

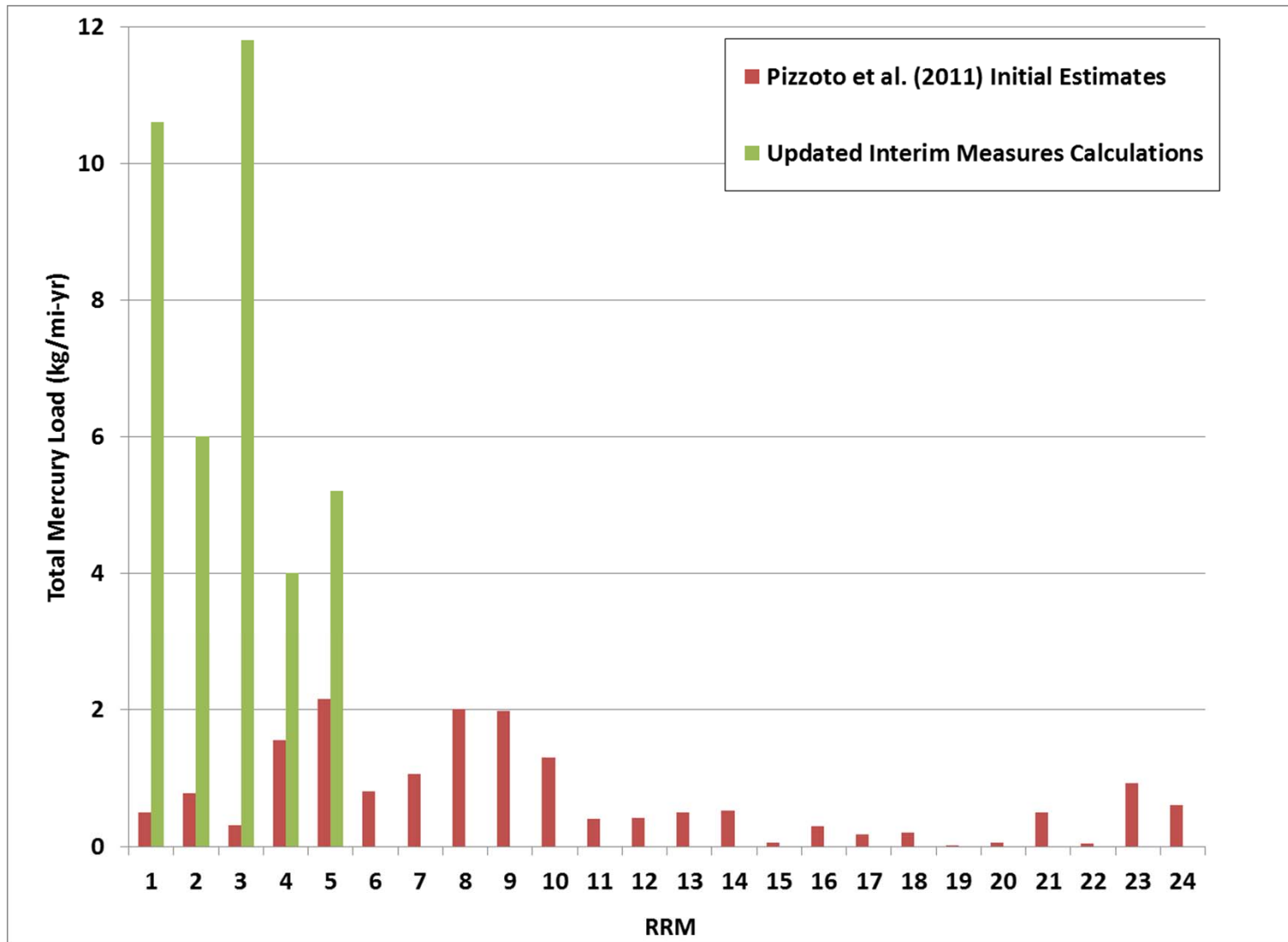


# Remedial Design Update South River, VA

May 2015



# Estimated South River Bank Total Hg Loading

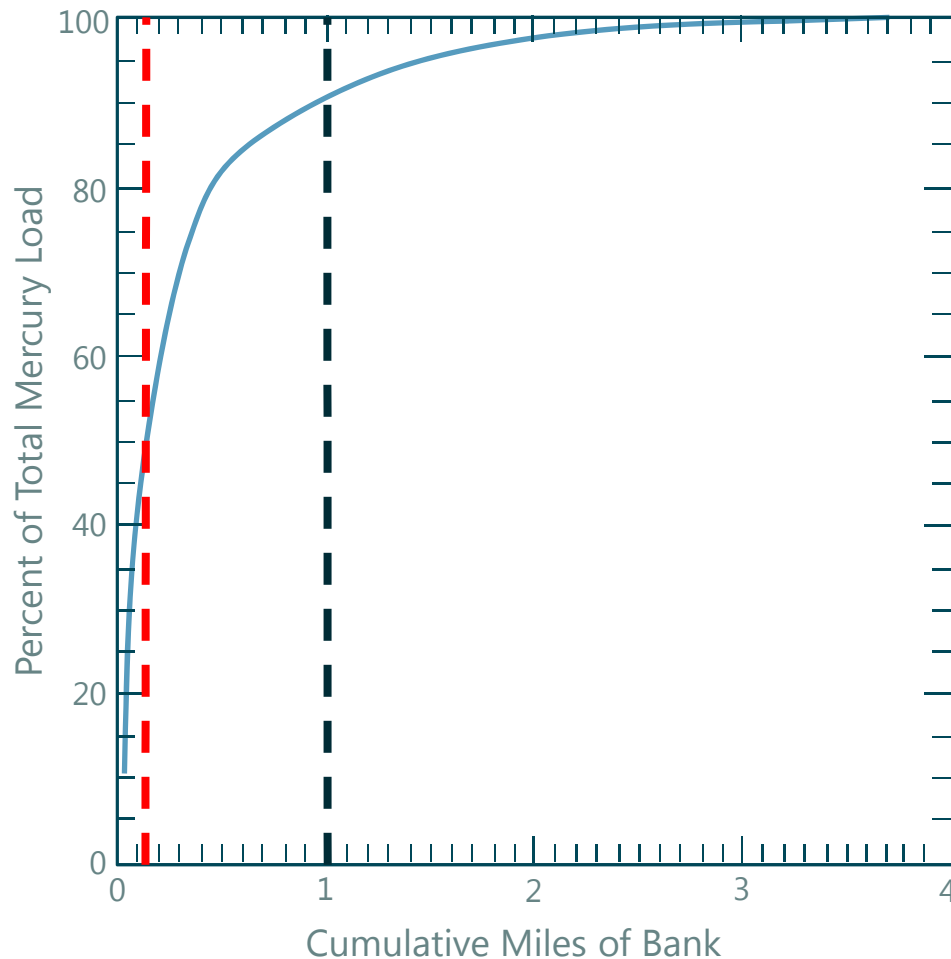


# Delineation of Phase 1 Bank Management Areas

- Phase 1: RRM 0 to 2
- Bank erosion rates
  - Exposed tree roots
  - High resolution LiDAR surveys
- Mercury loading
  - Supplemental core sampling
- New BMA definitions:
  - **Primary** BMAs (contribute 50% of cumulative T-Hg bank load)
  - **Secondary** BMAs (contribute an additional 40% of T-Hg bank load)



# Cumulative Bank Mercury Loading: RRM 0 to 2



- 50% of cumulative mercury load is attributable to ~5% of banks (**Primary** Phase 1 BMAs; corresponds to unit loading >20 kg Hg/mi-yr)
- 40% of remaining mercury load is attributable to ~20% of banks (**Secondary** Phase 1 BMAs)

## LEGEND

+ Relative River Mile

### BMAs

— Phase 1 Primary BMAs

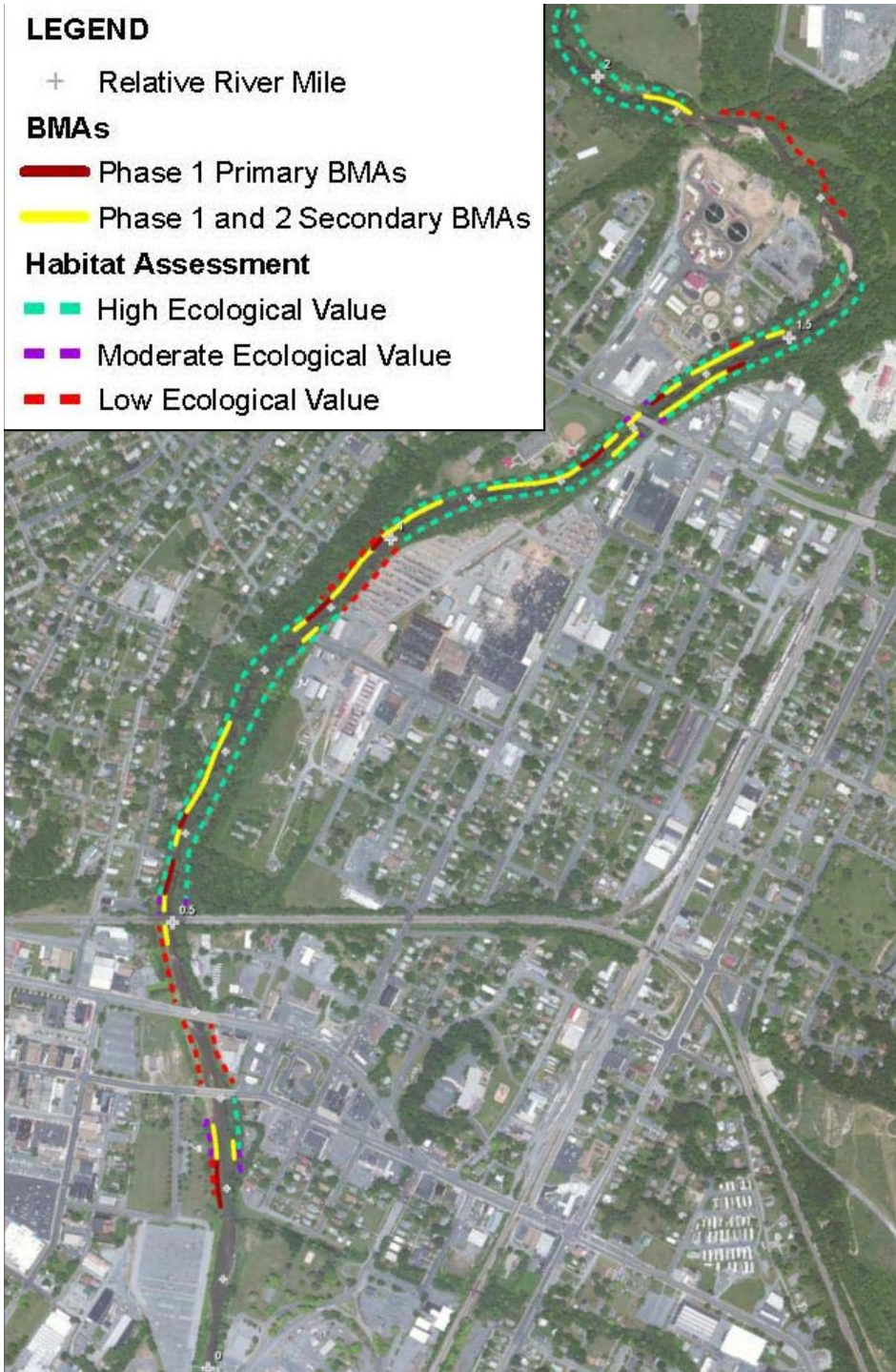
— Phase 1 and 2 Secondary BMAs

### Habitat Assessment

— High Ecological Value

— Moderate Ecological Value

— Low Ecological Value



## Phase 1 Bank Remediation Areas (RRM 0 to 2)

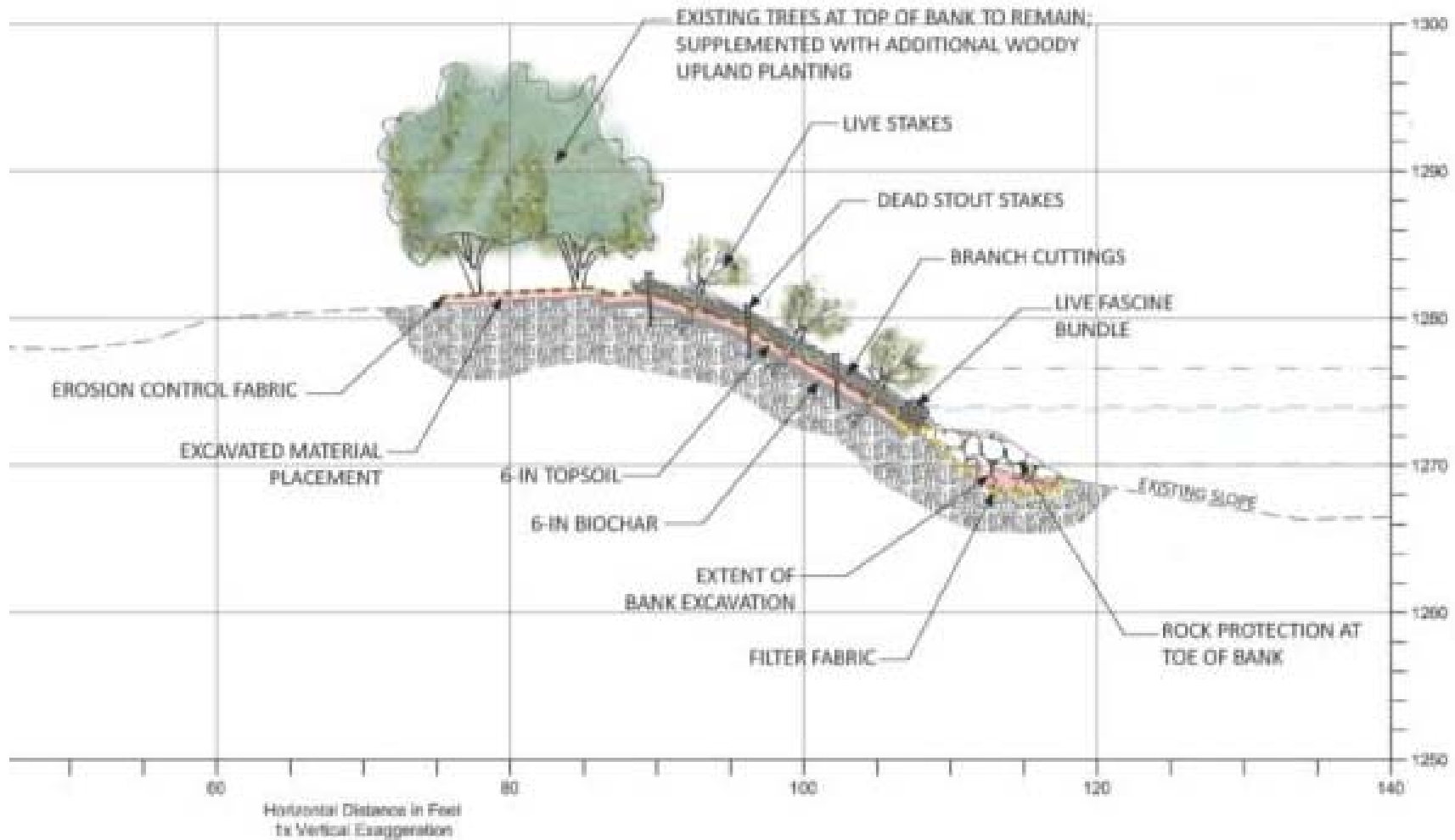
- Relatively few Phase 1 Primary BMAs
- Range of habitat conditions in BMAs (as determined by DGIF)

# Bank Stabilization Concepts

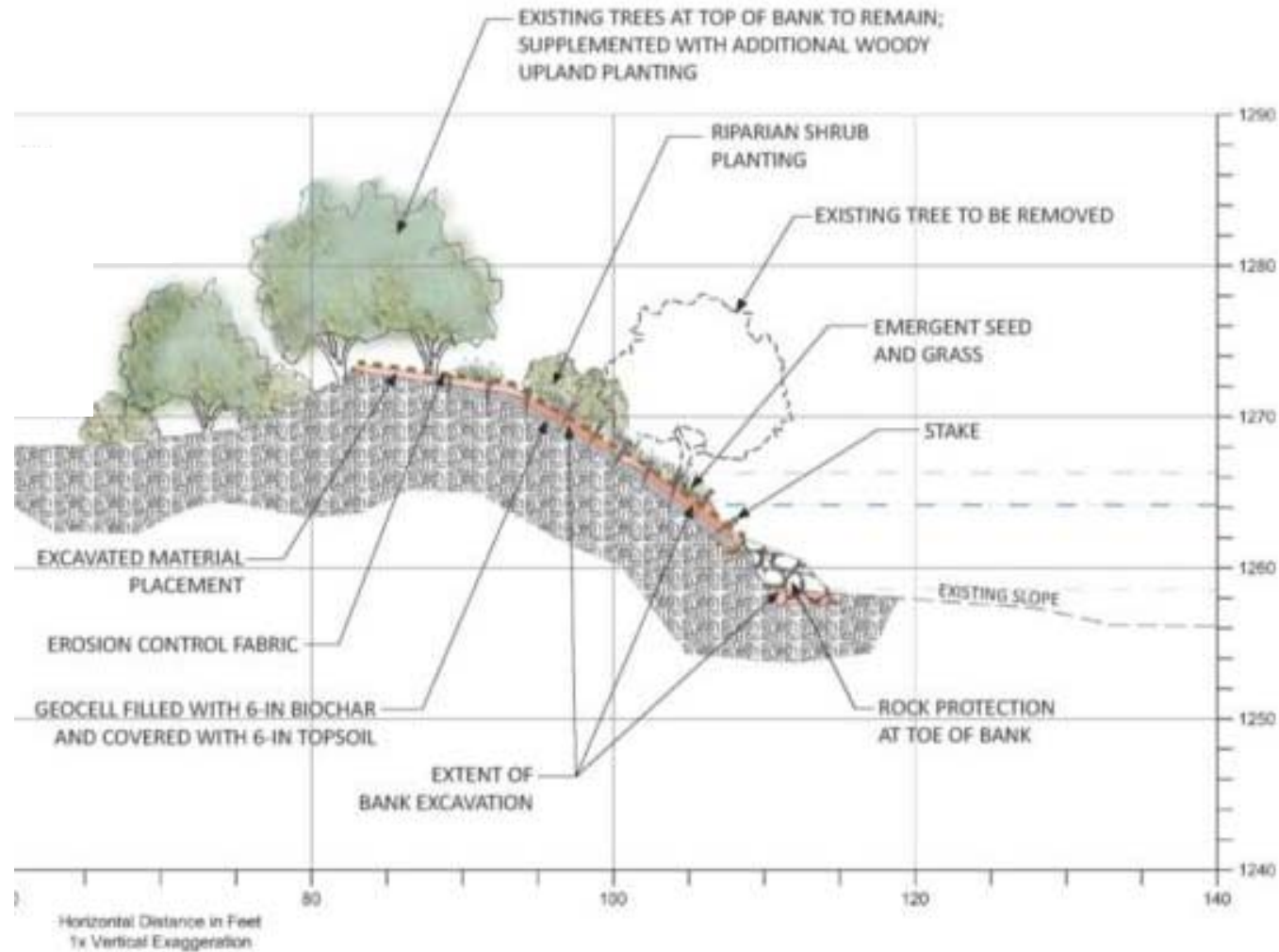
- Remediation designs
  - Removal and disposal
  - Structural stabilization
- Habitat protection designs
  - Enhanced vegetative stabilization
- Conceptual designs still being developed with stakeholders



# Potential Bank Remedy Design Concept: Primary BMA in Low Quality Habitat Area

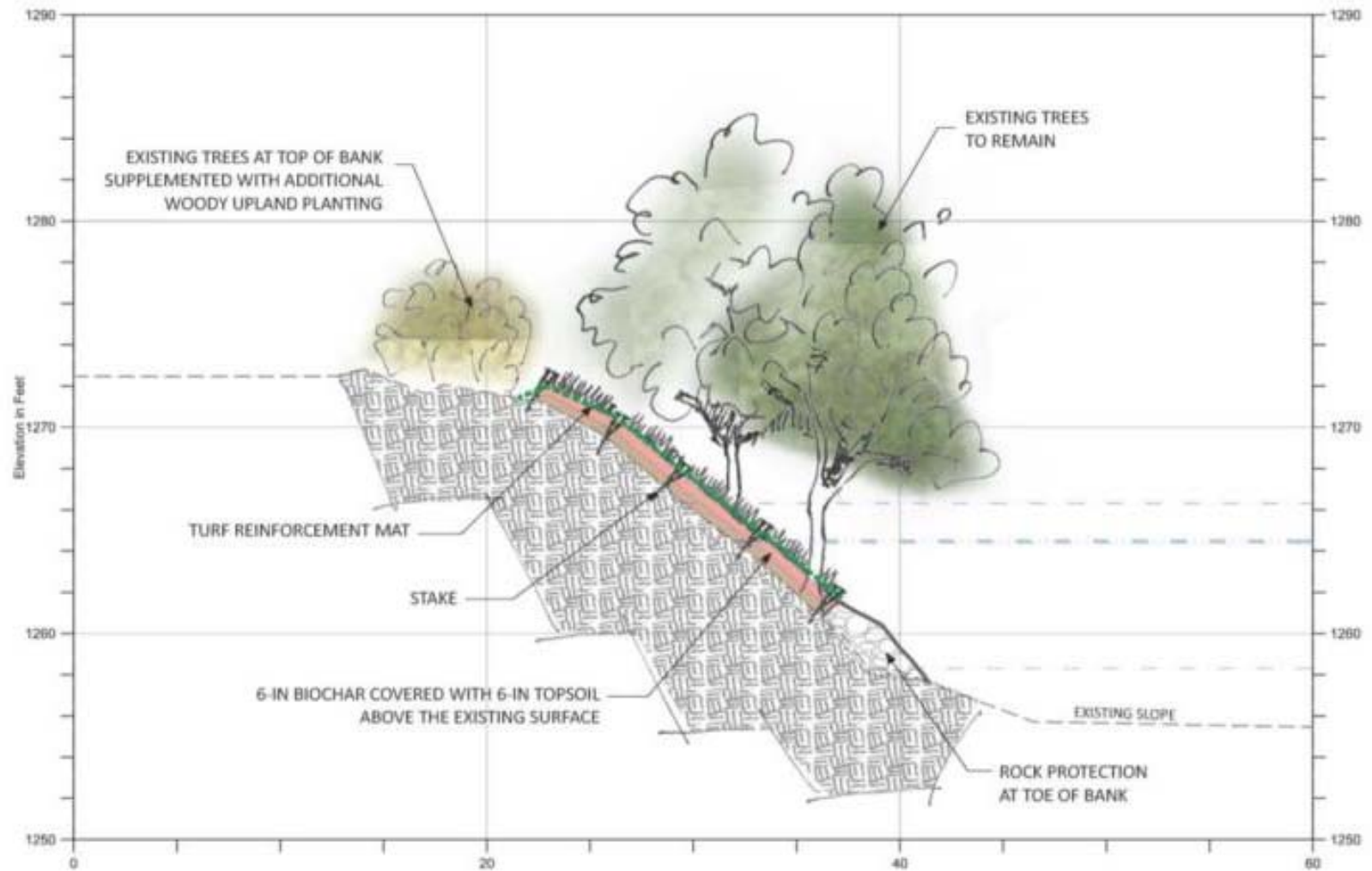


# Potential Bank Remedy Design Concept: BMA in Moderate Quality Habitat Area





# Potential Bank Remedy Design Concept: Secondary BMA in High Quality Habitat Area



## Schedule and Next Steps

- May – tree survey/marketing and supplemental core sampling
- May/June – conceptual design development with stakeholders
- Late June – pre-application permit meeting
- Early September – preliminary Phase 1A design report
  - Follow-on Agency reviews
- Early 2016 – final design, access agreements, and permitting

