



National Forest Foundation

Planning and Funding a Stream Restoration Project

Adde Sharp – Watershed Program Coordinator

Planning, Funding, and Implementing a Stream Restoration Project

Project Development Timeline



Site Prioritization & Selection

Considerations:

- What is the primary goal?
- Who are your stakeholders, what is important to them?
- Where is the opportunity for greatest ecological uplift?



Site Prioritization and Selection

National Forest Foundation
Colorado River Basin Low-Tech Process-Based Restoration Site Identification

Colorado River Basin Layers of Interest

Colorado River Basin

- Upper Basin
- Lower Basin

NFF Default Layer

Roads

- Primary Roads and Interstates

Map Layers

- Colorado River Basin Layers of Interest
- Colorado River Basin
- NFF Default Layer
- Infrastructure
- Public Lands
- Hydrology
- Wetland Classification
- Landfire
- Priority Restoration Areas



Esri, NASA, NGA, USGS | Fitkin County, Esri, TomTom, ©



Permitting

Federal

- National Environmental Policy Act (NEPA)
- US Army Corps of Engineers (USACE) Nationwide 27 Permit
- Endangered Species Act (ESA) Section 7 Consultation
- National Historic Preservation Act Section 106

State and County

- CO Parks and Wildlife Raptor Avoidance Guidelines
- Construction and Stormwater discharge General Permit (COR400000)



Permitting and Design

Example Budget

EXAMPLE Baseline, Design, and Permitting (240 acre site)	
Task	Amount (\$)
Wetland & Stream Delineation	\$ 14,000.00
Sensitive Species Surveys	\$ 8,000.00
Ground Water Well Install & Monitoring	\$ 12,000.00
Cultural Surveys	\$ 18,000.00
Design (Concept - 100%)	\$ 58,000.00
Permitting (assume CatEx or similar programmatic agreement)	\$ 30,000.00
Project Management	\$ 28,000.00
<i>Net Total</i>	\$ 168,000.00



Funding

Considerations:

- Do you need design *and* build funding?
- Do you have NEPA completed for your site?
- What is your timeline for design and for implementation?
- What additional benefits does your site have to offer?



Private and Corporate Funding

Foundations

- Walton Family Foundation
- The Gordon and Betty Moore Foundation
- Gates Family Foundation
- Funding conglomerates (i.e. Wildfire Resilience Funders Network)

Corporations

- Coca Cola, Swire
- Microsoft
- New Belgium/Bells Brewery
- Fat Tire
- Zoom



Implementation

Example Budget

EXAMPLE Implementation (240 acre site)	
Task	Amount (\$)
Site preparation, surveys, etc.	\$ 15,000.00
Procurement and delivery of materials	\$100,000
Installation of structures (BDAs/PALs etc.)	\$ 250,000.00
Willow stakes/re-vegetation	\$10,000
Monitoring instrumentation	\$ 60,000.00
Ongoing maintenance	\$ 100,000.00
Project management over project lifetime	\$ 100,000.00
<i>Net Total</i>	\$ 635,000.00



Project Readiness Checklist

Partner Requirements (NFF)	Capacity (USFS)	Biophysical Characteristics
Planning and implementation funding	Priority watershed or WRAP	Meets requirements of prioritization model(s)
Personnel to manage project	Personnel capacity (lead and specialists)	Synergy with other landscapes of interest (i.e. wildfire)
Site design and permits (i.e. NW27)	Capacity to complete NEPA/SHPO etc.	Clear hydrological benefits to watershed
Estimated water benefits calculated	Other env. surveys/requirements met	Accessibility/feasibility
Monitoring protocol in place	Federal agreement in place with partner	Ground-truthed for consistency
Local partnerships established		Pre-implementation baseline data
Implementation partners identified		
Downstream water users informed and involved		





Questions?

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