



Long Term Management for Mitigation: Part I

February 11, 2025 – 3pm ET

National Association of Wetland Managers Hot Topics

Ecological Restoration Business Association

- Advocacy organization.
- ERBA's mission is to support private investment in durable environmental results that enable responsible economic growth.
- ERBA members provide compensatory mitigation for impacts to wetlands and waters of the U.S. & other offsets.
- ~80 member companies operating across geographies.



Principles for Ecological Restoration
& Compensatory Mitigation



Prepared by the Ecological Restoration Business Association
May 2021



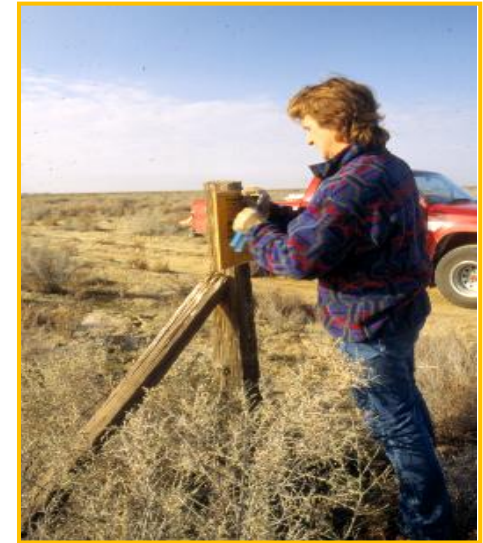
Scope of Today's Webinar

- Long Term Management (LTM) Best Practices and Standard – viewed from lessons learned in the regulatory context
 - i.e. Clean Water Act Section 404 and Endangered Species Act LTM requirements
 - While LTM is a fundamental element, the critical nuts and bolts are missing from the regulations
 - Applicable to a range of ecological restoration projects, whether regulatory or voluntary contexts
- Importance of Best Practices
 - Industry – sponsors and regulators - maturity after years of trial and error and observations
- Part I (today): The why, who, what, how (i.e. different roles and approaches), related key considerations, and standards
- Part II (March 4th): Financing mechanisms, considerations, funding determinations, and reflections on challenges and limitations



The Basics of Long-Term Management

Why, What and When



Citations for LTM... the Why?

- USACE/EPA 2008 Mitigation Rule
 - 332.4 (plan elements), 332.7 (general), 332.8 (MB and ILF)
- USFWS Mitigation Policy
 - 5(g) Durability, 6.6.3.1. Equivalent Standards (j)
- USFWS CMP
 - 5.4 Additionality, 7.1 Habitat Based Mechanisms
- NOAA Mitigation Policy
 - 3.03 Landscape/Seascape approach
 - 3.04 Promote Mitigation Strategies with High Probability of Success

Long-Term Management of Mitigation Projects

(33 CFR 230.97(d) and 332.7(d))

Permit Conditions or Instrument must:

- Identify responsible party and allow for transfer of long-term management responsibilities
- Description of LTM needs and associated costs
- Address financing required for LTM needs – funding mechanism and disbursement

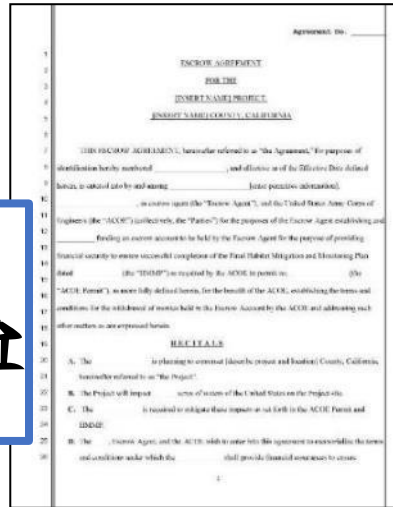


What... is Long-term Management

33 CFR 332.7 Management

a. Site protection

- Goal “Permanent Protection”
- Prohibit Incompatible Uses



b. Sustainability

- Limit Engineered Structures
- Include Buffer Areas
- Maintenance Plan

C. ADAPTIVE MANAGEMENT PLAN

- Monitoring Performance Standards
- Thresholds and Triggers for unforeseen circumstances



D. LONG-TERM MANAGEMENT PLAN

- Identify responsible party
- Identify management needs
- Describe funding amount & arrangements



What... is in a Long-term Management Plan

33 CFR 332.4 (c)(11) Long-term Management Plan

“A description of how the compensatory mitigation project will be managed after performance standards have been achieved to ensure the long-term sustainability of the resource, including long-term financing mechanisms and the party responsible for long-term management.”

- Background conditions
- Characterize site (at the time of transfer to LTM)
- Instrument requirements (obligations of LTM steward)
- Management goals & objectives
- Management strategies & tasks
- Adaptive management plan & procedures
- Reporting procedures
- **Contingencies**
- Legal provisions
- Funding mechanism and task itemization

Why... Ecosystem Sustainability

Past and Present Human Uses



Invasive Pests



Invasive Plants



Climate Change

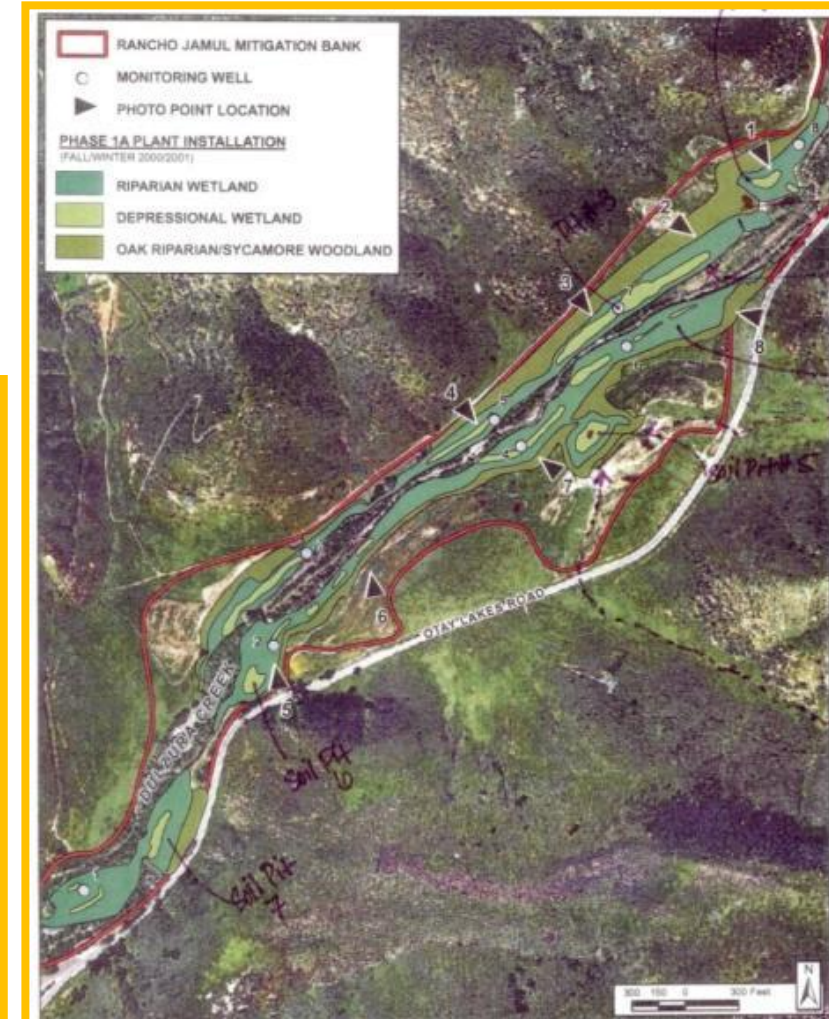


Why... Ecosystem Sustainability

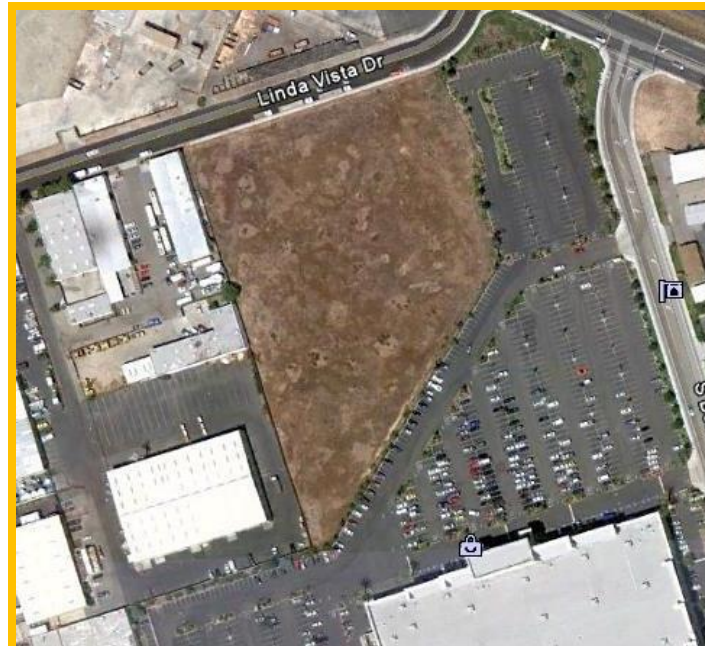
Site Selection is CRITICAL!

- Mitigation should be *self-sustaining*, but management *may be needed* to meet objectives
- Ensure sustainable mitigation *after* performance standards are met
- Lessons learned...

Water source can be diverted or depleted...
Water source is engineered/maintained...



Adjacent land uses ...

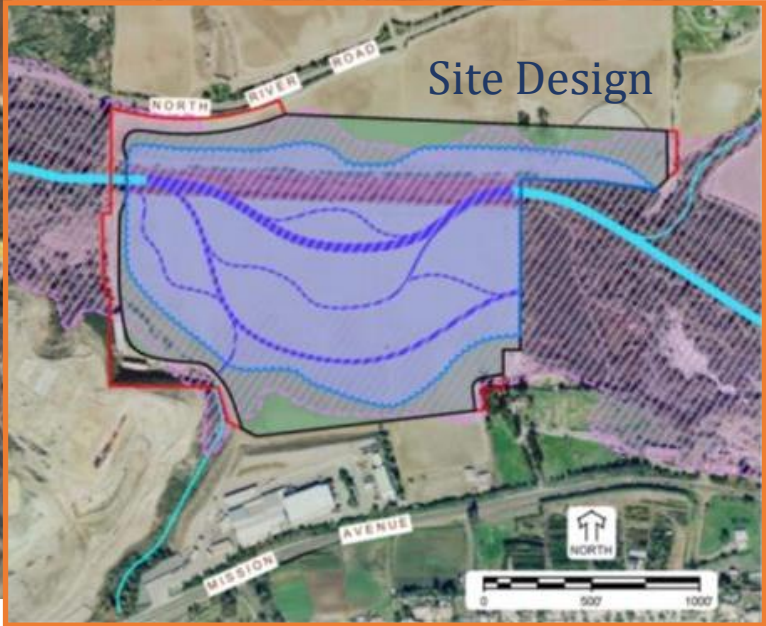
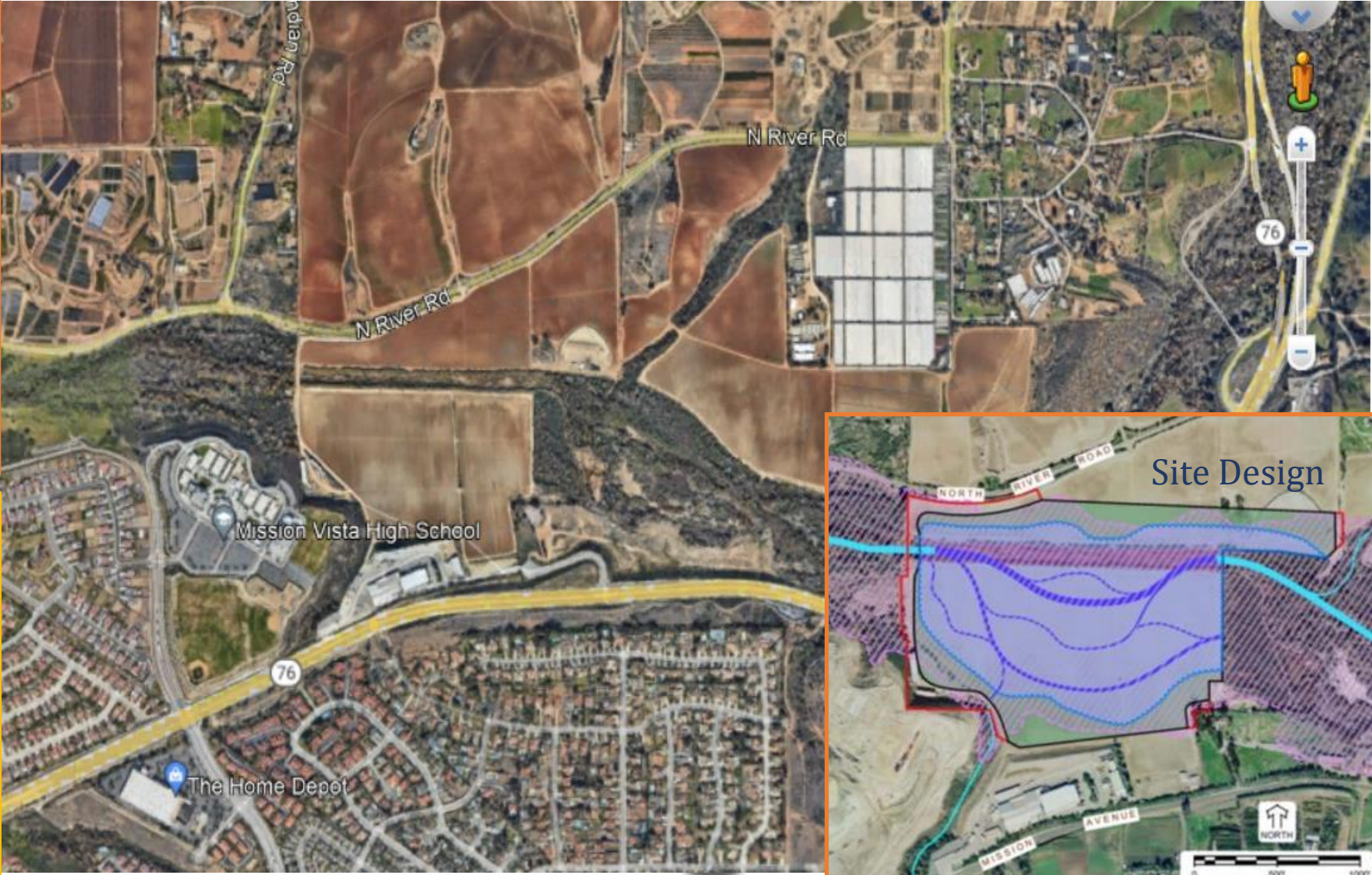


Water source is disconnected...



Great Site – Needs LTM

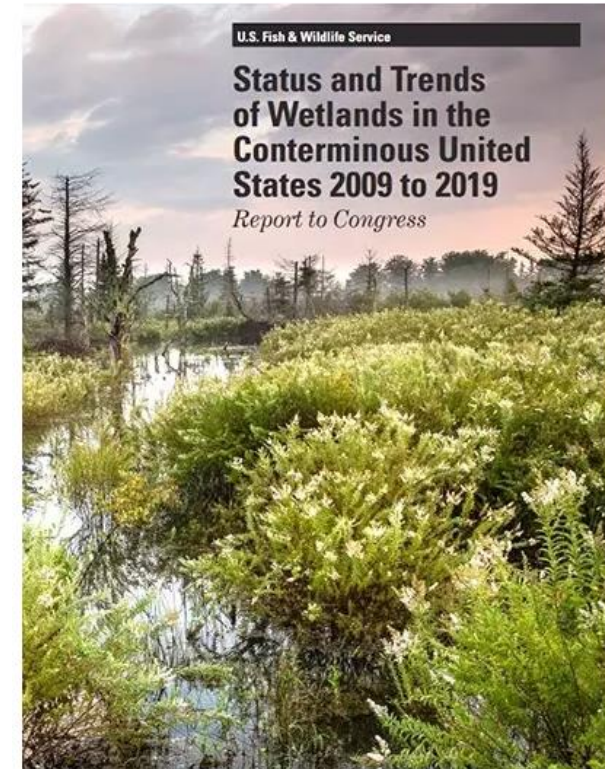
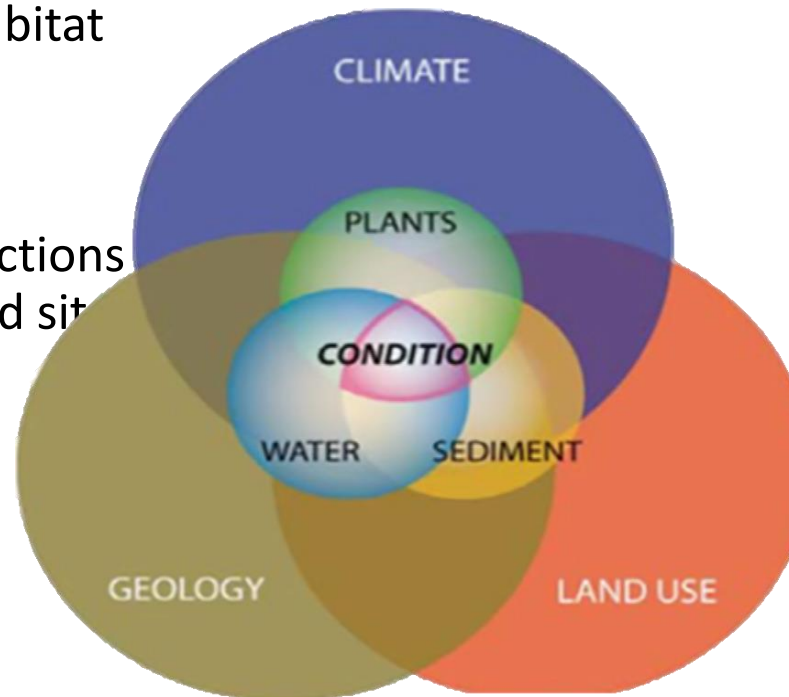
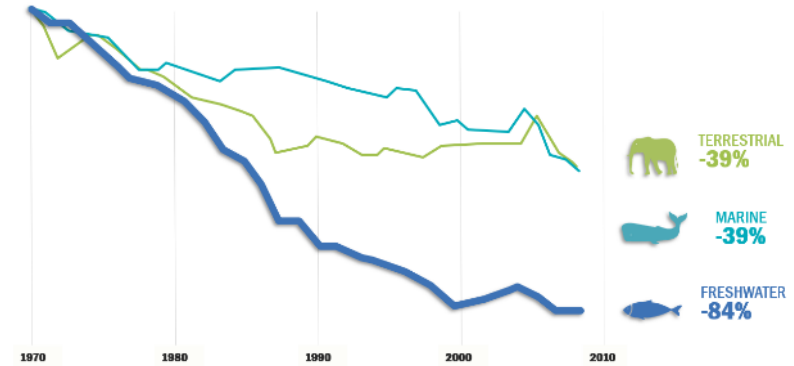
1946 Aerial Photograph



Why... Consequences of Failure

- Regulatory agencies and society
 - Loss of permanent offsets for authorized losses,
 - Cumulative losses, and
 - Ultimate failure of regulations (CWA, ESA)
- Landscape
 - Loss of resource functions
 - Loss of at-risk species and associated habitat
- Society
 - Affect listing decisions
 - Affect national goals
 - Loss of confidence in government protections
 - Cost to taxpayers for managing degraded sites
 - Cost to non-profits and supporters
- Mitigation Providers
 - Reputational risk
 - Financial risk

Freshwater Species Decline: 1970-2010



When... of Long-term Management

Project Approval

Construction and Performance Monitoring

Long-Term Management



~3yrs

5-10yrs

100 years? Long Term Management – Monitoring and Stewardship

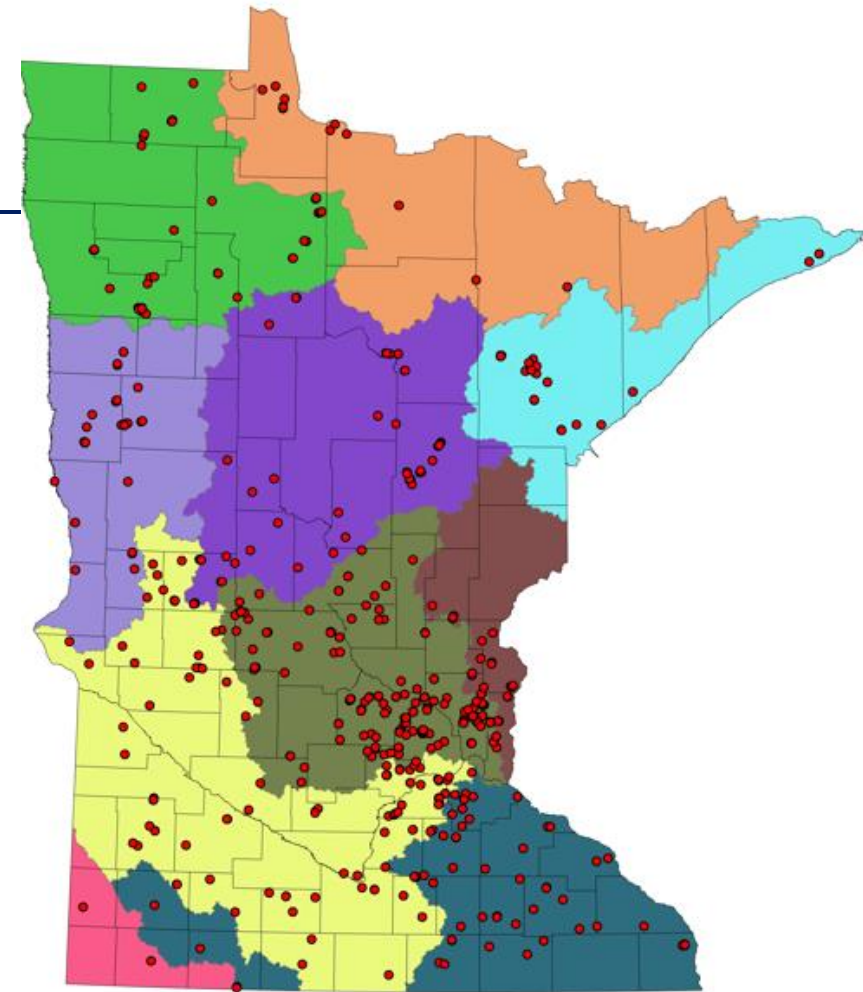
Minnesota Example



- MN attempts to limit need for long-term management.
- Bank reviews focus on site selection and design standards.
- Has a fee-based funding mechanism for long-term monitoring and management built into the wetland banking program.

Context and Background

- BWSR (state agency) administers the wetland banking program in MN
- ~600 banks dating to mid-1990s, ~dozen new banks per year.
- All banks must grant a conservation easement to the state.
- The State holds a real estate interest in all banks and has a vested interest in their long-term viability.



Site Selection

State Standards

- **Natural Siting Requirement:**

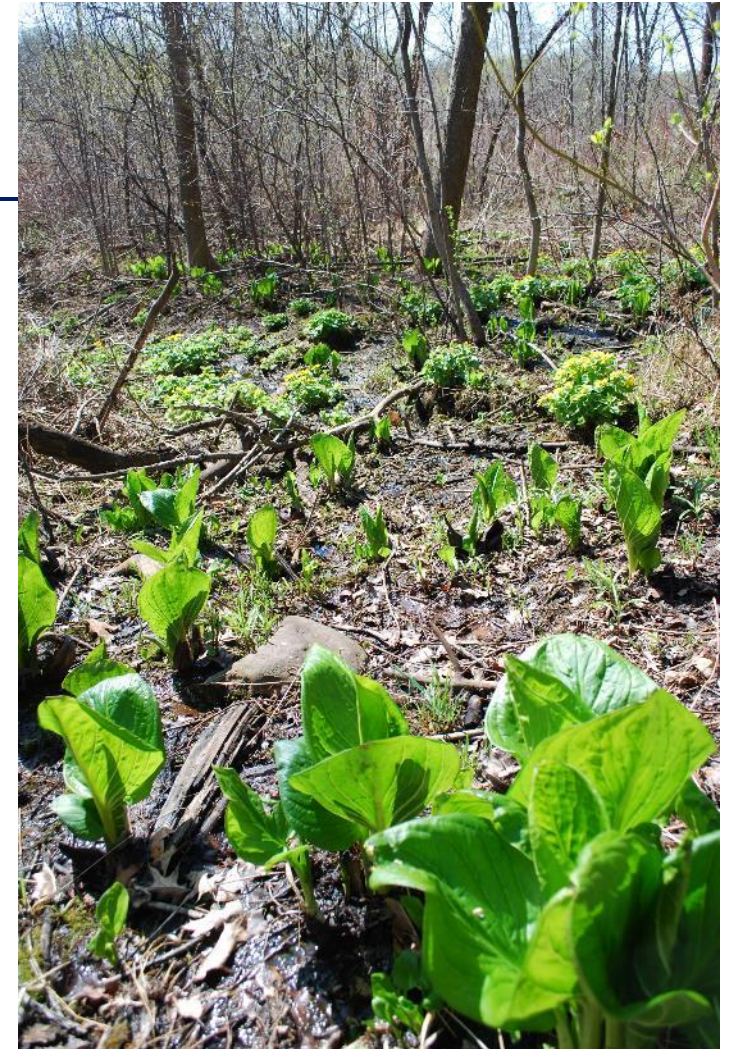
- Must take advantage of naturally occurring hydrogeomorphic conditions most likely to result in a wetland area that functions wholly, perpetually, and naturally.

- **Self-Sustaining Requirement:**

- Must be located and designed to be self-sustaining once performance standards have been achieved.
- Must provide the desired functions over time in a changing landscape without human intervention and must be compatible with adjacent land uses.

- **Expanded Buffers:**

- Expanded buffers where there is a high potential for erosion and the buffer will improve slope stability or when necessary to provide wildlife habitat corridor connections with other wetlands or habitats.



Site Selection

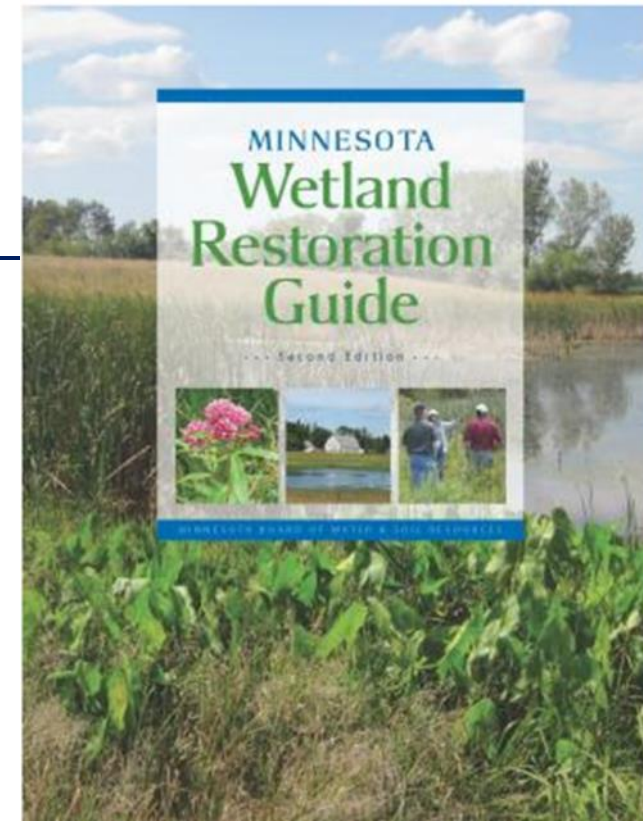
- Focus of project reviews:
 - Potential negative effects of surrounding land uses.
 - Ability of proposed buffers to protect restored wetlands.
- Credit allocation adjustments:
 - Zones of decreased credit when adjacent lands could degrade site (e.g. steep, erosive slopes, functioning drainage infrastructure, high traffic roads).
- Natural buffers and corridor connections:
 - Sites next to conserved areas are prioritized (Scientific Natural Areas, Wildlife Management Areas, etc.).



Design

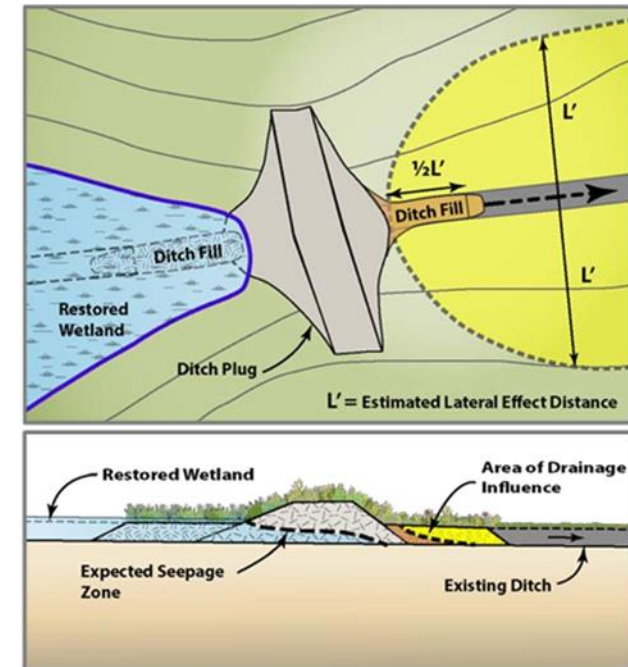
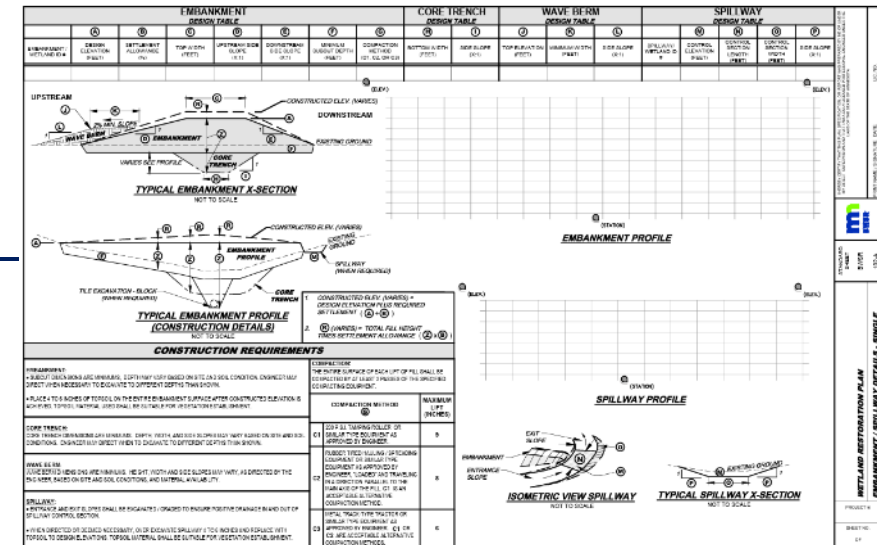
State Standards

- **Preference for Restoration:** Wetland restoration preferred over creation.
- **Natural Restoration:** Restoration must include wetland types or characteristics that naturally occur in the landscape.
- **Professional Engineer:** Construction plans must be designed, overseen, and certified by a registered professional engineer.
- **Native Vegetation Establishment Guidelines:** State seed mixes, standards, and expected procedures.
- **Specific Signage and Survey Requirements:** Clear demarcation of easement boundaries to minimize encroachments.

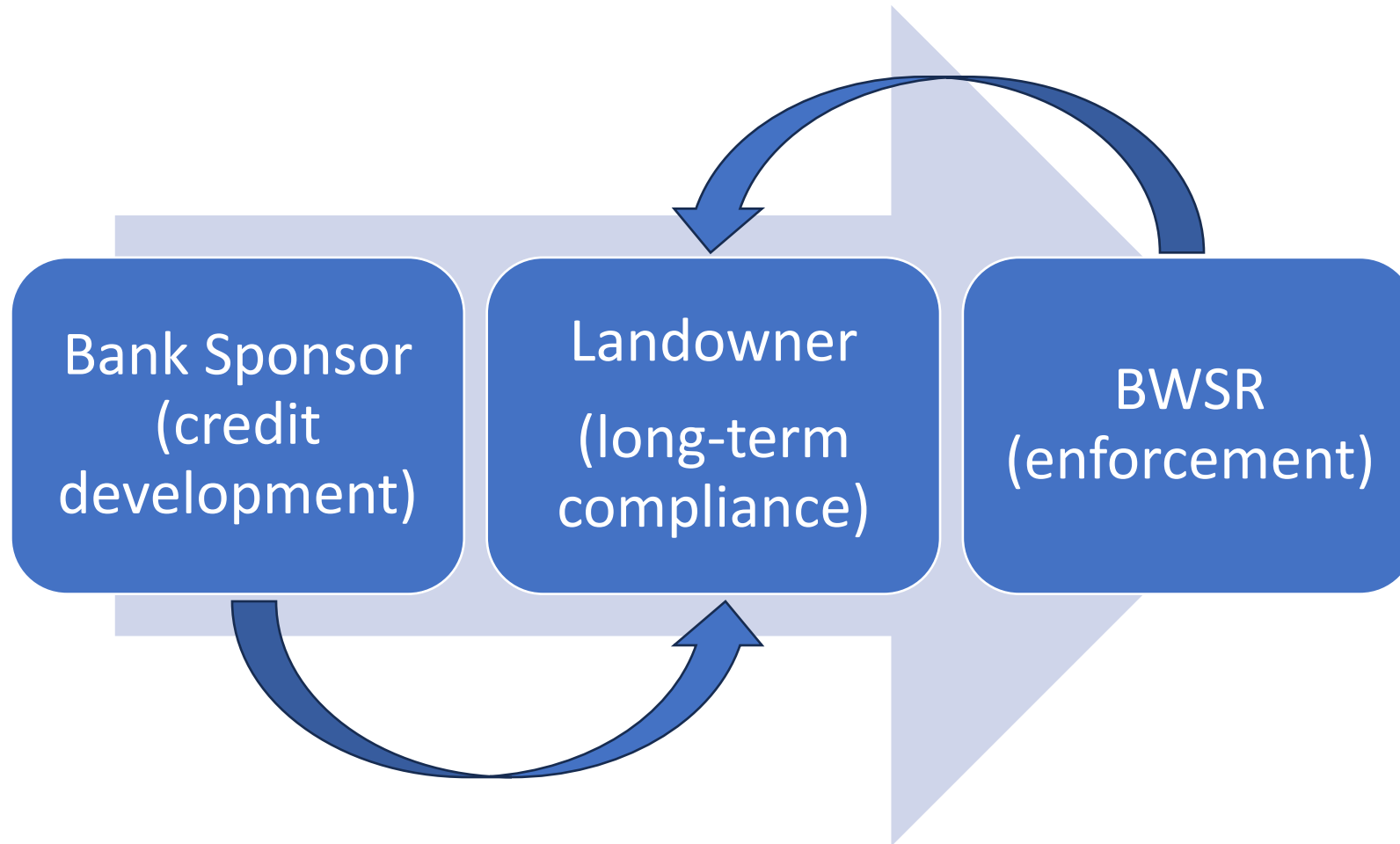


Design

- Credit for created wetlands reduced by 25%.
- Vegetative restoration only is very limited.
- Require simple, easy to maintain water control structures and prefer simple ditch fills and tile blocks when feasible.
- Generally, do not allow long-term grazing or other activities that require more monitoring and management.



Long-Term Monitoring & Mgmt. of State Easements



Long-Term Monitoring & Mgmt. of State Easements

- Easement stewardship fund established in 2015 for monitoring and enforcement of easements.
 - A fee for every released credit goes into the fund and is invested by the state. 5% of the balance is allocated to the agency each year to fund monitoring and enforcement efforts. In 2023, the fund was expanded to allow for repair associated with easements.
- Monitoring focus - encroachment, structural deficiencies, and unlawful land uses. Grants used to assess ecological condition of older banks.
- With increasing fund balances, agency monitoring and management efforts will likely expand.



Assignment of LTM Responsibility to Third Party Private Sector (or non-profit)

- Currently Standard Practice in many regions
- LTMP adopted by Land Manager (owner or operator)
- Funding mechanism transfers management payments from stewardship fund (Endowment) to Land Manager



Assignment of LTM: Issue Areas



- Qualifications/experience of Land Manager
- “Am I responsible if something fails?”
- Complex maintenance or monitoring requirements
- “Is there enough money for LTM?”
- Unclear or ambiguous Goals and Objectives for LTM

What is a Long-Term Management Plan?

“A crucial document that outlines the ongoing care, monitoring, and maintenance required for a successful and sustainable environmental mitigation project.”

Long-Term Management Plans



Cattle Grazing Mitigation Bank Wetlands

Technical-Ecological Components

- ✓ Site Purpose, Attributes & Resources
- ✓ Property and Resource Descriptions
- ✓ Management Personnel and Responsibilities
- ✓ Plan Goals/Objectives
- ✓ Monitoring and Analysis
- ✓ Management Activities
- ✓ Remediation/Restoration Activities

Long-Term Management Plans

Administrative Components

- ✓ Recreation & Education
- ✓ Agency Notification
- ✓ Long Term Maintenance of Structures/ Improvements
- ✓ Prohibited Activities
- ✓ Bank Inspections and Reporting
- ✓ Endowment Funding/spend plan
- ✓ Security, Safety, Access
- ✓ Plan Amendment



Long-Term Management Plans (details in Part II)



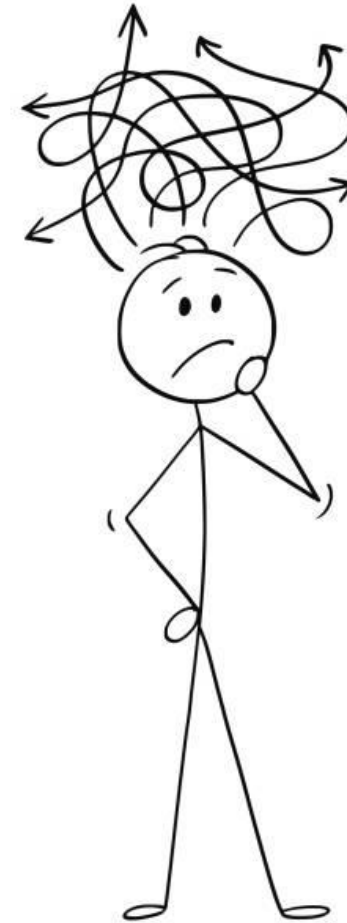
Financial Components

- ✓ Fund holder identified
- ✓ Cost Estimates for each Management/Monitoring task
- ✓ Costing assumptions
- ✓ Estimated cost to administratively operate the site and plan
- ✓ Contingency funding

Long-Term Management Plan

Key Considerations:

- You can't plan for everything
- Keep the organization easy - someone else will need to understand it 500 years from now
- Understand the implications of management action costs (part II)
- **Focus on Adaptive Management**



Best Practices: From Here to There?

“Plan”

Noun:

- *a detailed proposal for doing or achieving something.* (a prescription)

Verb:

- *decide on and arrange in advance.* (a process)

<https://www.google.com/search?client=firefox-b-1-d&q=definition+of+plan>



1

Pick good sites and design to incorporate and accommodate natural processes and change



Sites with incorrect soils, hydrology, or incompatible adjacent land uses = high management costs



High levels of human intervention = high management costs

2

Select an “A” team of non-profit partners and coordinate upfront



Appropriate
Mission



Experienced



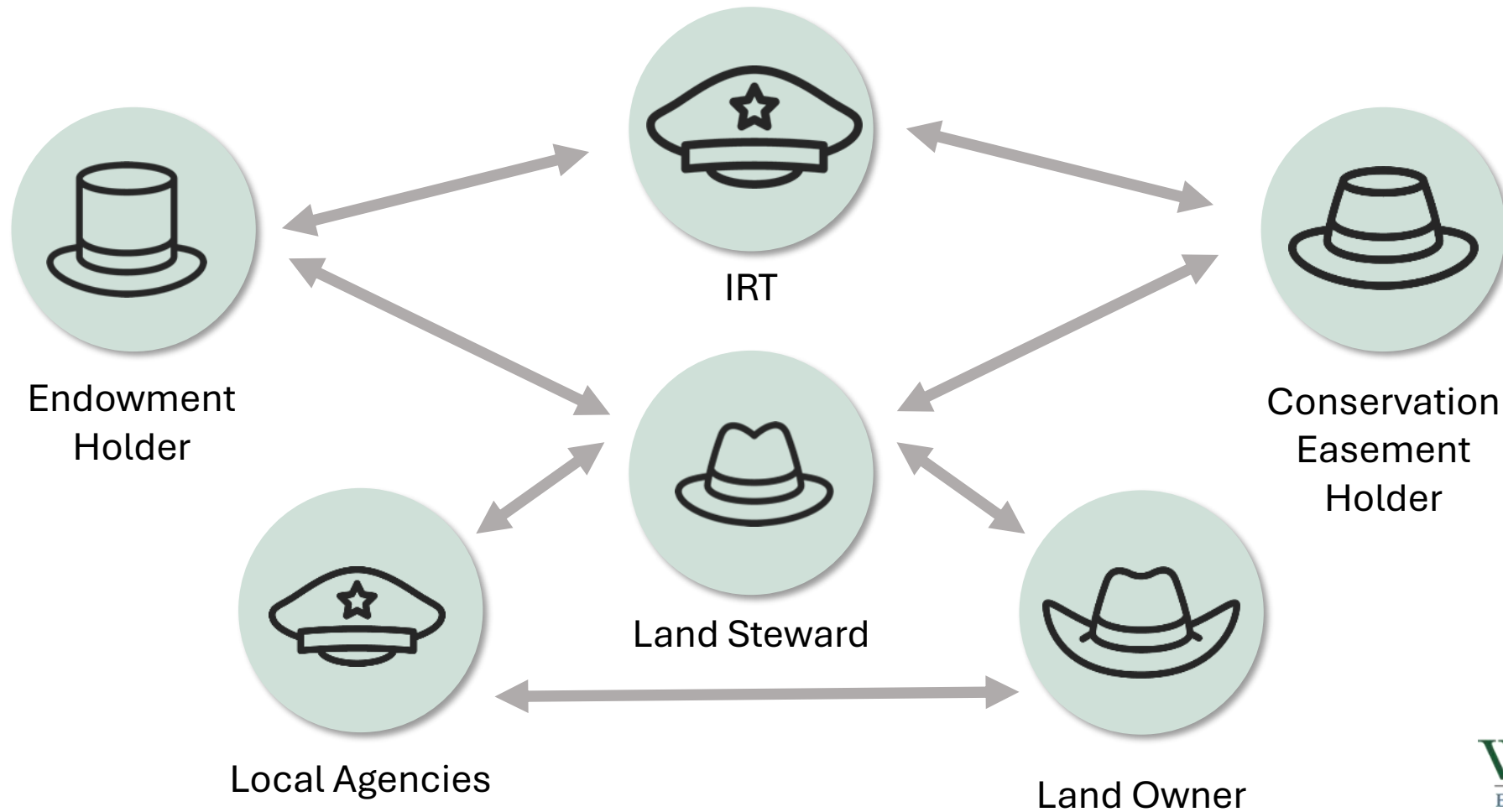
Committed



Compatible

2

Stewardship - a Team Sport!



Entities involved in Long Term Stewardship



Governmental Entity

- City
- County
- Special District
- State Agency
- Joint Powers Authority
- Tribes



Private Party

- Individual
- Corporation
- LLC



Non-profit

- Conservation Organization
- Land Trust
- Community Foundation
- Congressionally Chartered Foundation



Public Agency (Regulatory)

- Federal
- State
- Local



Project Proponent

- Individual
- Entity
- Agency

2

Roles in Long-Term Stewardship components



Land
Owner



Conservation
Easement Holder



Endowment
Manager



Long-Term
Steward



Resource Agency
Oversight

3

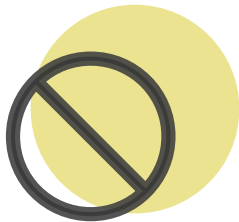
Dedicate enough \$ and expertise for basic land management functions:



Facilities Maint.
and Admin.



Monitoring



Neighbors and
Trespass



Adaptive
Management



Vegetation
Management



Administration
and Report

4

Use balanced portfolios – an effective “Investment Policy”



Tax
Exempt



Beats
Inflation



Not too
Risky

5

Set up timely, simple, and flexible distribution and accounting - an effective “Spend Policy”



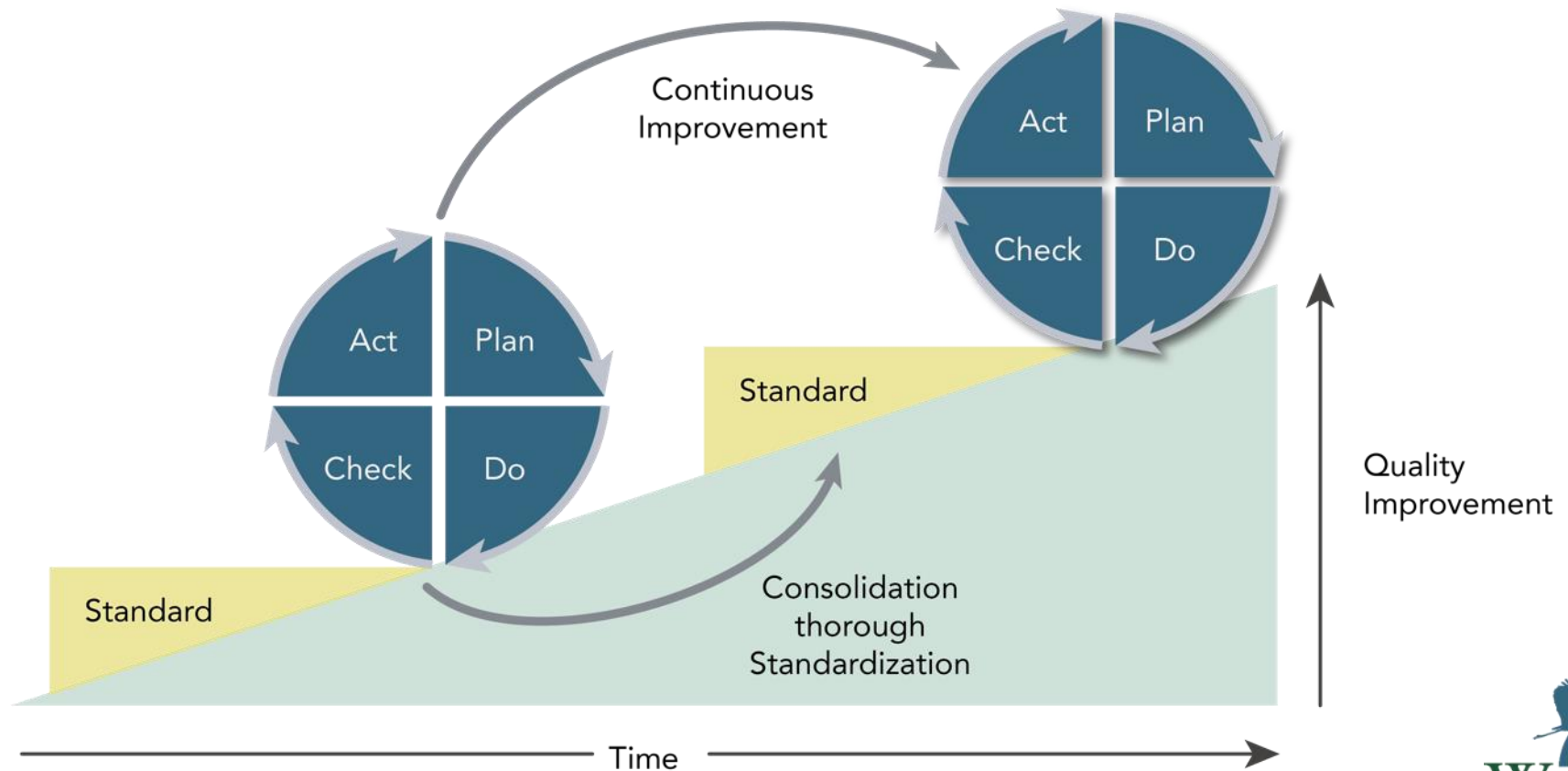
Distribution prior to stewardship year based on expected annual costs



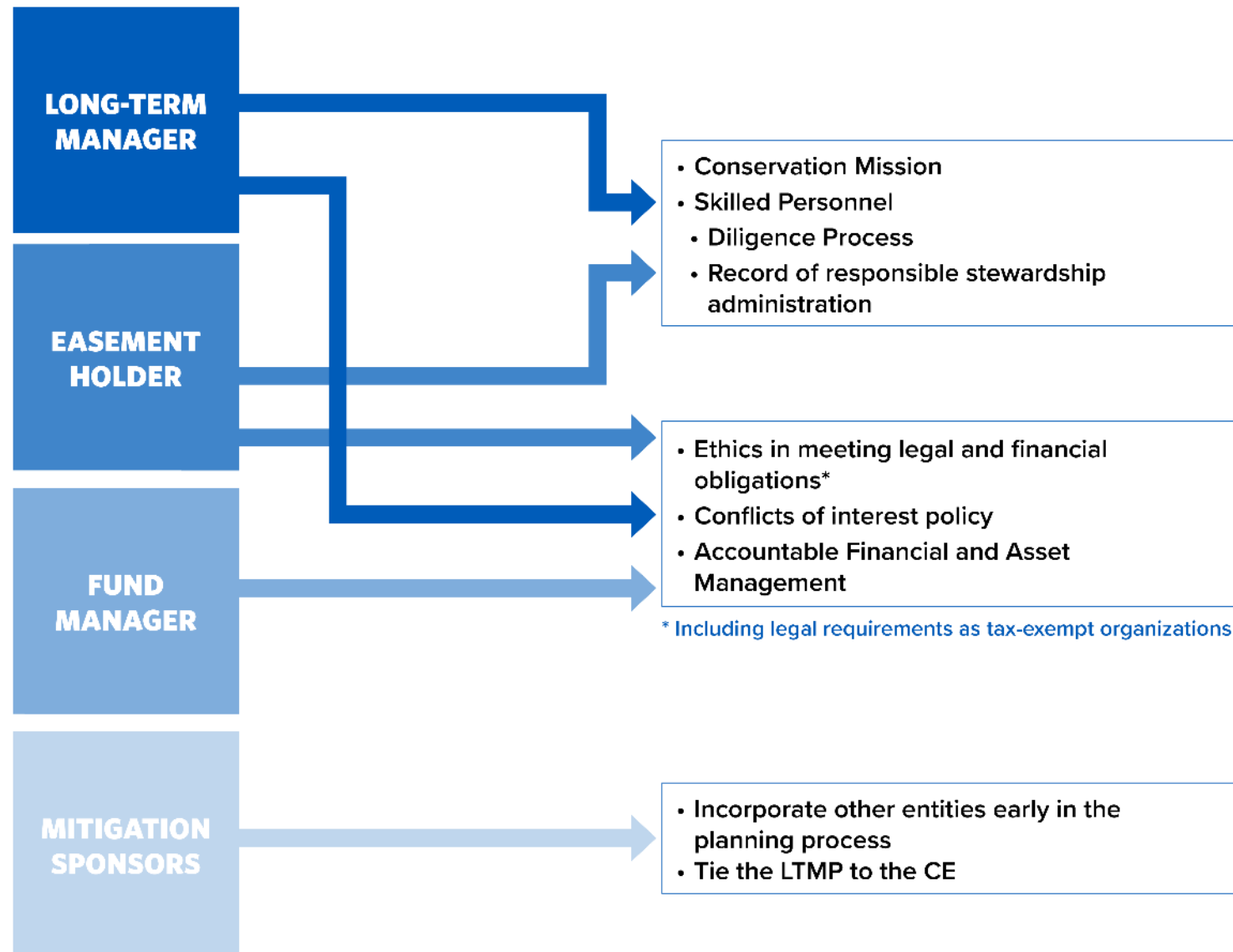
Accounting at stewardship category level (i.e, monitoring, maintenance, administration and reporting)

6

Establish an ability to prioritize, adjust, and adapt – “Continuous Improvement”



General Standards for the LTM Roles





Questions? Join us March 4th!

Reach out to sjohnson@ecologicalrestoration.org and our speakers to learn more. Join our LTM Part II discussion on March 4th to look more closely at financing mechanisms and considerations.