Abandoned Mine Reclamation BMP

Changes for CAST 23 and NEIEN Appendix

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In the Phase 6 model extractive land-uses are included in the mixed land-use domain (Natural Sector)

DECISION: The WQGIT approved the proposal to not include an explicit extractive land use in the Phase 6 Watershed Model. Areas known to be extractive will be simulated as "mixed open" and will be excluded from areas classed as agriculture or turf grass. Extractive acres can be added to the partnership's suite of decision support tools (e.g. MAST or VAST) at the discretion of the jurisdictions.

CBP WQGIT May 9, 2016, Meeting Minutes
https://d18lev1ok5leia.cloudfront.net/chesapeakebay/documents/wqgit_meeting_minutes_5_9_16.pdf

In C19 the abandoned mine reclamation BMP is land-use/load source change BMP that converts land from mixed open to mixed open

Therefore, currently there is no reduction credit associated with this BMP in CAST

OrderOfCredit	Sector	BMPFullName	BMPShortName	FromLoadSource	ToLoadSource
8	Natural	Abandoned Mine Reclamation	abanminerec	Mixed Open	Mixed Open

In C23- The BMP will begin to receive a land-use change credit from mixed open to forest.

CBP Definition(s) (p 158 BMP Quick Guide)

Abandoned mine reclamation (AMR) is the planting of forests to stabilize the soil on lands mined for coal or affected by mining, such as wastebanks, coal processing, or other coal mining processes. Enter units of acre or percent.

Specifications or Key Qualifying Conditions
There are no key qualifying conditions for abandoned mine reclamation.

Nitrogen, Phosphorus and Sediment Reductions
The abandoned mine reclamation BMP converts land from a higher loading land use (Mixed Open) to a lower loading land use (Forest). The specific loading rate varies by year.

Applicable Land Use Types (or other load sources) Treated by the BMP: Mixed Open

Brief Description of BMP Simulation in the Model : Abandoned mine reclamation is a *Load Source Change BMP.* Each acre reported under this BMP gets converted from Mixed Open load source into True Forest.

Annual or Cumulative? Cumulative - 10-year credit duration

For Tracking Purposes Starting with 2024 Progress

CBPO would like jurisdictions to track and report additional details related to the implementation of the ABR in the NEIEN database starting in 2024:

- Method of revegetation- tree canopy/forest or grass/other vegetation
- We can also track other BMP practice names for AMR if a state proposes

The purpose of tracking this data in NEIEN would be to inform future discussions regarding the treatment of this BMP in Phase 7, decisions concerning the land-use designation for extracted lands and the implementation/crediting of this BMP will be facilitated by a proactive approach to tracking this data

Earth Conservancy Grant: Nanticoke Creek, Wilkes Barre, PA

- Believed to be the largest grant that Pennsylvania has given to a nonprofit for abandoned mine land cleanup
- The Earth Conservancy has an expansive mission: to repair the landscape, restore a local economy devastated by the collapse of the mining industry and **provide more open space for recreation**.
- Will restore the headwaters of Nanticoke Creek, which flows into the Susquehanna River in the northeastern part of the state (Luzerne Co), **includes "daylighting" the creek**
- **Several thousand acres have been graded, recontoured and prepared to support vegetation again**.
- **Streams have been repaired and protected with streamside buffers of native trees and other plants**.
- Some **20 million tons of waste coal has been hauled away** by truck to a specialized power plant to produce electricity, though the plant is currently not running.
- The conservancy has **built three treatment systems to mitigate acid mine drainage**. **One is a wetlands-based filtering pond** that the EPA regards as the first to prove that such passive natural systems can be effective.

Nanticoke Creek near Wilkes-Barre, PA, was pushed underground by past mining activity and now emerges from its subterranean route tainted with acid mine drainage.

https://www.bayjournal.com/news/pollution/abandoned-mine-land-getting-makeover-in-northeastern-pennsylvania/article_272eddde-b94e-11ee-a637-db9a8636fcbb.html

Current C19 NEIEN Appendix

BMPName	DefaultCASTLoadSourceGroup	MeasurementName	CASTBmpShortName	Comments	CreditDuration	RetirementDate
Land Reclamation, Abandoned Mined Land	Mixedopen	Acres	abanminerec	BMP Acres, not acres treated	10	

Proposed C23 NEIEN Appendix: 2024 Progress forward begin tracking additional details for this BMP

BMPName	DefaultCASTLoadSourceGroup	MeasurementName	CASTBmpShortName	Comments	CreditDuration	RetirementDate
Land Reclamation, Abandoned Mined Land	Mixedopen	Acres	abanminerec	BMP Acres, not acres treated	10	**7/1/2024**
Abandoned Mined Land Reclamation with trees	Mixedopen	Acres	abanminerec	BMP Acres, not acres treated, mine land restored to forest condition	10	
Abandoned Mined Land Reclamation with grass	Mixedopen	Acres	abanminerec	BMP Acres, not acres treated, mine land restored to grass condition	10	
Name proposed by state	Mixedopen	Acres	abanminerec	BMP Acres, not acres treated	10	

- All old records will stand but all new records for 2024+ progress would need to be reported with the condition the mine was returned to.
- Nothing changes unless a state reports AMR for 2024+ progress

**Reminder- credit/acre implementation remains the same regardless of what type of AMR is reported

Questions?

- The WTWG will have the opportunity to review NEIEN updates at the July meeting and approve at the August meeting

Abandoned Mine Drainage Practice: Consideration for BMP status

- The STAC technical review for AMD (abandoned mine drainage) is still in the drafting stage.
- The practice would be considered for nutrient reduction/removal potential
- Erin Letavic and Scott Knoche are the STAC members/volunteers leading this effort.