

Presentation to the SRS Citizens Advisory Board

Savannah River Ecology Laboratory - FY12 update

July 23, 2012

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The University of Georgia

Savannah River Ecology Laboratory

OBJECTIVES

- ◎ **SREL Mission**
- ◎ **Staffing**
- ◎ **Funding and Work Scope**
- ◎ **Significant Events**
- ◎ **Challenges**
- ◎ **Future Directions**

SREL History

1951 - Atomic Energy Commission had concerns about environmental impacts resulting from Savannah River Site construction and operations.

1951 to present – Funding from AEC, ERDA, and DOE

1954 – Established permanent lab on the SRS



Dr. Eugene Odum



1977 – Established current lab facilities

SREL's Mission:

“To enhance our understanding of the environment by acquiring and communicating knowledge that contributes to sound environmental stewardship.”

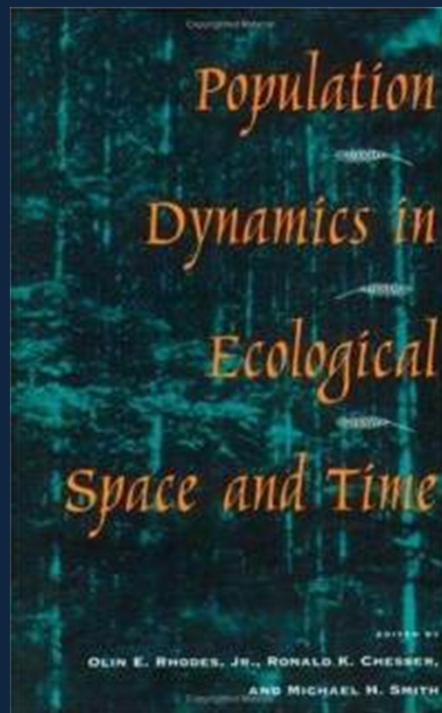
“To provide the public with an independent evaluation of the ecological effects of SRS operations on the environment”

- An interdisciplinary program of field and laboratory **research** conducted largely on the SRS and published in the peer-reviewed scientific literature
- **Education** and research training for undergraduate and graduate students
- **Service** to the community through environmental outreach activities



SREL Research Program's

- >**3209** peer-reviewed scientific publications to date
- **62** books



SREL Education Program

Education Programs

- **>400** theses and dissertations
 - **198** M.S.
 - **223** Ph.D.
- SREL graduate students have received more than **125** awards
- Over **650** undergraduates representing all **50** states have participated in SREL-sponsored research to date



SREL Environmental Outreach Program

- Integrates SREL research into presentations for the general public
- Provides hands-on classroom and field experience for students
- Conducts educator workshops

In 2011, SREL reached ~ **33,000** people by providing :

- **342** talks
- **65** public tours
- **15** exhibits at local or regional events, and
- **29** “Ecologist for a Day” programs for local schools



SREL in FY12

67 EMPLOYEES

◎ UGA Employees

- Research faculty - **8**
- Emeritus faculty - **4**
- Post docs - **2**
- Res. Professional - **22**
- Seasonal technical - **14**
- Graduate students - **3**
- Undergraduates - **2**
- Admin & support - **12**

◎ Facilities & Research Areas

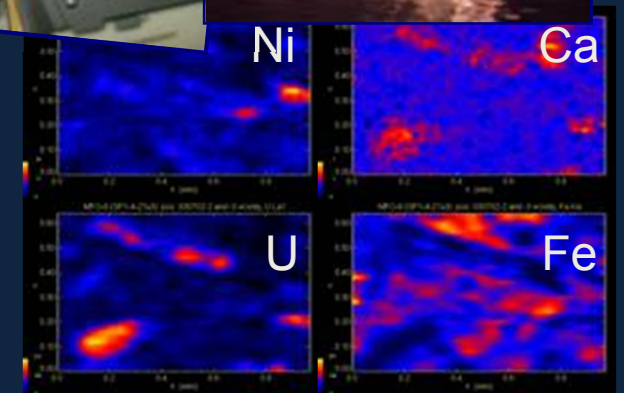
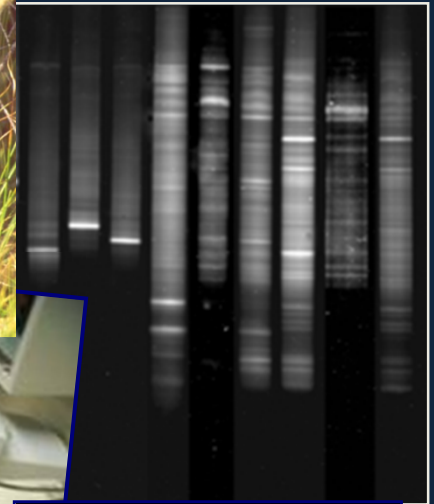
- A-Area (laboratories, equipment, offices, animal care, storage)
- Par Pond (low-dose facility)
- 30 DOE Set-Asides
- 75 field research sites

Disciplinary Expertise

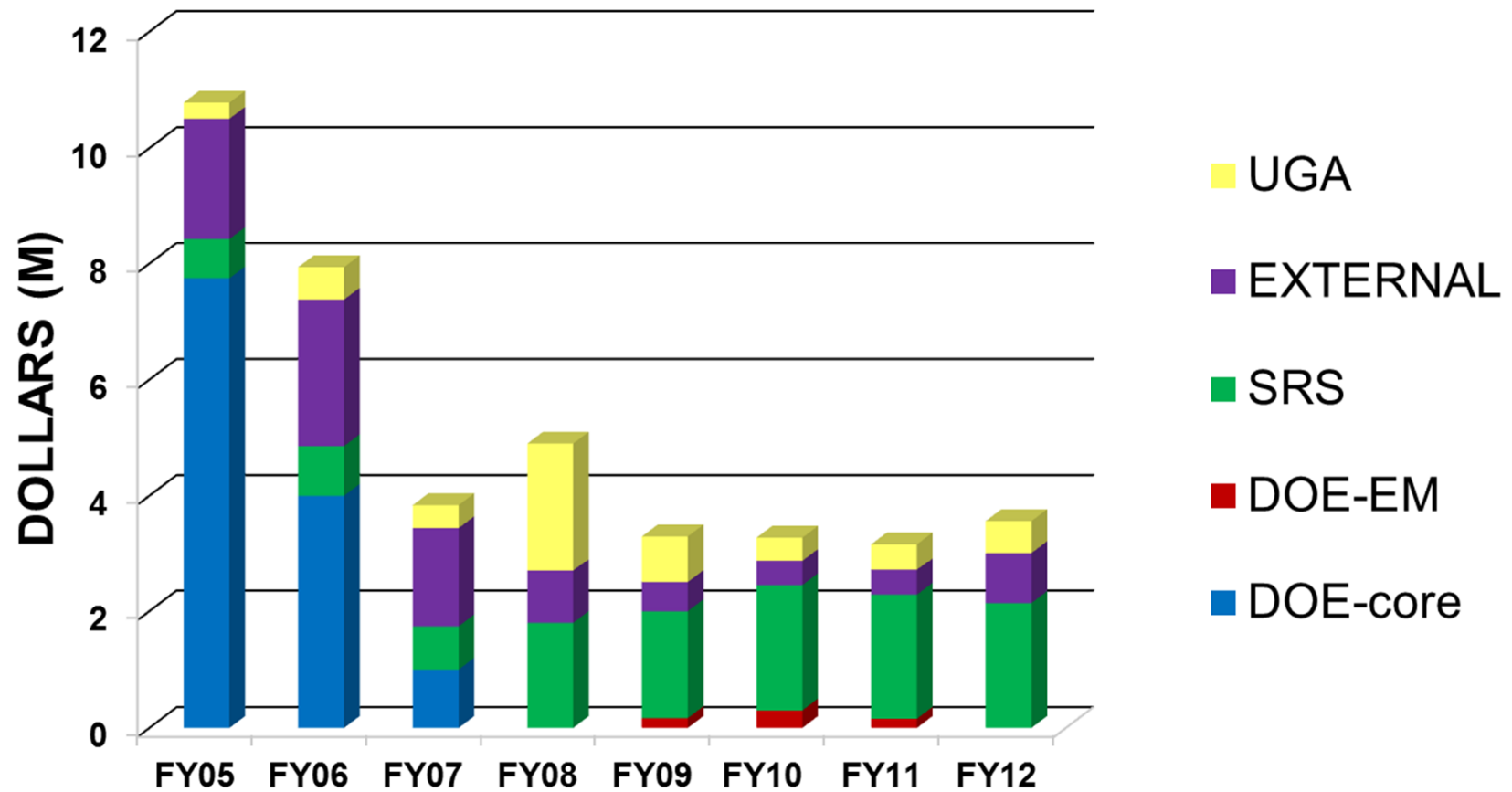
- Aquatic and Terrestrial Ecology
- Geology / Soil Science
- Environmental Microbiology
- Hydrology
- Molecular Biology
- Environmental Chemistry
- Radiation Ecology
- Ecotoxicology and Risk Assessment
- Wildlife Ecology

Current Research Areas

- Characterization and Effects
- Ecological and Health Risks
- Remediation and Restoration



RECENT FUNDING HISTORY



FY2012 SREL Budget

- **DOE Projects**
 - \$ 940K DOE-SR
 - \$ 500K NNSA MOX
 - \$ 932K NNSA Tritium
 - \$192K SRS ACP
 - \$ 95K SRNL
subcontracts
 - \$ 38K SRNS
subcontracts
- **Other Projects**
 - \$ 873K Outside Grants
(NSF, USFWS, City of
Augusta, etc)

TOTAL FY12 = \$3.5M
(\$683K Indirect Costs)

Significant events in FY12

◎ UGA

- Allowed majority (66%) of the 30% Indirect Costs to be retained by SREL
- Hired new Director
- Hired new Asst. Director
- Hired new Research Scientist
- Continues partial employment of emeritus faculty
- Provided an additional 1.4 million in support spread over three years

◎ DOE

- Building, equipment, utilities, and site access
- Renewed 5-year Cooperative Agreement
- DOE-SR provided 940K in new funding for FY12
- NNSA provided 932 in funding at end of FY11
- Facilities added to site integrated priority list
- Continued to provide opportunity for project funding (ACP, HQ-EM, SRNL, and SRNS)

Challenges for FY13

1. Work scope:

Research Set-Asides, Site Uses
NERP promotion and visitors
Collegial Education programs
General public outreach
Interdisciplinary Research
Site-wide committees

2. Aging facilities – Major infrastructure needs

3. Replacing or upgrading expensive scientific equipment

4. Maintaining unique SREL facilities/capabilities, including UGA Conference Center and LoDIF

5. Increase funding level to be able to provide ecological and environmental expertise

Future Directions

- ◎ **Enhancing Graduate Education**
- ◎ **Radioecology**
- ◎ **Remediation and Restoration**
- ◎ **SRS Strategic Initiative Support**

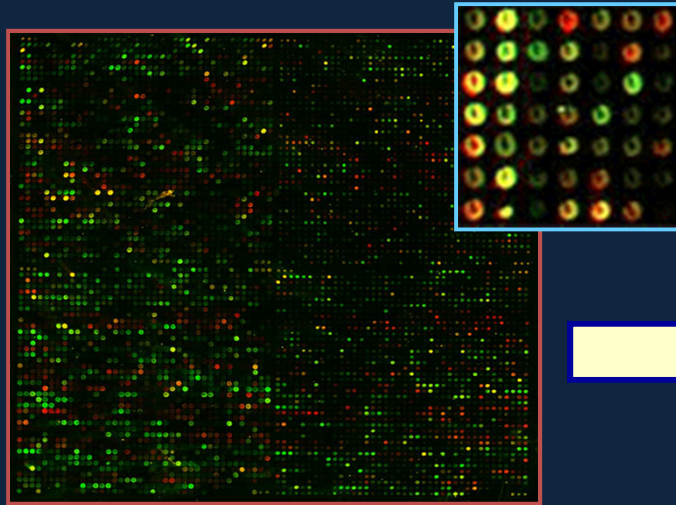
Enhance Graduate Training Using SRS as a Living Laboratory



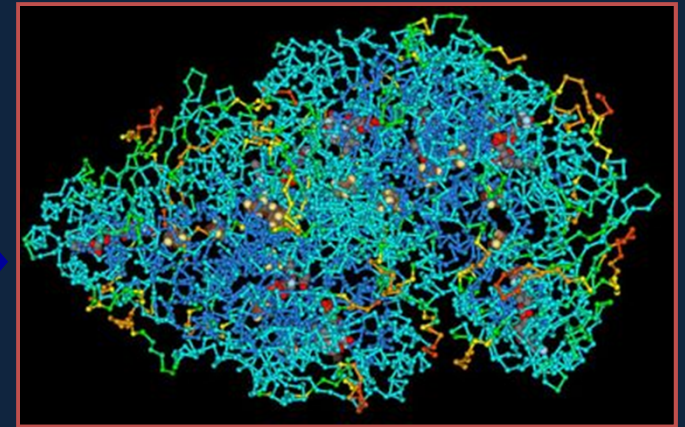
Long-term Surveillance and Monitoring R&D



DNA molecule



DNA micro array



protein



ecosystem

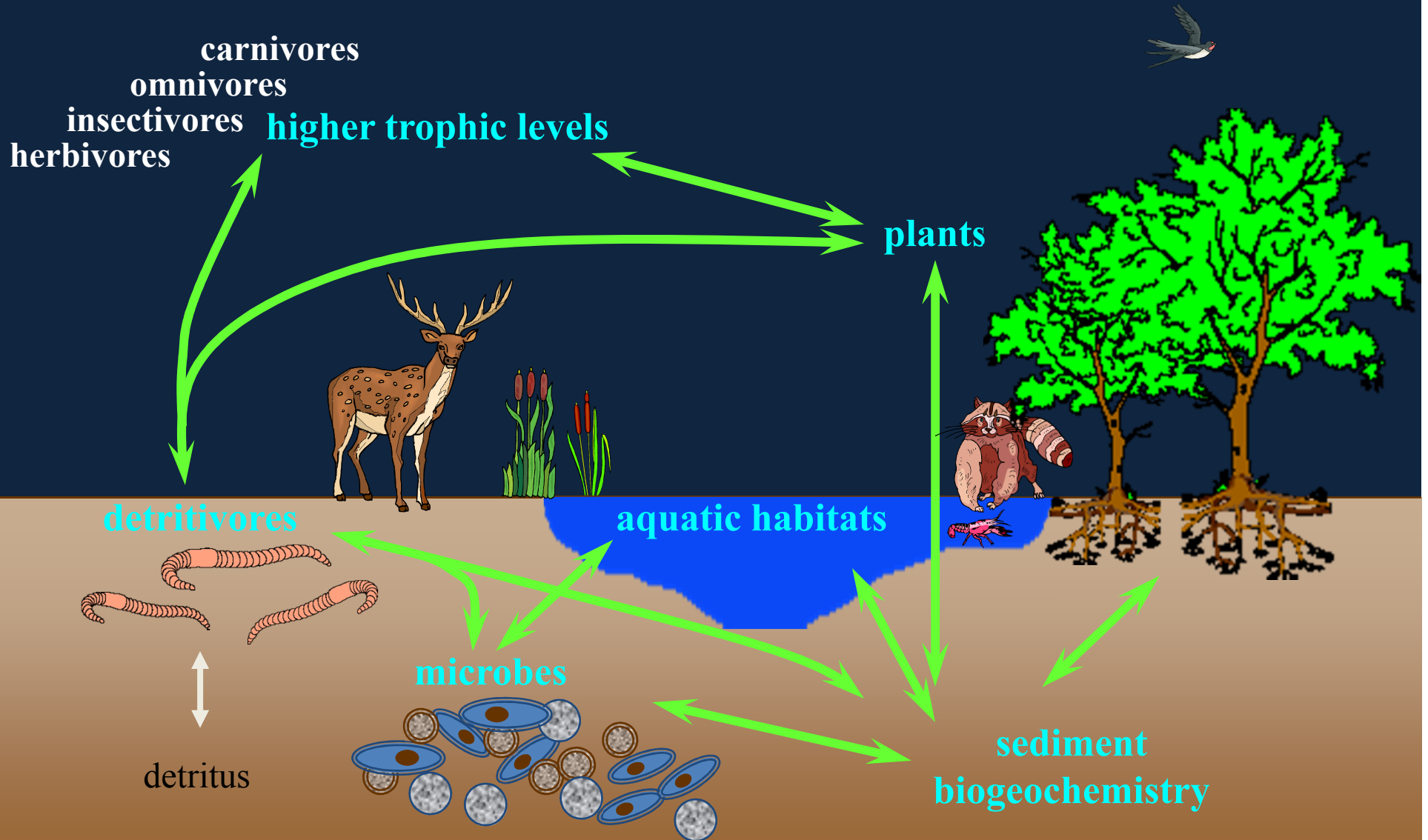


organisms

Develop New Curricula for Radioecology in the United States

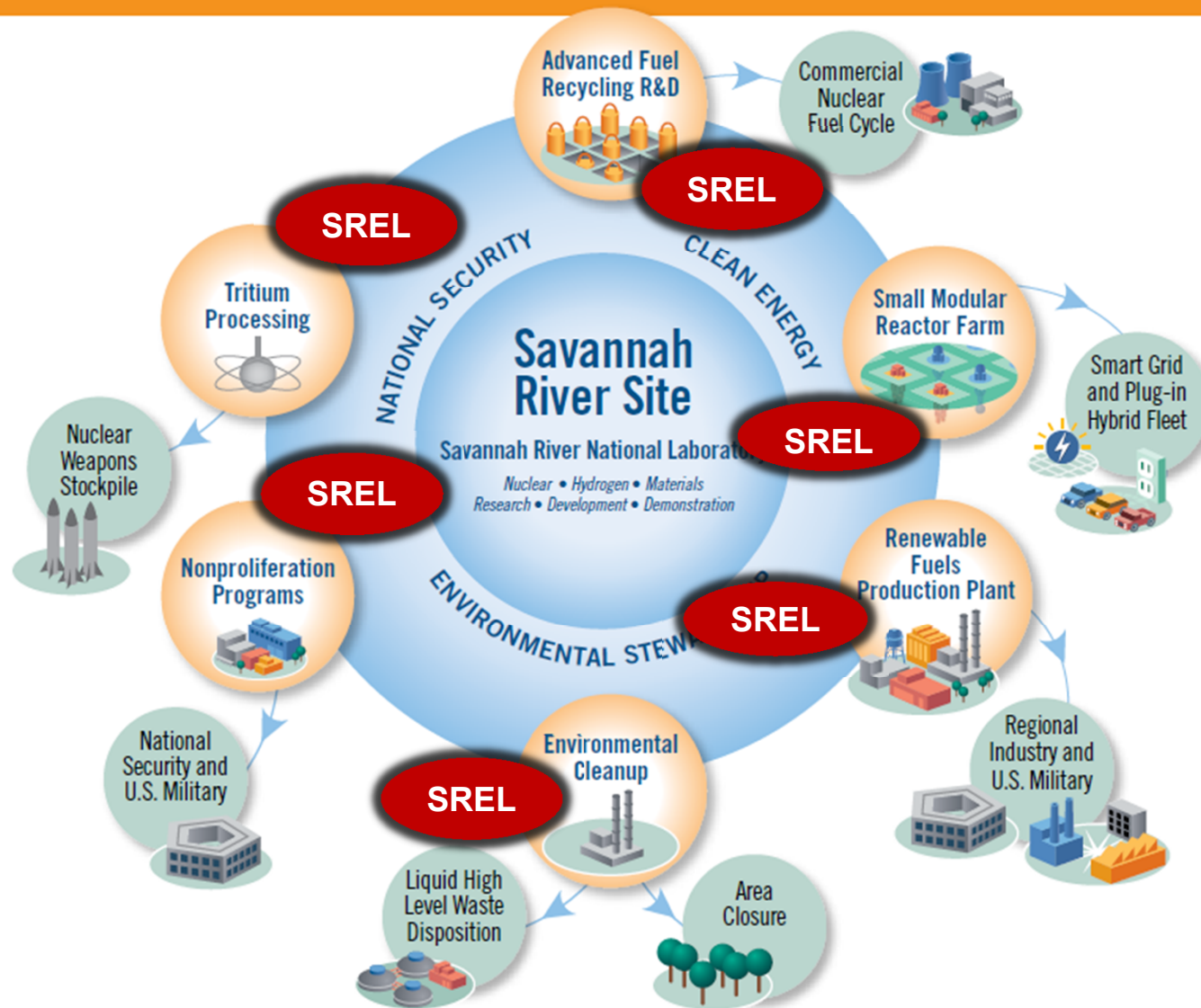
- ◎ **Have Developed Regional Environmental Radiation Protection Curriculum @ SREL**
 - **Offers Coursework in:**
 - **Radiation Safety and Protection**
 - **Radioecology**
 - **Radiation Genotoxicology**
 - **Environmental Geochemistry of Radionuclides**
 - **Radioecology Career Development Seminar**

Develop Ecosystems Approach



The Enterprise SRS Vision

A part of the DOE Comprehensive Asset Revitalization Strategy



Summary

- ◎ **SREL has a diversity of expertise available to address ecological issues on the SRS**
- ◎ **Additional funding is still needed to bring the laboratory to it's full potential**
- ◎ **UGA has reinforced it's commitment to keeping the laboratory open with the hire of the new director and additional resources**
- ◎ **DOE-SR and NNSA are investing in SREL to allow the laboratory to meet its work scope for the public good**
- ◎ **SREL will continue to support the development of radioecology on the SRS and in the US**
- ◎ **SREL will continue to make investments in graduate education**
- ◎ **SREL will continue to support and participate in the ongoing SRS Strategic Initiatives**



SAVANNAH RIVER ECOLOGY LABORATORY

