

BUDGET NARRATIVE

1) Request and General Justification:

Island Heritage Trust (IHT) respectfully requests **\$1,873,469** from NOAA’s Restoring Fish Passage through Barrier Removal Grants Under the BIL and IRA to support **A Collaborative Project to Restore Connectivity, Improve Resilience, and Improve Community Infrastructure Around the Lily Pond, Deer Isle, Maine.**

NOAA has a long history of funding aquatic connectivity projects in the Penobscot River watershed and has contributed to several very similar projects through the Penobscot Habitat Focus Area funds. Island Heritage Trust, in partnership with the Town of Deer Isle and the Deer Isle Fire Department, has accepted the role of management of this Fish Passage Restoration and Community Infrastructure Improvement Project and is committed to restoring connectivity for anadromous, catadromous, and resident fish populations while improving community resilience to climate change. In alignment with *our mission as a member-supported, community-based non-profit dedicated to contributing to the well-being of the Island community by conserving its distinctive landscapes and natural resources, maintaining public access to valued trails, shoreline and islands, and by providing educational programming for all ages*, we knew we wanted to not only “fix” the dam to reduce the risk of potential damage downstream, but improve the ecology and provide an opportunity for education and outreach. NOAA-funded Pierce Pond in Penobscot, Maine, part of the Bagaduce River Watershed, was an inspiration. We wanted to think holistically about the project. We realized a fishway at the dam would be ineffectual without removing the barrier downstream and creating a new and far superior fire water supply while de-coupling the emergency resource from the dam and the roadway. Adding resilience to climate change and improve community emergency infrastructure.

The funding requested in this proposal builds on past investments to further the NOAA-supported Habitat Focus Area Program of the Penobscot River. Our project will restore connectivity through two complete barriers, ultimately reconnecting an entire watershed from Northwest Harbor all the way to the Lily Pond, through the Mill Pond and Eel Brook. This watershed flows west off Deer Isle into Penobscot Bay and the mouth of the Penobscot River.

Weighing the economic benefits of reducing the risk of damage from deteriorating infrastructure, deferred highway maintenance costs, increased infrastructure longevity in the face of climate change, and increased health of the fisheries and added interest for eco-tourism against the cost of this project prove the value this replacement effort will leverage for the local communities, state taxpayers and the fish and other organisms of the Penobscot River Watershed. The multiple co-benefits of this project make it an excellent candidate for NOAA coastal resilience by focusing this funding stream in an area with ongoing restoration.

	Federal	Non-Federal Match
Personnel	\$98,250.00	\$50,000.00
Fringe Benefits	\$19,650.00	\$8,295.00

Travel	\$3,000.00	\$3,000.00
Equipment (Monitoring)	\$8,000.00	\$0.00
Supplies	\$0.00	\$0.00
Contractual	\$1,687,679.00	\$940,000.00
Construction	\$0.00	\$0.00
Other (Education & Outreach)	\$40,000.00	\$0.00
<i>Total Direct Costs</i>	<i>\$1,856,579.00</i>	<i>\$1,001,295.00</i>
Indirect	\$16,890.00	\$6,129.50
TOTAL	\$1,873,469.00	\$1,007,424.50

2) Detailed Budget Breakdown and Justification:

The following budget is based on the experience of IHT and its partners and has been developed in consultation with Maine Department of Transportation (MaineDOT) and Acadia Civil Works (ACW), the engineering consultants who completed the Preliminary Design Report for the Lily Pond Dam Rehabilitation and Fish Passage Project.

Construction and Engineering: A review of prior project contracts of similar size, complexity, and scope was conducted by ACW to develop the preliminary budget estimate and, after consultation with MaineDOT and analysis of recent bid prices, revealed significant differentials between cost estimates/bid submissions due to an ongoing construction labor shortage in the state. Due to these factors, the \$2,880,893.50 budget for this entire project is the best current estimation.

IHT’s Board of Trustees has taken responsibility for the dam and fishway and is committed to supporting the entire project with professional staff time and initial resources for planning and engineering work. The Town of Deer Isle is in the process of applying to the Maine Municipal Partnership Initiative (MPI) program after receiving positive indications that MaineDOT would be interested in funding this project— MaineDOT recognize that the deteriorating condition and undersized nature of the Route 15 culvert would require replacement in the near future anyway. Factoring in the overall barrier removal project makes the culvert replacement an ideal candidate for the MPI program. The Deer Isle Fire Department provided plans for their desired alternative firewater supply system with a commitment to partner on the project.

PERSONNEL

Salaries (Request): \$ 98,250

Proposed Salaries cover the cost of the following IHT employees:

Land Steward, New Position Created: This new position will come on full-time, 40 hours per week, beginning in 2024, to coordinate and manage project activities, pursue additional funding, work with partners, provide technical support, and compile and submit reporting. This position will also implement public access preserve/trail improvements and install educational signage after the dam/fishway construction is complete. We anticipate this position will spend an average of 67% of their salaried time on this project over three years, totaling \$88,000 salary for 36 months.

Environmental Educator, Martha Bell: This position currently works $\frac{3}{4}$ time or 30 hours/week and will dedicate 250 hours to education during and at the completion of the project. This total request is \$6,875 of salary.

Outreach Manager, Noël Ruth: This position currently works full time or 40 hours/week and will dedicate 150 hours to education during and at the completion of the project. This total request is \$3,375 of salary.

Salaries (Non-federal Match): \$ 50,000

Proposed Salaries cover the cost of the following IHT employees:

Executive Director, Julia Zell: As a match, Applicant offers 5% FTE totaling \$12,000 salary over a 36-month period, to be the main point of contact for NOAA and manage finance and budgets related to the project.

Stewardship Director, Alex Drenga: As a match, Applicant offers 10% FTE totaling \$18,000 salary over a 36-month period to manage the new Land Steward Position in relation to IHT's regular work, provide additional oversight of project coordination and guide IHT-hired contractors.

Volunteers: In Maine, the value of volunteer time in 2022 was estimated to equal \$28.98/hr. IHT has a robust cohort of dedicated volunteers who will assist in the project all the way from trail maintenance and fishway monitoring to committees and the board. The total value of their time is estimated to be \$20,000 over a 36-month period.

FRINGE BENEFITS

Benefits (Request): \$19,650

Benefits (Non-federal Match): \$8,295

Proposed are the calculated total benefits for all IHT Employees as a percentage of their salaries for the three-year period. IHT's benefits are calculated as follows:

Health Reimbursement Arrangement – 15% of salary

SEP IRA contribution – 5% of salary

FICA - 7.65%.

The portion requested from NOAA is for the personnel funding request, and the non-federal match is for the salaries covered by the Applicant.

TRAVEL: (Request) \$3,000 For the personnel requested to be covered by the grant and will be split equally among the three years of the project (\$1,000 each year) and will be reimbursed at the federal rate per mile. Travel will be by personal vehicle to and from the project site for applicable work. Personnel live locally and no per diem or lodging is required.

(Non-Federal Match) \$3,000 Provided for the personnel costs covered by the Applicant.

EQUIPMENT: (Request) \$8,000

The high density of restoration projects in the Penobscot River watershed provides an ideal situation to systemically assess the success of these fish passage projects. This project offers a terrific array of data-gathering potential with the right equipment. With no fish passage currently and with stocking of the pond upstream, we believe an underwater camera and environmental DNA (eDNA) sampling to be the best way to begin monitoring fish presence and movement. The Applicant wants to ensure good monitoring and counting at this site and

plans to create a Citizen Science project and to bring on board UMaine students currently conducting eDNA research to further engage the community.

The Applicant has had conversations with Downeast Salmon Federation and Maine Center for Coastal Fisheries, who have extensive experience with fish counting and monitoring. Based on their recommended equipment, the Applicant is requesting \$2,000 to purchase eDNA sampling tests and \$6,000 for one underwater video camera and equipment for charging and independent operation without human oversight. This equipment will also be used to determine the efficacy of this fish passage project in relation to other projects implemented in this watershed and will provide data to inform restoration projects across the northeastern coastal region, particularly other islands.

Equipment	Unit	Number	Cost per Unit	Total Budget
eDNA sampling tests	Each	20	\$100.00	\$2,000.00
Underwater video camera, hardware, software, batteries, and solar panel array for charging	Camera	1 set	\$6,000.00	\$6,000.00
TOTAL REQUEST				\$8,000.00

SUPPLIES: \$0 None Requested

CONTRACTUAL: (Request) \$1,687,679

Contractual Engineering (Request): The proposed **\$145,310** award from this Federal Funding Opportunity will be used to cover the contract for engineering and construction oversight for this project with an engineering firm Acadia Civil Works (ACW).

The engineering design for all three phases will take place in the first funding year of this award, and the construction implementation and oversight will be executed in the second and third award years.

This next phase of engineering in 2024, follows a scope and assessment phase completed at the end of 2022 that produced dam and fishway concept drawings with detailed cost estimates and general cost estimates for the cistern removal and culvert replacement, as well as the creation of a new firewater system for the Town of Deer Isle. Linked here is the full report, including Section 8, which addresses Downstream Structure Alternatives.

<https://www.islandheritagetrust.org/lily-pond-dam-preliminary-design-report/>




PERSON-HOUR/FEE ESTIMATE

Lily Pond - Nature-Like Fishway Design and Construction - October 13, 2023

Task/Phase Description	Classification	Engineer	CAD/GIS	RPR	Admin	Subcontractor			Subtotal
	Rate (\$/hr)	\$165	\$98	\$95	\$65	Fire Pro	Testing	Survey	
Phase 2A - Preliminary Design of Dam and Fishway									
2A.1 - Hydraulic Assessment		30	8		16				\$6,774
2A.2 - Preliminary (75%) Plans		40	75						\$13,950
2A.3 - Project Team Review		12			8				\$2,500
Phase 2B - Preliminary Design of Route 15 Road-Stream Crossing									
2B.1 - Existing Conditions Survey		16	6		6		\$4,000	\$7,000	\$14,618
2B.1 - Hydraulic Assessment		16	8						\$3,424
2B.2 - Preliminary (75%) Plans		24	60						\$9,840
2B.3 - Project Team Review		12			8				\$2,500
Phase 2C - Preliminary Design of Fire Protection System									
2C.1 - Existing Conditions Survey		4	4					\$8,000	\$9,052
2C.2 - Preliminary (60%) Plans		24	55			\$5,000			\$14,350
2C.3 - Project Team Review		12			6	\$1,000			\$3,370
Phase 3: Regulatory Permitting									
2.1 - Local Permitting		24	4		12				\$5,132
2.2 - State Permitting		16	8		8				\$3,944
2.3 - Federal Permitting		16	8		8				\$3,944
Phase 4: Final Design									
3.1 - Final Plans (90%)		8	24						\$3,672
3.2 - Construction Docs/Specs (90%)		24			12	\$1,000			\$5,740
3.3 - Project Team Review (90%)		12			8	\$1,000			\$3,500
3.4 - Finalize Documents		4	16		4				\$2,488
Phase 5: Bidding and Award									
4.1 - Bid Ad, Admin, and Addenda		16	4		4				\$3,292
4.2 - Pre-Bid Meeting		8			6				\$1,710
4.3 - Bid Analysis, Award, Execution		4			2				\$790
Phase 6: Construction Phase									
5.1 - Contract Administration		40			20				\$7,900
5.2 - Onsite Representation				96	72				\$13,800
5.3 - Materials Testing		8					\$6,000		\$7,320
Person-Hour Total		370	280	96	200				
Labor Subtotal		\$61,050	\$27,440	\$9,120	\$13,000	\$8,000	\$10,000	\$15,000	\$143,610
							Mileage		\$1,200
							Printing and Expenses		\$500
							Total		\$145,310

Contractual Construction (Request): The proposed **\$1,542,369** award from this Federal Funding Opportunity will be used to cover a portion of the contracts for construction with a construction company with oversight for this project by an engineering firm (ACW), estimated to cost a total of \$2,587,679.

Because the Lily Pond Dam is a “significant hazard” in fair to poor condition, it is critical to move forward to remediate the situation, reduce liability for our organization, and reduce risk for our community. We cannot delay seeking funds for this project. This is an opportunity to address multiple hazards, barriers, and community infrastructure needs while re-opening an entire local watershed. While we don’t yet have details/itemized budgets for the cistern/culvert replacement and new firewater system, the estimates are based on the contracted engineer’s vast experience with similar projects and consultation with MaineDOT. Detailed/itemized budget estimates will be created during the first award year and will be available to update NOAA prior to the contractual funding needs in the second and third award years.

Conceptual Estimate of Construction Costs				
Lily Pond Dam Improvements - Concept A				
Deer Isle, ME - August 2022				
				
ACADIA CIVIL WORKS ENGINEERING DESIGN & CONSULTATION				
Dam Construction	Unit	Quantity	Unit Price	Subtotal
Mobilization/Demobilization	LS	1	\$15,000	\$15,000
Clearing/Stump/Grub	SY	1,250	\$10	\$12,500
Cofferdam/Dewatering	LS	1	\$25,000	\$25,000
Common Excavation	CY	55	\$30	\$1,650
Riprap	CY	85	\$175	\$14,875
Low Permeability Embankment Fill	CY	200	\$200	\$40,000
Curtain Drain	CY	110	\$200	\$22,000
6" Underdrain	LF	180	\$50	\$9,000
Boulder Shoreline	CY	130	\$350	\$45,500
Loam and Seed	LS	1	\$7,500	\$7,500
Erosion and Sediment Control	LS	1	\$15,000	\$15,000
Fire Water Discharge Pipe and Valve	LS	1	\$25,000	\$25,000
Admin/Submittals/Bonds/Insurance	LS	1	\$10,000	\$10,000
Contingency (25%)				\$60,756
Subtotal				\$251,281
Fishway Construction	Unit	Quantity	Unit Price	Subtotal
Common Excavation	CY	430	\$30	\$12,900
Weir Backfill	CY	75	\$150	\$11,250
Cofferdam/Dewatering	LS	1	\$15,000	\$15,000
Bank Boulders	CY	250	\$300	\$75,000
Weir Boulders	CY	110	\$500	\$55,000
Loam and Seed	LS	1	\$5,000	\$5,000
Cutoff Sheeting	LS	1	\$50,000	\$50,000
Contingency (25%)				\$56,038
Subtotal				\$280,188
CONSTRUCTION COST ESTIMATE				\$531,469

The table above details the projected costs for the dam improvements and fishway. We plan to finalize designs and construction docs to acquire permits and complete the bid process for this phase in 2024, with construction to be completed in 2025.

The costs for the new firewater system are determined to be a total budget request of \$500,000 based on the engineer’s estimate of similar systems (Concept D in Section 8 of the preliminary design report). The engineering for this phase will take place in 2024, along with permitting and bidding, with construction anticipated in 2025.

After consultation with the Town of Deer Isle and engineer Lisa Sekulich at MaineDOT, the total cost (including engineering) for the cistern removal and culvert replacement at Route 15 has been \$2,000,000 based on recent concrete box culvert projects of similar size. MaineDOT believes Deer Isle will qualify for a 60/40 split under the MPI cost-sharing program and expects going that route could save 25% of the total cost of the project for an estimate of \$1,500,000, including engineering and project management. \$600,000 is requested from NOAA, with \$900,000 matched by the State. These estimates represent the best available cost estimate for a project of this type and complexity. The engineering for this phase will take place in 2024, and construction is anticipated to be completed in 2026.

Contract Funding Request	Cost
Engineering	\$143,310.00
Dam rehab & fishway	\$531,469.00
Cistern removal & culvert replacement	\$510,900.00
New firewater supply pump & tank system	\$500,000.00
TOTAL COST REQUEST	\$1,687,679.00
<i>Cistern & Culvert non-federal match</i>	<i>\$900,000.00</i>
TOTAL PROJECT COST	\$2,585,679.00

CONSTRUCTION: \$0 None Requested.

OTHER: (Request) \$40,000 The proposed award from this Federal Funding Opportunity is for community access, education, and outreach at the dam and fishway site. These items will be handled by IHT’s professional staff. See supplemental materials and IHT’s website for examples of our current education and outreach work. www.islandheritagetrust.org

Other Request Item	Cost
Educational signage at fishway including indigenous consultation	\$10,500.00
Printed maps for school children (free)	\$2,500.00
New wooden footbridge for preserve trail	\$10,000.00
Gravel and other trail improvements	\$7,000.00
Tree work on the property	\$10,000.00

PROJECT COST REQUEST	\$40,000.00
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INDIRECT COSTS:

(Request) \$16,890. Island Heritage Trust is requesting indirect costs at a rate of 10% of non-contract project costs totaling \$168,900 (personnel, benefits, travel, equipment, and other).

(Non-federal Match) \$6,129.50. Island Heritage Trust is offering as match indirect costs at a rate of 10% of non-contract project costs totaling \$61,295 (personnel, benefits, travel, equipment, and other).

BUDGET SUMMARY:

Total Direct Charges (NOAA Request):	\$ 1,856,579.00
Total Indirect Charges (NOAA Request):	\$ 16,890.00
Total Charges (NOAA Request):	\$ 1,873,469.00
Non-Federal Match:	\$ 1,001,295.00
Total Indirect Match:	\$ 6,129.50
TOTAL PROJECT COSTS	\$ 2,880,893.50

COST SHARING DETAIL

This significant investment by NOAA would be matched by the following sources:

\$900,000 in Maine State Match funding through an anticipated \$900,000 award from the Maine Department of Transportation's Municipal Partnership Initiative.

\$103,295 in Private Match funding from Applicant IHT, including staff time, administration, education, outreach, and final design and construction oversight.