



# **NATURAL ENERGY LABORATORY OF HAWAI'I AUTHORITY**

**FISCAL 2006**

**ANNUAL REPORT**

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# Natural Energy Laboratory of Hawai'i Authority

## **Chairman's and Chief Executive Officer's Letter:**

NELHA is an agency of the State of Hawaii that is mandated “*to develop and diversify the Hawaii economy by providing resources and facilities for energy and ocean-related research, education, and commercial activities in an environmentally sound and culturally sensitive manner.*”

This has, until fiscal year 2007, been accomplished through the expenditure of general funding from the state, lease income, and expense reimbursement from tenants. NELHA has also served as an incubator of businesses developing new technologies relating to aquaculture, in particular, through providing inexpensive office, and land space and access to its vast quantities of pristine surface and deep ocean water.

Now, the task of becoming more self-reliant, as Governor Cayetano called for in his 1995 letter, takes on new emphasis as no general fund support is being received. NELHA has made significant strides in achieving this self-reliance, through asking its agricultural tenants to pay actual cost for the water they consume, establishing a market-oriented lease rate structure, and striving to increase its internal efficiencies.

NELHA is required to pay 20% of its revenues to the Office of Hawaiian Affairs (as the facility is located on ceded lands) and an additional 5.0% of revenues to the state through the Department of Business, Economic Development and Tourism for its oversight of NELHA activities. Thus, literally 25% of its revenues “come off the top” before NELHA can begin covering its expenses. *We believe it important and significant that, in the face of this unprecedented challenge –self reliance -- for a state agency to become self-reliant from its own revenue stream, we also have made tremendous strides toward fulfilling the original purpose for which the agency was created – creating energy from the ocean and other natural sources.*

The year has been one of significant internal accomplishments for the Natural Energy Laboratory of Hawai'i Authority. These accomplishments set the stage both for growth and improved fiscal stability for NELHA. The NELHA Board of Directors and management are quite cognizant that NELHA must increase its revenue stream as well as contain costs in order to fulfill its mission of simultaneously developing and diversifying the Hawaii economy by providing resources and facilities for energy and ocean-related research, education, and commercial activities in an environmentally sound and culturally sensitive manner.

## **Financial Results:**

The current fiscal year is the first since its inception that NELHA will receive no General Fund support from the State of Hawaii. All aspects of revenue generation as well as cost containment are being examined in an effort to improve the fiscal viability of the agency. NELHA has been subsidizing aquatic agriculture for several decades through low, below-cost, seawater sales rates and very low land lease rates. Significant actions were taken in the past year in an effort to bring these rates more in line with actual costs (especially the major item of electricity used to pump the water) and the markets. These actions inevitably impact the aquaculture farmers at NELHA, but have

been and are necessary, to enhance the viability of the agency for the benefit of all its tenants – present and future – and the people of Hawaii.

Chronically escalating energy costs are a matter of constant concern and attention at NELHA. Seawater, both surface and deep sources, that NELHA provides its tenants and which is the basis of their entire business activities, require substantial amounts of electricity to pump into the distribution systems NELHA manages. For the past four years, electricity costs have risen nearly as much as NELHA has been able to raise the rates it charges tenants for the vital water. The schedule of fees for the water delivered by NELHA was changed in 2006 to reflect not only a basic 20% price increase every year until the farming tenants pay their seawater cost, but also a direct flow through of fuel cost adjustments – just like the Hawaiian electric and water utilities already do.

Largely as a direct result of this new delivery schedule, NELHA reduced its *operating* loss to about \$47,000 in fiscal 2006 compared to \$291,000 in fiscal 2005. Typical of governmental agencies, NELHA does not use GAAP accounting and does not set aside funds for repairs and maintenance of facilities. Because of employee health concerns, a major reconstruction of the administrative building air conditioning system, costing over \$500,000, was initiated. That reconstruction was expensed during the fiscal year and enlarged the loss to approximately \$552,000 compared to \$291,000 in fiscal 2005.

We have begun presenting our financial information, specifically, a balance sheet, to the Board of Directors using a modified accrual accounting system. This not only has made staff and the Board aware of the significant asset base that NELHA has, but also that NELHA must manage in the most responsible manner possible for the benefit of the citizens of Hawaii. This balance sheet is shown in a later section of this annual report, Appendix A.

Preparation and analysis of a less governmental-oriented balance sheet also has demonstrated that NELHA had to increase the rates that it charges for leasing lands at NELHA for commercial purposes such as farming, water bottling, and other activities. There have never been any “price increases” or policy regarding such at NELHA heretofore. Rates therefore were exhaustively studied, evaluated, and compared to elsewhere in Kona before any action was taken. The new lease policy, approved by the Board, is available elsewhere in this annual report for closer examination. The basic increases raised “extractive” (such as water bottling) from about \$200/acre-month to \$3,000/acre-month and agricultural rates from about \$150/acre-month to \$500/acre-month. The “extractive” rate puts NELHA’s land lease rate much more in line with commercial properties elsewhere in Hawaii.

Two important considerations of this rate increase are:

- 1.) leases at NELHA are *unique*: nowhere else can businesses obtain access to the pristine Hawaiian surface waters and unique deep ocean waters, and
- 2.) the rate increases affect *new leases* and *only* begin affecting existing leases when those come up for renewal. A complete list of individual leases and their renewal dates is included in this annual report as Appendix B. As can be seen from this table, years will be required under the present leases to

implement across-the-board rent increases. However, in time and with the leasing of lands under the new schedule, the fiscal health of NELHA can be insured without damage to the agricultural industry situated at NELHA, which we believe is a very important economic activity for the state.

### **Capital Improvement Appropriations by the State:**

Legislative appropriations of a capital expenditure nature were provided NELHA in the 2006 session to commence a number of very important improvement projects. Absolutely critical among these projects are those related to property in the HOST Park area. If the HOST Park area infrastructure investments are not made, NELHA effectively will be out of leasable land as right now it has just four permitted lots left in inventory. Action has commenced on some of these improvement projects and release of funds is awaiting others.

- A request for proposals for development of a new master plan (\$300,000) has been issued. *This is essential to accomplish as the last master plan was completed in 1989 and market conditions as well as land use designations have changed.*
- A request for proposals for commencement of infrastructural planning for a connector road to the Kona International Airport (\$400,000) is being prepared and should be issued before the end of this calendar year. *This road is essential to open up the most remaining undeveloped, but developable, land at NELHA.*
- Preparation of a request for proposals for the planning and design of upgrades to the 55" deep seawater distribution system (\$540,000) is being done. *This is essential so that construction of additional distribution capacity is available to meet tenant demand requirements.*
- Preparation of a request for proposals for installation of a key valve component (\$50,000) on the fresh water distribution system is underway. *This is essential to complete if NELHA is ever to be able to turn over operation of the fresh water distribution system to the Water Board of the county.*
- Preparation of a request for proposals to expand the ground water environmental monitoring system (\$312,000) at NELHA is underway. With the growth of industry at NELHA as well as the growth of the community around NELHA, it is vital to be able to pinpoint the cause of any change in the groundwater flowing under the property. These funds will plan, design, drill and equip a new series of monitoring wells for both purposes.

Also, very importantly, the legislature approved a \$250,000 one-time expenditure for the Center for Excellence in Research in Ocean Sciences (CEROS), which is attached to NELHA. CEROS manages the distribution of \$6 to \$7 million in Federal funds every year to research projects in Hawaii. The \$250,000 was to repay the United States Treasury for interest earned by the state treasury on CEROS funds previously deposited with the state treasury.

### **Foreign Trade Zone Status:**

We are very pleased to report that Foreign Trade Zone status has been granted NELHA. We filed our application to become a FTZ in February of 2006 and FTZ status was granted in September. This status will materially benefit tenants that import and export unfinished and finished goods through the alleviation of U.S. Customs duties and certain other items. FTZ status also will give NELHA an additional marketing tool to use with companies that could benefit from employment of the FTZ advantages. We expect the status will broaden the potential number of companies interested in becoming tenants from its current water bottling/farming orientation.

### **Foreign Interest in NELHA:**

During the past year, NELHA has hosted groups from a number of countries interested in pursuing developing of a NELHA-type economic development project. These have included delegations from Morocco, Taiwan, Korea, Mauritius, Guam, and China among others. NELHA has extended offers to assist these countries in such development, with the understanding that NELHA will receive compensation for any work that it undertakes on their behalf.

More recently, a 7 person governmental delegation from Taiwan and a 13 member governmental delegation from Korea visited NELHA. These delegations specifically were interested in just one aspect of the activities being conducted at NELHA: the water bottling. Both countries are pursuing the formation of an international standard for "deep ocean water" and would like Hawaii to join in this effort. Such a standard may be beneficial to NELHA tenants that have and plan to invest heavily in water desalinization and bottling plants.

### **Grants:**

The National Renewable Energy Laboratory (NREL) has a small grant available to NELHA. This grant would allow the continuation of studies begun at NELHA years ago on distributed energy grid systems and feasibility of establishing such a grid at NELHA.

Significant amounts of work toward fulfillment of this grant were done during the past year, both by NELHA and its subcontractor, the New Mexico Institute of Mining and Technology. However, in view of the fact that nearly as much time is spent in getting and administering the grant as is expended in actual work time on the grant, whether to participate in such programs should be examined for its cost-benefit-effectiveness.

### **Development of Alternate Energy Projects:**

During fiscal 2006, numerous discussions were held with private companies regarding the construction and operation of energy generating facilities at NELHA. These were of two distinct natures: solar and ocean thermal conversion. NELHA has about 80 net acres near the ocean that cannot be converted to commercial use such as water bottling or agricultural production since this land is effectively land-locked, has no electricity, no seawater delivery system, or other utilities. This block is, however, very ideal for the operation of a large photovoltaic or solar thermal array, which would

produce electricity. The electricity could be used to power NELHA pumping stations, thus essentially capping the cost of seawater production from an energy consumption point of view and assuring particularly the agricultural producers at NELHA a more stable operating environment. Several companies have expressed interest in developing such arrays at NELHA, but deemed the project uneconomic unless it can be accomplished through an equity mechanism such as a jointly owned corporation.

In June, NELHA executed a letter of understanding with Ocean Engineering & Energy Systems to construct the world's first Ocean Thermal Energy Conversion (OTEC) plant at NELHA, utilizing the capacity of the 55" deep water pipes previously specifically installed for that purpose. Statutory and regulatory impediments effectively prevented NELHA from being given a 25% (pre-financing) interest in the project. The intent was not only that NELHA would have a 25% interest in the plant, but in the future on-going activities of the jointly owned company. At the present time, in order to continue stimulating the development of this potentially important technology (especially to Hawaii since we depend on imported oil for nearly all our energy), NELHA and Ocean Engineering are negotiating a lease arrangement for the necessary land. Other aspects of this energy project remaining to be determined include the price of the electricity that the OTEC plant will produce, re-design and installation of larger capacity pumps, a surface water outfall, and other particulars.

A number of privately-funded energy research and development projects have been approved by the NELHA board in the past year for tenancy. These include a 10 megawatt solar thermal project proposed by Sopogy of Honolulu, a biodiesel derived from sea algae by HR Petroleum of Honolulu, and hydrogen fuel research (at the Gateway Center) by the Hawaii Natural Energy Institute (HNEI). At this writing, only HNEI has executed a lease agreement with NELHA while the others have been provided lease documents for execution.

**Final Note:**

The 6.7 and 6.0 magnitude earthquakes that affected the island of Hawai'i on Sunday, October 15, 2006 did not appear to result in any material damage at NELHA. Some surface seawater production was interrupted for approximately two hours until staff could arrive and re-prime and restart pumping units. Installation of an on-line electronic monitoring and management system has been planned for several years and may have prevented even this brief interruption of service, however; and we are currently evaluating such a system.

The Board of Directors and staff of the Natural Energy Laboratory of Hawai'i Authority look forward with great enthusiasm to the future.

Best regards,

Richard Henderson  
Chairman

Ron Baird  
Chief Executive Officer

## NELHA IN THE 21<sup>ST</sup> CENTURY

### *-- A VIEW TO THE FUTURE --*

NELHA today is at a crossroads, becoming a diversified entity developing and commercializing the three most important items that humans need: food, energy, and healthcare.

The State of Hawai'i has invested nearly \$70 million into the NELHA infrastructure over more than 30 years. Currently, more than 90% of the approximately 14,500 gallons per minute of produced seawater is used by aquaculture tenants at a price of \$0.1728 per thousand gallons (Kgals). These tenants' seawater purchases are subsidized by NELHA from its own funds. The balance of the water produced is purchased by water bottling companies who pay \$0.60 per Kgal and a charter high school that pays the actually operating cost of producing the water.

NELHA has the capability (with increased pump and motor capacity that will cost about \$5.0 million) to deliver 97,900 gallons of seawater per minute --- 58,100 gallons of surface seawater (SSW) and 39,800 gallons of deep seawater (DSW). There is, therefore, a tremendous opportunity to utilize this public investment to greater advantage, producing higher value products, more well-paying jobs in the private sector, and exportable products for the State of Hawai'i. The pumping capability is critical to installation of an OTEC plant and NELHA is presently the world's location in which this can be done.

At no time has the creation of higher paying jobs, development of alternative energy methodologies, and new industries been more important to Hawai'i than now. The energy situation particularly threatens our State in an unprecedented multitude of ways. Rippling effects of higher oil prices throughout the State economy are having serious repercussions.

NELHA is in the unique position, not just in the State of Hawai'i, but the world, to be the nexus of the development and production of the three things all people need in life: food, energy and healthcare. The agency's Board and staff are dedicated to see that this position is fully exploited to the benefit of all – tenants, Big Island residents, and the State of Hawai'i.



## **The National Defense Center of Excellence for Research in Ocean Sciences (CEROS)**

CEROS, administratively attached to NELHA, solicits and supports innovative technologies for national maritime military applications and sustained technology-based economic development in Hawai'i.

*CEROS continues to receive annual Department of Defense appropriations funding through the Defense Advanced Research Projects Agency (DARPA). In FY04, CEROS received \$6,905,000 and supported 19 projects. In FY05 it received \$6,905,000 and supported 15 projects. In January 2006, Mr. William Friedl, Technical Director since 1997, retired and Mr. Richard Hess became the new Technical Director.*

1. **BACKGROUND:** The CEROS Program was created under an initial grant provided by DARPA in 1993 and has continued to receive annual defense appropriations funding. CEROS seeks to advance innovative concepts and new approaches to technology while fully leveraging existing facilities and infrastructure in Hawaii and demonstrating beneficial commercial utility for the Department of Defense. Since 1993, the CEROS research programs have funded a total of 189 projects at a value of over \$72 million.
2. **MISSION:**
  - a. Support the Department of Defense technology requirements;
  - b. Encourage leading edge R&D in ocean sciences and technology in Hawaii;
  - c. Foster use of ocean R&D facilities in Hawaii;
  - d. Provide an interface between specialized small businesses with expertise in ocean related R&D and DoD users of advanced technology; and
  - e. Develop avenues to ocean science expertise and facilities at the University of Hawaii
3. **BUSINESS MODEL:** CEROS solicits proposals through annual competitive solicitations. All proposals are evaluated by an expert panel for technical merit, innovation, and value according to criteria published in the solicitations. The CEROS Research Advisory Board determines the best proposals based on critical evaluations.
4. **PRIORITIES:** Five technical topic areas are identified in the legislation that originally funded CEROS
  - a. Ocean Environmental Preservation
  - b. Shallow Water Surveillance Technologies
  - c. New Ocean Platform and Ship Concepts
  - d. Ocean Measurement Instrumentation
  - e. Unique Properties of the Deep Ocean Environment
5. **PRODUCTS:**

- a. LONG TERM SUMMARY: Since 1993, the CEROS program has supported a variety of advanced ocean technology development projects. These projects have produced tangible results and products for the Department of Defense (DoD), unique advanced capabilities, commercial products, and potential breakthrough products for future development. Twenty patents and seventy-two technical publications have resulted directly from CEROS-supported projects. The program has also helped create and sustain technical development and jobs in Hawaii.

<b>PROJECT TOPIC AREA</b>	<b># OF PROJECTS</b>	<b>FUNDING</b>
Shallow Water Surveillance Technologies	75	\$34,782,416
Ocean Environment Preservation	29	\$12,368,705
New Ocean Platform & Ship Concepts	25	\$9,358,874
Ocean Instruments & Engineering Tools	49	\$12,289,432
Unique Properties of the Deep Ocean Environment	11	\$3,334,107
<b>TOTAL</b>	<b>189</b>	<b>\$72,133,534</b>

6. SIGNIFICANT EVENTS

- a. CEROS, working with DARPA, the NELHA leadership, the Governor, and the State Legislature resolved a long standing issue with the Federal government regarding interest monies accrued on project funds.
- b. The FY05 Solicitation drew 68 initial proposals that were down-selected to 25 full proposals for consideration and 15 awarded contracts.
- c. The FY06 Solicitations drew a total of 79 initial proposals that were down-selected to 24 full proposals for consideration. The final number of awarded contracts is expected to be about 17 projects.
- d. In January 2006, Mr. William Friedl, Technical Director since 1997 retired and Mr. Richard Hess became the new Technical Director.

CEROS is a State program entirely supported by federal funds. The program started in 1993, with a \$5 million Department of Defense appropriation. Federal support for CEROS comes to the State through a Cooperative Agreement with the Defense Advanced Research Projects Agency (DARPA), the principal technology development agency for the Department of Defense. DARPA provides technical and administrative guidance to assure that the program remains responsive to the needs of the federal defense establishment while helping the technical commercial base develop in Hawai'i. Since 1993, CEROS has provided advanced technology to SUBPAC, PACFLT and SOCOM and supported creation of over 120 technology-based jobs in Hawai'i.

From the start, DARPA sought an efficient CEROS organization to turn the federal funds, which are appropriated annually, into funded contracts in as short a period as possible. Thus, CEROS runs annual competitive solicitations for technical projects

and handles the entire process from initial announcement (in October) to contract negotiation and commitment (usually in the following June). Since 1993, CEROS has funded 189 technical projects for about \$71,986,214.

Five technical topic areas are identified in the legislation that originally funded CEROS:

- Ocean Environment Preservation Technology;
- New Ocean Platform and Ship Concepts;
- Shallow Water Surveillance Technologies;
- Ocean Measurement Instrumentation; and
- Unique Properties of the Deep Ocean Environment.

#### CEROS Program Priorities

- Focus on Core technical program on maritime military technology needs
- Emphasize innovative technical development and demonstrations
- Solicit and support technically important projects with transition potential
- Enhance sustainable commercial technology capabilities in Hawai'i
- Maintain program quality, control costs and deliver results.

The CEROS program operates on less than 8% administrative overhead (i.e. 92% of the federal funds go into the Core technical program). The CEROS personnel list is 5: Technical Director, Fiscal Assistant, Program Manager for Outreach and Administration, Contracts and Grants Administrator and Research Administrator. CEROS maintains a Projects Office at NELHA headquarters in Kailua-Kona and a Contracts Office in Honolulu.

CEROS point of contact: Jacquie Brewbaker, Program Manager for Outreach & Administration, [jacquieb@ceros.org](mailto:jacquieb@ceros.org). For more information about CEROS, please consult, [www.ceros.org](http://www.ceros.org).

**NATURAL ENERGY LABORATORY OF HAWAII AUTHORITY**

**FINANCIAL REVIEW**

***STATEMENT OF OPERATIONS***

(For the period July 1, 2005 to June 30, 2006)

**REVENUES**

**General Funds**

	\$173,893.00
State Funds	\$173,893.00
Subtotal	<u>\$173,893.00</u>

**Special Funds  
(Revenue)**

Land Use Fees	\$909,293.62
Royalties	\$219,526.55
Reimburseables	\$1,481,324.88
Interest Received	\$89,934.07
Percentage Rents	<u>\$66,920.73</u>
Subtotal	\$2,766,999.85

TOTAL \$2,940,892.85

**EXPENDITURES**

**General Funds**

Salaries	\$130,497.05
Kona Operations	\$23,527.85
Subtotal	<u>\$154,024.90</u>

**Special Funds  
(Expenses)**

Salaries	\$1,019,437.37
Operations(including OHA transfers)	<u>\$2,145,684.87</u>
	\$3,165,122.24

Total Expenditures \$3,319,147.14

***FINANCIAL POSITION***

Special Fund Cash Balance July 1, 2005	\$1,619,797.00
State General Fund Appropriations	\$173,893.00
Special Fund Revenues	<u>\$2,766,999.85</u>
	\$4,560,689.85

General Fund Expenditures	\$154,024.90
Unrequired G/F Returned to St Treasury/DBEDT	\$15,386.00
Special Fund Expenditures/journal entries	\$2,973,939.39

Transfer to State General Fund From Special Fund	\$0.00
Transfers to OHA-Ceded land	\$191,182.85
Prior year adjustment	\$0.00

\*\*Ending Special Fund Cash Balance 6/30/06 \$1,226,156.71

\*\*subject to DAGS final numbers

**NATURAL ENERGY LABORATORY OF HAWAII AUTHORITY**  
**ESTIMATED BALANCE SHEET AS OF Year ending June 30, 2006**

**ASSETS**

*Current Assets*

**Funding**

General Fund Balance	\$	15,386
Special Fund Revenue	\$	2,767,000
Security Deposits Fund	\$	74,400
<b>Total Funding</b>	<b>\$</b>	<b>2,856,786</b>

**Accounts Receivable**

Accounts Receivable	\$	303,242
<b>Total Accounts Receivable</b>	<b>\$</b>	<b>303,242</b>

*Fixed Assets (CIP)*

Building & Machinery & other Infrastructure	\$	22,467,000
Less Depreciation	\$	(20,424,546)
Seawater System	\$	36,712,000
Less Depreciation	\$	(2,517,000)
Freshwater System	\$	2,012,000
Less Depreciation	\$	(563,360)
Gateway Building	\$	3,945,000
Less Depreciation	\$	(263,000)
Land (807 acres)	\$	70,000,000
Less land (153) ac/infrastructure/ archaeological/easements/setbacks	\$	(13,271,373)
<b>Total Fixed Assets</b>	<b>\$</b>	<b>98,096,721</b>

<b>TOTAL ASSETS</b>	<b>\$</b>	<b>101,256,748</b>
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**EQUITY**

**Equity**

Capital Contribution	\$	101,808,896
Net Income	\$	(552,148)

<b>TOTAL LIABILITIES &amp; EQUITY</b>	<b>\$</b>	<b>101,256,748</b>
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## **Board of Directors**

### **Richard Henderson, *Chairman of the Board***

*The Realty Investment Company, Ltd.  
At Large-Governor's Appointee; term expires June 30, 2008*

### **John Delong, Vice Chair**

*Hawaii Cement  
At Large-Governor's Appointee; term expires 06/30/07*

### **Vacant**

*At-Large, Governor's Appointee*

### **John Corbin**

*Director, Aquaculture Development Program Department of Agriculture  
Also Research Advisory Committee Secretary*

### **Donald Thomas, Ph. D.**

*Center for the Study of Active Volcanoes University of Hawai'i at Hilo  
Also Research Advisory Committee Chairman*

### **Maurice Kaya**

*Energy, Resources, and Technology Division  
Department of Business, Economic Development & Tourism  
Representing Ted Liu, Director, Department of Business, Economic Development & Tourism*

### **Russell Tsuji**

*Land Division, Department of Land and Natural Resources  
Representing Peter Young, Chairman, Board of Land and Natural Resources*

### **Patricia Cooper**

*School of Ocean & Earth Science & Technology  
University of Hawai'i  
Representing David McClain, President, University of Hawai'i at Manoa*

### **James LaClair**

*Vice President – Network Operations  
High Technology Development Corporation (HTDC)*

### **Edward H. W. Young**

*HTDV Project Manager  
Hawai'i Strategic Development Corporation (HSDC)*

### **Robert Arrigoni**

*Department of Research & Development  
Representing Mayor of the County of Hawaii*

## **NELHA Staff**

**Ron Baird**, *Chief Executive Officer*

**Karen Appleby**, *Fiscal Clerk*

**Tom Kelly**, *Operations Supervisor/Electrical Engineer*

**Chad Debina**, *General Laborer*

**Richard Robinson**, *Vehicle Construction Equipment Mechanic*

**Monica Dunse**, *Microbiologist III*

**Georgette Espinueva**, *Secretary III*

**Tom Pierce**, *Utility Electrician*

**Karin Haleamau**, *Groundskeeper II*

**Kimberly Deverse**, *Chemist III*

**Anna Schulte**, *Administrative Assistant*

**Sheryll Kaniho**, *Fiscal Officer*

**Laurence Sombardier**, *Tenant Revenue Specialist*

**Anthony Mitchell**, *Maintenance Mechanic I*

**Cilly Gibo**, *Maintenance Mechanic I*

**Jeff Nichols**, *Engineering Projects Coordinator*

**Eugene Pierce**, *Electrician II*

**Claudine Curnow**, *Chemist III*

**Jan War**, *Operations Manager II*

## **CEROS**

**Richard Hess**, *Technical Director*

**Lee Fausak**, *Research Administrator*

**Jacque Brewbaker**, *Program Manager for Outreach & Administration*

**Corinne Giles**, *Fiscal Assistant*

**Donna Mau**, *Contracts & Grants Administrator*



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