442	1,439	1,434	1,426
Land Retirement	1,450	1,427	1,420	1,420
Tree Planting	6	6	6	6
Wetland Restoration	629	628	627	626

NY Progress and Backout: Wetland example

BMP	2017 Progress	2018 Progress	2019 Progress	2020 Progress
Alternative Crops	353	353	383	457
Forest Buffer	3,039	3,179	3,298	3,098
Grass Buffer	1,442	1,482	1,542	1,571
Land Retirement	1,450	1,551	2,938	3,346
Tree Planting	6	6	8	201
Wetland Restoration	630	 637	637	 643

Back out is equal to or less
than 2017 Progress

BMP	2017 Backed Out	2018 Backed Out	2019 Backed Out	2020 Backed Out
Alternative Crops	353	347	341	336
Forest Buffer	3,039	3,028	3,020	2,836
Grass Buffer	1,442	1,439	1,434	1,426
Land Retirement	1,450	1,427	1,420	1,420
Tree Planting	6	6	6	6
Wetland Restoration	629	628	627	626

Model Credit	2017 Acres	2018 Acres	2019 Acres	2020 Acres
Land Use Change	0	9	10	17
Efficiency	630	637	637	643

Model Credit for Land Use Change =
Submitted – Backed out

NY Progress and Backout: Forest Buffers example

BMP	2017 Progress	2018 Progress	2019 Progress	2020 Progress
Alternative Crops	353	353	383	457
Forest Buffer	3,039	↑ 3,179	↑ 3,298	↓ 3,098
Grass Buffer	1,442	1,482	1,542	1,571
Land Retirement	1,450	1,551	2,938	3,346
Tree Planting	6	6	8	201
Wetland Restoration	630	637	637	643

Back out is equal to or less than 2017 Progress

BMP	2017 Backed Out	2018 Backed Out	2019 Backed Out	2020 Backed Out
Alternative Crops	353	347	341	336
Forest Buffer	3,039	↓ 3,028	↓ 3,020	↓ 2,836
Grass Buffer	1,442	1,439	1,434	1,426
Land Retirement	1,450	1,427	1,420	1,420
Tree Planting	6	6	6	6
Wetland Restoration	629	628	627	626

Model Credit	2017 Acres	2018 Acres	2019 Acres	2020 Acres
Land Use Change	0	151	278	262
Efficiency	3,039	3,179	3,298	3,098

NY 2020 Progress: Buffers removed from the model in NEIEN for not passing verifications and/or expiring credit

Model Credit for Land Use Change = Submitted – Backed out

Suggested Alternative to Backout – Changing the backout date of imagery for forest/tree BMPs

The model was designed to reflect future conditions in the watersheds. All BMPs entered are modeled as fully designed and implemented.

- Example - a tree planting or buffer implementation results in a modeled forest buffer with mature trees.

Land Use Workgroup is looking at aerial imagery of buffers with known planting date and other information to decipher when and how they appear.

- Evidence points to the 10-year time-frame currently used by CBP. CBP will look at a larger sample size to see if there is stronger evidence for a specified time-frame.