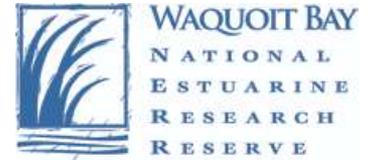




Blue Carbon in Our Backyard

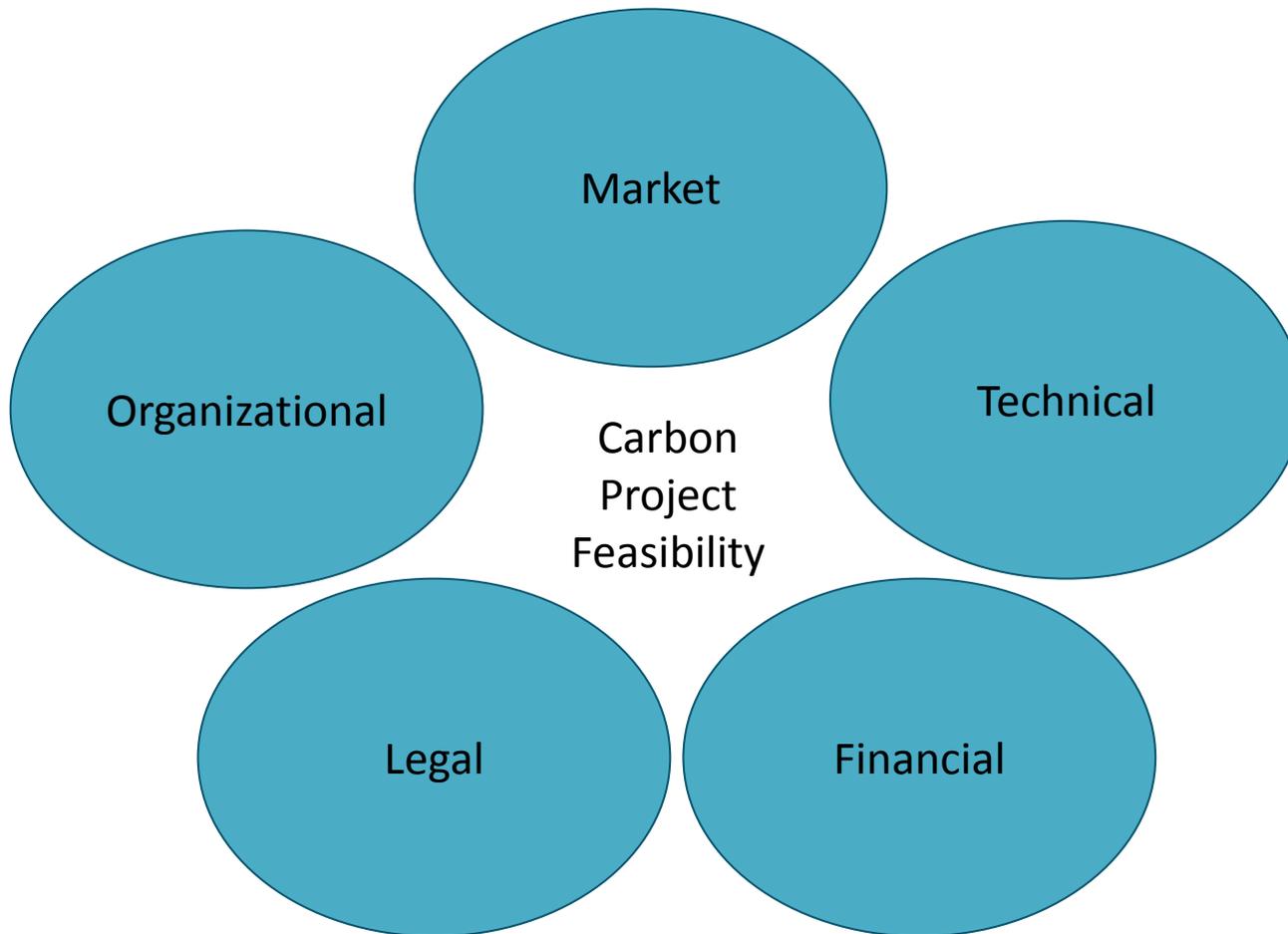
Hotel 1620 | September 10, 2019



Carbon Project Feasibility Study

Key Findings and Considerations in Developing a Carbon Offset Project for the Herring River Restoration Project

Carbon Project Feasibility



Feasibility questions

- **Market**
 - Is the project eligible in the regulatory or voluntary market?
- **Technical**
 - Is the project eligible to use approved VCS methodology?
 - How many credits could be generated?
- **Financial**
 - What are the potential carbon related revenues and costs?
- **Legal**
 - Who owns the carbon rights? Can they be transferred?
- **Organizational**
 - Which parties should be involved in development of the carbon project?

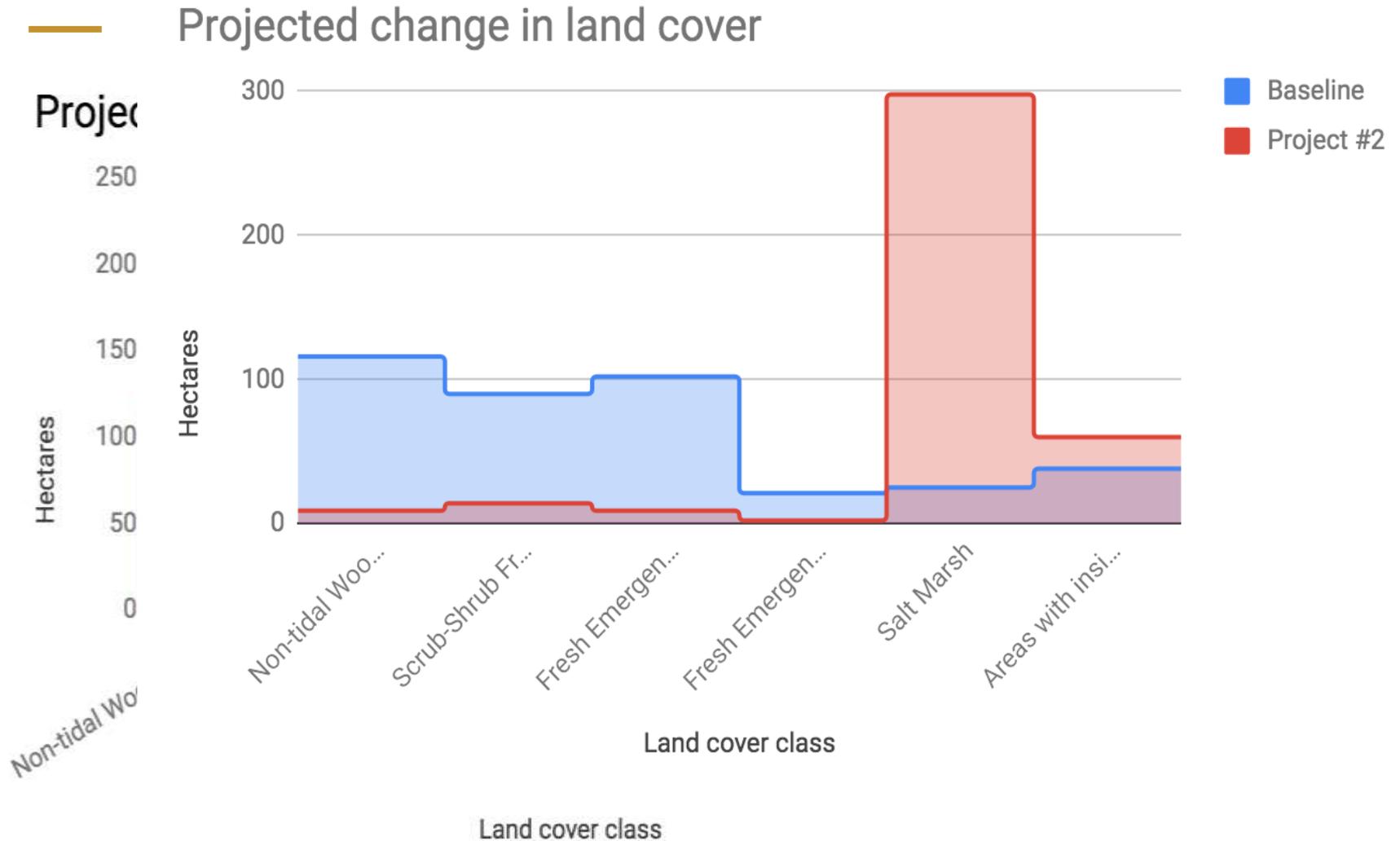
Market

- HRR project is eligible to generate offsets in the voluntary carbon market.
- Buyers of voluntary carbon offsets are often large companies with climate commitments
- HRR's climate adaptation co-benefits are a key selling point to these buyers
- Voluntary offsets from land-based C projects traded at \$4.20-\$9.50/ton in 2016.
- Tidal wetland restoration is not currently eligible in CA regulatory market (offsets in CA regulatory market trade at \$12/ton).

Technical

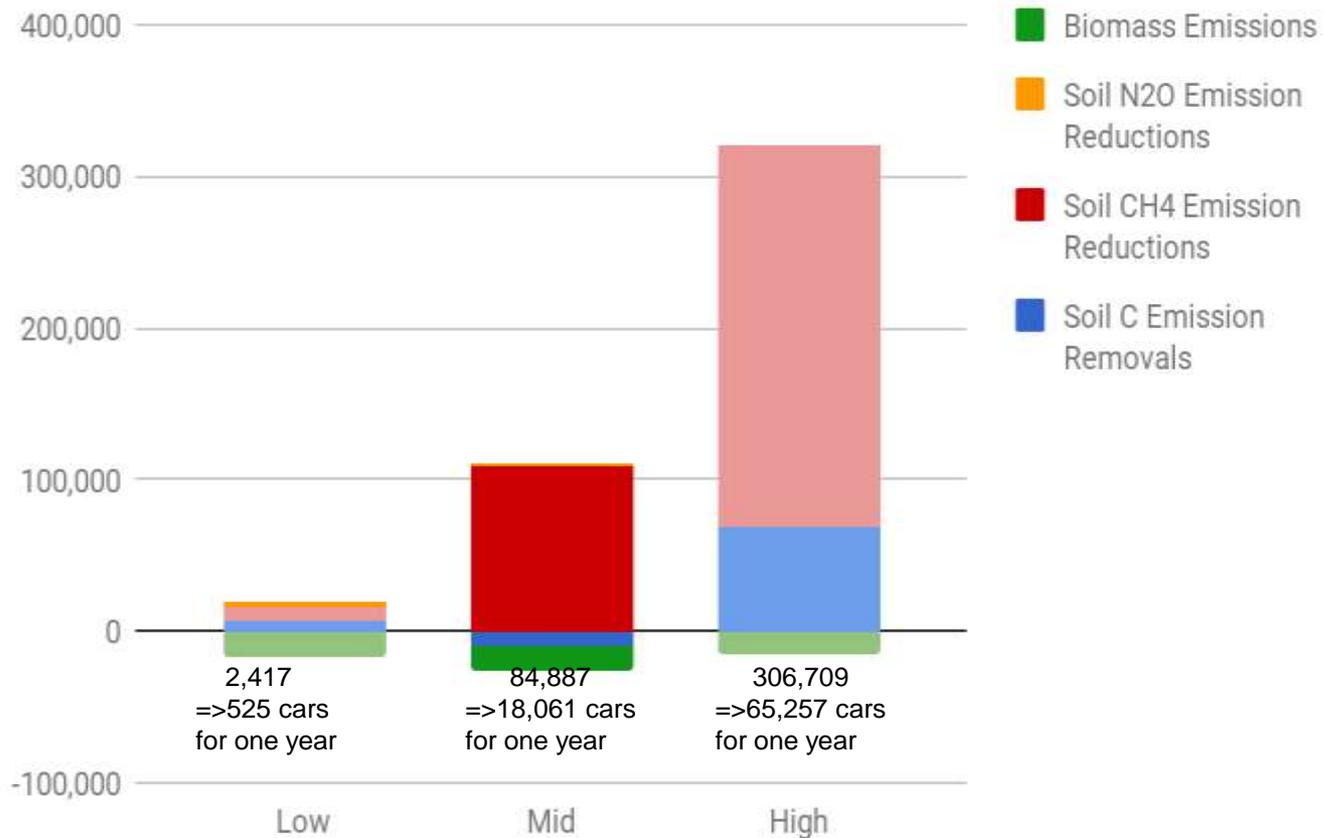
- HRR project meets applicability conditions of the approved VCS methodology for tidal wetland restoration
- Key GHG pools are Soil CO₂, Soil CH₄, and Biomass CO₂
- Developed a range of GHG emission reduction estimates, based on field data and literature

Technical

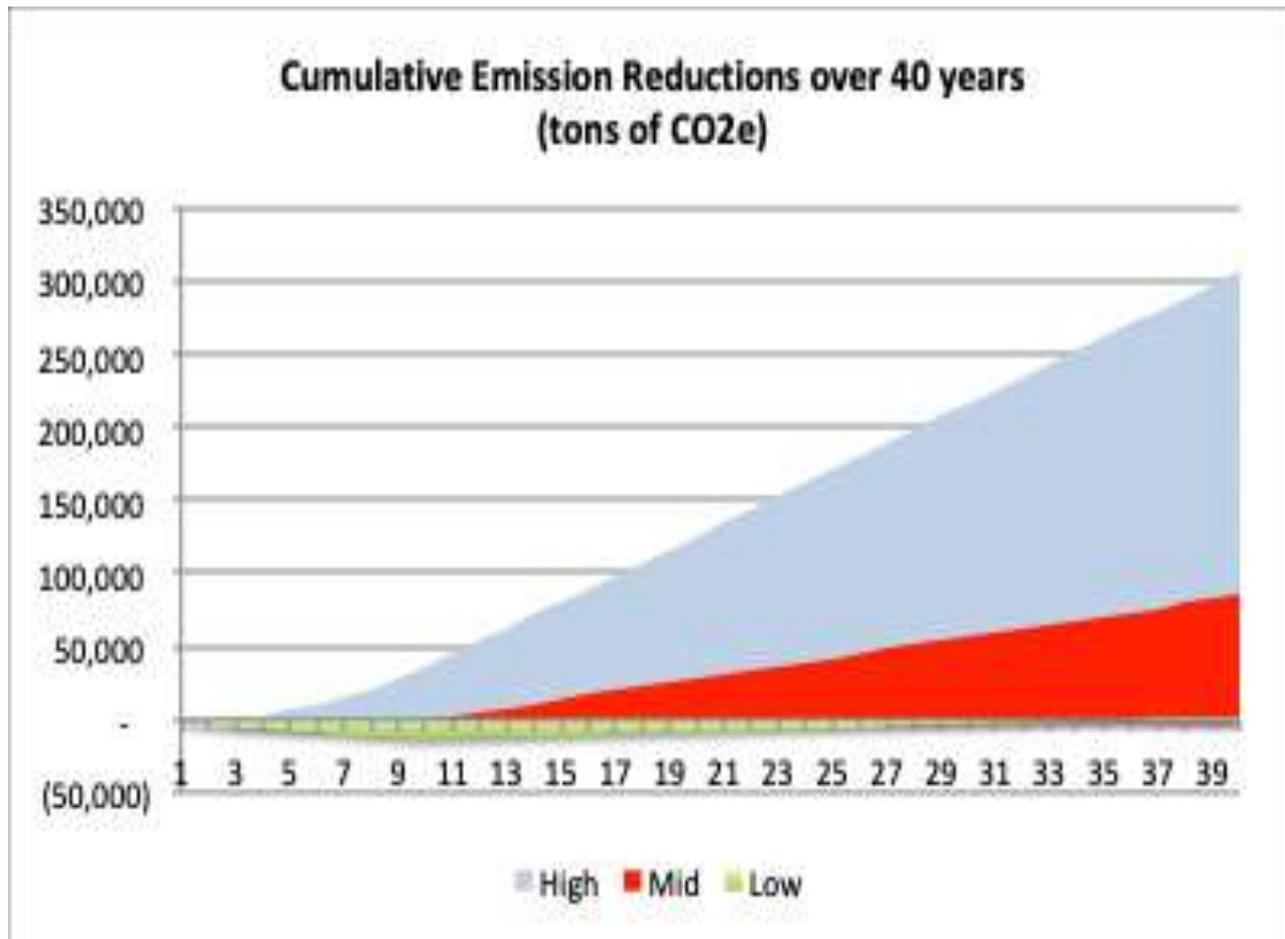


Technical

40 Yr GHG Emission Reduction Estimates (tons CO₂e)

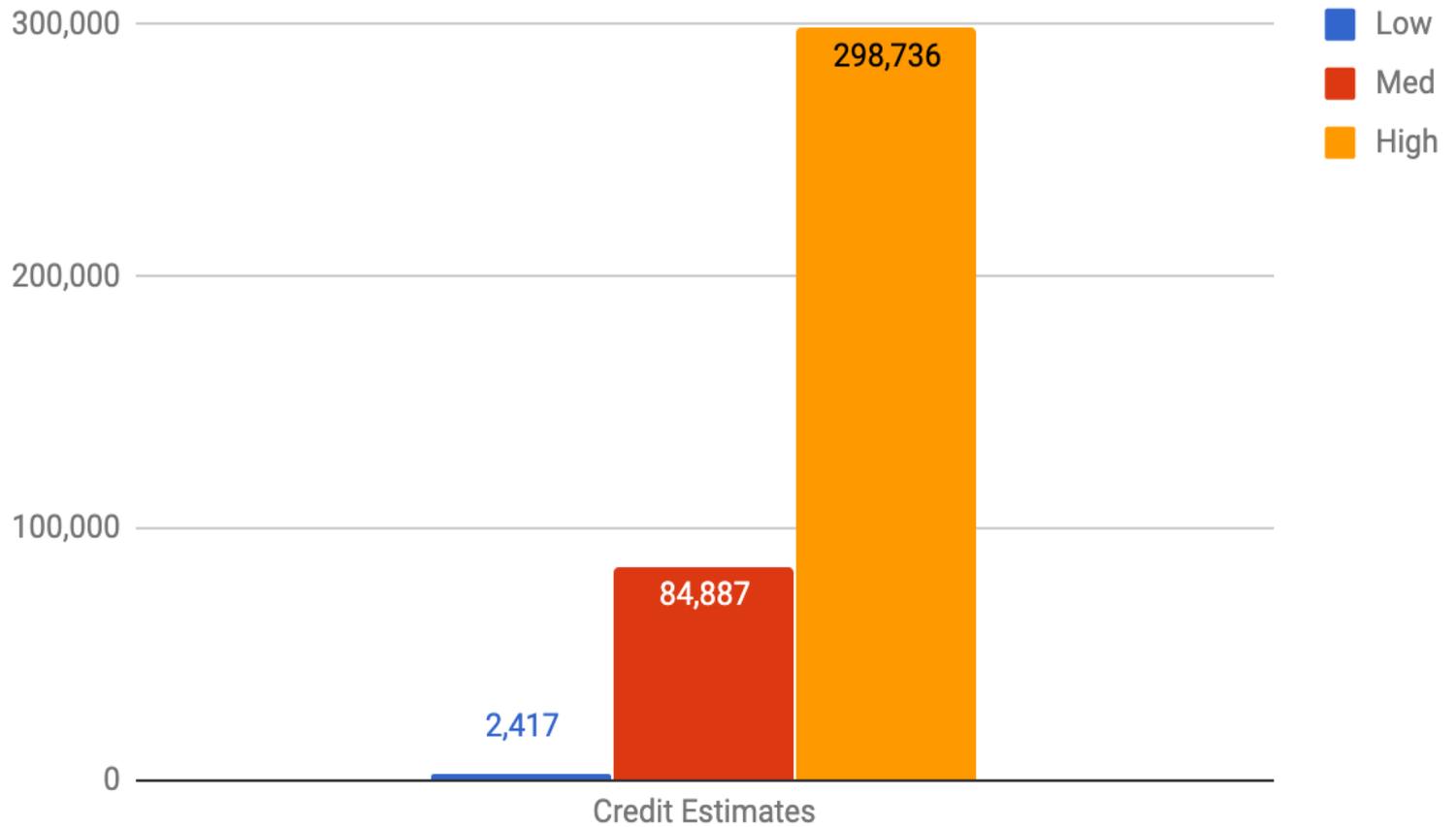


Technical



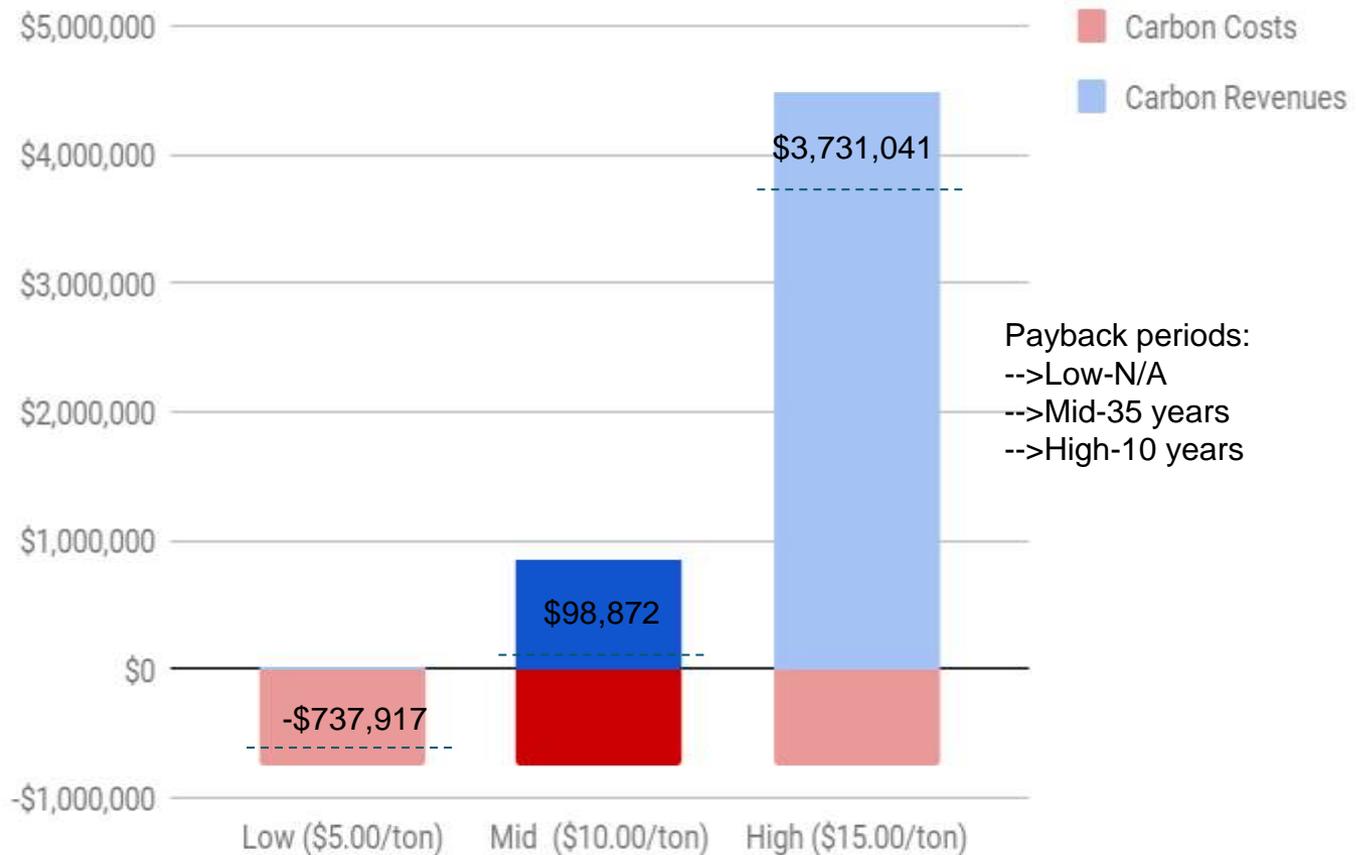
Technical

40 Yr Credit Estimates (tons CO₂e)



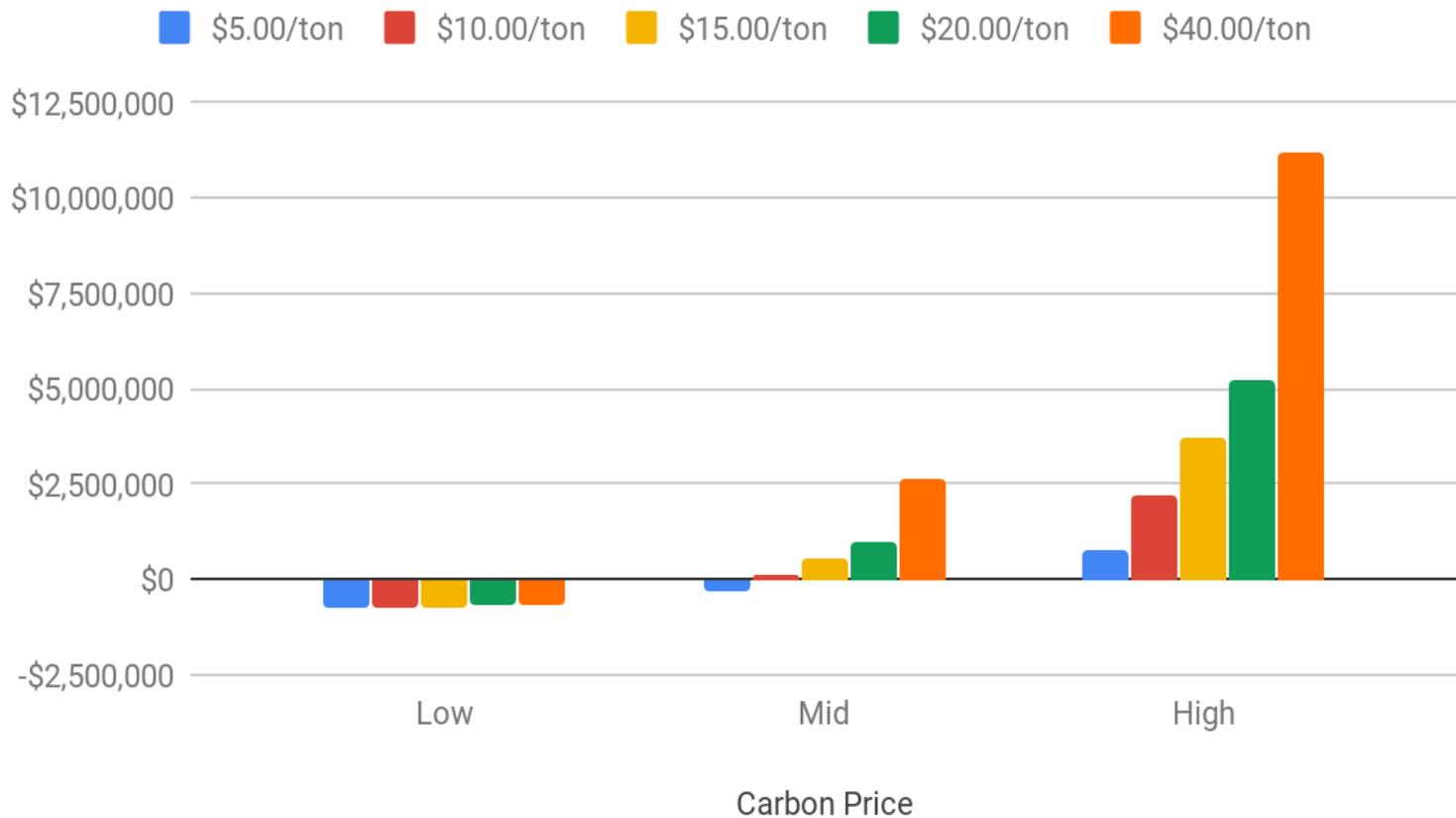
Financial

40 Yr Estimated Carbon Revenues and Costs



Financial

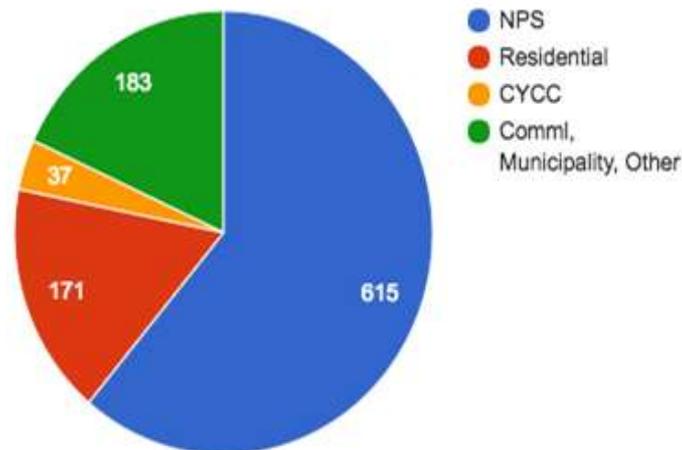
Sensitivity of cash flows to carbon prices



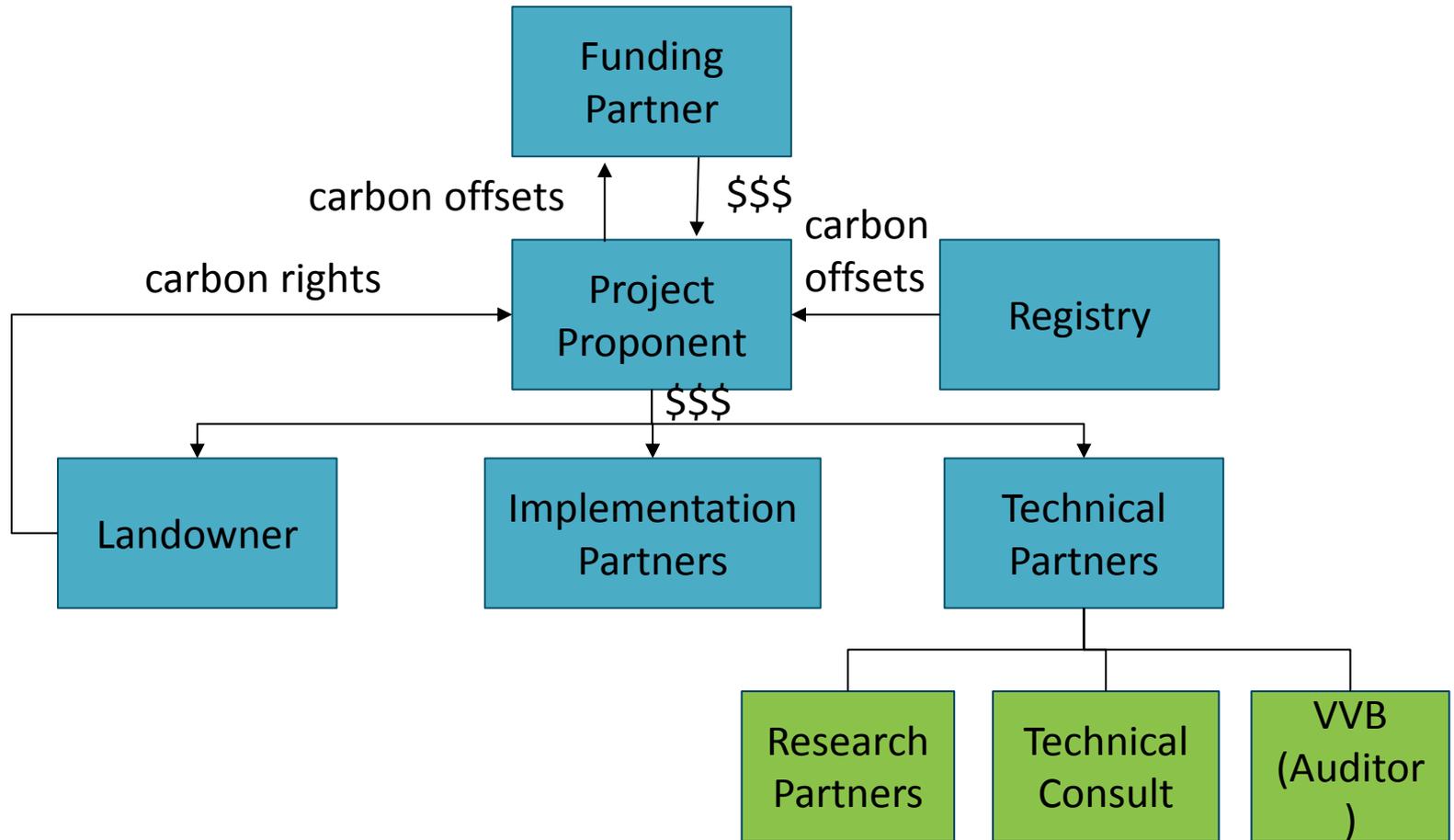
Legal

- NPS is largest landowner, precedent transactions within Dept of Interior (USFWS), need to clarify authority to transfer C rights.
- Other landowners could be added over time by developing grouped project.

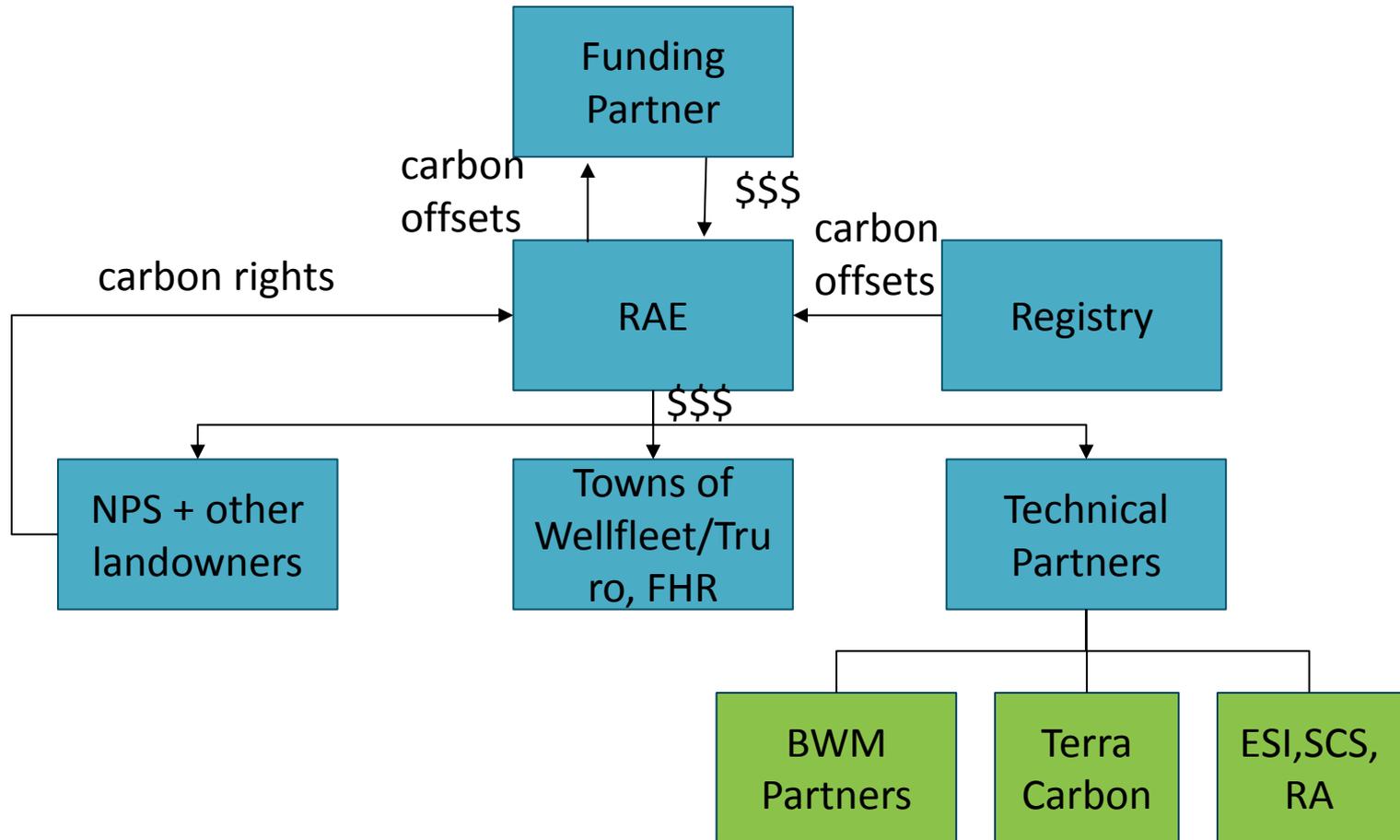
Ownership by Acreage in HRR Project Area



Organizational



Organizational



Take-aways

- HRR is eligible under voluntary offset standards.
- Prices vary, but expect offsets from HRR project can be sold for ~\$10/ton.
- Our mid estimate of carbon offsets is 85,000 tons over 40 years (18k cars for 1 yr), but potential range outcomes is wide due to CH₄ variability and scarcity of data from drained areas of HRR.

Take-aways

- Carbon revenues can cover carbon costs in mid and high scenarios and provide \$ for other long-term monitoring, but grant funding may also be available.
- Need DoI approval to develop carbon project and transfer carbon offsets.
- Carbon project can be started on NPS land and expanded to other lands over time.

Next Steps

- Request review and advice from DoFl counsel regarding transfer of carbon rights on NPS land.
- Collect additional CH₄ data in low salinity parts of HRR project to narrow the range of projected offsets and net cash flows.
- Finalize technical approach, including additional CH₄ collection, publishing of soil C and CH₄ papers, and additional sea level rise modeling.
- Identify potential grant funding sources to cover costs with initial project development and first monitoring event.



QUESTIONS