

HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: HB 7149 PCB SPT 06-01 Aerospace
SPONSOR(S): Spaceport & Technology Committee
TIED BILLS: **IDEN./SIM. BILLS:**

REFERENCE	ACTION	ANALYST	STAFF DIRECTOR
Orig. Comm.: Spaceport & Technology Committee	6 Y, 0 N	Whittier	Saliba
1) _____	_____	_____	_____
2) _____	_____	_____	_____
3) _____	_____	_____	_____
4) _____	_____	_____	_____
5) _____	_____	_____	_____

SUMMARY ANALYSIS

PCB SPT 06-01 changes the name of the Florida Space Authority to Space Florida throughout Chapter 331 and cross-references in other chapters of the Florida Statutes. The bill revises duties pertaining to the spaceport operations and removes the education duties from Space Florida and its Board of Supervisors (board). The bill also removes the power of the board to change the name of Space Florida.

The bill expands the definition of “aerospace” to include the application of aerospace technologies in air-based, land-based, and sea-based platforms for commercial, civil, and defense purposes.

The bill revises memberships of the boards of Space Florida, the Spaceport Management Council, and the Florida Space Research Institute (FSRI).

The bill directs FSRI to collaborate with universities and other public or private entities to develop a proposal for a Center of Excellence for Aerospace that will foster and promote the research necessary to “develop commercially promising, advanced, and innovative science and technology and will transfer those discoveries to the commercial sector.” The bill directs the Department of Education, in conjunction with FSRI, to establish the Florida Center for Mathematics and Science Education Research at a state university to increase student achievement in those academic areas.

The bill directs the Department of Revenue to distribute an amount equal to the sales and use tax revenues collected from dealers conducting business at the John F. Kennedy Space Center or Cape Canaveral Air Force Station to Florida Aerospace Finance Corporation (FAFC). These monies are to be utilized by FAFC to contract for innovative education programs offering hands-on or internet-based math and science experience and providing direct exposure to the state's space infrastructure for 6th and 7th graders in the state.

The bill directs the Office of Program Policy and Government Accountability to conduct a program evaluation of Space Florida, FSRI, and FAFC by January 31, 2007.

On February 24, 2006, the Revenue Estimating Conference reviewed the sales tax distribution provision and determined that it would have a negative impact of \$4 million on the state general revenue in FY 2006-07 and \$4.2 million in FY 2007-08. There is no significant fiscal impact on local governments.

The bill takes effect July 1, 2006.

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. HOUSE PRINCIPLES ANALYSIS:

Provide Less Government: The bill clarifies duties and responsibilities of state space entities to ensure implementation and execution of existing and new statutory requirements.

B. EFFECT OF PROPOSED CHANGES:

PRESENT SITUATION

Florida possesses a unique combination of geography, orbital mechanics, and technology that has allowed it to play a significant role in space launch services for decades. The state has been responsive to national policy changes and industry dynamics in an effort to remain a premier site for launch. In 1989, Florida established its first spaceport, Cape Canaveral Spaceport, in anticipation of a then-developing commercial market. Cape Canaveral Spaceport is defined as the territory consisting of areas within the John F. Kennedy Space Center and the Cape Canaveral Air Force Station.¹

Recently, the space transportation industry has been experiencing a renewed resurgence of commercial, civil, and defense activities which require access to space. Not only is there demand for commercially developed launch vehicles and services, entrepreneurial activities related to passenger-carrying spaceflight services present new considerations. Recent developments have prompted several states to establish commercial spaceports. The Governor's Commission on the Future of Space and Aeronautics in Florida (Governor's Commission) re-evaluated Florida's launch environment and the long-standing impediments to expanding launch services at Cape Canaveral Spaceport.

The Governor's Commission reported that Florida must compete on all the dimensions that influence payload customers' and launch suppliers' selection of a launch site. They recommended Florida proactively address three major categories of issues: government jurisdictional issues and the lack of synchronization of statutes, regulations and codifications; complex customer service processes and associated costs; and the need for improvements to an aging space launch infrastructure and technology.²

Florida Space Authority

In 1989, the Legislature created the Spaceport Florida Authority Act which established the Spaceport Florida Authority. In 2002, the Legislature renamed it the Florida Space Authority (FSA).³ Originally conceived as a space transportation authority, Chapter 331, F.S., empowered FSA to perform nearly every function required to develop and operate a spaceport.⁴

¹ See s. 331.304, F.S.

² *Florida Governor's Commission on the Future of Space and Aeronautics in Florida Final Report*, January 2006, pp 3.19-3.21.

³ On November 20, 2001, the Spaceport Florida Authority's Board of Supervisors voted to change the authority's name to reflect a shift from the authority's mission of primarily launch facilitation to the comprehensive planning and implementation of all phases of space business and economic development, including research and development. The name change of the authority was amended into statutes during the 2002 legislative session. See House of Representatives Staff Analysis for HB 1557, February 24, 2002, pp. 2-3.

⁴ Available at www.floridaspaceauthority.com.

Section 331.302(1), F.S., provides legislative intent that the FSA:

- Provide a unified direction for space-related economic growth and educational development to do the following:
 - Ensure a stable and dynamic economic climate;
 - Attract and maintain space-related businesses suitable to the state; and
 - Further the coordination and development of Florida's economy.

Section 331.302(3), F.S., further provides the FSA with the following purposes, functions, and responsibilities:

- Develop a strategy for, and implement the acceleration of, space-related economic growth and educational development within the state;
- Provide projects in the state which will develop and improve the entrepreneurial atmosphere;
- Provide coordination among space businesses, Florida universities, space tourism and the Spaceport Florida launch centers; and
- Provide activities designed to stimulate the development of space commerce.⁵

In accordance with s. 331.808, F.S., the FSA Board of Supervisors (board) currently is composed of eight regular members that are appointed by the Governor, a state senator ex officio nonvoting member, a state representative ex officio nonvoting member, and the Lt. Governor, who is chair of the board. All regular members are subject to confirmation by the Senate. The board members must have experience in the aerospace or commercial space industry or in finance, or have other significant relevant experience. Further, one member must represent organized labor interests, one must represent minority interests, and four must represent space industry.

Spaceport Management Council

Section 331.367, F.S., authorizes the Spaceport Management Council (management council), which coordinates between government agencies and commercial operators for the purpose of developing recommendations on projects and activities to increase the operability and capabilities of the state's space launch facilities, increase statewide space-related industry and opportunities, and promote space education, research, and technology development. The management council is also to create an integrated facility plan and programmatic development plans to address commercial, state, and federal requirements and to identify appropriate private, state, and federal resources to implement those plans.

The management council has an executive board which is composed of the executive director of FSA, the Secretary of Transportation, the president of Enterprise Florida, Inc., and the director of the Office of Tourism, Trade, and Economic Development. The management council also has a Space Industry Committee, which is made up of representatives of Florida's space industry.

Although required by s. 331.367(8), F.S., to meet at least semi-annually, this council, created in 1999, has not functioned as an advisory panel for several years. According to the FSA, this is because the federal members have stated that they cannot participate in such a council due to restrictions placed on them by the Federal Advisory Act.

The federal government agencies (NASA/KSC and the USAF)⁶ are the landlords of the spaceport, and thus control all activity thereon. The goals of the management

⁵ See s. 331.302, F.S.

⁶ NASA stands for National Aeronautics and Space Administration; KSC stands for the John F. Kennedy Space Center; and USAF stands for the United States Air Force.

council were defeated through lack of authority to implement initiatives. Out of frustration, interest in the council dissolved.⁷

Section 331.367(4)(c), F.S., allows participation by federal entities to contribute to the management council's effectiveness; however their participation is not mandatory.

Sections 331.367(6) and (7), F.S., require the council to provide "infrastructure and program requirements and develop other information to be utilized in a 5-year spaceport master plan" and provide "requirements and other information to be utilized in the development of a 5-year Spaceport Economic Plan..." Although these plans have been prepared, it has been without the statutorily-required input of the council.

Florida Space Research Institute

In 1999, the legislature created the Florida Space Research Institute (FSRI). Originally recommended in a 1988 Space Commission report,⁸ FSRI was created to expand and diversify the state's involvement in space research and technology development. In accordance with s. 331.368(1), F.S., FSRI is to do the following:

- Serve as an industry-driven center for research, leveraging the state's resources in a collaborative effort to support Florida's space industry and its
 - Expansion;
 - Diversification; and
 - Transition to commercialization.⁹

On December 15th of each year, FSRI is to report its annual activities and accomplishments to the Governor, the President of the Senate, the Speaker of the House of Representatives, and the Commissioner of Education. Further, FSRI is to include the following in its report:

- Provide recommendations regarding actions the state should take to enhance the development of space-related businesses, including:
 - Future research activities;
 - The development of capital and technology assistance to new and expanding industries;
 - The removal of regulatory impediments;
 - The establishment of business development incentives; and
 - The initiation of education and training programs to ensure a skilled workforce.¹⁰

Florida Aerospace Finance Corporation

In 1999, the legislature also created the Florida Commercial Space Financing Corporation and, in 2002, the legislature renamed it the Florida Aerospace Finance Corporation (FAFC). As provided in s. 331.407(1), F.S., the purpose of FAFC is to do the following:

- Expand employment and income opportunities for residents of this state by providing businesses domiciled in this state with the following:
 - Information;
 - Technical assistance; and
 - Financial assistance.¹¹

⁷ Florida's 2006 Space Strategy, Florida Space Authority, p. 15.

⁸ *Florida Governor's Commission on Space Final Report to Governor Martinez, Steps to the Stars*, July 7, 1988, p. 36.

⁹ See s. 331.368(1), F.S.

¹⁰ See s. 331.368(8), F.S.

¹¹ See s. 331.407(1), F.S.

The purpose of these functions is to support space-related transactions in order to increase the development of commercial aerospace products, activities, services, and facilities within the state.

It is generally understood within the industry that FSRI and FAFC were “spun off” of the FSA to provide specialized focus on the accomplishment of specific purposes. An alternative explanation is that the policy scope was too large for one entity and that there was a need for additional organizations as conceived in the 1988 report.

Each space entity is governed by a board with appointed members. Each board is made up of a combination of public and private sector representatives intended to bring industry expertise to the issues. The FSA executive director serves as a board member on both the FSRI and FAFC boards. It is interesting to note that Enterprise Florida, Inc., serves on the FSRI and FAFC boards, however, not on the FSA board. Additionally, the Enterprise Florida, Inc., board is not specifically required to maintain space representation.¹² Enterprise Florida, Inc., sponsors two stakeholder groups with a relationship to aerospace: the Florida Aviation Aerospace Alliance and the Florida Defense Alliance.

Centers of Excellence

In 2002, the Florida Technology Development Act (Technology Act) was enacted, which established a process for the State Board of Education to develop, approve, and authorize expenditures for one or more centers of excellence.¹³ A center of excellence is one model to stimulate university to industry technology transfer. The Emerging Technologies Commission, created in the Technology Act, subsequently designated three centers of excellence and distributed \$30 million, which was appropriated by the legislature for this purpose.

Currently, there are three technological Centers of Excellence in the state: The Center of Excellence for Regenerative Health Biotechnology at the University of Florida, the Center of Excellence in Biomedical and Marine Biotechnology at Florida Atlantic University, and Florida Photonics Center of Excellence at University of Central Florida. Each center received \$10 million to facilitate collaborative public-private research, create partnerships between industrial and governmental entities to advance knowledge and research, recruit and retain eminent scholars in advanced technology disciplines, and move technologies from academic laboratories to commercial sectors.

The authorizing legislation, s. 1004.225, F.S., sunset on July 1, 2004. Legislation reestablishing centers of excellence failed to pass during the 2005 Legislative Session.

The Governor’s Commission recommended that a Center for Math and Science Education Research be established at a university to enhance the quality of K-12 math and science instruction in the state.

The report specified the following:

Modeled after the existing Center for Reading Research, this Center should identify and disseminate effective teaching strategies and materials for science, mathematics, and related disciplines. The Center should be organized with regional partners who can assist in disseminating information and helping teachers and school systems identify professional development programs that can implement key research findings. The Center can build upon existing programs such as FSRI’s Project Launch, which uses space as an overarching theme to help improve mathematics and science teaching, particularly in low-performing schools.¹⁴

PROPOSED CHANGES

¹² See s. 288.901, F.S.

¹³ See SB 1844, enrolled, 2002 Legislative Session.

¹⁴ *Florida Governor’s Commission on the Future of Space and Aeronautics in Florida Final Report*, January 2006, p. 3.7.

PCB SPT 06-01 changes the name of the Florida Space Authority to Space Florida throughout Chapter 331 and cross-references in other chapters of the Florida Statutes. Most of the current powers, duties, and responsibilities remain unchanged. The bill does, however, add duties pertaining to spaceport operations and removes the education duties from Space Florida and its Board of Supervisors (board). The effect is that FSRI becomes the primary point of contact for space-related education, curriculum development, research, and workforce training. Space Florida remains the point of contact for economic development and operation of spaceports. The bill also removes the power of the Space Florida board to change the name of Space Florida.

The bill revises the definition of “aerospace” to include the application of aerospace technologies in air-based, land-based, and sea-based platforms for commercial, civil, and defense purposes. This allows for technologies developed or tested in these venues to be included in economic development, research, and financing considerations.

The bill provides additional duties for Space Florida pertaining to spaceport operations. The bill directs Space Florida to seek the means to upgrade infrastructure and technologies at the Cape Canaveral Spaceport; support federal efforts to clarify roles and responsibilities of federal agencies in an effort to streamline access; support and assist commercial launch operators in submitting paperwork and gaining authorizations for launching; and consult government entities and industry on all aspects of establishing and operating spaceport infrastructure and related facilities. These initiatives are identified as a means to ensure Florida remains a premier location for civil, military, and commercial launches.

The bill expands the Space Florida board from eight to nine members and requires that one regular member represent Enterprise Florida, Inc. It revises the membership of the FSRI board, replacing the representative of the expired Space Business Roundtable with a representative of the FAFC.

Currently, the Space Florida Management Council is composed of an executive board and a Space Industry Committee. The bill expands the executive board from four to seven members, adding the executive director of FSRI, the president of FAFC, and a representative of the Space Industry Committee and clarifies membership of the Space Industry Committee by directing it to be composed of representatives of Florida’s space flight businesses as defined in s. 212.031(a)(1)13., F.S. Subparagraph 13. defines “space flight business” as the manufacturing, processing, or assembly of a space facility, space propulsion system, space vehicle, satellite, or station of any kind possessing the capacity for space flight, as defined by s. 212.02(23),¹⁵ or components thereof, and also means the following activities supporting space flight: vehicle launch activities, flight operations, ground control or ground support, and all administrative activities directly related thereto. “

Currently, a corporation may not incorporate or transact business in the state using the name “spaceport Florida” or “Florida spaceport” without written approval from FSA. The bill expands this list to limit utilization of the names “Space Florida,” “Florida Space Authority,” “Florida Space Research Institute,” and “Florida Aerospace Finance Corporation” by other entities.

The bill authorizes the FSRI to collaborate with universities and other public or private entities to develop a proposal for a Center of Excellence for Aerospace that will foster and promote the research necessary to “develop commercially promising, advanced, and innovative science and technology and will transfer those discoveries to the commercial sector.” A Center of Excellence supports FSRI’s current duties related to industry-centered research, expansion and diversification of space-related business, and commercialization. A center also enables collaboration around research and technologies that support space, military, and defense sectors.

¹⁵ Section 212.02(23), F.S., defines “space flight” as any flight designed for suborbital, orbital, or interplanetary travel of a space vehicle, satellite, or station of any kind.

Currently statutes direct the FSRI board to invite the participation of public and private universities, including the University of Central Florida, the University of Florida, the University of South Florida, Florida State University, Florida Institute of Technology, and the University of Miami. The bill adds Embry-Riddle Aeronautical University to this list of academic institutions.

In lieu of a *co-management* partnership with NASA, the bill directs the FSRI board to *manage* operation of the Space Life Sciences Laboratory (laboratory). This facility houses a state-of-the-art space bio-imaging laboratory that provides life sciences research that will be needed for long-duration trips to the Moon and Mars. According to the institute, the laboratory can support research in many areas, including astrobiology, biomedical space science (radiation effects, bone demineralization, and muscle atrophy) and bioregenerative life support.¹⁶

The bill also directs the FSRI board to develop a strategy for, and implement the acceleration of, space-related education and engage in the planning and implementation of space-related educational development within the state.

In 2001, the Office of Program Policy Analysis and Government Accountability (OPPAGA) conducted a review of the FAFC¹⁷ and a follow-up review in 2002 where it was determined that FAFC had corrected deficiencies that had been described in their previous report.¹⁸ The FSA's and FSRI's programs and performance have not been reviewed by OPPAGA. The bill directs the OPPAGA to conduct a program evaluation of the FSA, FSRI, and FAFC and report to the Governor and the Legislature by January 31, 2007.

The bill directs the Department of Revenue to distribute an amount equal to the state's share of the sales and use tax revenues collected from dealers conducting business at the John F. Kennedy Space Center or Cape Canaveral Air Force Station to the FAFC. The bill authorizes these monies to be utilized by the FAFC to contract for innovative education programs offering hands-on or internet-based math and science experiences and providing direct exposure to the state's space infrastructure for 6th and 7th graders in the state.

The bill directs the Department of Education, in conjunction with FSRI, to establish the Florida Center for Mathematics and Science Education Research at a state university to increase student achievement in those academic areas. It requires the center to do the following:

- Provide technical assistance and support to school districts and schools in the development and implementation of math and science instruction;
- Conduct applied research on policy and practices related to math and science instruction and assessment in the state;
- Conduct or compile basic research regarding student acquisition of math and science knowledge and skills;
- Develop comprehensive course frameworks for math and science courses that emphasize rigor and relevance at the elementary, middle, and high school levels; and
- Disseminate information regarding research-based teaching practices in math and science to teachers and teacher educators in the state.
- Collect, manage, and report on assessment information regarding student achievement in mathematics and science.
- Establish partnerships with state universities, community colleges, and school districts.

¹⁶ Florida Space Research Institute, 2005 Annual Report, p. 4.

¹⁷ In this report [*Space Financing Corporation is Still Gearing Up and Needs to Develop a Business Plan*, Report No. 01-11, Office of Program Policy Analysis and Government Accountability, February 2001, p. 5.], OPPAGA recommended that the FAFC improve its performance measurement system (complete revising its research design and identify reliable data sources for its performance measures) and develop a strategic business plan to guide future activities.

¹⁸ *Space Financing Corporation Has Addressed OPPAGA Recommendations*, Report No. 02-60, Office of Program Policy Analysis and Government Accountability, November 2002.

- Collaborate with the Florida Center for Reading Research in order to provide research-based practices that integrate the teaching of reading within mathematics and sciences courses.

C. SECTION DIRECTORY:

Section 1. amends s. 331.301, F.S.; changes the name of the Florida Space Authority to Space Florida.

Section 2. amends s. 331.302, F.S.; revises responsibilities of Space Florida.

Section 3. amends s. 331.303, F.S.; revises definitions.

Section 4. amends s. 331.305, F.S., revises powers of Space Florida.

Section 6. repeals s. 331.307, F.S., regarding building a spaceport at Cape San Blas.

Section 7. amends s. 331.308, F.S.; revises membership of the board of supervisors.

Section 9. amends s. 331.310, F.S.; revises powers of the board of supervisors.

Section 46. amends s. 331.355, F.S.; revises requirements for use of names.

Section 48. amends s. 331.367, F.S.; revises reporting requirements and membership of the council.

Section 49. amends s. 331.368, F.S.; revises membership and duties of the FSRI board; revises powers of the institute.

Section 50. creates s. 331.370, F.S.; directs the Office of Program Policy Analysis and Government Accountability to conduct an evaluation.

Section 51. amends s. 331.405, F.S.; revises definitions.

Section 52. amends s. 331.407, F.S.; revises powers of the corporation.

Section 57. amends s. 212.20, F.S.; directs Department of Revenue to distribute certain sales and use tax revenues.

Section 62. creates 1004.86, F.S.; directs the Department of Education to establish the Florida Center for Mathematics and Science Education Research at a state university; specifies requirements for the center.

Section 63. provides an effective date of July 1, 2006.

Sections 5, 8, 10-45, 47, 53-56, and 58-61 amend ss. 74.011, 196.012, 212.02, 288.063, 288.075, 288.35, 288.9415, 331.306, 331.309, 331.3101, 331.311, 331.312, 331.313, 331.314, 331.315, 331.316, 331.317, 331.318, 331.321, 331.322, 331.323, 331.324, 331.325, 331.326, 331.327, 331.328, 331.329, 331.331, 331.333, 331.334, 331.335, 331.336, 331.337, 331.338, 331.339, 331.340, 331.343, 331.345, 331.346, 331.347, 331.348, 331.349, 331.350, 331.351, 331.354, 331.360, and 331.411, F.S.; conform provisions and cross-references.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

On February 24, 2006, the Revenue Estimating Conference reviewed the sales tax distribution and determined that the provision would have a negative impact of \$4 million on the state general revenue in FY 2006-07 and \$4.2 million in FY 2007-08.

2. Expenditures:

The bill authorizes the FAFC board to contract for innovative education programs. To the extent the board enters into contracts for services, these funds will be expended.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

No impact. The bill provides that the monthly distributions not include proceeds of discretionary surtaxes; therefore, the local option sales taxes are not affected.

2. Expenditures:

None.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

There is no significant direct fiscal impact on the private sector.

D. FISCAL COMMENTS:

The Governor's budget recommendations for FY 2006-07 propose \$2 million for the purpose of establishing a Center for Mathematics and Science Education Research.

III. COMMENTS

A. CONSTITUTIONAL ISSUES:

1. Applicability of Municipality/County Mandates Provision:

The bill does not appear to require counties or cities to spend funds or take action requiring the expenditure of funds; reduce the authority that cities or counties have to raise revenues in the aggregate; or reduce the percentage of a state tax shared with cities or counties.

2. Other:

None.

B. RULE-MAKING AUTHORITY:

None.

C. DRAFTING ISSUES OR OTHER COMMENTS:

None.

IV. AMENDMENTS/COMMITTEE SUBSTITUTE & COMBINED BILL CHANGES

On March 14, 2006, the Spaceport & Technology Committee adopted four amendments to PCB SPT 06-01 and passed the PCB unanimously. The changes are reflected in this bill analysis and include the following:

- Provides clarification of the composition of the Space Florida Management Council. *See Section 48 of the bill.*
- Directs the Department of Education, in conjunction with FSRI, to establish the Florida Center for Mathematics and Science Education Research at a state university to increase student achievement in those academic areas and lists requirements of the Center. *See Section 62 of bill.*
- Expands FSRI duties to conform with above amendment. *See Section 49 of the bill.*
- Expands FSRI duties to include developing a strategy for, and implementing the acceleration of, space-related education and engaging in the planning and implementation of space-related educational development within the state. *See Section 49 of the bill.*