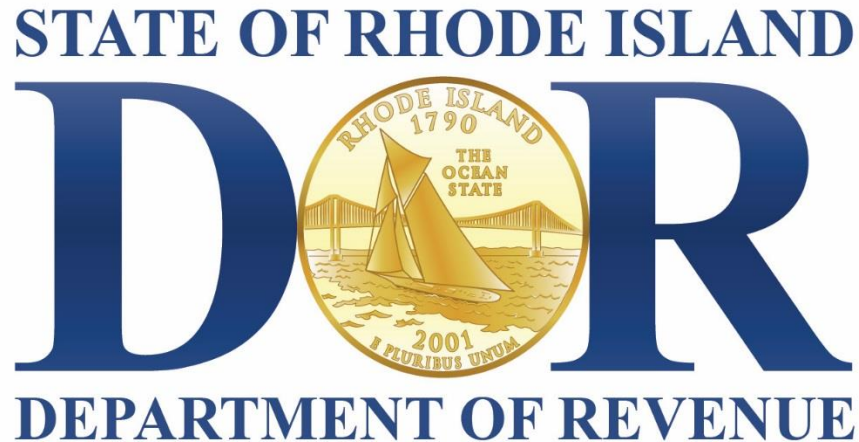


*STATE OF RHODE ISLAND*

**Governor Daniel J. McKee**



# **Economic Development Tax Incentives Evaluation Act:**

*Evaluation of*  
“Stay Invested in  
RI Wavemaker Fellowship”

**(R.I. Gen. Laws § 42-64.26)**  
*Tax Years 2019 through 2021*

**Office of Revenue Analysis**

**April 14, 2023**

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## **Executive Summary**

This report is an evaluation of the “Stay Invested in RI Wavemaker Fellowship” program conducted by the Office of Revenue Analysis (ORA) in accordance with Rhode Island General Laws Chapter 44-48.2. The report provides an estimate of the economic and fiscal impacts of this tax incentive. ***ORA found that the program breaks even on a net general revenue basis if 53% of the jobs associated with the program are assumed to be new jobs that would not have existed without the incentive.*** ORA relied primarily on data provided by the Department of Revenue, Division of Taxation and the Rhode Island Commerce Corporation to conduct the analysis. The following is a summary of this evaluation:

### **The Tax Incentive Provision:**

The Wavemaker Fellowship tax incentive provides college graduates who are working in science, technology, engineering, mathematics and some design fields with a refundable tax credit that covers eligible beneficiaries’ student loan payments for up to four years. The amount of tax credit that an eligible beneficiary receives depends on the level of education attained by the beneficiary. In particular, an eligible beneficiary with an associate’s degree receives up to \$1,000 annually in refundable tax credits; an eligible beneficiary with a bachelor’s degree receives up to \$4,000 annually in refundable tax credits; and an eligible beneficiary with at least a master’s degree receives up to \$6,000 annually in refundable tax credits. An eligible beneficiary need not be a Rhode Island resident, but they must work for a Rhode Island based company.

### **The Main Goals and Objectives of the Tax Incentive:**

The main goals and objectives of the Wavemaker Fellowship program can be summarized as :

- Attract high-skilled and high paying jobs to create opportunities and retain young people in the state.
- Help lower the student loan burden for college graduates to ensure access to lucrative employment opportunities.

### **Key Findings:**

- According to Taxation, a total of 993 individuals received the Wavemaker Fellowship tax incentive over tax years 2019 through 2021, totaling \$3.4 million in tax credits/refunds issued.
- Out of the \$3.4 million, \$3.2 million was received by fellows as a tax refund and \$189,870 was received as a tax credit that could be applied against the fellows’ personal income tax liability.
- The current analysis was conducted using three-year average Wavemaker Fellowship tax credit amount of \$1,144,512 and a three-year average of 331 credit recipients.
- ORA used the Regional Economic Model Incorporated’s Tax-PI model to conduct the current evaluation. ORA selected the Professional, Scientific and Technical Services sector

(North American Industry Classification System code 54) as representative of the types of jobs in which eligible beneficiaries of the Wavemaker Fellowship program are employed.

- ORA modeled the Wavemaker Fellowship program as a combination of an increase in employment in the Professional, Scientific and Technical Services industry, under the assumption that without the program the jobs occupied by Wavemaker fellows would not exist in Rhode Island, and an increase in after tax personal income, under the assumption that the program merely subsidizes Wavemaker fellows in existing jobs in the state.
- ORA employed a breakeven analysis to estimate the minimum percentage of the jobs occupied by Wavemaker Fellows that would have to be new to the Rhode Island economy (and therefore would not exist without the tax incentive) in order for the program to pay for itself on a net general revenue, gross domestic product, and total employment basis.
  - With respect to Rhode Island net general revenues, the Wavemaker Fellowship program breaks even if 53.0% of the recipients work in Rhode Island in new jobs that exist because of this tax incentive and 47.0% of fellows work in jobs already embedded in the state economy but benefited from the decrease in personal income taxes associated with the program.
  - With respect to Rhode Island Gross Domestic Product, the Wavemaker Fellowship program breaks even if only 1.8% of the recipients were assumed to work in Rhode Island in new jobs that exist because of this tax incentive and 98.2% of fellows work in existing jobs in the Rhode Island economy but benefited from the decrease in personal income taxes associated with the program.
  - With respect to Rhode Island employment the Wavemaker Fellowship program breaks even if only 4.0% of the recipients were assumed to work in Rhode Island in new jobs that exist because of this tax incentive and 96.0% of fellows work in existing jobs in the Rhode Island economy but benefited from the decrease in personal income taxes associated with the program.

### **Overall Assessment and Recommendations:**

ORA recommends that the Wavemaker Fellowship be retained at this time but that adjustments be made in accordance with the following recommendations:

- Given that the program is succeeding in delivering benefits to applicants with well-paying jobs, the State should consider adjusting the amount of the Wavemaker Fellowship award based on applicant income.
- The program should consider adding “but for” due diligence into the application process to ensure new jobs are attributable to the incentive.
- The program should improve data collection by asking applicants for more specific industry and wage data.
- The program should seek to reduce administrative costs to ensure program efficiency.

Finally, policymakers should consider that the Wavemaker Fellowship program challenges two tenants of tax policy: vertical and horizontal equity. Vertical equity would be addressed by amending the program to include an income phaseout as described in the first recommendation. Horizontal equity is more difficult to address given that only a subset of taxpayers eligible for the program apply and are awarded the incentive. Opening the program to all eligible taxpayers would solve horizontal equity concerns but would substantially increase the cost of the program.

## **Foreword**

The evaluation of the “Stay Invested in RI Wavemaker Fellowship” program, *Tax Years 2019 through 2021* was prepared at the request of Matt McCabe, Chief of the Rhode Island Department of Revenue, Office of Revenue Analysis in accordance with Rhode Island General Laws § 44-48.2-4. Madiha Zaffou, *Ph.D.*, Deputy Chief in the Office of Revenue Analysis was project leader for the production and writing of this report, under the guidance of Mr. McCabe. Ms. Zaffou was assisted by Bethany Scanlon, Principal Economic & Policy Analyst in the Office of Revenue Analysis.

Much of the information needed to complete the analysis contained in this report was provided by the Rhode Island Department of Revenue, Division of Taxation, under the direction of Neena Sinha Savage, State Tax Administrator. The compilation of the data that was provided to the Office of Revenue Analysis was due to the tremendous efforts of Tracy Wunder, Data Analyst III in the Division of Taxation. Tracy was assisted in this task by Donna Dube, Chief Revenue Agent, Forms, Credits and Incentives.

In addition, the Office of Revenue Analysis would like to thank the Rhode Island Commerce Corporation (CommerceRI), under the direction of Elizabeth M. Tanner, Esq., Secretary of Commerce, for providing information pertaining to this tax incentive program.

The Office of Revenue Analysis is appreciative of the efforts made by the Division of Taxation and the Rhode Island Commerce Corporation to provide us with the best information available at the time this report was written.

## Part I: Introduction

Pursuant to Rhode Island General Laws § 44-48.2-4, titled *Rhode Island Economic Development Tax Incentives Evaluation Act of 2013*, the Chief of the Office of Revenue Analysis (ORA) in the Rhode Island Department of Revenue is required to produce a report that contains analyses of economic development tax incentives as listed in R.I. Gen. Laws § 44-48.2-3(1). According to R.I. Gen. Laws § 44-48.2-4(1), the report “[s]hall be completed at least once between July 1, 2014, and June 30, 2017, and no less than once every three (3) years thereafter”.

The additional analysis as required by R.I. Gen. Laws § 44-48.2-4(1) shall include, but not be limited to the following items as indicated in R.I. Gen. Laws § 44-48.2-5(a):

- 1) A baseline assessment of the tax incentive, including, if applicable, the number of aggregate jobs associated with the taxpayers receiving such tax incentive and the aggregate annual revenue that such taxpayers generate for the state through the direct taxes applied to them and through taxes applied to their employees;
- 2) The statutory and programmatic goals and intent of the tax incentive, if said goals and intentions are included in the incentive's enabling statute or legislation;
- 3) The number of taxpayers granted the tax incentive during the previous twelve-month (12) period;
- 4) The value of the tax incentive granted, and ultimately claimed, listed by the North American Industrial Classification System (NAICS) Code associated with the taxpayers receiving such benefit, if such NAICS Code is available;
- 5) An assessment and five-year (5) projection of the potential impact on the state's revenue stream from carry forwards allowed under such tax incentive;
- 6) An estimate of the economic impact of the tax incentive including, but not limited to:
  - i. A cost-benefit comparison of the revenue forgone by allowing the tax incentive compared to tax revenue generated by the taxpayer receiving the credit, including direct taxes applied to them and taxes applied to their employees;
  - ii. An estimate of the number of jobs that were the direct result of the incentive; and
  - iii. A statement by the Chief Executive Officer of the Commerce Corporation, as to whether, in his or her judgment, the statutory and programmatic goals of the tax benefit are being met, with obstacles to such goals identified, if possible;
- 7) The estimated cost to the state to administer the tax incentive if such information is available;
- 8) An estimate of the extent to which benefits of the tax incentive remained in state or flowed outside the state, if such information is available;
- 9) In the case of economic development tax incentives where measuring the economic impact is significantly limited due to data constraints, whether any changes in statute would facilitate data collection in a way that would allow for better analysis;
- 10) Whether the effectiveness of the tax incentive could be determined more definitively if the General Assembly were to clarify or modify the tax incentive's goals and intended purpose;

- 11) A recommendation as to whether the tax incentive should be continued, modified, or terminated; the basis for such recommendation; and the expected impact of such recommendation on the state's economy;
- 12) The methodology and assumptions used in carrying out the assessments, projections and analyses required pursuant to subdivisions (1) through (8) of this section.

The current report is one part of a series of reports for each one of the tax credits to be analyzed according to R.I. Gen. Laws § 44-48.2-3(1). This report concerns R.I. Gen. Laws § 42-64.26 entitled “Stay Invested in RI Wavemaker Fellowship” and measures the economic impact associated with the tax incentive during tax years 2019 through 2021. This analysis is performed at the micro-level using information provided by the Division of Taxation. This report is divided into five sections. Section I provides a detailed description of the tax incentive and its statutory programmatic goals and intent. Section II presents some background regarding this tax incentive. Section III presents a description of the data provided and used in the analysis by ORA. Section IV assesses the economic impact generated under the Wavemaker Fellowship program. Section V discusses relevant policy recommendations that could help in the decision process as to whether the tax credit should be continued, modified, or terminated.

## **1. Description of the Incentive**

The Wavemaker Fellowship program offers qualifying individuals a refundable tax credit worth the value of their annual student loan burden. This program is primarily administered by Rhode Island Commerce Corporation (CommerceRI) and is designed for applicants who

- “shall have graduated from an accredited two-year, four-year or graduate post-secondary institution of higher learning with an associate's, bachelor's, graduate, or post-graduate degree and at which the applicant incurred education loan repayment expenses”;
- “is a full-time employee with a Rhode Island-based employer located in this state”; and
- “whose employment is for work in one or more of the following covered fields: life, natural or environmental sciences; computer, information or software technology; advanced mathematics or finance; engineering; industrial design or other commercially related design field; or medicine or medical device technology.”<sup>1</sup>

The maximum amount of credit that can be granted to an applicant is “up to a maximum amount for each” 12 month period “of \$1,000 for an associate's degree holder, \$4,000 for a bachelor's degree holder, and \$6,000 for a graduate or post-graduate degree holder,...not to exceed the education loan repayment expenses incurred by such applicant during each 12 month period completed for up to four consecutive 12 month periods.”<sup>2</sup> Seventy percent of the total amount

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<sup>1</sup> Beginning on July 1, 2022, “healthcare applicant” are newly eligible for the program and are defined as any eligible applicant who works full time as a high demand healthcare practitioner or mental health professional, including clinical social workers and mental health counselors licensed by the department of health. Tax year 2022 will be analyzed in the next edition of this report.

<sup>2</sup> For example, an eligible applicant with an associate’s degree could receive at most \$4,000 in refundable tax credits over a four-year period provided the applicant has and pays on student loan debt payments of at least \$4,000 for the same period. The comparable figures are \$16,000 and \$24,000 for an eligible bachelor’s degree holder and an eligible graduate or post-graduate degree holder respectively.



awarded in each calendar year should be reserved to applicants who are permanent residents of the state of Rhode Island or who attended an institution of higher education located in Rhode Island when they incurred the education loan expenses.

The credit is allowed against the personal income tax imposed by R.I. Gen. Laws Chapter 44-30. The fellowship recipient may also request a refund of his/her credits in whole or in part, for 100% of the credit amount. Usage of the incentive is reimbursed from the Wavemaker Fellowship fund, which to-date has consisted of money appropriated in the state budget to this fund (meaning the State prefunds this tax incentive program through the budget process). Funding for the program is limited. The number of awards depends on the number of eligible applications and available funding. No incentives or credits under the program can be authorized after December 31, 2023.

A copy of the 2022 Wavemaker Fellowship Program application can be found in Appendix A.

## **2. Statutory and Programmatic Goals and Intent of the Tax Incentive**

According to R.I. Gen. Laws § 42-64.26-2, the General Assembly finds and declares that:

- 1) A well-educated citizenry is critical to this state's ability to compete in the national and global economies.
- 2) Higher education both benefits individual students and is a public good benefiting the state as a whole.
- 3) Excessive student loan debt is impeding economic growth in this state. Faced with excessive repayment burdens, many individuals are unable to start business, invest or buy homes, and may be forced to leave the state in search of higher paying jobs elsewhere.
- 4) Relieving student loan debt would give these individuals greater control over their earnings, would increase entrepreneurship and demand for goods and services, and would enable employers in this state to recruit and retain graduates in the fields of science, technology, engineering and mathematics.
- 5) The Stay Invested in RI Wavemaker Fellowship is designed to achieve the following goals:
  - i. Promote economic opportunity for people in this state by ensuring access to the training and higher education that higher-paying jobs require;
  - ii. Bring more and higher-paying jobs to this state by increasing the skill level of this state's workforce;
  - iii. Offer educational opportunity and retraining to individuals impacted by job loss, workplace injury, disability or other hardship;
  - iv. Keep young people in the state through incentives for educational opportunity and creation of more high-paying jobs;
  - v. Encourage an entrepreneurial economy in Rhode Island;
  - vi. Accomplish all of the goals in this chapter with as little bureaucracy as possible.

## **Part II: Benchmarking and Background**

This benchmarking and background section presents information useful for understanding how the Wavemaker Fellowship program functions and the economic environment in which it operates. This section provides some information on the availability of similar tax incentives in neighboring states, as well as discussion of local economic factors that may be related to the program. Where

appropriate, this section provides data on Rhode Island, other New England states, and nationwide. Data generally are compiled from public sources such as the U.S. Department of Labor, Bureau of Labor Statistics, U.S. Department of Commerce, Census Bureau and the U.S. Department of Treasury, Internal Revenue Service.

The federal government offers different tax incentive programs that are designed to lower the burden of student loan debts, ranging from tax credits that can be directly applied to a taxpayer's tax liability to deductions that help lower the amount of income subject to federal tax. For purposes of this benchmarking analysis, ORA will only focus on the first type of federal tax benefit. As of now, there are two federal tax credit programs that help offset the cost of higher education through a direct reduction in a taxpayer's tax liability: the American Opportunity Credit and the Lifetime Learning Credit. However, taxpayers cannot claim more than one tax credit for the same students and the same expenses. The following table provides a detailed description of these tax credits.

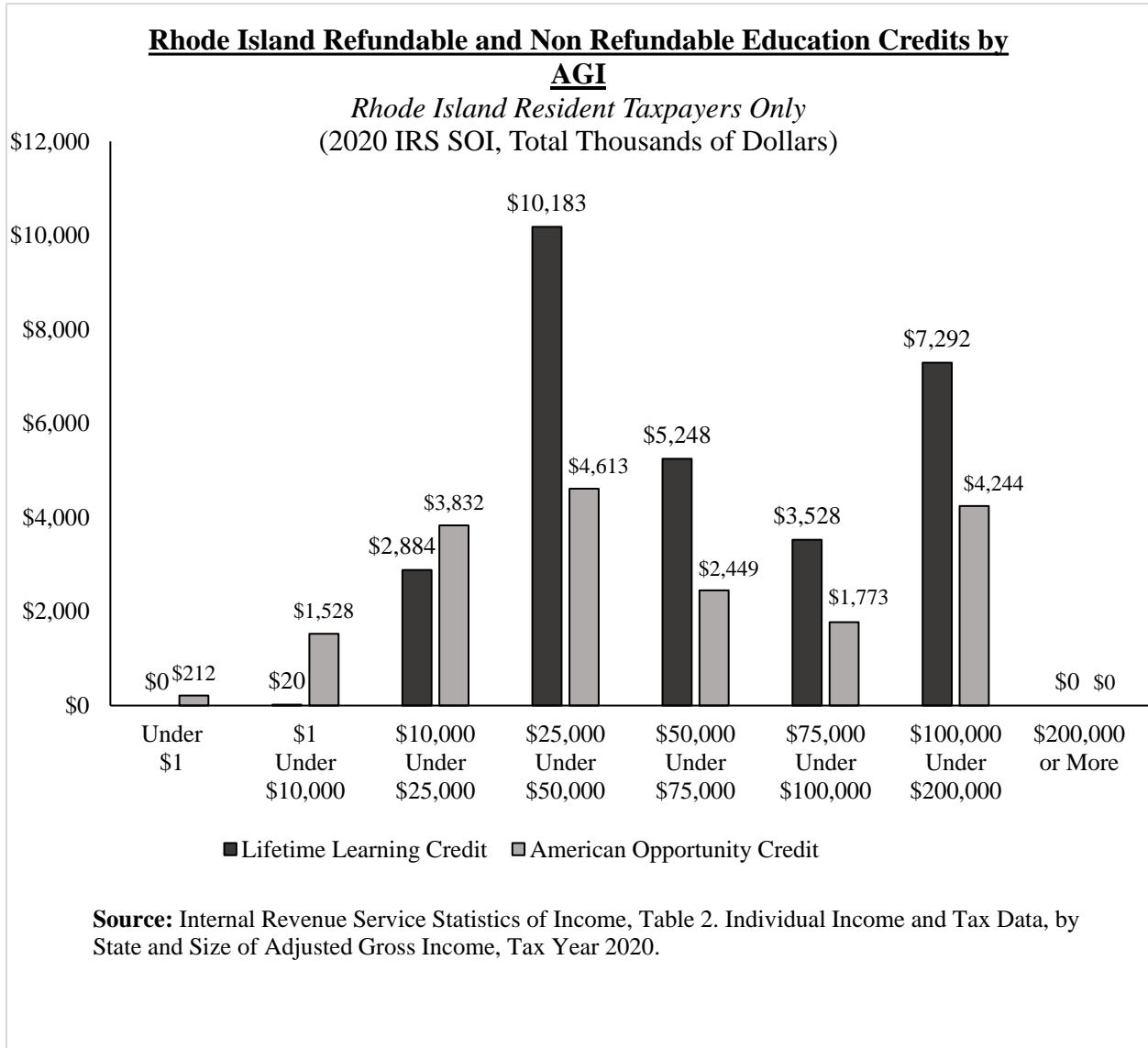
**Overview of the American Opportunity Credit and the Lifetime Learning Credit**

(Tax Year 2021)

	<b>The American Opportunity Credit</b>	<b>The Lifetime Learning Credit</b>
<b>Maximum Credit</b>	Up to \$2,500 per eligible student	Up to \$2,000 per return
<b>Limit on Modified Adjusted Gross Income (MAGI)</b>	\$180,000 if married filing jointly; \$90,000 if single, head of household, or qualifying widow(er)	\$180,000 if married filing jointly; \$90,000 if single, head of household, or qualifying widow(er)
<b>Refundable</b>	40% of credit may be refundable	Nonrefundable
<b>Number of Years of Postsecondary Education</b>	Available only if the student had not completed the first 4 years of postsecondary education before 2021 (generally, the freshman through senior years, determined by the eligible educational institution, not including academic credit awarded solely because of the student’s performance on proficiency examinations)	Available for all years of postsecondary education and for courses to acquire or improve job skill
<b>Number of Tax Years Credit Available</b>	Available only for four tax years per eligible student	Available for an unlimited number of tax years
<b>Type of Program Required</b>	Student must be pursuing a program leading to a degree or other recognized educational credential	Student doesn't need to be pursuing a program leading to a degree or other recognized education credential
<b>Number of Courses</b>	Student must be enrolled at least half-time for at least one academic period that begins during 2021	Available for one or more courses
<b>Felony Drug Conviction</b>	As of the end of 2021, the student had not been convicted of a felony for possessing or distributing a controlled substance	Felony drug convictions don't make the student ineligible
<b>Qualified Expenses</b>	Tuition required enrollment fees, and course materials that the student needs for a course of study whether or not the materials are bought at the educational institution as a condition of enrollment or attendance.	Tuition and fees required for enrollment or attendance (including amounts required to be paid to the institution for course-related books, supplies, and equipment)
<b>Payment for Academic Periods</b>	Payments made in 2021 for academic periods beginning in 2021 or beginning in the first 3 months of 2022	Payments made in 2021 for academic periods beginning in 2021 or beginning in the first 3 months of 2022

**Source:** Internal Revenue Service, Publication 970 “Tax Benefits for Education”, available at <https://www.irs.gov/pub/irs-pdf/p970.pdf>

To better understand Rhode Island taxpayers that benefit from the two federal education tax incentives described above, data on credit usage from Rhode Island resident tax returns is presented in the chart below<sup>3</sup>:



The American Opportunity Credit was more likely to be claimed compared to the Lifetime Learning Credit by Rhode Island tax filers with federal Adjusted Gross Incomes (AGIs) under \$25,000. The Lifetime Learning Credit was more likely to be claimed by those with a higher AGI, with the highest amount claimed by individuals with AGI between \$25,000 and \$50,000.

In addition to the federal incentives, ORA investigated the availability of tax incentive programs like the Wavemaker Fellowship in neighboring states. Only Maine was found to offer a similar

<sup>3</sup> Data is from the Internal Revenue Service’s Statistics of Income (SOI) for TY 2020 and includes federal individual income tax returns filed from Rhode Island addresses that were finalized prior to the issuance of the report.

type of tax credit to college graduates. The following table contains a brief description of credit features in both states, as well as information on any identified credit cap and carryforward provisions. Maine is listed twice in the table, as the state recently updated its tax credit beginning in tax year 2022. In other neighboring states, it should be noted that beginning in tax year 2022 a new tax credit called “Higher Education Loan Repayment Tax Credit” will be available to companies that are subject to the Connecticut Corporation Business Tax or Insurance Premiums Tax. This tax credit is available to companies that make payments directly to the Connecticut Higher Education Supplemental Loan Authority on eligible education loans on behalf of qualified employees.

<b><u>Wavemaker Fellowship Program in Rhode Island and Selected Comparison States</u></b>			
	<b>Rhode Island</b>	<b>Maine – TY 2019- TY 2021</b>	<b>Maine TY 2022 and beyond</b>
<b><i>Credit Name</i></b>	Stay Invested in RI Wavemaker Fellowship	Credit for educational opportunity	Refundable Student Loan Repayment Tax Credit
<b><i>Statutory Reference</i></b>	R.I. Gen. Laws § 42-64.26	36 Me. Rev. Stat. Ann tit. 36, § 5217-D	36 Me. Rev. Stat. Ann tit. 36, § 5217-E
<b><i>Credit Features</i></b>	Associate, bachelor's, graduate, or post-graduate degree holders working for a Rhode Island-based employer whose employment is for work in certain fields and meeting other requirements can claim this credit.	This credit is available to associate, bachelor's and graduate degree holders who attended an accredited college or university and live, work and pay taxes in Maine, in addition to meeting other requirements.	This credit is available to associate, bachelor's and graduate degree holders who attended an accredited college or university and live, work and pay taxes in Maine, in addition to meeting other requirements.
<b><i>Cap</i></b>	Up to \$1,000 per year for associate degree holders, up to \$4,000 for bachelor's degree holders, and up to \$6,000 for master's degree or higher.	In 2018, up to \$888 for associate degree holders, up to \$4,524 for bachelor's degree holders, and up to \$3,936 for graduate degree holders.	Up to \$2,500 per year including any carryover allowed under § 5217-D. Certain degree fields are allowed a cap up to \$3,500. A qualified individual is subject to a lifetime cap of \$25,000.
<b><i>Carryforward</i></b>	Up to 4 years	Up to 10 years	Up to 10 years
<b><i>Source</i></b>	<a href="http://webserver.rilin.state.ri.us/Statutes/TITLE42/42-64.26/INDEX.HTM">http://webserver.rilin.state.ri.us/Statutes/TITLE42/42-64.26/INDEX.HTM</a>	<a href="https://www.mainelegislature.org/legis/statutes/36/title36sec5217-D.html">https://www.mainelegislature.org/legis/statutes/36/title36sec5217-D.html</a>	<a href="https://www.mainelegislature.org/legis/statutes/36/title36sec5217-E.html">https://www.mainelegislature.org/legis/statutes/36/title36sec5217-E.html</a>

**Note:** Credit characteristics reflects current policy as identified by ORA in January 2023. This table presents a single comparison credit program for each comparison state determined by ORA to be most like the Rhode Island Stay Invested in RI Wavemaker Fellowship program.

Despite these state and federal government tax provisions to make higher education more affordable, student loans continue to increase with the rising costs of college tuition. According to a study conducted by Experian, a consumer credit reporting agency, student loan debt in the U.S. reached \$1.6 trillion in the third quarter 2021, which represents a 92% increase over the first quarter of 2009, with an average of \$39,487 per borrower.<sup>4</sup> The following table provides a snapshot of student loan debt statistics nationwide and for selected states in the third quarter of 2021.

<sup>4</sup> This study can be found at <https://www.experian.com/blogs/ask-experian/state-of-student-loan-debt/>

### **Student Loan Debt Overview**

(Data is for Quarter 3 of 2021)

#### **United States**

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Total student loan debt in the U.S.	\$1.595 Trillion
Average student loan debt per borrower in the U.S.	\$39,487
Washington D.C., had the highest average student loan debt	\$61,312
North Dakota had the lowest average student loan debt	\$31,974
Average tuition and fees for a public four-year in state college	\$10,740
Average tuition and fees for a public four-year out of state college	\$27,560
Average tuition for a private non-profit four-year college	\$38,070

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#### **New England**

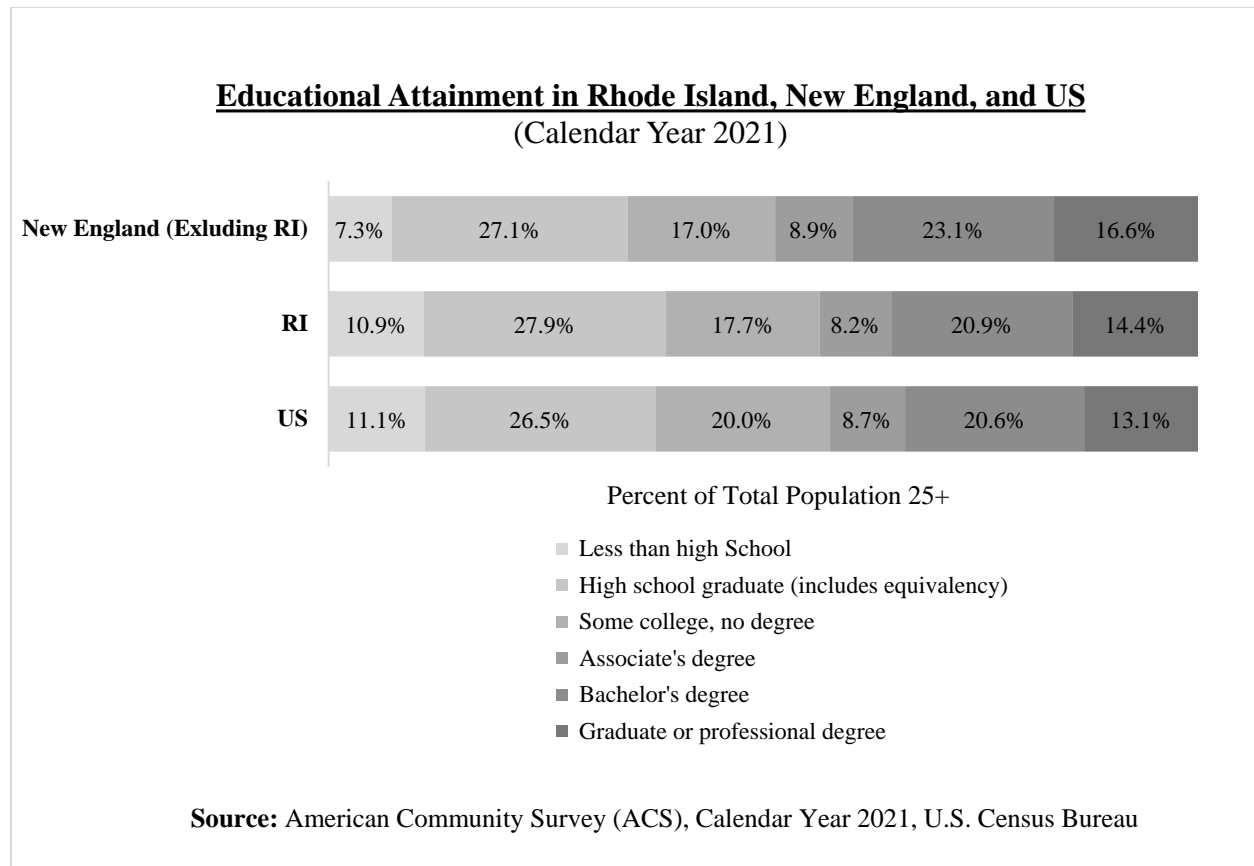
Maine student loan debt average	\$36,379
Rhode Island student loan debt average	\$36,639
New Hampshire student loan debt average	\$38,125
Vermont student loan debt average	\$39,407
Massachusetts student loan debt average	\$39,839
Connecticut student loan debt average	\$40,075

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**Source:** Experian and The College Board. The report can be found at <https://www.experian.com/blogs/ask-experian/state-of-student-loan-debt/>

The table shows how student loan debt in Rhode Island compares to the national average and the rest of the New England states. At the national level, Washington D.C., had the highest average student loan debt of \$61,312 and North Dakota had the lowest with an average of \$31,974. Rhode Island's average student loan debt of \$36,639 was below the U.S. average student loan debt of \$39,487. In New England, Rhode Island had the second lowest average student loan debt, trailing only Maine, while Connecticut had the highest average student loan debt of \$40,075.

Besides having student loan debt to pay for, applicants for the Wavemaker Fellowship program must complete a two-year, four-year or graduate degree from an accredited institution. To give some education background, the following chart provides comparison data on Rhode Islanders' levels of formal educational attainment compared with the rest of New England, and the nation in 2021:



Formal educational attainment is generally defined in terms of the highest formal educational credential earned by an individual – for example, less than a high school diploma, high school diploma, some college, associate’s degree, bachelor’s degree, and graduate degree. Compared with other New England states, Rhode Island has a greater portion of the population that holds a high school diploma or less and lower proportion holding an associate’s degree or higher. When compared with national averages, Rhode Island has a lower proportion of individuals with less than a high school diploma than the national average and has a greater proportion of individuals possessing at least an associate’s degree.

The Wavemaker Fellowship program is designed to target specific work areas. When evaluating the program applications, the Wavemaker Fellowship Committee at CommerceRI gives priority to applicants whose employment is in one or more of the science, technology, engineering, and mathematics (STEM) fields.

According to the U.S. Bureau of Labor Statistics (BLS), STEM jobs are defined to consist of 100 occupations, including computer and mathematical, architecture and engineering, and life and physical science occupations, as well as managerial and postsecondary teaching occupations related to these functional areas and sales occupations requiring scientific or technical knowledge at the postsecondary level. Using the list of STEM-related occupations available at [www.bls.gov/oes/stem\\_list.xlsx](http://www.bls.gov/oes/stem_list.xlsx), ORA compiled employment and wage data for these targeted occupations in Rhode Island.



**Rhode Island Employment and Wages by Occupations**

(May 2021)

<b>SOC Code</b>	<b>Occupations</b>	<b>Count of Sub-Occupations</b>	<b>Total Employees</b>	<b>Average Entry Wage</b>	<b>Average Experienced Wage</b>
<b><u>All Rhode Island Occupations</u></b>					
00-0000	Total Occupations	540	457,720	\$13.61	\$37.24
<b><u>Rhode Island STEM-Related Occupations</u></b>					
11-0000	Management Occupations	3	1,350	\$54.85	\$84.05
15-0000	Computer and Mathematical Occupations	14	14,190	\$31.22	\$60.06
17-0000	Architecture and Engineering Occupations	20	7,640	\$26.78	\$48.37
19-0000	Life, Physical, and Social Science Occupations	8	1,030	\$24.27	\$46.34
25-0000	Education, Training, and Library Occupations*	6	970	\$27.75	\$62.62
41-0000	Sales and Related Occupations	1	840	\$22.03	\$60.53
<b>Total/ Weighted Average</b>		<b>52</b>	<b>26,020</b>	<b>\$30.44</b>	<b>\$57.44</b>

**Source:** U.S. Bureau of Labor Statistics, May 2021.

**Note:**

\* Only annual salaries were reported for these occupations; no wage estimates are available. For simplicity, annual salaries were divided by 52 weeks then by 40 hours to calculate an hourly rate.

The entry and experienced wage rates presented in the table above are defined as the 10<sup>th</sup> and 75<sup>th</sup> percentiles of the wage distribution, respectively. The percentiles are determined by arranging all reported wage rates for each occupation in order from highest to lowest. The rate at which 10 percent of the reported wage rates falls below is the 10<sup>th</sup> percentile. The rate at which 75 percent of the reported wage rates falls below is the 75<sup>th</sup> percentile. In Rhode Island, BLS reported a total of 540 occupations comprising 457,720 employees, with an average entry wage of \$13.61 (an annual full time equivalent (FTE) salary of \$28,309) and an average experienced wage of \$37.24 (an annual FTE salary of \$77,459). Out of the 457,720 total employees, 26,020 workers had STEM jobs as of May 2021, representing 5.7% of the total state employment. Computer and mathematical occupations were the largest group constituting 54.5% of STEM employment with 14 different sub-occupations. Sales and related occupations comprised only one STEM sub-occupations and were the smallest group with 840 employees or 3.2% of the total STEM jobs. The highest entry and experienced wages were observed in management occupations whereas the lowest entry wage was in sales and related occupations and the lowest average experienced

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wage was in life, physical, and social science occupations. For all STEM-related occupations the weighted average annual entry FTE salary is \$63,324 and the weighted average annual experienced FTE salary is \$119,474. The 2021 Rhode Island wage data confirms that STEM-related occupations are well paying and thus the Wavemaker Fellowship is targeting high paying jobs relative to the average Rhode Island job.

## **Part III: Report Data Description**

The analysis of the Wavemaker Fellowship program required an examination of micro-level taxpayer data. In order to gain access to the relevant data while respecting confidentiality concerns, ORA entered into Memoranda of Understanding (MOU) with the Rhode Island Department of Revenue, Division of Taxation (Taxation), the Rhode Island Department of Labor and Training (DLT), and the Rhode Island Commerce Corporation (CommerceRI). These MOUs sought to preserve the confidentiality of individually identifiable taxpayers consistent with the statutory mandates regarding secrecy and confidentiality of taxpayer information. In this context, ORA relied on data provided by the Taxation and CommerceRI for tax years 2019, 2020, and 2021, to the extent such information were provided, as required by R.I. Gen. Laws § 44-48.2-5(b). The data provided to ORA consisted of the following:

- Wavemaker Fellowship program applications (employer endorsement forms) provided by CommerceRI for tax years 2019 through 2021<sup>5</sup>;
- Tax credit awarded and certified amounts provided by CommerceRI for tax years 2019 through 2021;
- Tax credit amounts used by credit recipients in each tax year subject to the current analysis provided by Taxation;
- Withholding tax payment records on file provided by Taxation in each tax year subject to the current analysis;
- Cost of tax credit administration.

ORA made no attempt to verify the accuracy of the data provided and made minimal corrections to the data in order to be able to execute specific calculations for the report. The data included in this report are unaudited and reported as compiled.

### **1. Number of Taxpayers Granted Tax Benefit**

According to the Taxation a total of 993 individuals received the Wavemaker Fellowship tax credit over tax years 2019 through 2021, totaling \$3.4 million. A total of \$3.2 million was received by fellows as a tax refund and \$189,870 received as a tax credit that could be applied against their tax liability. The following table provides a breakdown of the program recipients and the corresponding credit/refund amounts received by tax year and by residency status:

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<sup>5</sup> ORA did not receive these applications for some of the fellows.

**Wavemaker Fellowship**  
**Credit/Refund Amounts and Number of Recipients**

(Tax Years 2019 – 2021)

<b>Residency</b>	<b>TY 2019</b>	<b>TY 2020</b>	<b>TY 2021</b>	<b>Average</b>	<b>Total</b>
<b><u>Rhode Islands</u></b>					
Count of Taxpayers	296	349	205	<b>283</b>	<b>850</b>
Credit Amount	\$87,212	\$50,486	\$42,403	<b>\$60,034</b>	<b>\$180,101</b>
Refund Amount	\$964,898	\$1,234,548	\$613,081	<b>\$937,509</b>	<b>\$2,812,527</b>
Total Amount	<i>\$1,052,110</i>	<i>\$1,285,034</i>	<i>\$655,484</i>	<b>\$997,543</b>	<b>\$2,992,628</b>
<b><u>Out of State</u></b>					
Count of Taxpayers	50	55	38	<b>48</b>	<b>143</b>
Credit Amount	\$7,222	\$2,147	\$400	<b>\$3,256</b>	<b>\$9,769</b>
Refund Amount	\$138,251	\$172,260	\$120,628	<b>\$143,713</b>	<b>\$431,139</b>
Total Amount	<i>\$145,473</i>	<i>\$174,407</i>	<i>\$121,028</i>	<b>\$146,969</b>	<b>\$440,908</b>
<b><u>Total</u></b>					
Count of Taxpayers	<b>346</b>	<b>404</b>	<b>243</b>	<b>331</b>	<b>993</b>
Credit Amount	<b>\$94,434</b>	<b>\$52,633</b>	<b>\$42,803</b>	<b>\$63,290</b>	<b>\$189,870</b>
Refund Amount	<b>\$1,103,149</b>	<b>\$1,406,808</b>	<b>\$733,709</b>	<b>\$1,081,222</b>	<b>\$3,243,666</b>
Total Amount	<b>\$1,197,583</b>	<b>\$1,459,441</b>	<b>\$776,512</b>	<b>\$1,144,512</b>	<b>\$3,433,536</b>

Source: Taxation

## 2. Direct Taxes Paid by Recipients

Taxation provided ORA with data on personal income tax (PIT) paid by the Wavemaker Fellowship recipients for tax years 2019 through 2021. The following table describes the breakdown of this information by taxpayer’s residency status.

**Wavemaker Fellowship**  
**Personal Income Taxes Paid by Recipients**  
 (Tax Years 2019-2021)

<b>Residency</b>	<b>TY 2019</b>	<b>TY 2020</b>	<b>TY 2021</b>	<b>Average</b>	<b>Total</b>
<b><u>Rhode Island</u></b>					
Count of Taxpayers	290	339	200	<b>276</b>	<b>829</b>
Taxes Paid <sup>1</sup>	\$619,043	\$845,209	\$512,371	<b>\$658,874</b>	<b>\$1,976,623</b>
Avg. Taxes Paid	\$2,135	\$2,493	\$2,562	<b>\$2,397</b>	<b>\$7,190</b>
<b><u>Out of State</u></b>					
Count of Taxpayers	49	51	34	<b>45</b>	<b>134</b>
Taxes Paid <sup>2</sup>	\$82,060	\$93,904	\$64,871	<b>\$80,278</b>	<b>\$240,835</b>
Avg. Taxes Paid	\$1,675	\$1,841	\$1,908	<b>\$1,808</b>	<b>\$5,424</b>
<b><u>Total</u></b>					
Count of Taxpayers	<b>339</b>	<b>390</b>	<b>234</b>	<b>321</b>	<b>963</b>
Taxes Paid <sup>3</sup>	<b>\$701,103</b>	<b>\$939,113</b>	<b>\$577,242</b>	<b>\$739,153</b>	<b>\$2,217,458</b>
Avg. Taxes Paid	<b>\$2,068</b>	<b>\$2,408</b>	<b>\$2,467</b>	<b>\$2,314</b>	<b>\$6,943</b>

**Source:** Taxation

**Note:**

The count of taxpayers in this table is slightly different than the one in the table above because apportioned taxes paid were calculated for taxpayers for whom necessary tax information and/or tax returns were available.

<sup>1</sup> Taxes Paid for RI Residents are calculated as "Total RI Tax and Checkoff Contributions" minus "Property Tax Relief" minus "RI earned income credit" minus "RI Resident lead paint credit"

<sup>2</sup> Taxes Paid for RI Non-Residents are calculated as "Total RI Tax and Checkoff Contributions" minus "RI earned income credit"

<sup>3</sup> Taxes Paid is a sum of RI Residents and RI Non-Residents. all taxes paid amounts were apportioned using the ratio of 'Wavemaker' wages divided by Federal AGI on the return.

Using the information on Credit/Refund Amounts and Number of Recipients above, ORA calculated the average Total Credit/Refund Amount per Recipient:

**Wavemaker Fellowship**  
**Average Total Credit/Refund Amount per Recipient**  
 (Tax Years 2019 – 2021)

<b>Residency</b>	<b>TY 2019</b>	<b>TY 2020</b>	<b>TY 2021</b>	<b>Average</b>	<b>Total</b>
<b><u>Rhode Island</u></b>					
Count of Taxpayers	296	349	205	<b>283</b>	<b>850</b>
Total Amount	\$1,052,110	\$1,285,034	\$655,484	<b>\$997,543</b>	<b>\$2,992,628</b>
Avg Total Amount	\$3,554	\$3,682	\$3,197	<b>\$3,521</b>	<b>\$10,434</b>
<b><u>Out of State</u></b>					
Count of Taxpayers	50	55	38	<b>22</b>	<b>143</b>
Total Amount	\$145,473	\$174,407	\$121,028	<b>\$80,639</b>	<b>\$440,908</b>
Avg Total Amount	\$2,909	\$3,171	\$3,185	<b>\$3,653</b>	<b>\$9,265</b>
<b><u>Total</u></b>					
Count of Taxpayers	<b>346</b>	<b>404</b>	<b>243</b>	<b>331</b>	<b>993</b>
Total Amount	<b>\$1,197,583</b>	<b>\$1,459,441</b>	<b>\$776,512</b>	<b>\$1,144,512</b>	<b>\$3,433,536</b>
Avg Total Amount	<b>\$3,461</b>	<b>\$3,612</b>	<b>\$3,196</b>	<b>\$3,423</b>	<b>\$10,269</b>

Source: Taxation

A comparison of the average total credit/refund amount per recipient and the average taxes paid per recipient shows that the average total credit/refund amount granted exceeds the average taxes paid by Rhode Island resident and non-resident tax filers in each year of 2019 through 2021 as well as on average for the three tax years and in total over the three tax years. The difference between the three averages is significantly higher for non-resident tax filers than for resident tax filers. For example, in TY 2019, the average Rhode Island resident recipient of a Wavemaker Fellowship received 66.5% (i.e.,  $(\$3,554 - \$2,135) / \$2,135$ ) more in tax benefits than they paid in taxes while the average non-resident recipient of a Wavemaker Fellowship received 73.7% (i.e.,  $(\$2,909 - \$1,675) / \$1,675$ ) more in tax benefits than they paid in taxes.

### 3. Cost of Administration

ORA surveyed the Taxation and CommerceRI to ascertain the cost for the administration of the Wavemaker Fellowship program. The table below provides information on the cost incurred to administer this tax incentive by both entities during tax years 2019 through 2021.

**Wavemaker Fellowship**  
**Cost of Administration**  
 (Tax Years 2019 – 2021)

<b>Cost-Incurring Entity</b>	<b>TY 2019</b>	<b>TY 2020</b>	<b>TY 2021</b>	<b>Total</b>	<b>Average</b>
Taxation	\$8,827	\$9,528	\$6,112	<b>\$24,467</b>	<b>\$8,156</b>
CommerceRI	\$189,416	\$223,429	\$197,224	<b>\$610,068</b>	<b>\$203,356</b>
<b>Total</b>	<b>\$198,243</b>	<b>\$232,957</b>	<b>\$203,336</b>	<b>\$634,535</b>	<b>\$211,512</b>

Source: Taxation and CommerceRI.

According to CommerceRI, administrative funds are used for program personnel, cohort events, and outreach initiatives. During TY 2021, federal student loan forbearance prevented the

certification of tax credits for many Wavemaker fellows. This federal policy led to a greater ratio of TY 2021 allocated funds being used for administration than other years.

#### 4. Measuring the Extent to Which Benefits Remained in the State

R.I. Gen. Laws § 44-48.2-5(a)(8) requires that an economic development tax incentive evaluation report on the extent to which benefits associated with the tax incentive remained in the state, if such information is available. In consideration of this requirement, ORA has presented tables on taxes paid by recipients by resident vs. non-resident status throughout this report.

#### 5. Additional Data Analysis

- Wavemaker Fellowship Awardees Characteristics

ORA divided the data provided by the CommerceRI into groupings based on awardee characteristics in order to draw comparisons and demonstrate the diversity of the fellows.<sup>6</sup> Some of these characteristics were not indicated in the CommerceRI data and therefore was marked as “Not Listed” in some of the tables below. In addition, there were no awardees in tax year 2020 according to CommerceRI due to the ongoing student loan forbearance and uncertainty about student loan burden moving forward.

According to R.I. Gen. Laws § 42-64.26-5(e), 70% of the awards should be reserved to applicants who are Rhode Island residents or those who attended an institution of higher education located in Rhode Island when they incurred the education loan expenses. This requirement was easily achieved in 2019 and 2021. The following table provides the breakdown of awardees by residency status:

**Wavemaker Fellowship**  
**Descriptive Statistics: Awardees by Residency**  
(Tax Years 2019 – 2021)

<b>Residency</b>	<b>2019</b>	<b>2020*</b>	<b>2021</b>	<b>Total</b>
RI Resident	89.4%	0.0%	91.9%	90.4%
Non-Resident	10.6%	0.0%	8.1%	9.6%
<b>Total</b>	<b>100%</b>	<b>0%</b>	<b>100%</b>	<b>100%</b>

**Source:** CommerceRI

**Notes:**

\*CommerceRI stated that there were no Wavemaker Fellowship awardees in tax year 2020.

CommerceRI provided ORA with the certified incentive amounts for the 2019 cohorts and the calculated incentive amounts for the 2021 cohorts. This information is displayed in the table below:

<sup>6</sup> An awardee refers to a Wavemaker Fellowship program applicant who was awarded the tax incentive by CommerceRI. An applicant means an eligible graduate who applies for a tax credit for education loan repayment expenses under this program.

**Wavemaker Fellowship**

**Descriptive Statistics: Award Amounts Breakdown by Residency**

(Tax Years 2019 – 2021)

<b>Residency</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>Total</b>
RI Resident	88.4%	0.0%	90.6%	89.8%
Non-Resident	11.6%	0.0%	9.4%	10.2%
<b>Total</b>	<b>100%</b>	<b>0%</b>	<b>100%</b>	<b>100%</b>

Source: CommerceRI

The overwhelming majority of awardees attended a higher education institution in the Northeast, accounting for 90.9% of total awardees across all three years. Further, across all three years, 65.0% of awardees attended an institution located in Rhode Island and 15.5% attended an institution in Massachusetts. The following table provides the breakdown of awardees by the location of their institution:

**Wavemaker Fellowship**

**Descriptive Statistics: Awardees by Institution Region**

(Tax Years 2019 – 2021)

<b>Region</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>Total</b>
Midwest	0.9%	0%	2.5%	1.6%
Northeast	92.5%	0%	88.8%	90.9%
South	2.7%	0%	5.6%	3.9%
West	2.7%	0%	3.1%	2.8%
Not Listed	1.3%	0%	0.0%	0.8%
<b>Total</b>	<b>100.0%</b>	<b>0.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: CommerceRI

Of the 386 total awardees of the Wavemaker Fellowship, 60.9% of all awardees hold a bachelor’s degree, while 37.0% of awardees hold a master’s degree or above, and 1.3% hold an associate’s degree. In comparison, 20.9% of all Rhode Island residents 25 years and over hold a bachelor’s degree, 8.2% have an associate’s degree and 14.4% have a graduate or professional degree, according to the U.S. Census Bureau, 2017-2021 American Community Survey (ACS) 5-year estimates. The table below presents the breakdown of awardees by their qualifying degree:



**Wavemaker Fellowship**  
**Descriptive Statistics: Awardees by Qualifying Degree**  
 (Tax Years 2019 – 2021)

<b>Degree</b>	<b>Share of Awardees</b>	<b>Number of Awardees</b>
Associate’s	1.3%	5
Bachelor’s	60.9%	235
Master’s or above	37.0%	143
Not Listed	0.8%	3
<b>Total</b>	<b>100.0%</b>	<b>386</b>

**Source:** CommerceRI

Awardees work in a variety of fields but are largely concentrated in two work fields: engineering and computer, information, or software technology. This is in line with what is defined under R.I. Gen. Laws § 42-64.26-3(8)(ii), which states that applicants to this program should work in one or more of the following covered fields: life, natural or environmental sciences; computer, information or software technology; advanced mathematics or finance; engineering; industrial design or other commercially related design field; or medicine or medical device technology. The following table provides the breakdown of awardees by work field:

**Wavemaker Fellowship**  
**Descriptive Statistics: Awardees by Work Field Range**  
 (Tax Years 2019-2021)

<b>Work Field</b>	<b>TY 2019</b>	<b>TY 2020</b>	<b>TY 2021</b>	<b>Total</b>
Advanced Mathematics or Finance	18.1%	0.0%	15.0%	16.8%
Computer, Information or Software Technology	30.5%	0.0%	18.1%	25.4%
Engineering	22.6%	0.0%	32.5%	26.7%
Industrial design or other commercially related design field	9.3%	0.0%	5.6%	7.8%
Life, Natural or environmental Sciences	5.8%	0.0%	9.4%	7.3%
Medicine or medical device technology	12.4%	0.0%	19.4%	15.3%
Not Listed	1.3%	0.0%	0.0%	0.8%
<b>Total</b>	<b>100.0%</b>	<b>0.0%</b>	<b>100.0%</b>	<b>100.0%</b>

**Source:** CommerceRI

The type of work, or work-field, does not always match the industry of the employer. The industry classification of employers shows more diversity than work field, with no industry capturing a majority. The following table provides the breakdown of awardees by their employer industry:

**Wavemaker Fellowship**  
**Descriptive Statistics: Awardees by Employer Industry**  
 (Tax Years 2019 – 2021)

Industry*	2019	2020	2021	Total
Advanced Business Services	22.6%	0.0%	15.0%	19.4%
Arts, Education, Hospitality & Tourism	5.8%	0.0%	6.9%	6.2%
Biomedical Innovation	7.1%	0.0%	25.6%	14.8%
Defense, Shipbuilding, Maritime	12.4%	0.0%	15.0%	13.5%
Design, Food, Custom Manufacturing	19.9%	0.0%	13.8%	17.4%
IT, Cyber, Data Analytics	13.7%	0.0%	6.3%	10.6%
Life, natural or environmental sciences	0.0%	0.0%	0.6%	0.3%
Medicine or medical device technology	0.0%	0.0%	1.3%	0.5%
Offshore Wind	0.0%	0.0%	1.3%	0.5%
Transportation, Distribution & Logistics	2.7%	0.0%	2.5%	2.6%
Other**	0.4%	0.0%	6.3%	2.8%
Not Listed	15.5%	0.0%	5.6%	11.4%
<b>Total</b>	<b>100.0%</b>	<b>0.0%</b>	<b>100.0%</b>	<b>100.0%</b>

**Source:** CommerceRI

**Note:** \* A list of employers can be found at

<https://wavemaker.commerceri.com/information/wavemaker-information/>

\*\* This includes healthcare, software & technology, biotechnology, financial services, consulting engineering, building design/ construction, real estate development.

The bulk of Wavemaker Fellowship awardees earn an income between \$50,000 and \$74,999, accounting for 40% of all awardees regardless of certification year. Generally, the breakdown of awardees among the salary ranges is very similar across the certification years, with approximately 70% to 80% of awardees earning between \$50,000 and \$99,999 in all certification years. According to the U.S. Census Bureau, 2017-2021 American Community Survey (ACS) 5-year estimates, the median household income in Rhode Island was \$70,305 \$67,167, and \$74,489 in 2019, 2020, and 2021 respectively. The table below presents the breakdown of awardees by different salary ranges:

**Wavemaker Fellowship**  
**Descriptive Statistics: Awardees by Salary Range**

(Tax Years 2019 – 2021)

Income Range	TY 2019		TY 2020		TY 2021		Total	
	Count	Share	Count	Share	Count	Share	Count	Share
\$0-\$34,999	3	1%	0	0%	1	1%	4	1%
\$35,000-\$49,999	4	2%	0	0%	5	3%	9	2%
\$50,000-\$74,999	87	38%	0	0%	67	42%	154	40%
\$75,000-\$99,999	67	30%	0	0%	59	37%	126	33%
\$100,000+	38	17%	0	0%	28	18%	66	17%
Not Listed	27	12%	0	0%	0	0%	27	7%
<b>Total</b>	<b>226</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>160</b>	<b>100%</b>	<b>386</b>	<b>100%</b>

Source: CommerceRI

- Wavemaker Fellowship Taxpayer Recipient Characteristics

Awardees of the Wavemaker Fellowship must maintain eligibility in order to take advantage of the tax credit/refund the program awards and not all eligible awardees choose to use the tax credit/refund. This section looks at awardees who actually received the incentive. ORA divided the data provided by Taxation into groupings based on recipient characteristics in order to draw comparisons and demonstrate the diversity of the fellowship awardees.

**Wavemaker Fellowship**  
**Descriptive Statistics: Recipients by Degree**

(Tax Years 2019-2021)

Degree Level	TY 2019	TY 2020	TY 2021	Average
Associate	1.0%	2.0%	1.0%	1.3%
Bachelor's	56.0%	59.0%	65.0%	60.0%
Master's or above	43.0%	39.0%	34.0%	38.7%

Source: Taxation

The majority of awardees of the Wavemaker Fellowship who received a tax credit or a refund, had either a bachelor's or master's or higher degree in all years 2019 through 2021. On average, 38.7% had a master's or higher degree and 60.0% had a bachelor's degree.

**Wavemaker Fellowship**  
**Descriptive Statistics: Recipients by Work-Field**

(Tax Years 2019-2021)

<b>Work-Field</b>	<b>TY 2019</b>	<b>TY 2020</b>	<b>TY 2021</b>	<b>Average</b>
Advanced mathematics or finance	14.0%	14.0%	17.0%	15.0%
Computer, information or software technology	26.0%	28.0%	25.0%	26.3%
Engineering	26.0%	29.0%	27.0%	27.3%
Healthcare	2.0%	1.0%	1.0%	1.3%
Industrial design or other commercially related design field	9.0%	10.0%	11.0%	10.0%
Life, natural or environmental sciences	7.0%	6.0%	6.0%	6.3%
Medicine or medical device technology	14.0%	10.0%	11.0%	11.7%
Other	2.0%	2.0%	2.0%	2.0%

**Source:** Taxation

On an average tax year 2019 through 2021, more than two thirds of the fellows that received either a tax credit of a refund worked in advanced mathematics or finance; computer, information, or software technology; or engineering. This is in line with what is defined under R.I. Gen. Laws § 42-64.26-3(8)(ii), which states that applicants to this program should work in one or more of the following covered fields: life, natural or environmental sciences; computer, information or software technology; advanced mathematics or finance; engineering; industrial design or other commercially related design field; or medicine or medical device technology.

**Wavemaker Fellowship**  
**Descriptive Statistics: Recipients by Employer Industry**

(Tax Years 2019-2021)

<b>Employer Industry</b>	<b>TY 2019</b>	<b>TY 2020</b>	<b>TY 2021</b>	<b>Average</b>
Advanced Business Services	16.0%	16.0%	18.0%	16.7%
Arts, Education, Hospitality & Tourism	5.0%	5.0%	6.0%	5.3%
Biomedical Innovation	9.0%	8.0%	7.0%	8.0%
Construction	2.0%	1.0%	1.0%	1.3%
Defense, Shipbuilding, Maritime	19.0%	19.0%	16.0%	18.0%
Design, Food, Custom Manufacturing	13.0%	18.0%	23.0%	18.0%
Engineering	3.0%	4.0%	0.0%	2.3%
Environmental Sciences	2.0%	2.0%	0.0%	1.3%
Healthcare	10.0%	7.0%	4.0%	7.0%
IT, Cyber, Data Analytics	12.0%	13.0%	9.0%	11.3%
Miscellaneous Manufacturing	1.0%	1.0%	0.0%	0.7%
Transportation, Distribution & Logistics	4.0%	4.0%	13.0%	7.0%
Other	4.0%	2.0%	3.0%	3.0%

**Source:** Taxation

The industry of the employers shows a somewhat different breakdown than the work-field, with design, food, custom manufacturing, advanced business services, defense, shipbuilding and maritime industries accounting for the highest portion of Wavemaker recipients in an average year.

**Wavemaker Fellowship**  
**Descriptive Statistics: Recipients by Salary Range**

(Tax Years 2019-2021)

<b>Salary Range</b>	<b>TY 2019</b>	<b>TY 2020</b>	<b>TY 2021</b>	<b>Average</b>
Not Listed	1.0%	0.0%	5.0%	2.0%
\$0-\$34,999	0.0%	2.0%	2.0%	1.3%
\$35,000-\$49,999	10.0%	10.0%	8.0%	9.3%
\$50,000-\$74,999	50.0%	48.0%	42.0%	46.7%
\$75,000-\$99,999	27.0%	27.0%	29.0%	27.7%
\$100,000+	12.0%	13.0%	14.0%	13.0%

**Source:** Taxation

According to the U.S. Census Bureau, 2017-2021 American Community Survey 5-year estimates, the median household income in Rhode Island was \$70,305 \$67,167, and \$74,489 in 2019, 2020, and 2021 respectively. The table above indicates that most incentive recipients in the three years earned an income close or above the median household income.

**Wavemaker Fellowship**  
**Descriptive Statistics: Recipient Wages**

(Tax Years 2019-2021)

	TY 2019	TY 2020	TY 2021
<b>Number of Recipients *</b>	341	394	235
<b>Sum of Wages</b>	\$25,317,969	\$31,140,008	\$18,904,132
<b>Median Wage</b>	\$69,967	\$76,830	\$76,908

**Source:** Taxation

**Note:**

\* A total of 23 recipients were removed from the reporting because no state wages were found for the year the Wavemaker Credit was issued via a refund or for the tax year it was applied, or recipient is an outlier. Note that wage information reflects the wage information for the year the Wavemaker Credit was issued via a refund or for the tax year it was applied.

The median wage earned by Wavemaker recipients was \$69,967 in 2019, which is 99.5% of the 2017-2021 U.S. Census Bureau American Community Survey 5-year estimate of median earnings for full-time, year-round workers with earnings in Rhode Island in tax year 2019 of \$70,305. This percentage was 114.4% in tax year 2020 and 103.2% in tax year 2021.

## Part IV: Evaluation of the Economic Impact of the Tax Credit

This section of the report addresses two major objectives defined in R.I. Gen. Laws § 44-48.2-5: first, to provide a projection of the potential impact of the Wavemaker Fellowship on state revenues from projected future use and carryforward; and, second, to produce a breakeven cost-benefit analysis that can determine the net impact on state revenues resulting from the tax incentive.

### 1. Assessment and Five-Year Projection of Revenue

Current law includes a sunset of the Wavemaker Fellowship program, stating that no new credits can be authorized after December 31, 2023. However, it is anticipated that credit/refund usage activity will continue beyond this date as unused credit/refund amounts can be carried forward for an additional four years to be applied against future tax liabilities.

To construct a projected schedule of this tax incentive, ORA assumed that Wavemaker Fellowship program usage will follow historical usage patterns. Over tax years 2019 through 2021, 5.7% of this tax incentive was used as a tax credit and applied against recipients' tax liability and 94.3% was used as a tax refund. ORA then used the actual amounts provided by Taxation for tax years 2019 and 2020 to construct a 2-year projection for Wavemaker Fellowship amounts that would be assigned in tax year 2022 and assumed no growth in tax year 2023<sup>7</sup>. In addition, given that starting in tax year 2024 healthcare applicants are newly eligible for the program, ORA added to this average the \$1.3 million fund that was appropriated by CommerceRI for the healthcare fellowship. ORA used the percentages calculated above to breakdown the healthcare fellowship between tax credit and tax refund. These healthcare fellowship amounts were added to the projected wavemaker amounts for tax years 2024 through 2026.

The following table provides the distribution of the anticipated amount of the tax incentive to be used in each tax year.

<b><u>Wavemaker Fellowship</u></b> <b><u>Revenue Forgone Projections</u></b>			
<b>Tax Year</b>	<b>Credit Amount</b>	<b>Refund Amount</b>	<b>Total Amount</b>
2019	\$94,434	\$1,103,149	\$1,197,583
2020	\$52,633	\$1,406,808	\$1,459,441
2021	\$42,803	\$733,709	\$776,512
2022*	\$73,534	\$1,254,979	\$1,328,512
2023*	\$73,534	\$1,254,979	\$1,328,512
2024*	\$164,221	\$2,764,291	\$2,928,512
2025*	\$164,221	\$2,764,291	\$2,928,512
2026*	\$164,221	\$2,764,291	\$2,928,512

**Source:** ORA calculations based on data provided by Taxation

**Notes:**

\* Projected years.

<sup>7</sup> Tax year 2021 shows abnormally low credit usage due to federal student loan forbearance and therefore was excluded from the average calculation.

## **2. “Breakeven” Cost-Benefit Analysis**

- *Introduction to “Breakeven” Cost-Benefit Analysis Methodology*

Pursuant to R.I. Gen. Laws § 44-48.2-5(6), ORA conducted a “breakeven” cost-benefit analysis to measure the fiscal impacts on the state economy resulting from the Wavemaker Fellowship program under a variety of assumptions. To provide additional insight, ORA also produced breakeven analyses with respect to employment and Rhode Island gross domestic product (GDP).

To execute these cost-benefit analyses, ORA utilized Regional Economic Models, Incorporated’s (REMI) 70-sector model of the Rhode Island economy via the REMI Tax-PI software platform to produce estimates of the total economic effects of the tax credits issued in tax years 2019 through 2021.<sup>8</sup> The dynamic capabilities of the REMI Tax-PI model allows one to estimate the impacts of exogenous shocks to the state’s economy, including changes to public policy, shifts in consumer behavior and demand, and developments in industry. The REMI Tax-PI operationalizes these insights by augmenting REMI’s base economic and demographic model, PI+, with a module that allows the user to enter a state’s customized budget, in order to run fiscal and economic forecasts. Specifically, for each budget item, one can choose an “Indicator,” which is the economic or demographic driver of that budget item (e.g., personal income for personal income tax revenue, or age 5-18 population for K-12 education spending), and a “Policy Variable,” which is the economic or demographic change associated with a change to the structure of that budget item (e.g., a change in consumer prices for a change in the sales tax).

The analysis is based on self-reported individual-level data provided by CommerceRI, Taxation and publicly available historical data on the regional and national economies. Direct benefits are input into the REMI model as policy variables simulating changes in industry sales, exogenous final demand, employment, and compensation or wages. ORA assigned these benefits to a profile of sectors among the 70 sectors available in the REMI Tax-PI model in proportion with the three-year average Wavemaker tax incentive amount of \$1,144,512.

The “breakeven” approach developed for this report allows a reader to assume that the Wavemaker program leveraged some degree of economic activity required by program recipients to take this benefit. This assumption means that a varying portion of the economic activity required of these recipients would not have occurred in the absence of the tax incentive. Under this assumption, recipients made certain decisions based on the availability of an incentive over a period of time and removal of that tax benefit in a given year would undo all such decisions.

- *Modeling Costs*

ORA assumed that the tax incentive is funded by an equivalent reduction in state government spending – that is, when the state government forgoes revenue by allowing a Wavemaker Fellowship tax credit/refund, there are fewer funds available for other spending priorities. ORA modeled these adjustments based on a comprehensive historical analysis of Rhode Island general fund expenditures for fiscal years 2019 through 2021. ORA compiled all state general fund expenditures and assumed that the level of these expenditures could be adjusted to maintain a

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<sup>8</sup> Detailed documentation on the REMI Tax-PI v3.0.0 model employed in this analysis is available at: <http://www.remi.com/resources/documentation>



balanced general fund budget. The breakdown of general fund expenditures by category is shown in the following table:

**Rhode Island General Fund Expenditures by NAICS**  
(Average FY 2019-2021)

<b>Industry Description</b>	<b>NAICS Code</b>	<b>Percent of Total</b>
Ambulatory Healthcare Services	621	36.6%
Educational Services	61	30.3%
State Wages, Salary, and other Compensation	n/a (Entered as “state/local govt. compensation” and “employment”)	24.3%
Local Government Spending	n/a (Entered as “state/local govt. spending”)	3.5%
Social Assistance	624	2.0%
Administrative and Support Services	561	1.8%
Professional, Scientific, and Technical Services	54	1.8%
Repair and Maintenance	811	1.3%
Wholesale Trade	42	1.0%
Remaining Industries		2.3%
<b>Total:</b>		<b>100.0%</b>

**Source:** ORA analysis of Rhode Island general fund expenditure data.

- Modeling Benefits

To model the benefits of the Wavemaker Fellowship program, ORA examined the intended purpose and goals defined in the program’s governing statute. When doing so, the objective of this program appeared to be twofold: on one hand, the availability of this tax benefit would offset the cost of higher education to make it more affordable. For example, the Wavemaker Fellowship amount ranges between \$1,000 and \$6,000 a year and takes the form of a tax credit that could be applied against a taxpayer’s liability, or a tax refund that could be cashed out. Therefore, the program recipients would have lower student loan debts in comparison to their peers. On the other hand, the availability of this tax benefit would attract more and higher-paying jobs to the state in the science, technology, engineering and math (STEM) fields.

To address the program’s objectives, ORA modeled three-year average Wavemaker tax incentive amount and jobs count as a commensurate increase in industry employment and a decrease in personal income taxes. In the REMI model, an “Industry Employment (Exogenous Production)” policy variable affects the industries that provide the goods or services demanded. This policy variable assumes that employment is related to exogeneous sources of demand, thus, the employment loss/gain will not be offset by local firms. In the case of the Wavemaker Fellowship program, this policy variable assumes that the program recipients represent new net jobs to Rhode Island economy. With respect to “Personal Taxes,” this policy variable models changes in total personal income taxes of taxpayers and assumes that lowering personal taxes raises disposable income, which in turn results in higher consumption spending and higher government revenues.

To apply the changes in industry employment discussed above, ORA selected the “Professional, Scientific and Technical Services” sector (NAICS 54) in the REMI Tax-PI model. This sector represents a broad category inclusive of all the STEM fields defined in R.I. Gen. Laws § 42-64.26-3(8)(ii). It is possible that this sector may include some fields that are not related to those defined in the law, however, it is found to be the most suitable option for capturing STEM-related fields in the REMI analysis.<sup>9</sup>

Finally, it is difficult to infer what percentage of the Wavemaker Fellowship program resulted in bringing new net jobs to the state and what percentage resulted in lowering personal income taxes for the program recipients. For this reason, ORA ran different simulation scenarios varying the percentages of these benefits.

- *The “Breakeven” Approach*

A fundamental challenge in evaluating economic development incentives is determining the extent to which an incentive stimulated or attracted new economic activity rather than subsidized economic activity that would have been largely present even in the absence of the incentive. In the case of the Wavemaker Fellowship program, it is difficult to determine how much the program affects an individual’s decision to work in Rhode Island. In fact, it is not unreasonable to think that this tax incentive is large enough to impact such a decision, given the maximum credit/refund allowed over a four-year period. However, it is also possible that an individual had already decided to work in Rhode Island and therefore this tax incentive may have simply rewarded or subsidized behavior that likely would have occurred anyway. Real world conditions often make it difficult or impossible for an evaluator to assess where on this continuum the impact of any given tax incentive falls.

In this context, ORA conducted a breakeven analysis. This analysis allows for the evaluation of an incentive program’s performance under a wide range of assumptions regarding the level of economic activity that would have taken place if the program had not been available. Furthermore, the breakeven analysis specifies the proportion of economic activity associated with the incentive program recipients that one must assume to have been attributable to the incentive program in order for the total benefits to equal its total costs, where benefits and costs are measured as the

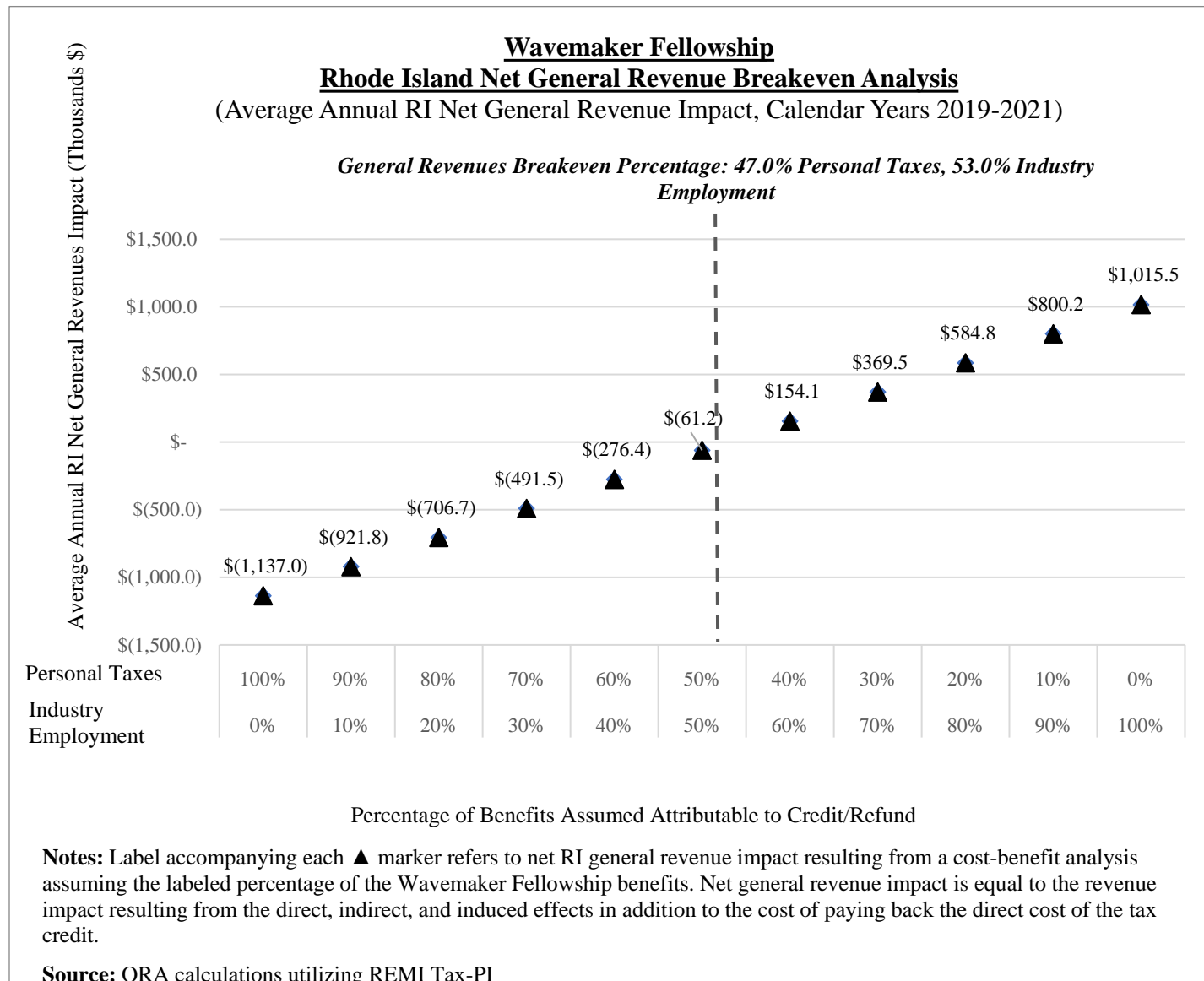
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<sup>9</sup> A detailed breakdown of the “Professional, Scientific, and Technical Services” NAICS (54) sector is provided in Appendix B.

impact on state general revenues (i.e., the condition that must be satisfied for the incentive program to “pay for itself”).

The breakeven percentage should be interpreted as follows: if the reader believes the assumption to be plausible, that at least the amount of economic activity implied by the breakeven percentage can be attributed to the availability of the tax incentive, then one can infer that the incentive has a net positive impact on state general revenues. In the opposite case, if the reader believes that the amount of economic activity attributable to the tax incentive was less than the level implied by the breakeven percentage, then one can infer that the incentive had a net negative impact on state general revenues. Holding other factors equal, a lower breakeven percentage is more desirable than a higher breakeven percentage if the goal of an incentive program is to cost the state as little revenue as possible. A tax incentive program fails to breakeven when the breakeven percentage is greater than 100 percent. This implies that even if 100 percent of the economic activity associated with the incentive recipient was assumed to have taken place strictly because of the incentive’s availability, a net negative impact on state general revenues would have resulted.

The following chart provides results of the breakeven analysis with respect to Rhode Island general revenues:



The chart suggests that the program breaks even with respect to state net general revenues if 53.0% of the Wavemaker fellowship recipients were assumed to work in Rhode Island only because of this tax incentive and 47.0% of them were already embedded in the state economy but benefited from the decrease in personal income taxes.

Note that, as the assumed percentage of industry employment benefits increases and the assumed percentage of personal taxes benefits decreases, the net revenue impact becomes higher. However, when these two benefits switch directions, the net revenue impact decreases. This suggests that increasing employment in the “Professional, Scientific, and Technical Services” industry has more impact on the state economy than lowering personal income taxes.

The following table provides more detailed information regarding the state general revenue impact breakdown:

**Wavemaker Fellowship**  
**Detailed Net Revenue Impacts**

(Annual Rhode Island Net General Revenue Impact, TY 2019-2021)

<b>Assumed % of “Industry Employment”</b>	100%	50%	0%
<b>Assumed % of “Personal Taxes”</b>	0%	50%	100%
<b>Forgone Revenue Due to Credit</b>	<b>\$(1,144,512)</b>	<b>\$(1,144,512)</b>	<b>\$(1,144,512)</b>
<b>Total General Revenue Generated by Credit</b>	<b>\$2,160,043</b>	<b>\$1,083,291</b>	<b>\$7,536</b>
<b><u>Total General Revenue Generated by Component</u></b>			
Personal Income Tax	\$804,413	\$397,669	\$(8,805)
General Business Taxes	326,501	164,971	3,496
Sales and Use Taxes	822,463	418,681	15,196
Other Taxes	32,980	16,311	(343)
Total Departmental Receipts	92,369	45,555	(1,068)
Other Sources	81,317	40,104	(940)
<b><u>Net General Revenue, After Paying for Credit</u></b>	<b>\$1,015,531</b>	<b>\$(61,221)</b>	<b>\$(1,136,976)</b>
<b>Revenues Generated for Every \$1 of Credit</b>	<b>\$1.89</b>	<b>\$0.95</b>	<b>\$0.01</b>

**Source:** ORA calculations based on historical Rhode Island revenue amounts and REMI Tax-PI simulations.

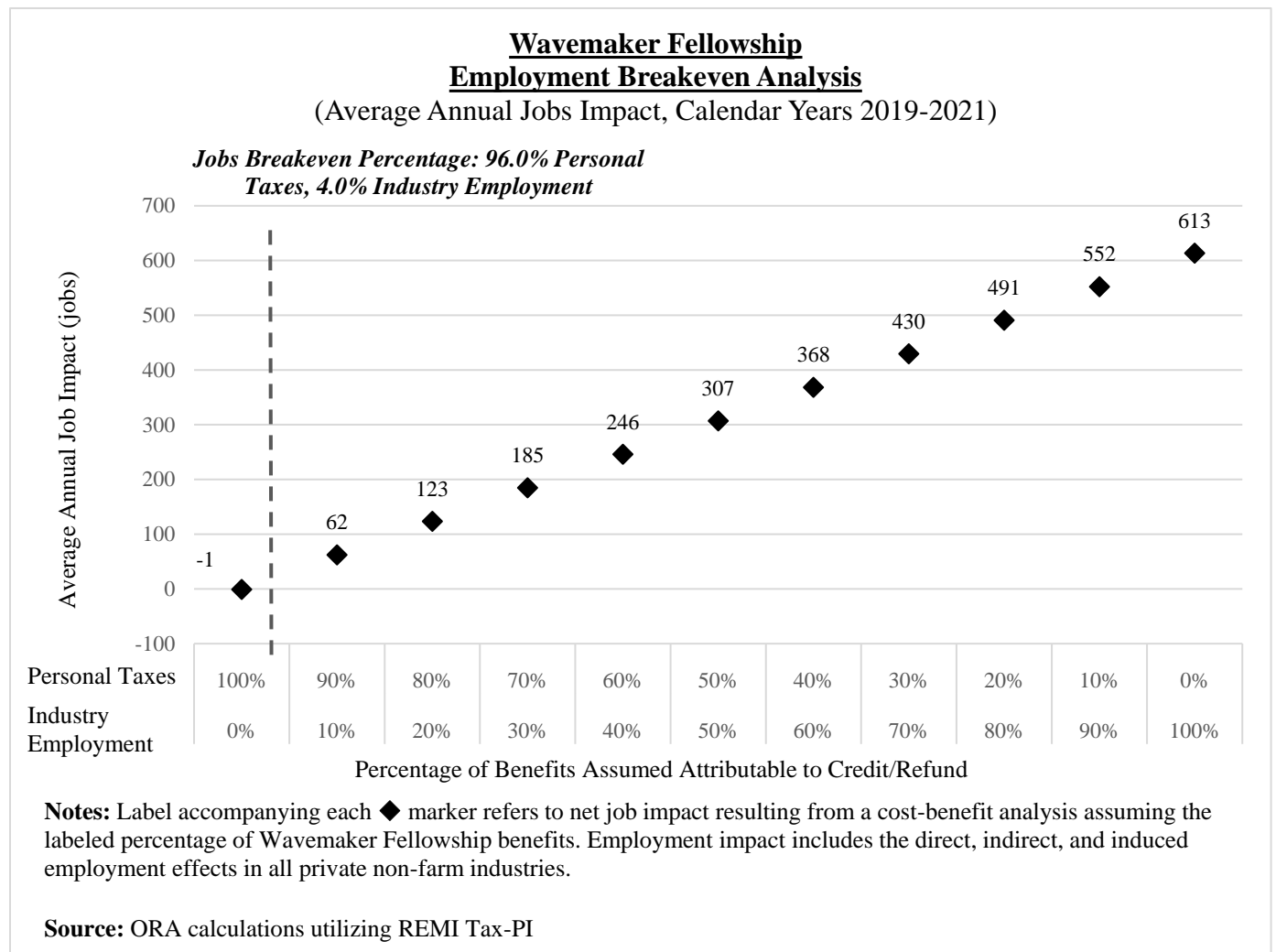
The table shows the detailed revenue impacts under three different scenarios. The “most favorable” scenario is when 100% of the Wavemaker Fellowship recipients took a job in Rhode Island only because of this tax incentive. This scenario generated a total of \$1,015,531 of net general revenues, which incorporates the average credit amount of \$1,144,512. Expressed another way, under this scenario, for every dollar spent on the Wavemaker program, the state generates \$1.89 of revenues. This payback ratio shows that new revenues generated from the Wavemaker-incentivized activity exceed the total costs of the Wavemaker program and add a new net positive revenue amount to the state under the assumption that *all* Wavemaker recipients would not work in Rhode Island if not for the availability of the tax incentive.

The table also shows the detailed revenue impacts under the “least favorable” scenario where the tax incentive resulted in lowering personal income taxes for all program recipients but did not generate any new employment to the state. Under this scenario, Rhode Island gives up \$1,144,512 in revenues on the Wavemaker Fellowship program and receives \$7,536 of new revenues in return, equal to an annual net loss of \$1,136,976 in net general revenues. In this case, for every dollar spent on the Wavemaker program, the state generates only one cent of revenues in return.

In addition to these two extreme cases, the table provides a mid-point scenario. In this case, 50% of the Wavemaker Fellowship recipients were assumed to work in Rhode Island only because of this tax incentive and 50% of them were already embedded in the state economy but benefited from the decrease in personal income taxes. Under this scenario, the generated net revenue is a loss of \$61,221. The calculated payback ratio in this case is \$0.95 for every dollar spent on the program. ORA examined additional possible scenarios varying the percentages of benefits assumed attributable to the tax incentive. Results of these analyses are provided in appendix C.

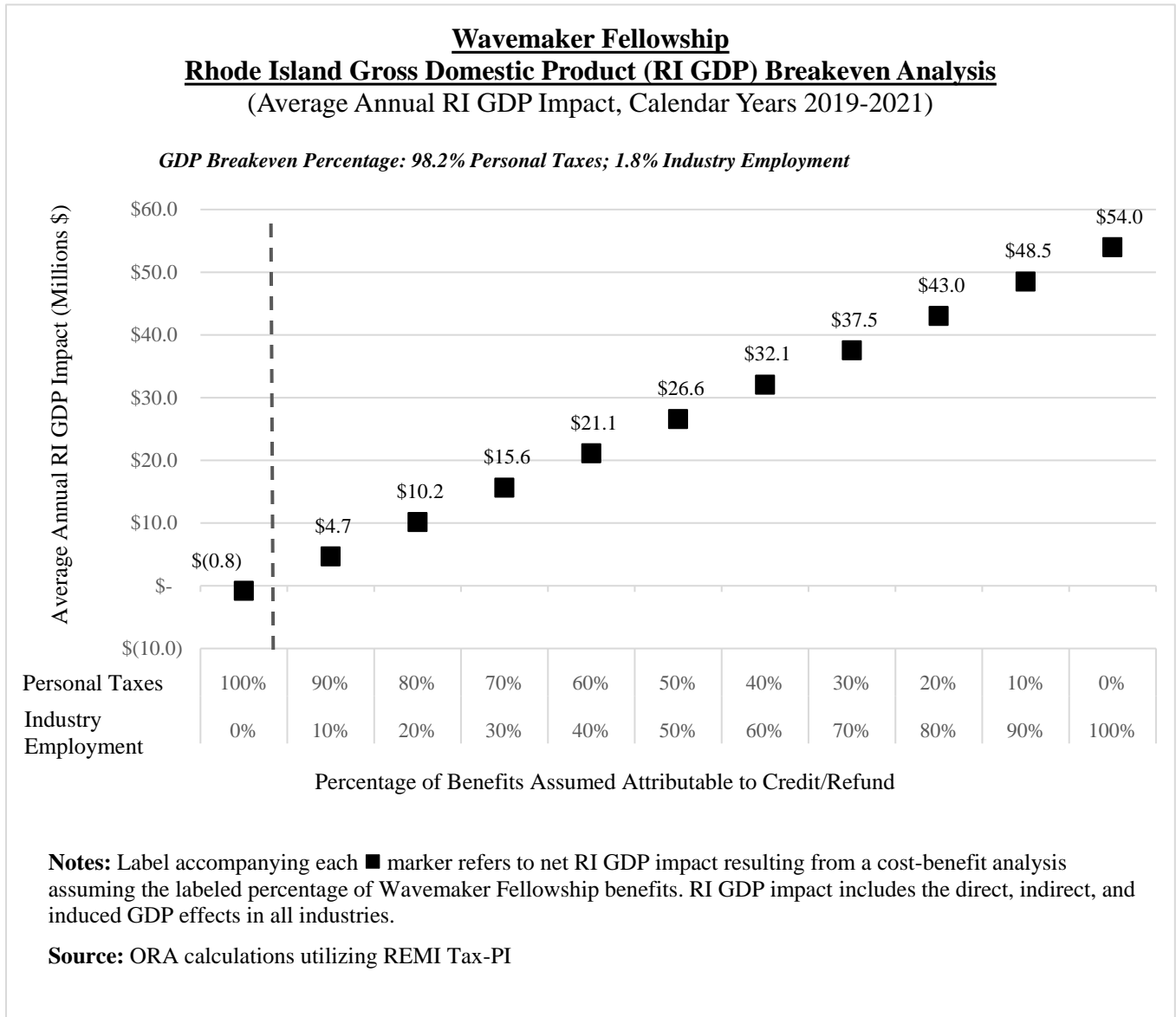
The breakeven framework can also be extended to employment and Rhode Island GDP. In these contexts, the breakeven percentage can be interpreted as the percentage of economic activity associated with Wavemaker recipients assumed to be attributable to the availability of the tax incentive. This is the necessary percentage for the increase in employment and GDP resulting from new economic activity to outweigh the employment or GDP losses resulting in the reduction in government spending necessary to fund the credit.

The following chart shows the results of a breakeven analysis with respect to total private non-farm employment.



The employment breakeven percentages imply that the Wavemaker Fellowship has a net positive impact on Rhode Island employment if at least 4.0% of the program was associated with an industry employment increase and 96.0% of the program was associated with a decrease in personal taxes. Detailed employment breakdown (e.g., direct, indirect, and induced) is provided in appendix C.

The following chart shows the results of a breakeven analysis with respect to Rhode Island gross domestic product (RI GDP).



The RI GDP breakeven percentages imply that the Wavemaker Fellowship program has a net positive impact on RI GDP if at least 1.8% of the program is associated with an industry employment increase and 98.2% of the program is associated with a decrease in personal taxes.

The results of additional breakeven scenarios in which the input parameters are varied to provide the reader with additional possible breakeven analysis outcomes are provided in Appendix C.

## Part V: Discussion and Recommendations

### 1. Statement by the CEO of the Commerce Corporation

The Secretary of Commerce, who serves as Chief Executive Officer of the Rhode Island Commerce Corporation pursuant to R.I. Gen. Laws 42-64-1.1(b), provided the following statement pursuant to R.I. Gen. Laws § 44-48.2-5(a)(6)(iii):

**Statement from the CEO of the Commerce Corporation:**

The Stay Invested in RI Wavemaker Fellowship program (Wavemaker) is a key component of Rhode Island Commerce’s toolbox for economic development, designed to keep high-tech, high-skill professionals in the state. The information provided by the Office of Revenue Analysis (ORA) shows the potent impact Wavemaker has on the state’s economy, and we agree with their recommendation to retain the program.

Wavemaker helps to incentivize economic growth in the state in multiple ways; the tax credit is paid directly to professionals in the state while the program also benefits employers by providing the talent businesses in the STEM and design industries need to grow and thrive in the state.

Wavemaker’s utility as a talent recruitment and retention tool is an important factor that led to the expansion of the program to healthcare and mental healthcare professionals in the Fiscal Year 2023 budget. There is additionally a proposal in the Governor’s Fiscal Year 2024 budget to expand the program to teachers. There has been a severe shortage of professionals in these fields, and Wavemaker serves as an incentive for Rhode Islanders to stay in state and for professionals in these high-demand fields to locate here.

ORA’s report provides helpful context on student loan debt in Rhode Island and across the country as well as critical statistics about Wavemaker. One important finding to highlight is that the most powerful driver of state revenue generation, economic growth, and job creation is increasing employment in the Professional, Scientific, and Technical Services industry. This aligns with Commerce’s focus to drive growth in this industry through Wavemaker.

ORA’s report offers thoughtful recommendations that Commerce will take into consideration while also balancing statute and the constraints of resources. For instance, Commerce is committed to improving program data and reporting and has already incorporated ORA’s recommendations #3 and #4 to aim toward that goal. We offer additional context on recommendation #5, which relates to the statutory goal of Wavemaker to achieve programmatic objectives with as little bureaucracy as possible. As mentioned by ORA, the period of performance being analyzed includes the period of federal forbearance, a time when limited tax credits could be certified. During this time, applications were still being reviewed and processed and career support was being offered to fellows, but limited tax credit funds were able to be disbursed. We agree with ORA that this program is demanding to administer and believe the current administrative and programmatic funding is necessary to execute this program effectively. Additionally, it is important to note — as ORA does — that program administrative



funds are used not just for program personnel and program overhead, but also for cohort events, outreach initiatives, and other career supports for Wavemaker fellows.

We feel strongly that continuing the Wavemaker program with a focus on high-demand and/or high-wage professions will be crucial to continuing Rhode Island's economic benefit.

## **2. ORA Recommendations**

**Finding #1:** The majority of Wavemaker Fellowship recipients have well-paying jobs when compared to the state's median household income.

### **Related Recommendations:**

- The statutory goals of the program aim to increase the net compensation of individuals to make jobs located in Rhode Island more competitive on an after-tax basis with higher paying jobs located elsewhere in the region.
- The program, by design, benefits those persons who work in Rhode Island in specific high-wage occupations and who have student loan debt, for a maximum of four years. Modifying the program by adjusting the amount of the Wavemaker Fellowship grant based on an applicant's income could allow the program to be expanded to more applicants in the STEM and healthcare fields or to other occupations thereby raising the after-tax income of more workers.

### *Discussion Supporting Finding #1:*

The statutory goals and objectives of the program do not provide any explicit income limit on program recipients making this tax incentive open to all income ranges. However, ORA examined income information of the Wavemaker Fellowship recipients provided by Taxation. As indicated in the "Additional Data Analysis" section, this data revealed that most recipients earned an income at or above the Rhode Island household median earnings for full time, year-round workers with earnings as reported by the U.S. Census Bureau ACS 5-year estimates for the years subject to this analysis. This is not surprising since R.I. Gen. Laws § 42-64.26-3(8)(ii) explicitly states that the program applicant must be a full-time employee working in one of the STEM fields, which are usually high-paying jobs. While this may satisfy the objective to "bring more and higher-paying jobs to this state by increasing the skill level of this state's workforce," it may not help relieve student loan debts for individuals in other less well remunerated occupations. Policymakers need

to reconsider the program’s parameters and probably prioritize low-income earners when deciding on the program eligibility.

**Finding #2:** It is unknown how much new net employment is attributable to the Wavemaker Fellowship program.

**Related Recommendations:**

- Producing a more rigorous analysis than what is contained in this report would require incorporating some elements of “but for” due diligence into the application process.

*Discussion Supporting Finding #2:*

It is difficult to determine with certainty the portion of Wavemaker Fellowship program recipients who made the decision to work in Rhode Island because of the availability of this tax incentive. Thus, when evaluating this program’s benefits, ORA provided a variety of scenarios displaying possible economic and fiscal outcomes using different employment assumptions.

To help overcome this challenge, ORA recommends incorporating some level of “but for” due diligence into the application process. For example, applicants of the Wavemaker Fellowship should be required to commit to working in Rhode Island for a specific time period in order to receive this tax benefit. This approach would demonstrate that the program recipients are not provided tax benefits for engaging in an activity that they would have done absent the incentive. Policymakers should not consider the “but for” as a hurdle to this program. Instead, the “but for” is a diligent effort to limit subsidies given to individuals that would have taken a job in Rhode Island without any government support as much as possible.

**Finding #3:** The Wavemaker Fellowship application form provides a breakdown of the applicants work fields by economic industries, however this breakdown does not follow the North American Industry Classification System. While this industry breakdown may be suitable for statutory compliance, it is not specific enough for facilitating the economic analysis of the program.

**Related Recommendations:**

- The program recipients work fields should be designated based on the North American Industry Classification System in order to help evaluators conduct a detailed economic analysis.

*Discussion Supporting Finding #3:*

ORA received all the Wavemaker Fellowship application forms for calendar years 2019 through 2021 from CommerceRI. These forms capture a considerable amount of information regarding each program applicant and their employers, which is suitable to demonstrate compliance with Wavemaker Fellowship eligibility criteria. One piece of information of interest for the current analysis is the work fields of the tax incentive recipients. ORA examined this data and attempted to match each credit recipient to the corresponding industry code according to the North American

Industry Classification System (NAICS) when modeling the benefits of this program in the REMI Tax-PI model.

However, the industry description on the application forms was not clear enough for this type of breakdown as it did not indicate specific NAICS-based sectors or codes. Therefore, ORA was unable to allocate the number of program recipients across different industries in the REMI model. Instead, given that the Wavemaker Fellowship program is targeting the science, technology, engineering and math (STEM) fields, ORA selected the “Professional, Scientific and Technical Services” sector (NAICS 54) to represent a broad category inclusive of all these fields. ORA cautions that the results of the breakeven analysis presented in this report are particularly dependent on this assumption. A list of subsectors contained in this sector is provided in the appendix for further details.

In addition, R.I. Gen. Laws § 42-64.26-4(e) made applicants in the healthcare sector eligible to apply for this tax incentive starting in 2022.

**Finding #4:** The Wavemaker fellowship application form provides wage ranges of the program’s applicants. However, this information is insufficient for purposes of tax incentive evaluation.

**Related Recommendations:**

- Applicants to the Wavemaker Fellowship program should be required to indicate their earned wage on the program’s application form.

*Discussion Supporting Finding #4:*

The application form provides important Wavemaker Fellowship individual level data. However, a simple modification to the application form is changing the wage range field to a field where the Wavemaker fellows can indicate their earned wage. Absent the actual wages earned by the Wavemaker Fellowship recipient, it is not possible to determine, for example, the compensation of these recipients relative to the state minimum wage, a common requirement in other tax incentive programs.

Based on wage data provided by Taxation, the median wage made by Wavemaker Fellowship recipient was \$69,967 in TY 2019; \$76,830 in TY 2020; and \$76,908 in TY 2021. Compared to the U.S. Census Bureau American Community Surveys (ACS) 5-year estimates median earnings, those wages represent 99.5%; 114.4%; and 103.2% in tax years 2019 through 2021 respectively. This difference in wages has the potential to significantly impact the economic and fiscal outcomes of the analysis. Therefore, ORA recommends that future program applicants should specify their wages in order conduct a precise analysis.

**Finding #5:** The cost of administration represents a relatively high share of the tax benefit delivered to taxpayers.

**Related Recommendations:**

- ORA recommends altering the Wavemaker Fellowship program statute to reduce the relatively high cost of administration and allocate more funds to program participants.

*Discussion Supporting Finding #5:*

A best practice of tax incentive design is to minimize its cost of administration. The average TY 2019-2021 annual revenue forgone as a result of the Wavemaker Fellowship program was \$1,144,512. The average TY 2019-2021 annual cost of administration reported by Taxation and CommerceRI over this same time period was \$211,512. Therefore, the cost to administer the program represents 14% of the total cost to the state, Wavemaker Fellowship awards plus program administration. The low credit usage in TY 2021 due to federal student loan forbearance does increase this ratio.

The significant amount of administrative cost of the Wavemaker Fellowship program may be because the program is demanding to administer given the large volume of applicants attempting to secure the tax incentive. Streamlining the application and approval process should be undertaken to reduce the administrative cost of the program. Policymakers should minimize the cost of the administration in order to ensure program efficiency, provided that one of the goals and objectives of the program is to reduce bureaucracy as much as possible. As noted earlier, some of these administration costs go to career support for fellows.

### **3. ORA Conclusion and Overall Recommendation**

R.I. Gen. Laws § 44-48.2-5(a) (11) require the Office of Revenue Analysis to make a recommendation “as to whether the tax incentive should be continued, modified, or terminated.” ORA recommends that the Stay Invested in RI Wavemaker Fellowship be retained at this time but that adjustments be made in accordance with the recommendations described in the previous section. In addition, ORA warns that the net positive impact of the Wavemaker Fellowship program is heavily dependent on the industry sector selected to run the analysis in the REMI model in which the qualifying jobs are located. Expansion of the program to industry sectors in the model with lower paying jobs will likely diminish the effectiveness of the program.

It is important to recognize, however, that the Wavemaker Fellowship program as it is currently constituted conflicts with the good tax policy principals of horizontal and vertical equity in the treatment of program participants. The conflict with the principle of vertical equity resides in the fact that the Wavemaker Fellowship program effectively reduces the student loan burden of those individuals who can most afford to pay their student loan debts given their employment in high paying jobs. For example, a Wavemaker Fellow who earns \$150,000 per year receives the same tax benefit as one who earns \$50,000 per year even though the higher earning fellow has a greater financial capability to make student loan payments.

As discussed in Finding #1, one possible reform would be to phase out the amount of the Wavemaker Fellowship awards at incomes above a certain level. For illustrative purposes, a reduction in the Wavemaker Fellowship amount of say, \$50 for every \$1,000 above \$100,000 in earnings would reduce the Wavemaker Fellowship for the \$150,000 earner to \$1,500 (assuming the student loan debt was incurred for a bachelor's degree) freeing up resources that could be used to fund other Wavemaker fellows.

The conflict with the principle of horizontal equity results from the fact that, as devised, funding for the program is limited. The number of awards depends not only on the number of eligible applications but also on funding availability. Thus, the Wavemaker Fellowship program treats similarly situated taxpayers, those with the same income, potentially the same title, and same student loan debt burden who may work at the same company, differently based on whether they are a Wavemaker fellow recipient or not. For example, two senior software engineers that each earn \$80,000 a year and each of whom have \$25,000 in student loan debt, might have very different tax burdens. The Wavemaker fellow in this example will have a tax burden up to \$4,000 less (assuming the student loan debt was incurred for a bachelor's degree) than the other person who is not a Wavemaker fellow due to lack of funding.

One possible solution to this inequity would be to make the Wavemaker Fellowship a by right benefit and not one that an eligible person must apply and be approved for. However, this would result in a high budgetary cost to the State as it would require a significant expansion of the Wavemaker Fellowship fund. More analysis is needed on the potential costs and benefits of this change to the program.

## APPENDICES

### Appendix A: 2022 Wavemaker Fellowship Application, Employer Endorsement Form



#### 2022 Wavemaker Fellowship Program Application Employer Verification Form

**Applicants:** Please have this form completed by your immediate supervisor to certify your current employment status at your company, performing work in a qualifying job field. Your employer should return the form to you, to be submitted with your application materials.

**Employers:** Please complete this form in its entirety to certify that you support your employee's eligibility for, and application to, the Wavemaker Fellowship Program. Questions? Visit [www.wavemaker.commerceri.com](http://www.wavemaker.commerceri.com) to review eligibility, or email [wavemaker@commerceri.com](mailto:wavemaker@commerceri.com) with questions.

#### Wavemaker Fellowship Applicant Information:

1. Applicant Legal Name: \_\_\_\_\_
2. Applicant Job Title: \_\_\_\_\_
3. Is this position considered a senior-level position at your company?  Yes  No
4. Does this position require specific skills/competencies that make it a 'difficult to fill' position at your company?  Yes  No
5. Is the applicant a full-time employee?  Yes  No

*For the purposes of this program, full-time is defined as being employed by a business for a minimum of at least 35 hours/week, or rendering any other standard of service generally accepted by custom or practice as full-time employment, with wages subject to withholding.*

6. Does this employee currently work remotely, either in full or in part?  Yes  No

*If yes, is this employee's role specifically a Rhode Island-based position? (In other words, but for the ability for the employee to work remotely with the help of technology, would this person otherwise be reporting to an RI-based office or worksite?)*  Yes  No

7. Is the applicant the owner or sole proprietor of this company?:  Yes  No

*Note: Additional documentation may be required if the answer to this question is 'yes'*

8. Has this applicant received any workplace awards or recognition (ex: performance awards, merit-based awards, employee of the month, etc.):  Yes  No

*If yes, please list:* \_\_\_\_\_  
\_\_\_\_\_

9. Please indicate which field(s) applies to the work that the applicant does on a daily basis for your organization:

- |                                                                       |                                                                                        |
|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <input type="checkbox"/> Life, natural or environmental sciences      | <input type="checkbox"/> Engineering                                                   |
| <input type="checkbox"/> Computer, information or software technology | <input type="checkbox"/> Medicine or medical device technology                         |
| <input type="checkbox"/> Advanced mathematics or finance              | <input type="checkbox"/> Industrial design or other commercially relevant design field |



10. Please give a short description of the applicant's regular duties & responsibilities:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

11. What is the applicant's salary range?:

- |                                            |                                            |                                            |
|--------------------------------------------|--------------------------------------------|--------------------------------------------|
| <input type="checkbox"/> \$0-\$34,999      | <input type="checkbox"/> \$55,000-\$59,999 | <input type="checkbox"/> \$80,000-\$84,999 |
| <input type="checkbox"/> \$35,000-\$39,999 | <input type="checkbox"/> \$60,000-\$64,999 | <input type="checkbox"/> \$85,000-\$89,999 |
| <input type="checkbox"/> \$40,000-\$44,999 | <input type="checkbox"/> \$65,000-\$69,999 | <input type="checkbox"/> \$90,000-\$94,999 |
| <input type="checkbox"/> \$45,000-\$49,999 | <input type="checkbox"/> \$70,000-\$74,999 | <input type="checkbox"/> \$95,000-\$99,999 |
| <input type="checkbox"/> \$50,000-\$54,999 | <input type="checkbox"/> \$75,000-\$79,999 | <input type="checkbox"/> \$100,000+        |

**Employer Information:**

12. Organization Legal Name: \_\_\_\_\_

13. Organization Address: \_\_\_\_\_

14. RI Tax ID #: \_\_\_\_\_

15. Which industry or sector is your company a part of?:

- |                                                             |                                                                   |
|-------------------------------------------------------------|-------------------------------------------------------------------|
| <input type="checkbox"/> Biomedical Innovation              | <input type="checkbox"/> Transportation, Distribution & Logistics |
| <input type="checkbox"/> IT, Cyber, Data Analytics          | <input type="checkbox"/> Arts, Education, Hospitality & Tourism   |
| <input type="checkbox"/> Defense, Shipbuilding, Maritime    | <input type="checkbox"/> Offshore Wind                            |
| <input type="checkbox"/> Advanced Business Services         | <input type="checkbox"/> Other: _____                             |
| <input type="checkbox"/> Design, Food, Custom Manufacturing |                                                                   |

16. Please describe your company's primary work/function: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

17. Name of individual completing this form: \_\_\_\_\_

18. Are you the owner or sole proprietor of this business?: \_\_\_\_\_

19. Title of individual completing this form: \_\_\_\_\_

20. Email address of individual completing this form: \_\_\_\_\_

21. Phone number of individual completing form: \_\_\_\_\_

22. How long have you been supervising this Fellow?: \_\_\_\_\_

**Appendix B: Professional, Scientific, and Technical Services Sector (NAICS 54)**

<b>54</b>	<b><i>Professional, Scientific, and Technical Services</i></b>
<b>5411</b>	<b>Legal Services</b>
541110	Offices of Lawyers
541120	Offices of Notaries
541191	Title Abstract and Settlement Offices
541199	All Other Legal Services
<b>5412</b>	<b>Accounting, Tax Preparation, Bookkeeping, and Payroll Services</b>
541211	Offices of Certified Public Accountants
541213	Tax Preparation Services
541214	Payroll Services
541219	Other Accounting Services
<b>5413</b>	<b>Architectural, Engineering, and Related Services</b>
541310	Architectural Services
541320	Landscape Architectural Services
541330	Engineering Services
541340	Drafting Services
541350	Building Inspection Services
541360	Geophysical Surveying and Mapping Services
541370	Surveying and Mapping (except Geophysical) Services
541380	Testing Laboratories
<b>5414</b>	<b>Specialized Design Services</b>
541410	Interior Design Services
541420	Industrial Design Services
541430	Graphic Design Services
541490	Other Specialized Design Services
<b>5415</b>	<b>Computer Systems Design and Related Services</b>
541511	Custom Computer Programming Services
541512	Computer Systems Design Services
541513	Computer Facilities Management Services
541519	Other Computer Related Services
<b>5416</b>	<b>Management, Scientific, and Technical Consulting Services</b>
541611	Administrative Management and General Management Consulting Services
541612	Human Resources Consulting Services
541613	Marketing Consulting Services
541614	Process, Physical Distribution, and Logistics Consulting Services
541618	Other Management Consulting Services
541620	Environmental Consulting Services
541690	Other Scientific and Technical Consulting Services



<b>54</b>	<b><i>Professional, Scientific, and Technical Services</i></b>
<b>5417</b>	<b>Scientific Research and Development Services</b>
541713	Research and Development in Nanotechnology
541714	Research and Development in Biotechnology (except Nanobiotechnology)
541715	Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)
541720	Research and Development in the Social Sciences and Humanities
<b>5418</b>	<b>Advertising, Public Relations, and Related Services</b>
541810	Advertising Agencies
541820	Public Relations Agencies
541830	Media Buying Agencies
541840	Media Representatives
541850	Outdoor Advertising
541860	Direct Mail Advertising
541870	Advertising Material Distribution Services
541890	Other Services Related to Advertising
<b>5419</b>	<b>Other Professional, Scientific, and Technical Services</b>
541910	Marketing Research and Public Opinion Polling
541921	Photography Studios, Portrait
541922	Commercial Photography
541930	Translation and Interpretation Services
541940	Veterinary Services
541990	All Other Professional, Scientific, and Technical Services

**Appendix C: Additional Breakeven Scenarios**

The following table presents a sensitivity analysis of the Wavemaker Fellowship program. ORA ran different economic scenarios across which the input parameters are being varied accordingly to provide the reader with additional possible breakeven analysis outcomes.

**Wavemaker Fellowship**  
**Detailed Net Economic & Revenue Impacts Tax Years 2019 – 2021**

*Policy Variable Percentage Assumed*

	100%	90%	80%	70%	60%	50%	40%	30%	20%	10%	0%
<b>Personal Taxes</b>	100%	90%	80%	70%	60%	50%	40%	30%	20%	10%	0%
<b>Industry Employment</b>	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
<i>Economic &amp; Revenue Impacts Calculated</i>											
<b>Total Private Non-Farm Employment</b>	<b>-1</b>	<b>62</b>	<b>123</b>	<b>185</b>	<b>246</b>	<b>307</b>	<b>368</b>	<b>430</b>	<b>491</b>	<b>552</b>	<b>613</b>
Direct Employment	0	33	66	99	132	166	199	232	265	298	331
Indirect Employment	-2	10	21	32	43	54	65	76	88	99	110
Induced Employment	1	19	36	53	70	87	104	121	138	155	172
<b>Total GDP (\$000)</b>	<b>(\$802)</b>	<b>\$4,675</b>	<b>\$10,152</b>	<b>\$15,629</b>	<b>\$21,106</b>	<b>\$26,583</b>	<b>\$32,062</b>	<b>\$37,541</b>	<b>\$43,020</b>	<b>\$48,498</b>	<b>\$53,977</b>
<b>Generated Revenues by Component (\$000)</b>											
<i>Personal Income Tax</i>	-8.8	72.5	153.8	235.1	316.4	397.7	479.0	560.4	641.7	723.1	804.4
<i>General Business Taxes</i>	3.5	35.8	68.1	100.4	132.7	165.0	197.3	229.6	261.9	294.2	326.5
<i>Sales and Use Taxes</i>	15.2	95.9	176.6	257.3	338.0	418.7	499.4	580.2	660.9	741.7	822.5
<i>Other Taxes</i>	-0.3	3.0	6.3	9.6	13.0	16.3	19.6	23.0	26.3	29.6	33.0
<i>Total Departmental Receipts</i>	-1.1	8.3	17.6	26.9	36.2	45.6	54.9	64.3	73.6	83.0	92.4
<i>Other Sources</i>	-0.9	7.3	15.5	23.7	31.9	40.1	48.3	56.6	64.8	73.1	81.3
<b>Cost of Incentive (\$000)</b>	<b>(\$1,144.5)</b>	<b>(\$1,144.5)</b>	<b>(\$1,144.5)</b>	<b>(\$1,144.5)</b>	<b>(\$1,144.5)</b>	<b>(\$1,144.5)</b>	<b>(\$1,144.5)</b>	<b>(\$1,144.5)</b>	<b>(\$1,144.5)</b>	<b>(\$1,144.5)</b>	<b>(\$1,144.5)</b>
<b>Total Net Revenues (\$000)*</b>	<b>(\$1,137.0)</b>	<b>(\$921.8)</b>	<b>(\$706.7)</b>	<b>(\$491.5)</b>	<b>(\$276.4)</b>	<b>(\$61.2)</b>	<b>\$154.1</b>	<b>\$369.5</b>	<b>\$584.8</b>	<b>\$800.2</b>	<b>\$1,015.5</b>

Source: ORA calculations based on historical Rhode Island revenue amounts and REMI Tax-PI simulations

Note: The total net revenues represent the difference between the sum of generated revenues and the cost of the tax incentive.

