

**ARTICLE 4I: - Marine & Environmental Affairs – Jenney
Pond Dredging Engineering & Permitting**

RECOMMENDATION: Approval \$101,000 (9-1-0)

The Advisory & Finance Committee recommends Town Meeting approve this appropriation. The Jenney Pond Dredging is closely related to the preceding dam repairs project and aligning them makes sense. The last dredging was in 1968. The dredging will improve water quality, habitat and aesthetics within the park area. Funding for this project will also be from the Environmental Affairs Fund.

**TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST FORM
FY20 FALL ANNUAL TOWN MEETING REQUEST FORM**

| | | | |
|--|--|---------------------|---------|
| Department: Marine and Environmental Affairs | | | 2 |
| Project Title and Description: | Engineering and Permitting for the dredging of Jenney Pond | Total Project Cost: | 101,000 |

Department/Division Head: David Gould

Cost estimate was developed: Internally ☐ Externally ☒

| Basis of Estimated Costs (attach additional information if available) | | | If project has impact on 5 Year Plan and future operating budgets, insert estimated amounts. | | |
|---|---------|----------|--|---------|-------|
| Capital: | Cost | Comments | Fiscal Year: | Capital | O & M |
| <i>Planning and Design</i> | 101,000 | | <i>FY20</i> | | |
| <i>Labor and Materials</i> | | | <i>FY21</i> | | |
| <i>Administration</i> | | | <i>FY22</i> | | |
| <i>Land Acquisition</i> | | | <i>FY23</i> | | |
| <i>Equipment</i> | | | <i>FY24</i> | | |
| <i>Other</i> | | | | | |
| <i>Contingency</i> | | | | | |
| Total Capital | 101,000 | | | | |

Possible sources and amounts of funding, if known: Environmental Affairs Fund

Project Justification and Objective: Jenney Pond is an artificial impoundment created by the dam at this location and therefore sediment build-up behind the dam is an on-going process. The impoundment has not been dredged since 1968 and with 20 years of previous dam removals upstream (over 12,000 cubic yards of sediment was removed from upstream impoundments) it is in need of dredging to improve water quality, habitat and aesthetics within the park area.

Justification for Request at Fall Annual Town Meeting: Beginning the process now allows us to get started on design and permitting and to be concurrent with the engineering and design of dam repairs. The two projects are closely related and it makes sense to keep both projects aligned in terms of schedule.

For Capital Project Requests:

Will this project be phased over more than one fiscal year? If yes, enter it on the next 5 Year Plan Yes ☒ No ☐

Can this project be phased over more than one fiscal year? Yes ☒ No ☐

For Capital Equipment Requests:

☐ Check if equipment requested is replacement and enter the year, make & model, VIN and present condition of existing equipment

Attach additional information, estimates, or justification. Please see attached back-up materials.

Person-Day and Fee Schedule
Jenny Pond Dredging Project
December 2014 revised with 2018 rates 11/6/18

Time is indicated in hours.

| Scope of Work | Principal | Sr. Licensed Prof. | Lead Licensed Prof. | Licensed Prof. | Engineer/Planner | Survey Technician | 2 person Survey Crew | Total Hours | Fee | Task Subtotal |
|---|-------------|--------------------|---------------------|----------------|------------------|-------------------|----------------------|--------------|-----------------|-----------------|
| Task 1 - Project Management | | | | | | | | | | |
| 1.1 Project Management | 2.0 | 8.0 | | | | | | 10.0 | \$1,820 | |
| 1.2 Coordination Meetings | | 16.0 | | | | | | 16.0 | \$2,800 | |
| | | | | | | | | | | \$4,620 |
| Task 2 - Data Collection and Review | | | | | | | | | | |
| 2.1 Existing Data Collection and Review | | | | 4.0 | 16.0 | | | 20.0 | \$2,408 | |
| 2.2 Site Inspection | | 2.0 | | 8.0 | 12.0 | | | 22.0 | \$2,906 | |
| 2.3 Sensitive Species Review | | | | 4.0 | | | | 4.0 | \$600 | |
| 2.4 Sensitive Historical/Archaeological Resources | | | | | 4.0 | | | 4.0 | \$452 | |
| 2.5 Delineation of Wetlands | | | 10.0 | | | | | 10.0 | \$1,550 | |
| 2.6 Wetland Characterization Memo | | | 2.0 | | | | | 2.0 | \$310 | |
| | | | | | | | | | | \$8,226 |
| Task 3 - Field Survey and Base Mapping | | | | | | | | | | |
| 3.1 Survey | 2.0 | 4.0 | | | | 8.0 | 24.0 | 38.0 | \$5,704 | |
| 3.2 Existing Conditions Plan | 4.0 | | | | | 8.0 | | 12.0 | \$1,584 | |
| | | | | | | | | | | \$7,288 |
| Task 4 - Sediment Sampling Plan and Analysis | | | | | | | | | | |
| 4.1 Sed Quality Assessment | | 8.0 | | | 40.0 | | | 48.0 | \$5,920 | |
| 4.2 Sediment Probing & Sampling* | | | | | 40.0 | | | 40.0 | \$4,520 | |
| 4.3 Data Review | | 4.0 | | | 4.0 | | | 8.0 | \$1,152 | |
| | | | | | | | | | | \$11,592 |
| Task 5 - Conceptual Design | | | | | | | | | | |
| 5.1 Conceptual Alternatives | 2.0 | 4.0 | 8.0 | | 16.0 | | | 30.0 | \$4,168 | |
| 5.2 Sediment Management Plan | 2.0 | 16.0 | | | 8.0 | | | 26.0 | \$4,124 | |
| 5.3 Technical Memorandum | 2.0 | 2.0 | 8.0 | | | | | 12.0 | \$2,010 | |
| 5.4 Submittal | | | | | 1.0 | | | 1.0 | \$113 | |
| | | | | | | | | | | \$10,415 |
| Task 6- Preliminary Design | | | | | | | | | | |
| 6.1 Supplemental Survey | | 2.0 | | | | 4.0 | 12.0 | 18.0 | \$2,642 | |
| 6.2 Prelim Design Plans | 2.0 | 16.0 | 12.0 | 12.0 | 16.0 | | | 58.0 | \$8,688 | |
| 6.3 Preliminary Cost Opinion | | | 1.0 | 1.0 | 8.0 | | | 10.0 | \$1,209 | |
| 6.4 Submittal | | | | | 2.0 | | | 2.0 | \$226 | |
| | | | | | | | | | | \$12,765 |
| Task 7 - Regulatory Permitting | | | | | | | | | | |
| 7.1 Permit Application Preparation | 4.0 | 8.0 | | 40.0 | 16.0 | | | 68.0 | \$10,048 | |
| 7.2 Application Review | 2.0 | 4.0 | | 8.0 | | | | 14.0 | \$2,320 | |
| 7.3 Comment Response | | 2.0 | | 8.0 | | | | 10.0 | \$1,550 | |
| | | | | | | | | | | \$13,918 |
| Task 8 - Final Design and Construction Documents | | | | | | | | | | |
| 8.1 Semifinal Design | 2.0 | 8.0 | 16.0 | 16.0 | 16.0 | | | 58.0 | \$8,508 | |
| 8.2 Technical Specifications | | 8.0 | 16.0 | 16.0 | | | | 40.0 | \$6,280 | |
| 8.3 Estimated Quantities and Cost Opinion | | 2.0 | 2.0 | 2.0 | 8.0 | | | 14.0 | \$1,864 | |
| 8.4 Final Design Documents | | 8.0 | 8.0 | 8.0 | 8.0 | | | 32.0 | \$4,744 | |
| | | | | | | | | | | \$21,396 |
| TOTALS: | 24.0 | 122.0 | 83.0 | 127.0 | 215.0 | 20.0 | 36.0 | 627.0 | \$90,220 | \$90,220 |

*Assumes two days of sampling with a crew of two.
This number may need to be adjusted following completion of the sediment sampling plan.
Direct expenses will be invoiced in addition to the above lump sum fees.

Direct Expenses (Printing, Travel, Lab fees, etc.): \$10,000

TOTAL: \$100,220