|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1. PERSONNEL | | | Total $ | | 38,728 |
| Name | Position Title | Year 1 | Year 2 | No. of Months | $Amount |
| Connor O’Loughlin (Stipend) | PI | 10,432 | 6,439 | 24 | 16,871 |
| Connor O’Loughlin (Hourly) | PI | 10,432 | 11,425 | 24 | 21,857 |
| Total$ | | | | | 38,728 |

***Personnel Justification***

*PI – Connor O’Loughlin:* This position oversees the general operation of the project and is responsible for executing fieldwork and data analysis. Responsibilities include sample materials acquisition, sample collection, data analysis, data formatting, and data interpretation. This position is responsible for making sure data is made available and that the project meets all deadlines and relates to all program objectives. Connor O’Loughlin will work as a Graduate Research Assistant during the spring of Y1 and Y2 ($10,432 and $6,439), during the summer of Y1 ($10,432), and during the summer in Y2 (hourly, total $11,419.80) for a total of $38,728 over 24 months.

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| --- | --- | --- | --- | --- | --- | --- | --- |
| 1. FRINGE BENEFITS | | Total $ | | | | 2,481 | |
| PI – Salary $32,289 | | | | | | | |
| Position Title | Name | |  | RequestedPersonnel | % Rate | | $Amount |
| PI | Connor O’Loughlin | |  | 38,728 | 14.7 | | 2,481 |

***Fringe Justification***

*PI – Connor O’Loughlin:* The fringe benefit rate for graduate students is 14.7 % when paid as a GRA. No fringe is requested for hourly pay during Y1 and Y2.

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| --- | --- | --- | --- |
| 1. TRAVEL - DOMESTIC | Total $ | | 2,027.12 |
| Gas - 28 mpg, 3.2 dollars per gallon | $215.12 | | |
| Car Rental – Husky Motors, 3 trips, 1st trip: 4 days total, 2nd trip: 2 days total, 3rd trip: 2 days total. | $820.00 | | |
| Lodging | $550.00 | | |
| Per Diem | $442.00 | | |
|  | | Total $ | 2,027.12 |

***Domestic Travel Justification***

The PI will travel from Houghton to Whitefish Bay and Saint Martin’s Bay, over 4 days, to begin the incubations and collect samples. There will be an additional trip to the field sites to gather samples at the midpoint of the incubations, and one final trip (for a total of three trips) to terminate the incubations, each being 2 days in duration. A compact SUV will be rented from Husky Motorpools and driven to the field sites each trip. Mileage rates are the standard mileage rates outlined by the IRS.

1. EQUIPMENT - NONE REQUESTED
2. SUPPLIES

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| SUPPLIES | | | | Total$ | | | 7,156 |
| Item | Amount needed | Cost | Count | | Unit Cost | Amount | |
| Sterivex Filter | 18 | 511.00 | 50 | | 10.22 | 511.00 | |
| 60 mL Luer Lock Syringe | 18 | 40.95 | 25 | | 1.64 | 81.90 | |
| 40 mL Amber vial | 18 | 98.40 | 72 | | 1.37 | 98.40 | |
| 3 𝛍m filter (47 mm) | 18 | 245.00 | 100 | | 2.45 | 245.00 | |
| 60 mL Luer slip syringe | 18 | 39.25 | 25 | | 1.57 | 78.50 | |
| 25 mm filter holder | 18 | 40.00 | 10 | | 4.00 | 80 | |
| 10 𝛍m PC filter (47 mm) | 18 | 184.00 | 100 | | 1.84 | 184.00 | |
| 0.7 𝛍m GF/F filter (25 mm) | 18 | 217.00 | 100 | | 2.17 | 217.00 | |
| Biolog Ecoplate | 18 | 221.400 | 10 | | 22.14 | 442.80 | |
| 47 mm filter holder | 6 | 96.00 | 1 | | 96.00 | 576.00 | |
| 50 mL centrifuge tubes | 36 | 367.50 | 500 | | 0.74 | 367.50 | |
| 12-14 kDa MWCO, 75mm Dialysis tube | 10 m | 328.00 | 5 m | | 65.60 | $656.00 | |
| ZymoBiomics DNA Kit | 1 | 319.70 | 50 | | 6.40 | 319.70 | |
| CuSO4 solution | 0.056 g | 44.80 | 5 g | | 8.96 (per mg) | 44.80 | |
| Tris[(1-benzyl-1H-1,2,3-triazol-4-yl)methyl]amine | 0.60 g | 142.50 | 250 mg | | 0.57 (per mg) | 427.50 | |
| Sodium Ascorbate | 2.23 g | 126.50 | 100 g | | 1.27 (per gram) | 126.50 | |
| Aminoguanidine | 1.24 g | 73.5 | 25 g | | 2.94 (per gram) | 73.50 | |
| Carboxyrhodamine 110 Alkyne | 0.0016 𝛍g | 103.00 | 1 mg | | 103.00 (per mg) | 103.00 | |
| L-Azidohomoalanine | 2.79 mg | 394.00 | 5 mg | | 78.80 (per mg) | 394.00 | |
| 15 mL centrifuge tubes | 18 | 465.50 | 500 | |  | 465.50 | |
| 2 mL centrifuge tubes | 1188 | 418.48 | 1000 | |  | 418.45 | |
| 2 mL centrifuge tubes | 1188 | 46.33 | 100 | |  | 92.66 | |
|  |  |  |  | | Total | $7,156 | |

***Supplies Justification***

All supplies listed will be used for sample collection, processing, and analysis. Each supply item is essential to the study. The “cost” column is the price listed on the supplier’s website, with the count provided in the “count” column. The Unit cost is the cost divided by the count, and the “Amount” column shows the cost needed to meet the project’s needs.

1. CONTRACTUAL - NONE REQUESTED
2. CONSTRUCTION - NONE REQUESTED
3. TUITION

|  |  |  |
| --- | --- | --- |
| TUITION | Total$ | 4,737 |
| Connor O’Loughlin | 4,737 | |

A total of $4,737 is requested to go to tuition for summer of Y1.

1. OTHER

A total of $845 is requested for services.

|  |  |  |  |
| --- | --- | --- | --- |
| Other | Total$ | 845 | |
| 16S rRNA Analysis | 540.00 | | |
| Particulate C & N | 36.00 | | |
| Particulate P | 37.20 | | |
| Soluble reactive Phosphorus | 111.60 | | |
| DOC/TN | 118.70 | | |
| Total$ | | | 845 |

***Other Justification***

A total of $845 is requested for services.

1. TOTAL DIRECT COSTS

A total of $55,974 is requested for direct costs.

|  |  |  |
| --- | --- | --- |
| Total Direct Costs | Total$ | 55,974.12 |
| 1. PERSONNEL | 38,728 | |
| 1. FRINGE | 2,481 | |
| 1. TRAVEL | 2,027.12 | |
| E. SUPPLIES | 7,156 | |
| H. TUITION | 4,737 | |
| I. OTHER | 845 | |
| Total$ | 55,974.12 | |

J. TOTAL INDIRECT COSTS

No indirect costs are requested.

K. TOTAL DIRECT AND INDIRECT COSTS

Total direct and indirect costs are $55,974.

L. COST SHARE

Cost share is committed in the form of tuition ($12,850), stipend for GRA spring Y2 ($4,000), supplies ($2,333), and faculty academic time ($1,439 for Y1 and $5,709 for Y2) for a total of $29,762. Cost share will be provided by the Biological Sciences department and the Great Lakes Research Center.