Reservoir Sediment Management: The Future Without Project

John Shelley, Ph.D., P.E.

Kansas City District

River Engineering and Restoration Section

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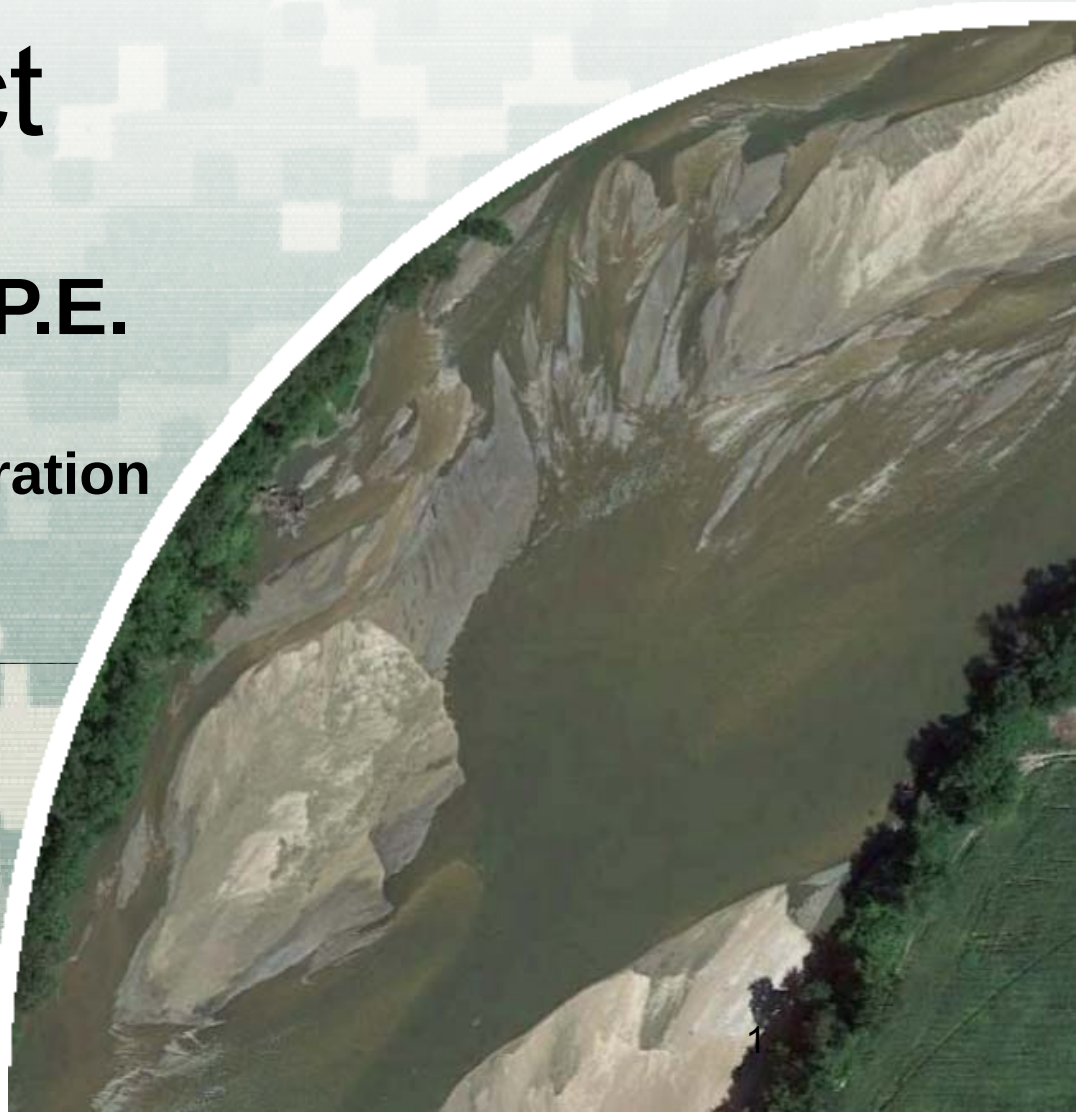

US Army Corps of Engineers

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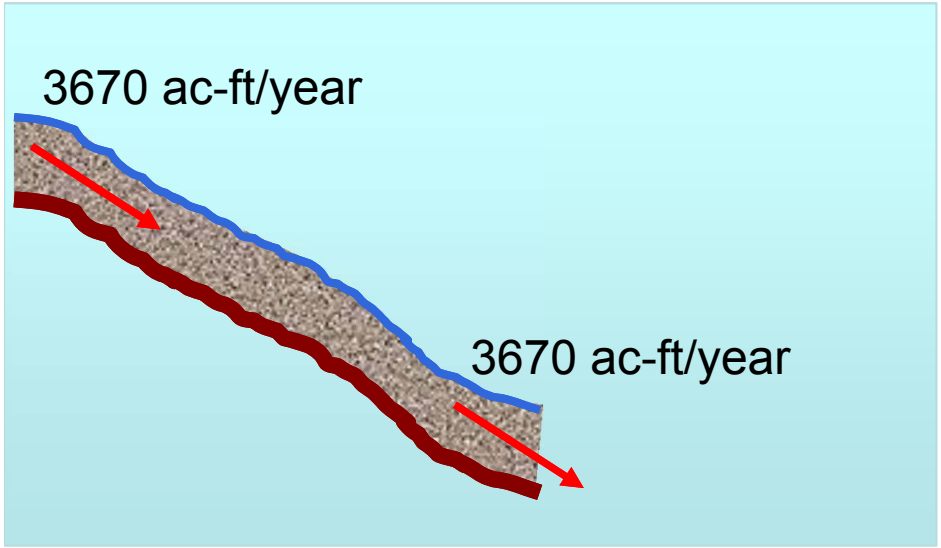
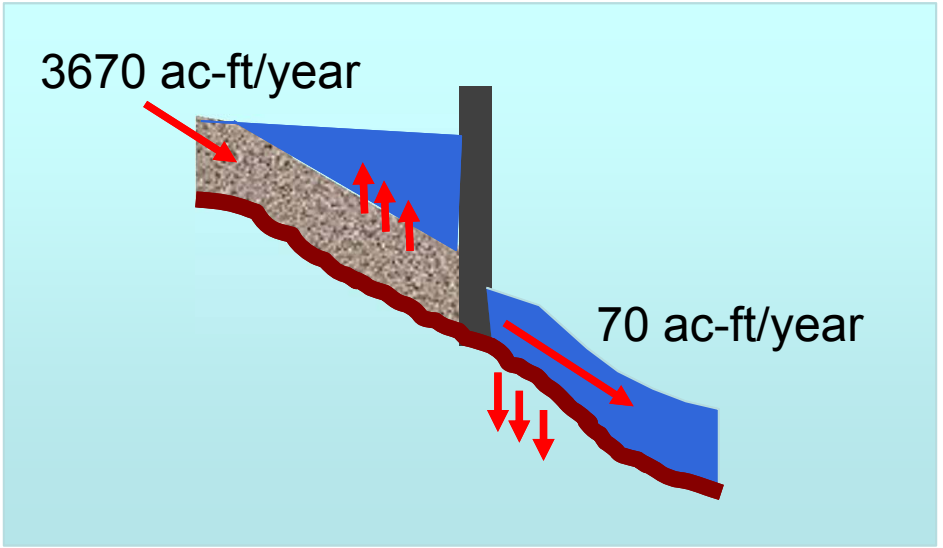
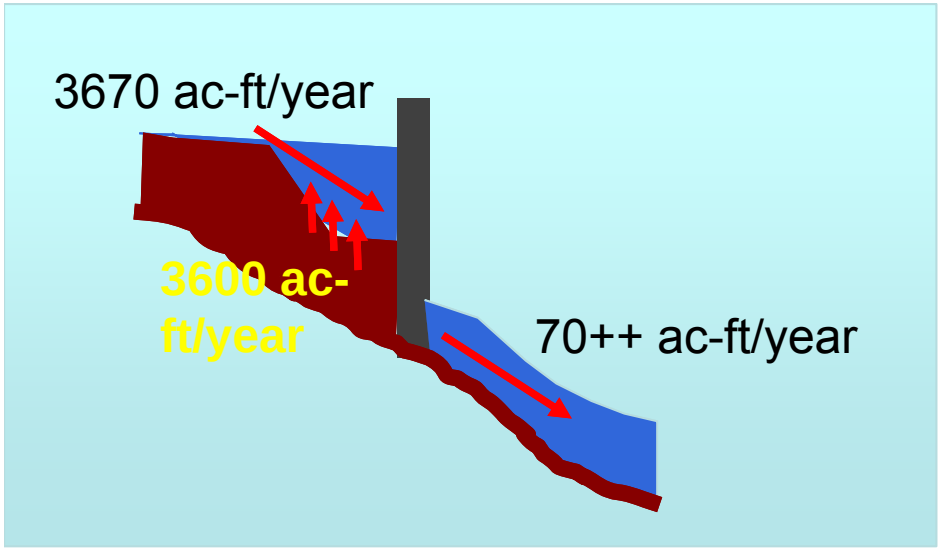
Outline

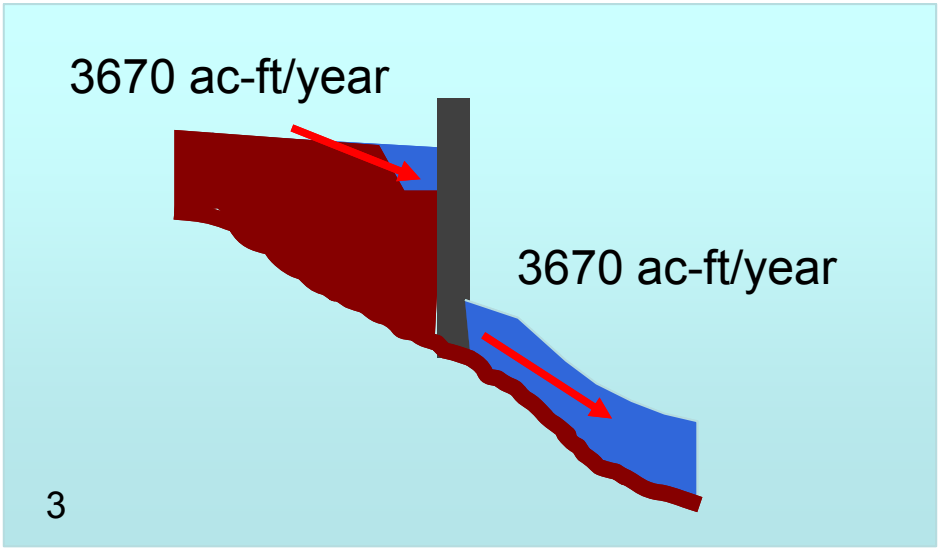
- Future Without Project Defined
- What happens to the reservoir?
- What happens to the upstream channel?
- What happens to the downstream channel?
- Reservoir sustainability

What happens to the reservoir

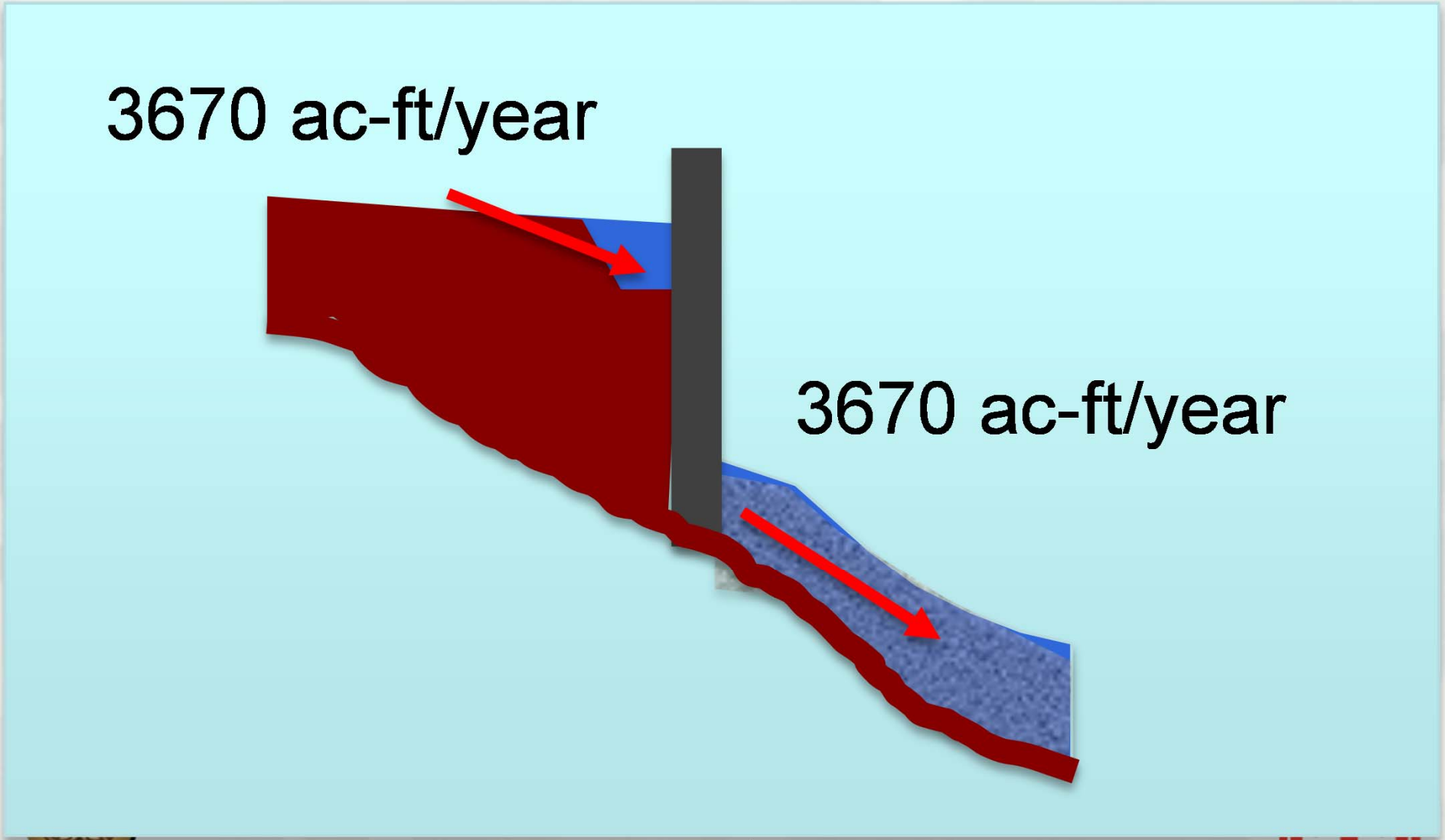




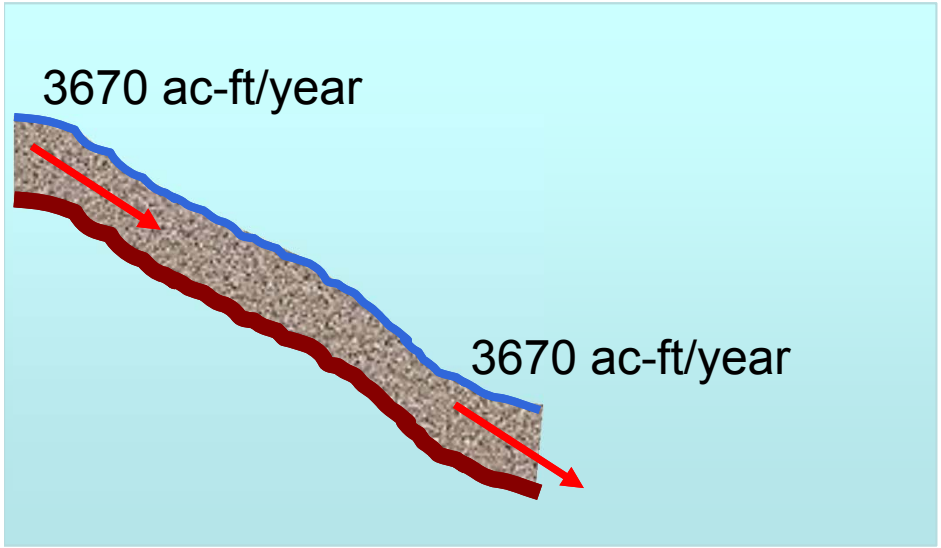


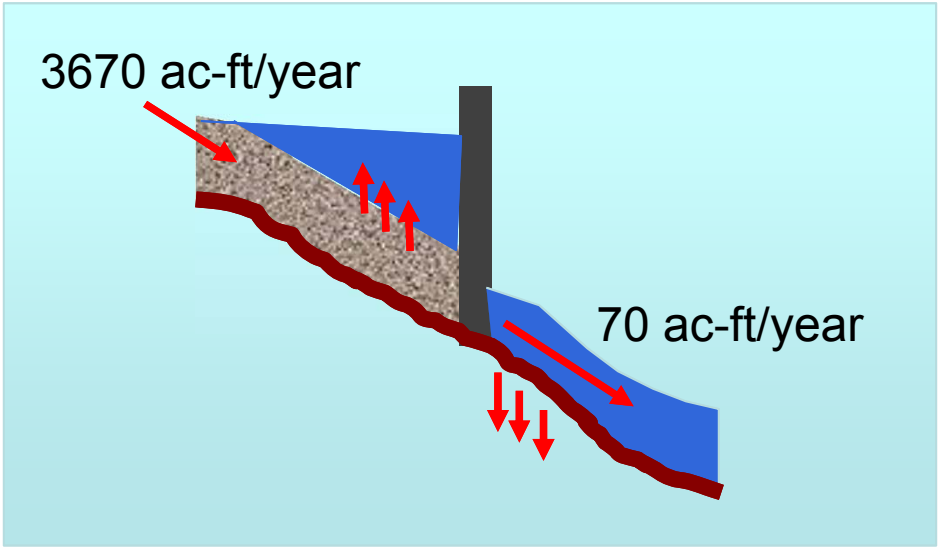


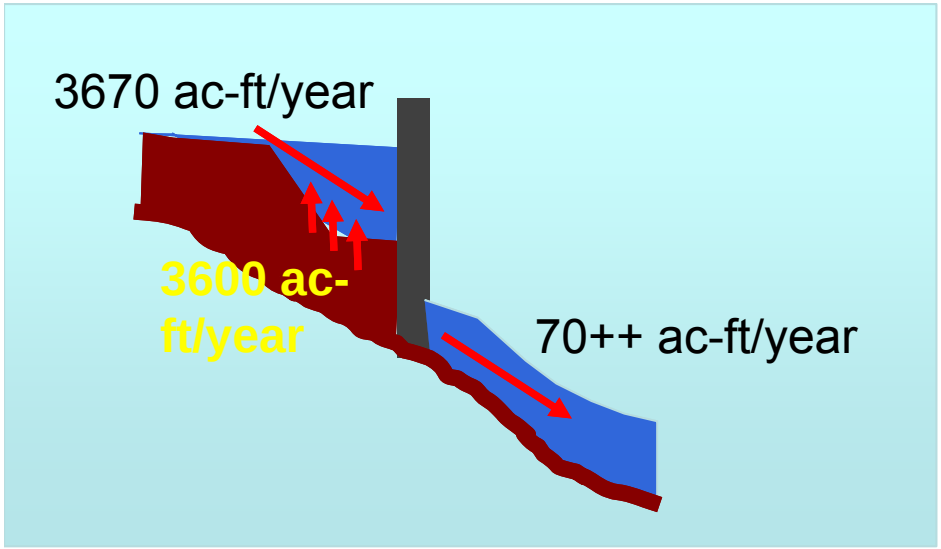
Eventually…

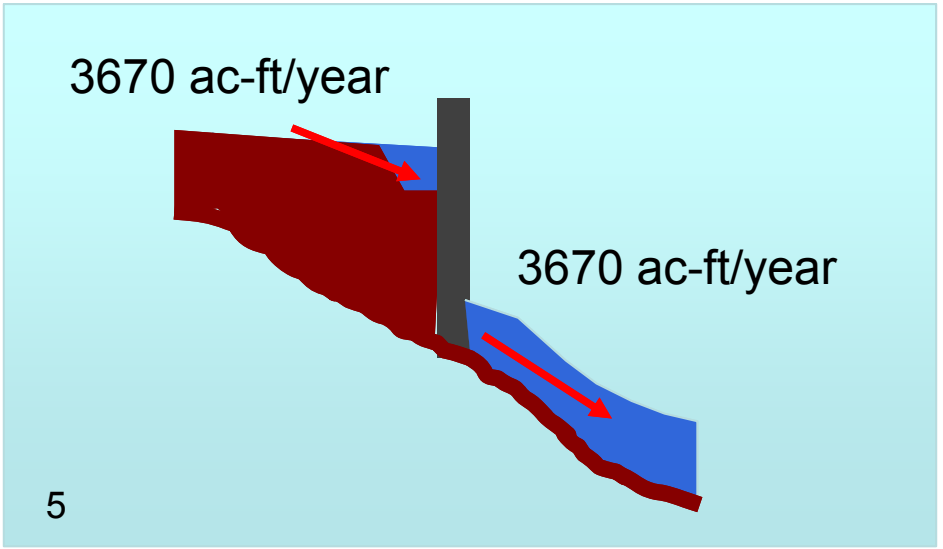


What happens to the downstream channel









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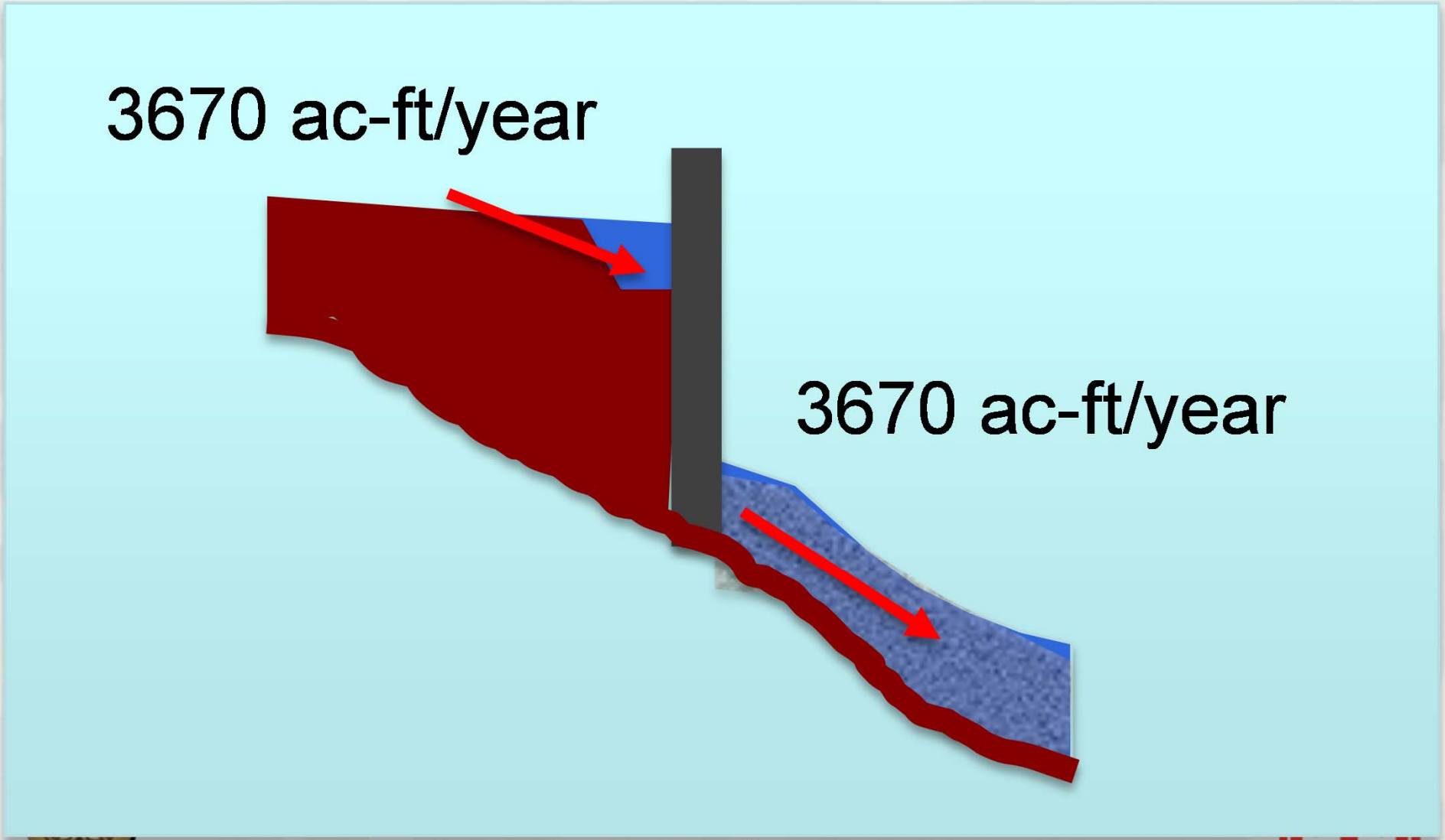
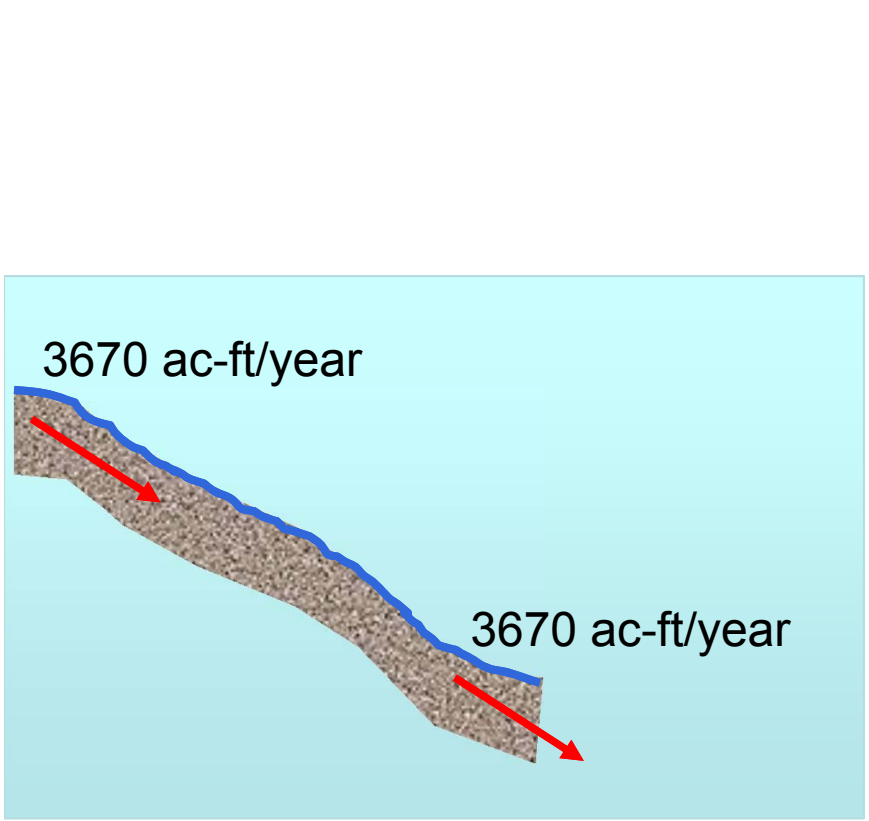


Reservoir Sustainability = Sediment Continuity NOW rather than LATER



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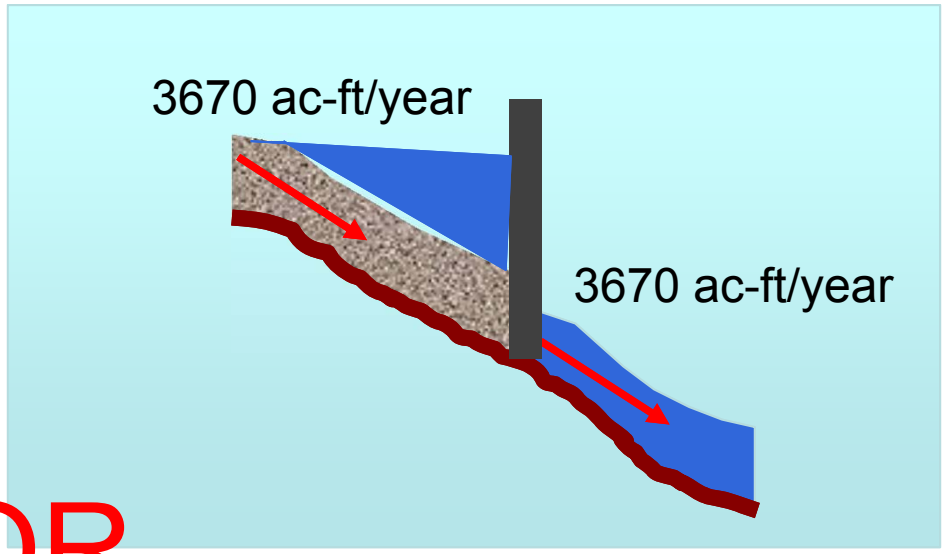
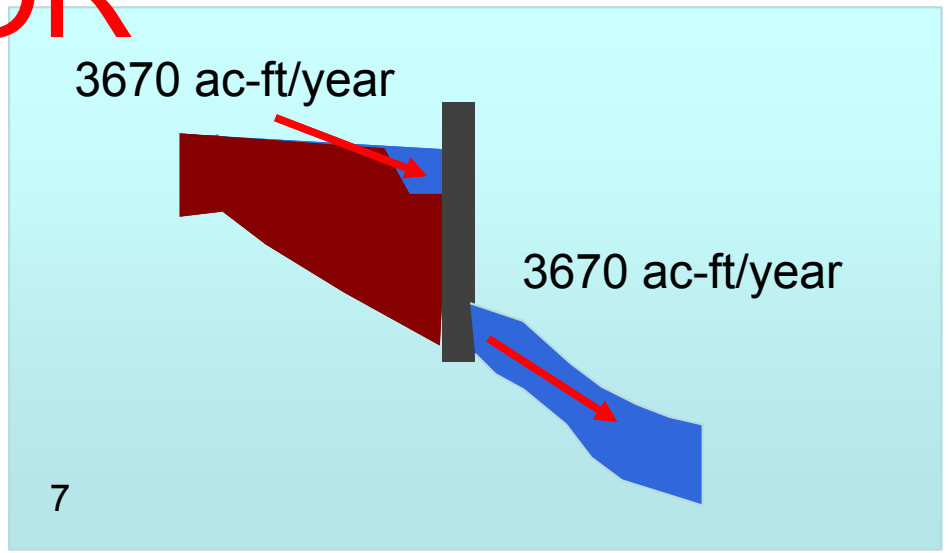




Example

- Searsville Dam: http://news.stanford.edu/2015/05/01/searsville-preferred-plan-050115/

Example

- Options for Searsville Dam
  - 1- Create a low-level outlet (no more water supply, irrigation, recreation benefits– maintain flood benefits)
  - 2- Let the dam completely fill and manage the liability in perpetuity
  - 3- (Not mentioned) Remove the dam

There are two options:

1- The Future Without Project Alternative (the “do-nothing” option)

You have no reservoir pool or associated benefits.

All incoming sediment passes to the channel downstream.

2- The reservoir sustainability option.

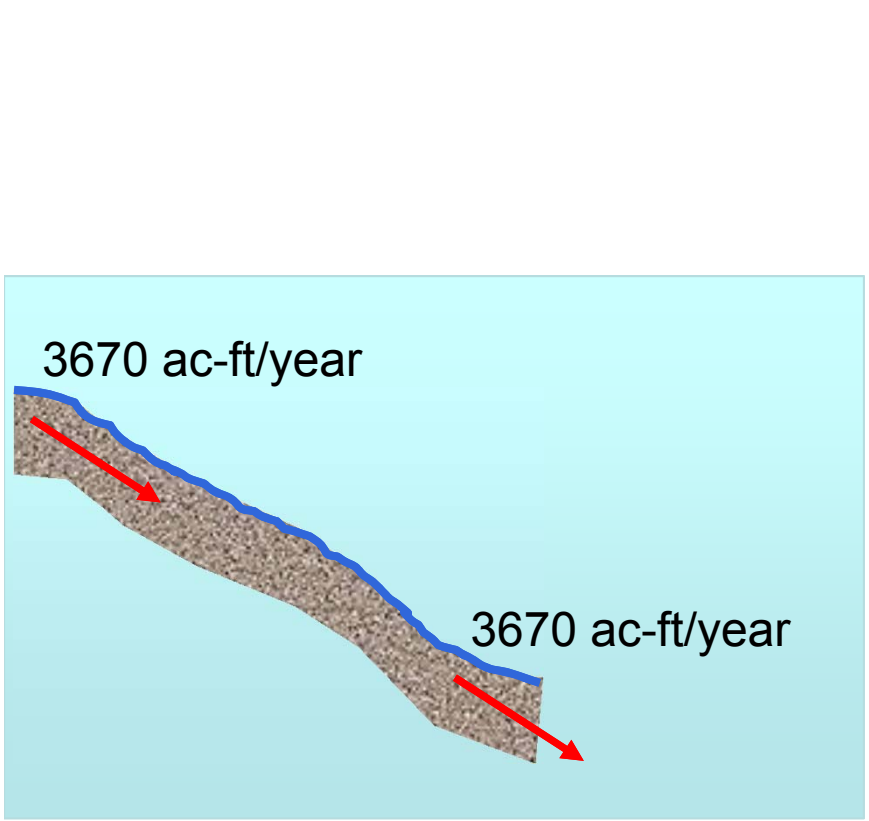
You do have reservoir pool benefits.

All incoming sediment passes to the channel downstream.

Downstream Channel

- From an environmental perspective:
  - In either case, 100% of the sediment will pass downstream sooner or later, at the rate the watershed and upstream channels generate it.
- But to maintain reservoir benefits and minimize impacts:
  - The sooner you begin managing sediment sustainably, the more reservoir benefits you can maintain!

Reservoir Sustainability = Sediment Continuity NOW rather than LATER



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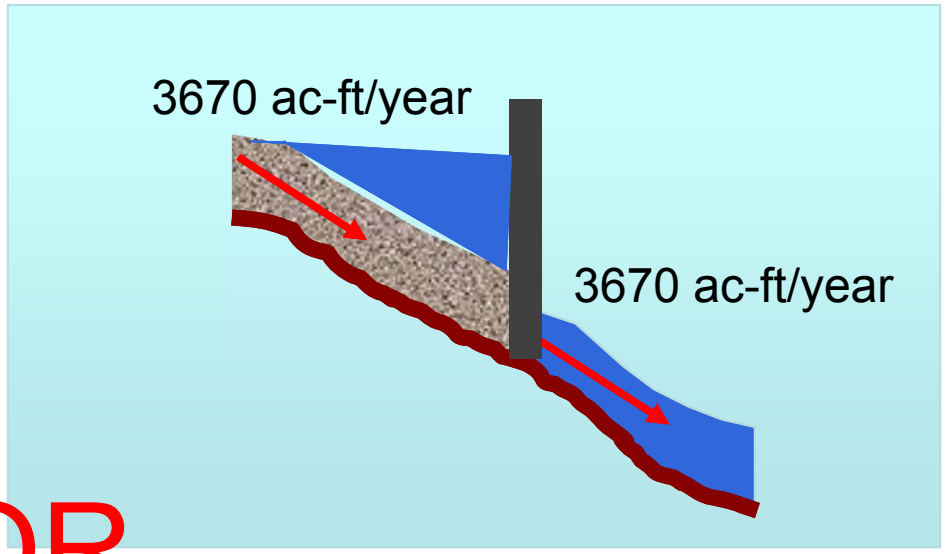

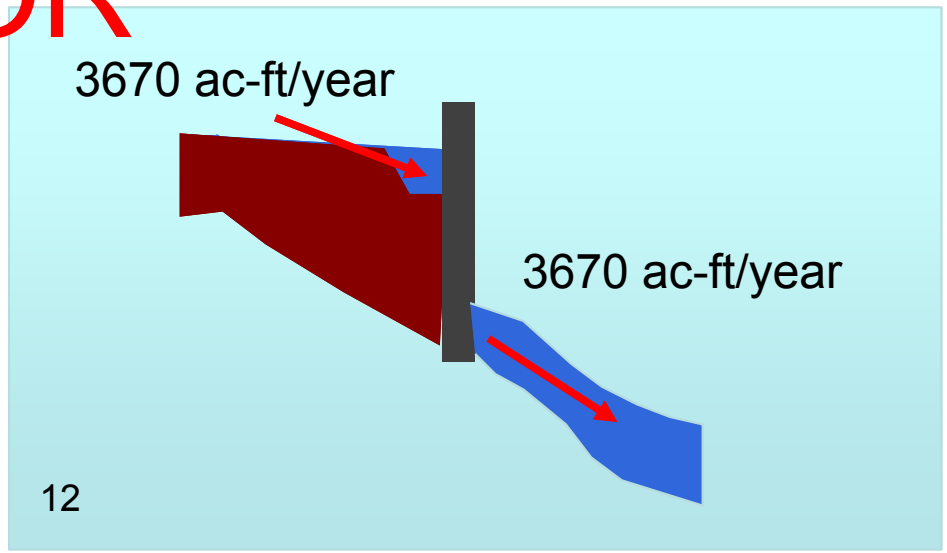

Questions?