



The Office of Research collects Annual Reports for all State of Florida and SUS/University Reporting, University Non-Reporting and Exempt Institutes and Centers (I/C) (per UCF Regulation 2.035 2022 Revision). Reports are due back to the Associate Vice President for Research and Scholarship no later than July 31st by 5:00 PM each calendar year.

Enter Name of Person Preparing This Form:

Email Address for Person Preparing This Form:

Date Prepared

Instructions by Institute and Center (I/C) Type

State of Florida Center (State of Florida BOG Recognized and Reporting)

Complete All Pages: Directory Information Form, Executive Summary, Attachment B - Funding, Expenditures and Staffing Form, Attachment C – Management Data, Attachment D – Evaluation of Research and Activities

SUS/University Established Reporting (University Established / Recognized – Signed Center Proposal by UCF President etc. with FL BOG Recognition and Reporting)

Complete All Pages: Directory Information Form, Executive Summary, Attachment B - Funding, Expenditures and Staffing Form, Attachment C – Management Data, Attachment D – Evaluation of Research and Activities

University Established Non-Reporting (University Established / Recognized – Signed Center Proposal by UCF President etc. and **NO** FL BOG Recognition or BOG Reporting)

Complete All Pages: Directory Information Form, Executive Summary, Attachment B - Funding, Expenditures and Staffing Form, Attachment C – Management Data, Attachment D – Evaluation of Research and Activities

Exempt Institutes and Centers (I/C)

Complete: Directory Information Form & Executive Summary Only

Institute and Center (I/C) Requirements

Type	BOG Recognized	Approval/ Disbandment	Oversight	Reporting Requirements	Paperwork To Be Filed With OR
State of Florida	Yes	ORC/Provost/President/CAVP/BOT/BOG	ORC/Provost (Designee)	To BOG: Annual Expenditures & Every 5-Year Evaluation To UCF OR: Complete Annual Report Package Attached	Copy of University Center Approval / Proposal Signed by UCF President Copy of By-Laws All Previously Filed BOG Annual Expenditures, UCF Annual Reports, Copy of all 5-Year BOG Evaluations
SUS <i>(UCF/University Reporting Center)</i>	Yes	ORC/Provost/President (Notify BOG)	ORC/Provost (Designee)	To BOG: Annual Expenditures & Every 7-Year Evaluation To UCF OR: Complete Annual Report Package Attached	Copy of University Center Approval / Proposal Signed by UCF President Copy of By-Laws All Previously Filed BOG Annual Expenditures, UCF Annual Reports, Copy of all 7-Year BOG Evaluations
UCF/University Established Non-Reporting Center <i>Must Have Signed Center Approval Paperwork w/ University President's Signature on File in OR Database</i>	No	ORC/Provost/President (Notify BOG)	ORC/College	To UCF OR: Complete Annual Report Package Attached	Copy of University Center Approval / Proposal Signed by UCF President Copy of By-Laws All Previously Filed Complete UCF Annual Report, Copy of all 7-Year Internal UCF Evaluations
Exempt	No	AA	Internal Unit	Annual (Internal Unit Format) To UCF OR: Annually Updated Directory Information Form & Executive Summary Only	Current / Updated Directory Information Form & Executive Summary



UCF Institutes & Centers (I/C) Annual Report

Directory Information

I/C Name: **UCF I/C Type:**

Date Established: **I/C Status:** **State Funded:** Yes No

I/C Director: **Email:** **Oversight Unit:**

I/C Website Address:

I/C Address:

I/C Email: **I/C Phone:**

Legislatively Formed: Yes No **FL Statute #:**

Other Affiliated Universities:

State of Florida and SUS / Reporting BOG Recognized Institutes and Centers (I/C) Only

State I/C Code: **BOG I/C Type:** **Review Cycle:**

Last Review Filed: **Next Review Due Date:**

Please explain if I/C next review date is outside of established review cycle parameters:

Mission and Areas of Focus

Mission Statement:

Discipline(s) (by **CIP Codes**) List All That Apply:

Key Terms (Areas of Focus):

Annual Report Executive Summary

Please provide an Executive Summary (maximum 2 -pages) addressing the status and productivity of the institute or center (I/C). Please number each section and include the proper heading for each of the following areas:

1. Mission
2. Strengths
3. Key Activities and Accomplishments
4. Future Goals with Estimated Progress and Barriers Towards Realization
5. UCF (and State, where applicable) Impact and ROI of institute or center (I/C).
6. For all BOG Recognized I/C(s). Please address in a clearly subtitled section, the progress made against defined goals and objectives within the context of the [State Board of Governors' mission](#) and the [University's Strategic Plan](#)

1. Mission (Purpose, Vision and Goals):

The ESEI was established in 1985 and is affiliated with the Department of Civil, Environmental and Construction Engineering (CECE) within the College of Engineering and Computer Sciences (CECS). The ESEI is evaluated on a 7-year basis by the State University System's (SUS's) Board of Governors; the last Academic Program Review was completed in December 2019.

The purpose of the ESEI is to provide environmental engineering research with a focus on water quality engineering. We strive to provide our students with the best possible education in a stimulating research-oriented and intellectually diverse environment. We provide high-quality and innovative undergraduate and graduate curricula that prepare our students to be effective, contributing members of a technological society and life-long learners.

We are committed to strengthening our partnerships with industry, engaging our alumni and friends, and serving the state of Florida and beyond. The ESEI is a non-commercial laboratory that specializes in potable quality and treatment with focus on the several unit process operations, including but not limited to: synthetic membrane processes (reverse osmosis, nanofiltration, ultrafiltration, microfiltration); aeration and odor scrubbing; coagulation, flocculation, sedimentation and conventional filtration; disinfectants and disinfection; advanced oxidation; granular activated carbon adsorption and biofiltration. The ESEI also specializes in conducting water quality engineering process studies, for example: disinfection by-product formation potential evaluations; jar testing; and both coupon-based and linear-polarization based corrosion control inhibitor and chemical passivation studies; and evaluation of sulfide in groundwater supplies.

The Environmental Engineering Program within the Department is geared to create a high-quality learning experience for our students. The principal goals include:

- i. Provide a broad engineering education to our graduates that will prepare them for both current and future professional challenges.
- ii. Promote a commitment to continued scholarship and service among our graduates.
- iii. Foster a spirit of innovation so that our graduates are positioned to take advantage of new technology in our profession.
- iv. Promote an environment that is inclusive and diverse.
- v. To attain prominence in key areas of Environmental Engineering graduate education and research.

2. Strengths:

- i. The ESEI's interaction with the water and wastewater industries provides a platform to market municipalities and their consultant professional engineering organizations. Most of the ESEI funding is provided by municipal government(s) or their retained professional engineering firms that require specialized water quality services. Many of the ESEI projects require follow-up research, securing future UCF Office of Research contracts.
- ii. Although a small dollar revenue maker as compared to other Centers or Clusters, the ESEI provides a valuable connection to regional municipalities and its consulting engineering community. These professional organizations fund our university research, hire our students, support our academic instruction: consequently, this interaction is priceless.
- iii. ESEI is unique as it is one of few Florida laboratories (if any) that can provide field evaluations for total sulfide on-site. ESEI also performs disinfection by-product formation and formation potential analysis for municipal water purveyors. These analytical "operations" quality-based studies provide municipal utilities and professional engineering organizations that could not necessarily be obtained from commercial laboratories or other similar institutions.
- iv. Offers a unique opportunity for students to engage in water quality, disinfection, disinfection by-product and distribution system internal corrosion studies for the water and wastewater professional communities.

3. Key Activities and Accomplishments:

- i. Obtained a total of 4 new opportunities from 3 different entities as one funding agency contracted for two separate projects. Three of the four projects are new contracts (totaling \$181,574.00), and the 1 remaining project is confirmed as backlog for the Fiscal Year 2023 to 2024 (\$8,151.00).
- ii. **Assessment.** For the purpose of assessment, a formally recognized research center with "Institute" in its name, and a total of one faculty member who supports the Institute (when counting all research faculty associated with the Institute within or outside the College of Engineering & Computer Science), is eligible to submit a consolidated assessment report (mission statement, one outcome with two quantitative measures) compared to a full assessment report. The assessment strategy for the ESEI is to set up one outcome with each having two measures to meet the goals of becoming America's leading partnership university with respect to potable water quality, treatment and distribution systems.

Outcome: 1: Be a leading partnership university with respect to water quality, treatment, and distribution systems. A strategic directive to support this goal includes the use of STEM and emerging technologies into the work efforts in an effort to provide results that impacts positively the quality of life. The research work conducted in ESEI will increase undergraduate student research participation and promote student engagement that infuses real-world experiences and community involvement into academic learning.

Measure 1.1: Target was to produce a minimum of 6 new contracts per year of service with either a governmental, municipal, or private water utilities, engineering consulting firms, or other associated potable water quality, treatment and distribution system entity that will benefit from the work offered by UCF's ESEI. During the Fiscal year 2022 to 2023 a total of 4 new contracts were obtained by ESEI. Hence this target was NOT MET.

Measure 1.2: Target was for ESEI to maintain an average of \$15,000 per contract. For the Fiscal year 2022 to 2023 an average of \$45,394 was in process within ESEI. Hence this target was MET.

4. Future Goals and Estimated Progress and Barriers Towards Realization:

The assessment strategy for ESEI is to set up two measures to meet the goals related to UCF's 2022-27 strategic plan as related to the community's water quality, treatment and distribution system infrastructure (public health). Assessment for performance is based on two measures, one based on achieving six (6) new contracts this next Fiscal Year 2023 to 2024, and a second based on maintaining an average of \$15,000 per contract obtained. Progress has been made as 1 project is backlogged (contracted) for Fiscal Year 2023 to 2024.

ESEI will maintain an ongoing assessment of institute quality, productivity, and sustainability in the pursuit of future goals.

Barrier: The simultaneous launch of SET and Workday on July 1, 2022, continues to impacted productivity relative to documentation, data reporting and information transfer. This must be corrected.

5. UCF (and State, where applicable) Impact and ROI of Institute or Center:

Government and municipal water agencies, private water utilities, engineering consulting firms and other associated entities rely on the ESEI to collect specific water quality data and information. In Fiscal Year 2022 to 2023 \$173,423.00 was secured by ESEI.

ESEI's is aligned with Priority No. 3 of UCF's Five-Year Strategic Plan: Priority No. 3: Community and Culture: Creating Community Impact Through Partnerships.

6. Please Address the Progress Made Against Defined Goals and Objectives in the University Strategic Plan and the State Board of Governors' Mission:

Strategic Plan Priority No. 3: Community and Culture. ESEI supports UCF's desire to be a destination of choice for the most talented people, a best place to learn and work, and a partner of choice in our community. As with UCF, ESEI fosters a culture of innovation, inclusion, public service, and collaboration. This provides for an environment that allows civil discourse that is consistent with the Florida Board of Governors' "Statement of Free Expression".

ESEI has made progress for obtaining projects that allow for community impact through partnerships, such as what has been demonstrated with long-term support by the city of Sarasota (FL) Utilities Department and their retained professional engineering firms where UCF graduate students integrated connections between the university and its community, professional organizations and public (municipal government) partners. The ongoing investigation "City of Sarasota Water Treatment Plant Water Quality Improvement Phase B: Pilot Testing Nanofiltration Treatment of Verna Wellfield" has provided ESEI with \$54,471.00 of funding to determine the feasibility of operating a NF process at the city's Verna wellfield. The research will be used by decision makers in their ongoing city- infrastructure improvements programs. Specifically in this project UCF graduate and undergraduate students interacted with municipal government employees, licensed water plant operators, engineers, and stakeholders during the conduct of ESEI's efforts. This interaction is important because every municipal water and wastewater utility strives to protect public health and the environment while meeting federal and state (local) regulations (and ordinances).

Consequently, ESEI's funding partners allow students to benefit by learning techniques and leadership skills in managing tasks on actual project (studies). Working with internal and external professionals when involved, graduate and undergraduate research students become engaged by infusing "real-world" experiences and municipal decision maker involvement into academic learning. These concepts are critical in CECS maintaining ABET Accreditation.

Attachment B

Required for All Institutes and Centers Except Those Designated EXEMPT by Office of Research

Funding, Expenditures, and Staffing Information

*Please provide Total Expenditures (Rounded to Nearest Dollar) and FTE over the last Fiscal Year (July 1st – June 30th).
 Instructions for calculation included in Separate Exhibit B, if needed.*

Centers of Excellence are required to provide additional information (see below).

Budget and Funding Contact Name:
Contact Email:
Contact Phone:

Actual Expenditures for the Institute or Center (I/C)

FISCAL YEAR:		SUS Appropriated Funds (E&G)	Contracts and Grants (C&G)	Fees for Services	Private and Other Funding (Specify)	Total
Salaries & Benefits	Faculty, A&P & USPS					
Other Personal Services	Graduate Assistants					
	Other					
Expenses						
Operating Capital Outlay						
Total Expenditures						

Additional Financial Reporting for Centers of Excellence

Center of Excellence Name	Fiscal Year	Cumulative Total State Funds Received	Cumulative Total Non-State Funds Received	Fiscal Year State Funds Received	Fiscal Year Non-State Funds Received

Staffing / Total FTE

	Faculty	A&P	USPS	Total FTE
FTE				

Contract and Grant Summary

FISCAL YEAR:		
	NUMBER	TOTAL (\$)
Proposals Submitted Total of 5		
Proposals Funded Total of 4		

List of New Contracts and /or Grants Active in Reporting Year:

(Please Attach Additional Pages, As Necessary)

Title:	
PI / Co-PI(s):	
Sponsor:	
Start Date:	
End Date:	
Total Project Award Amount:	

Title:	
PI / Co-PI(s):	
Sponsor:	
Start Date:	
End Date:	
Total Project Award Amount:	

Title:	
PI / Co-PI(s):	
Sponsor:	
Start Date:	
End Date:	
Total Project Award Amount:	

Title:	
PI / Co-PI(s):	
Sponsor:	
Start Date:	
End Date:	
Total Project Award Amount:	

List of Continued/Existing Contracts and/or Grant Active in Reporting Year:

Title:	City of Sarasota Water Treatment Plant Water Quality Improvement Phase B: Pilot Testing Nanofiltration Treatment of Verna Wellfield
PI / Co-PI(s):	Steven J Duranceau, PhD, PE
Sponsor:	Hazen & Sawyer, 1000 N. Ashley Dr., Suite 1000, Tampa, FL 33602
Start Date:	01/19/2023
End Date:	12/31/2023
Total Project Award Amount:	\$54,471.00

Title:	City of Sanford Alternative Water Supply Pilot Study: Process Sampling, Analysis, and Operations Data Support Services.
PI / Co-PI(s):	Steven J Duranceau, PhD, PE
Sponsor:	CPH Engineers, Inc., 50 W. Fulton Street, Sanford, FL 32771
Start Date:	02/10/2023
End Date:	12/31/2023
Total Project Award Amount:	\$52,898.00

Title:	City of Casselberry (FL) Bench-Scale Screening Study to Assess the Relative Performance of Manufactured Corrosion Control Inhibitor Formulation
PI / Co-PI(s):	Steven J Duranceau, PhD, PE
Sponsor:	Hazen & Sawyer P.C., 2420 S. Lakemont Ave., Suite 325, Orlando, FL 32814-6164
Start Date:	05/18/2023
End Date:	02/28/2024
Total Project Award Amount:	\$66,054.00

Title:	UTILITIES Perfluoroalkyl and polyfluoroalkyl substances (PFAS) Wellfield Assessment
PI / Co-PI(s):	Steven J Duranceau, PhD, PE
Sponsor:	University of Central Florida Utilities & Engineering Services
Start Date:	07/11/2023
End Date:	12/31/2023
Total Project Award Amount:	\$8,151.00

Endowment Information

If the institute or center (I/C) is supported in whole or in part by proceeds from an endowment, please provide the following information: the amount of the endowment; where the endowment is managed; and an overview of the endowment spending plan (interest earnings and/or part of the capital endowment)

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Attachment C

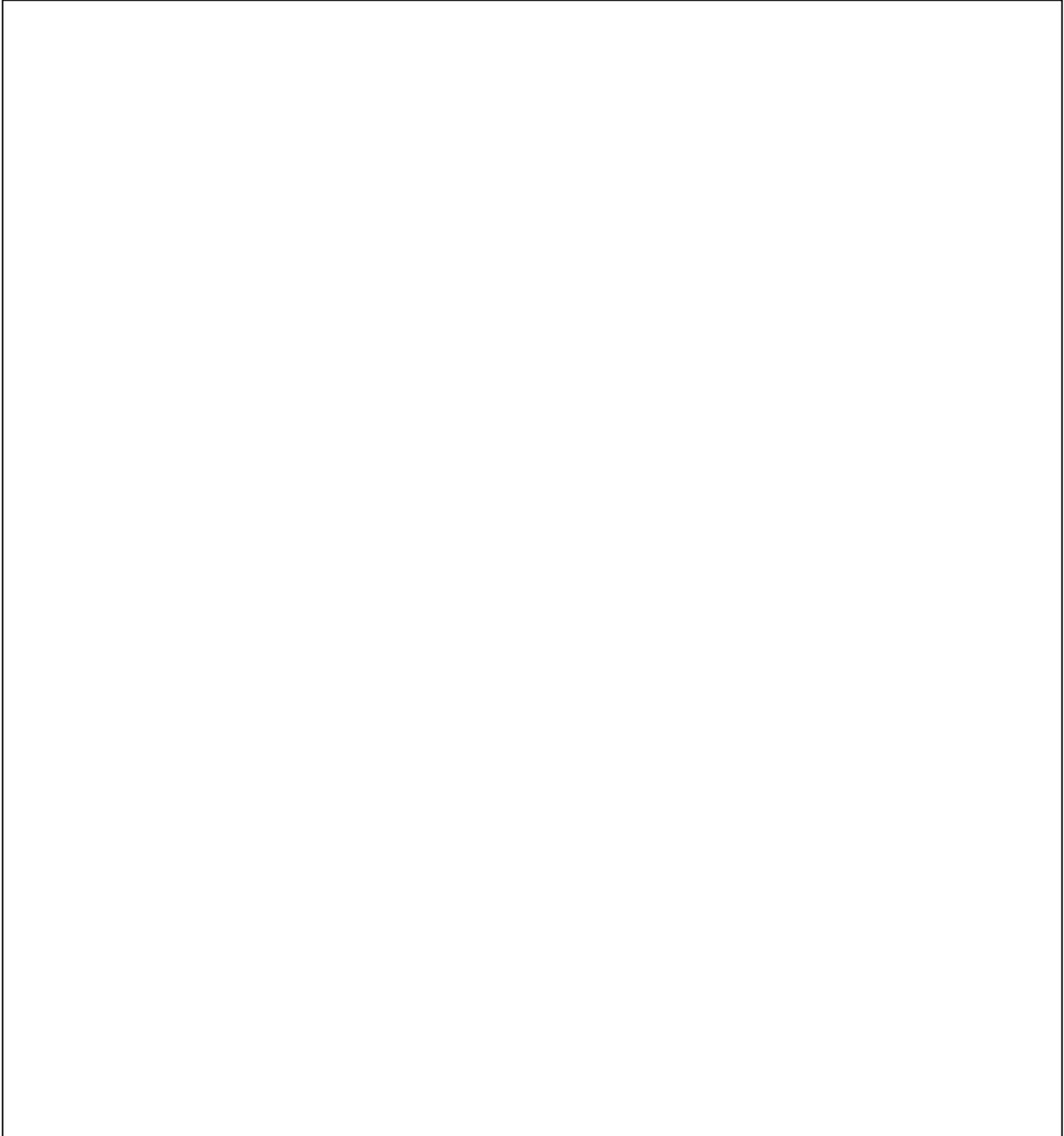
Management Data

C1: Organizational Chart

Provide an **updated organizational chart** that delineates the functions of all faculty and staff.

Current I/C Director:

Start Date:



C2: Board of Directors

If there is a Board of Directors, provide a list of current Board Members, service capacity / roles and remaining terms, as well as meeting frequency.

C3: Advisory Board / Committee

If there is an Advisory Board, provide a list of current members, service capacity / roles and remaining terms, as well as meeting frequency.

C4: Anticipated Organizational Changes or Proposed Updates to By-Laws

Summarize any planned updates or changes to organizational structure and / or to the by-laws. If the by-laws have been changed, please include a copy attached to this report.

C5: Organizational Information for Multiple-Site Institutes or Centers (I/C)

For centers or institutes with site(s) at other institutions, describe the management plan as well as the Statewide structure. Include a brief description of administration, oversight, etc.

Attachment D

Evaluation of Research and Activities

Provide an evaluation of accomplishments related to scholarly activities and published research by primary authors, external funding sources, non-funded outreach, conferences, or symposia.

Publications (In Referred Journals, Peer Reviewed Books, or Peer-Reviewed Chapters)

Please do NOT include those publications credited to the faculty member's primary academic department that are unrelated to the Institute/Center (I/C) Mission

Number of Peer-Reviewed Journal Publications	
Number of Peer-Reviewed Conference Papers	
Number of National Conference Presentations	
Number of International Conference Presentations	
Number of Books	
Number of Book Chapters	

Other Publications and Products (Ex. Training Manuals)

Please list additional publications or products and give the title and a brief description/ overview for each item.

Approved Patents / Copyrights / Licenses

Please list each patent approved, copyright generated, and license distributed during the reported fiscal year. Give the title and a brief description/ overview for each item listed.

Submitted Patents / Copyrights / Licenses

Please list each patent, copyright, and license filed, but not approved, during the reported fiscal year. Give the title and a brief description/ overview for each item listed.

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Student Products

Number of PhD Dissertations	
Number of Masters' Theses	
Number of Undergraduate Theses	

Professional Development and Assistance
Consulting Contracts & Technical Assistance Sessions / Seminars

Number of Consulting Contracts	
Amount of Funding Obtained through Consulting Contracts	
Number of Technical Assistance Sessions or Seminars Offered	
Amount of Funding Obtained through Technical Assistance Sessions or Seminars	

Hosted / Organized Conferences and / or Symposia

Please list below the Date, Title, and Location of all the conferences and /or symposia the Institute or Center (I/C) has sponsored or hosted during the fiscal year.

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