

Texas A&M Engineering Experiment Station
Summary of Recommendations - Senate

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Method of Financing	2016-17 Base	2018-19 Recommended	Biennial Change (\$)	Biennial Change (%)
General Revenue Funds	\$38,548,088	\$41,082,383	\$2,534,295	6.6%
GR Dedicated Funds	\$924,086	\$887,123	(\$36,963)	(4.0%)
Total GR-Related Funds	\$39,472,174	\$41,969,506	\$2,497,332	6.3%
Federal Funds	\$89,954,656	\$89,954,656	\$0	0.0%
Other	\$115,123,395	\$113,963,028	(\$1,160,367)	(1.0%)
All Funds	\$244,550,225	\$245,887,190	\$1,336,965	0.5%

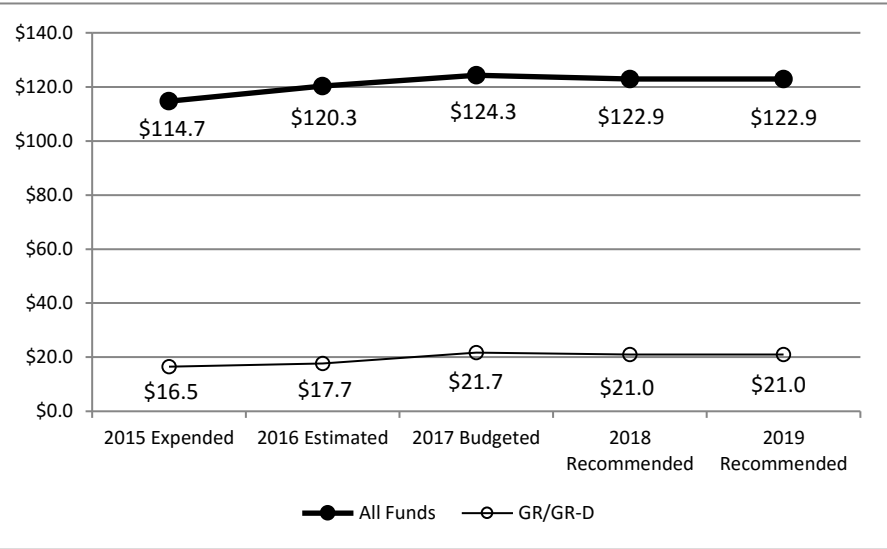
	FY 2017 Budgeted	FY 2019 Recommended	Biennial Change	Percent Change
FTEs	825.0	842.4	17.4	2.1%

Agency Budget and Policy Issues and/or Highlights

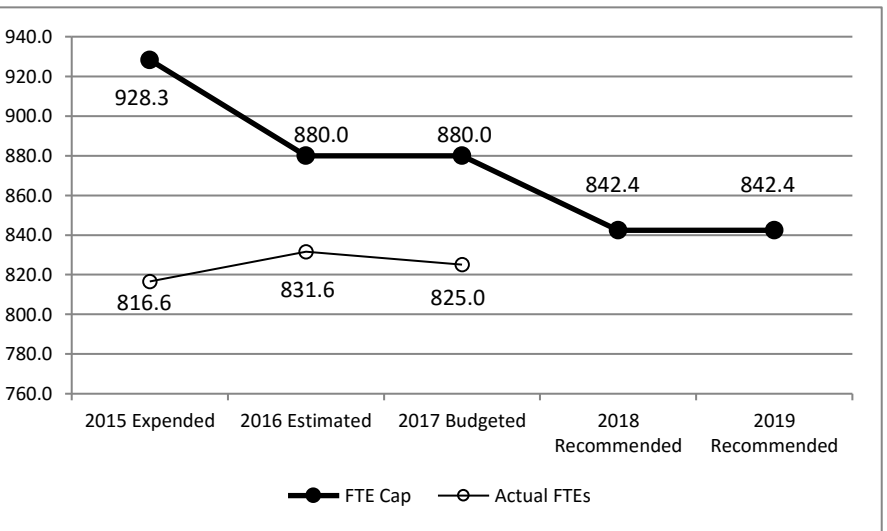
Texas A&M Engineering Experiment Station (TEES) conducts research, provides continuing education, and develops technology to assist industry and the engineering workforce. TEES performs engineering and technology research on water, energy, manufacturing, and the environment across 30 different TEES research centers.

The bill pattern for this agency (2018-19 Recommended) represents an estimated 88.5% of the agency's estimated total available funds for the 2018-19 biennium.

Historical Funding Levels (Millions)



Historical Full-Time-Equivalent Employees (FTEs)



Texas A&M Engineering Experiment Station
Summary of Funding Changes and Recommendations - Senate

Section 2

Funding Changes and Recommendations for the 2018-19 Biennium compared to the 2016-17 Base Spending Level (in millions)		General Revenue	GR-Dedicated	Federal Funds	Other Funds	All Funds	Strategy in Appendix A
<i>SIGNIFICANT Funding Changes and Recommendations (each issue is explained in Section 3 and additional details are provided in Appendix A):</i>							
A)	Research and workforce development programs funding decrease as a result of the agency's four percent General Revenue and General Revenue - Dedicated base reduction requirement.	(\$0.9)	\$0.0	\$0.0	\$0.0	(\$0.9)	A.3.1.
B)	Debt service funding biennialized for Center for Infrastructure Renewal.	\$4.6	\$0.0	\$0.0	\$0.0	\$4.6	C.1.3.
C)	Pilot project completed for prevention of wildfires caused by power lines which results in reduction for one-time funding.	(\$1.0)	\$0.0	\$0.0	\$0.0	(\$1.0)	A.1.1.
<i>OTHER Funding Changes and Recommendations (these issues are not addressed in Section 3 but details are provided in Appendix A):</i>							
D)	Interagency contracts and infrastructure support decreases.	(\$0.2)	\$0.0	\$0.0	(\$1.2)	(\$1.4)	A.1.1, C.1.1, C.1.2.
TOTAL SIGNIFICANT & OTHER Funding Changes and Recommendations (in millions)		\$2.5	\$0.0	\$0.0	(\$1.2)	\$1.3	As Listed
<i>SIGNIFICANT & OTHER Funding Increases</i>		\$4.6	\$0.0	\$0.0	\$0.0	\$4.6	As Listed
<i>SIGNIFICANT & OTHER Funding Decreases</i>		(\$2.1)	\$0.0	\$0.0	(\$1.2)	(\$3.3)	As Listed

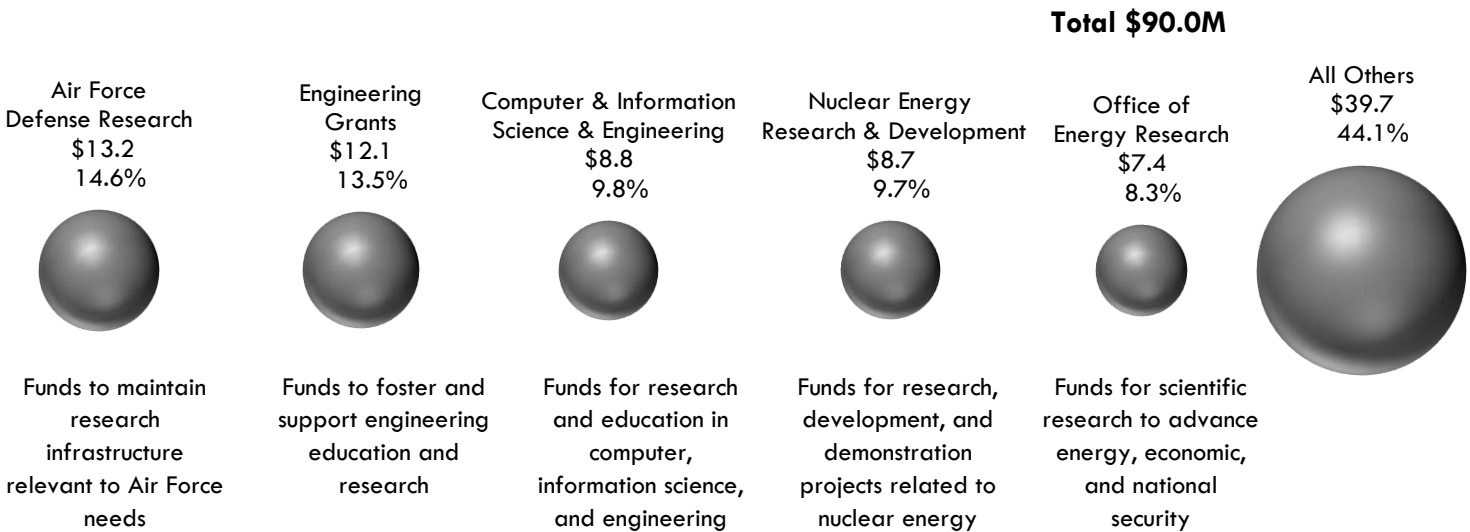
NOTE: Totals may not sum due to rounding.

**Texas A&M Engineering Experiment Station
Selected Fiscal and Policy Issues - Senate**

1. **Four Percent General Revenue and General Revenue – Dedicated Base Reduction.** Recommendations include reductions of \$0.9 million in General Revenue Funds and \$36,963 in General Revenue - Dedicated Texas Emissions Reduction Plan Account 5071 funding due to the four percent base reduction requirement (note: Infrastructure Support funding was exempted from the reduction calculation because it is formula funded). TEES reports the funding reduction will require the agency to reduce research and workforce development programs and activities in the areas of its Nuclear Power Institute, summer camps, and teaching outreach programs. The agency also indicates these funds have historically been leveraged to obtain federal and other research funding. The agency has submitted an Exceptional Item request to restore the General Revenue and General Revenue – Dedicated Funds.
2. **Debt Service Funding Biennialized for Center for Infrastructure Renewal.** Recommendations include a \$4.6 million increase in General Revenue for biennialized debt service requirements for the Center for Infrastructure Renewal (CIR). The agency's FY2016-17 base expenditures include only the first year of CIR debt service (FY2017 was \$5.0 million), and FY2018-19 debt service funding totals \$9.6 million. The CIR is a joint facility for TEES and Texas A&M Transportation Institute which will allow for the consolidation and coordination of research and workforce initiatives related to infrastructure materials and structural systems. Infrastructure includes roadways, bridges, and pipeline systems for oil, gas, water and wastewater. Construction of the CIR began in FY2016 and is expected to be completed in fall 2017.
3. **Pilot Project Completed for Prevention of Wildfires Caused by Power Lines.** Recommendations include a \$1.0 million decrease in General Revenue Funds for one-time funding for a pilot project that alerts utilities and firefighters of failing power devices and conditions that could lead to a wildfire before a failure or fire occurs. The pilot project was originally funded in the 2014-15 biennium for \$3.0 million, to be completed within two years. The project was completed in fiscal year 2016 and utilized a \$1.0 million unexpended balance carryforward from fiscal year 2015 to fiscal year 2016. This \$1.0 million was included in the agency's 2018-19 base request for Strategy A.1.1, Research Programs.
4. **Infrastructure Support.** Funding to Texas A&M System agencies for infrastructure support within Brazos County is maintained at 2016-17 total appropriations, but is adjusted for 2018-19 for each respective agency based on updated data. Texas A&M System agricultural agencies also receive funding for infrastructure support outside Brazos County which is proportionally allocated to those agencies by their percentage of total actual square footage, and the 2018-19 funding recommendations are maintained at 2016-17 total appropriations.

Texas A&M Engineering Experiment Station

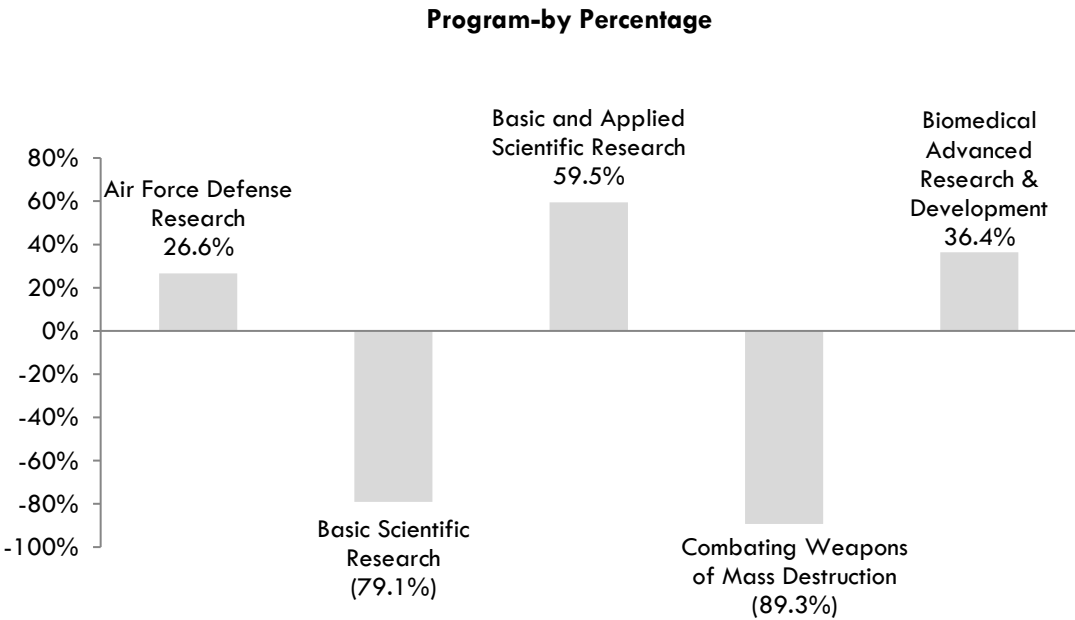
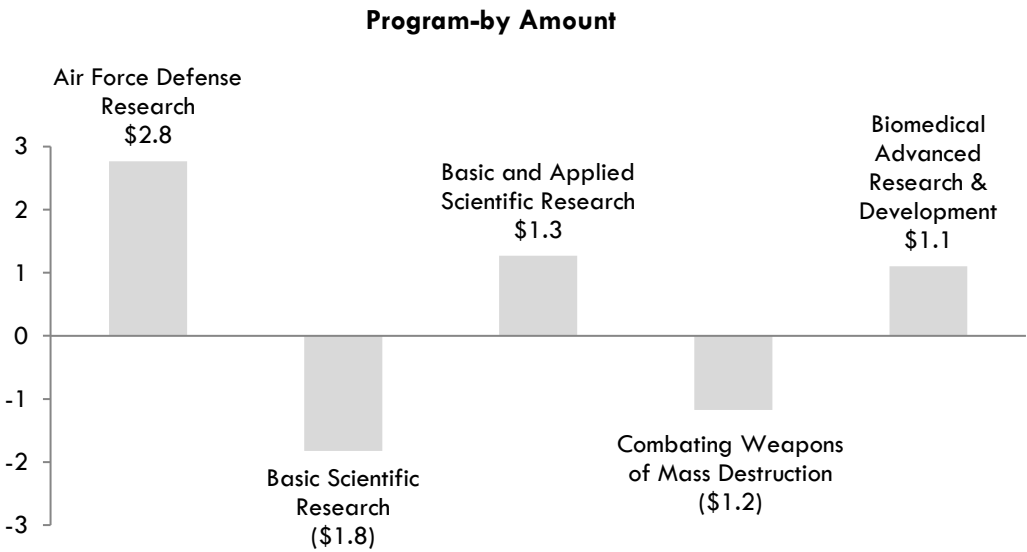
Summary of Federal Funds (2018 - 19) - Senate



Selected Federal Fiscal and Policy Issues

Despite a reduction in General Revenue funding, Federal Funds estimates for the 2018-19 biennium maintain level funding equal to fiscal years 2016-17.

Programs with Significant Federal Funding Changes from 2016 - 17



Texas A&M Engineering Experiment Station
FTE Highlights - Senate

Section 3b

Full-Time-Equivalent Positions	Expended 2015	Estimated 2016	Budgeted 2017	Recommended 2018	Recommended 2019
Cap	928.3	880.0	880.0	842.4	842.4
Actual/Budgeted	816.6	831.6	825.0	NA	NA

Schedule of Exempt Positions (Cap)

None.

Notes:

- a) The Actual/Budgeted FTEs for FY2015-17 are lower than the respective FY2015-17 FTE Cap because the agency experienced vacancies due primarily to the cyclical nature of available research funds (Other Funds) and TEES has increased its subcontracting approach for providing some services.
- b) The Recommended FY2018-19 FTE Cap of 842.4 represents a decrease of 37.6 FTEs compared to the FY2016-17 FTE Cap. This 37.6 FTE decrease is requested by TEES and is not a reduction in any filled positions, it represents a change in FTE Cap authority only.

**Texas A&M Engineering Experiment Station
Rider Highlights - Senate**

Deleted Riders

5. **Prevention of Wildfires Caused by Power Lines.** Recommendations delete this rider because the required Wildfire Prevention Pilot Project was completed in fiscal year 2016. See Section 3 (page 3) for discussion of related funding reduction.

Texas A&M Engineering Experiment Station
Items Not Included in Recommendations - Senate

Section 5

	2018-19 Biennial Total			Information Technology Involved?	Contracting Involved?	Estimated Continued Cost 2020-21
	GR & GR-D	All Funds	FTEs			

Agency Exceptional Items - In Agency Priority Order

1)	Restore the Four Percent General Revenue - Related Baseline Reduction Funding for research and workforce development programs and activities in the areas of the agency's Nuclear Power Institute, summer camps, and teaching outreach programs. The agency indicates these funds have historically been leveraged to obtain additional federal and other research funding.	\$925,707	\$925,707	0.0	No	No	\$925,707
2)	Establishing Marketable Skills Workforce Development Certificate Programs in Emerging Technical Areas Funding and 7.6 FTEs to develop specialized programs targeting marketable skills for 25-34 year old Texans who may be entry-level employees, displaced workers, veterans transitioning from active duty, unrepresented minorities and in economically disadvantaged areas. The agency would create a training environment that features an interactive learning laboratory that includes virtual reality stations to enhance developing skills regarding emerging technologies.	\$5,000,000	\$5,000,000	7.6	Yes	Yes	\$4,150,000

TOTAL Items Not Included in Recommendations	\$5,925,707	\$5,925,707	7.6				\$5,075,707
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Texas A&M Engineering Experiment Station
Appendices - Senate

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* Appendix is not included - no significant information to report

** Information is included in the presentation section of the packet

Texas A&M Engineering Experiment Station
Funding Changes and Recommendations - Senate, by Strategy -- ALL FUNDS

Strategy/Goal	2016-17 Base	2018-19 Recommended	Biennial Change	% Change	Comments
RESEARCH PROGRAMS A.1.1	\$198,707,590	\$200,323,933	\$1,616,343	0.8%	Recommendations include: 1) \$1.0 million decrease in General Revenue Funds due to completion of a one-time funded pilot project related to prevention of wildfires caused by power lines (see Section 3 for details); 2) \$36,963 decrease in General Revenue - Dedicated Account 5071 resulting from the four percent base reduction requirement; and 3) \$2.6 million net increase in All Funds due to growth in agency staff salaries and wages (\$11.9 million increase in Other Funds, \$8.3 million decrease in General Revenue, and \$0.9 million decrease in Federal Funds).
TECHNOLOGY TRANSFER A.2.1	\$2,062,716	\$2,062,716	\$0	0.0%	Recommendations include a decrease of \$0.5 million in General Revenue and an increase of \$0.5 million in Other Funds (Fund 997: locally held funds from grants/contracts from industry, municipalities, and foundations) due to cyclical nature of technology funding transfers.
WORKFORCE DEVELOPMENT A.3.1	\$7,600,306	\$6,959,302	(\$641,004)	(8.4%)	Recommendations include: 1) \$0.9 million decrease in General Revenue resulting from the four percent base reduction requirement; and 2) \$0.2 million increase in Other Funds (Fund 997: locally held funds from grants/contracts from industry, municipalities, and foundations).
Total, Goal A, ENGINEERING RESEARCH	\$208,370,612	\$209,345,951	\$975,339	0.5%	
STAFF GROUP INSURANCE B.1.1	\$5,416,154	\$5,416,154	\$0	0.0%	Recommendations include \$0.9 million decrease in Federal Funds and \$0.9 million increase in Other Funds (Fund 997: locally held funds from grants/contracts from industry, municipalities, and foundations) due to agency estimated expenditure patterns.
WORKERS' COMP INSURANCE B.1.2	\$112,052	\$112,052	\$0	0.0%	
UNEMPLOYMENT INSURANCE B.1.3	\$70,308	\$70,308	\$0	0.0%	
OASI B.1.4	\$1,978,158	\$1,978,158	\$0	0.0%	

Texas A&M Engineering Experiment Station
Funding Changes and Recommendations - Senate, by Strategy -- ALL FUNDS

Strategy/Goal	2016-17 Base	2018-19 Recommended	Biennial Change	% Change	Comments
OPTIONAL RETIREMENT PROGRAM B.1.5	\$87,060	\$87,060	\$0	0.0%	
Total, Goal B, STAFF BENEFITS	\$7,663,732	\$7,663,732	\$0	0.0%	
INDIRECT ADMINISTRATION C.1.1	\$8,124,970	\$8,124,970	\$0	0.0%	Recommendations include \$0.3 million decrease in General Revenue and \$0.3 million net increase in Other Funds (\$0.3 million decrease in interagency contracts, \$0.3 million decrease in indirect cost recovery, and \$0.9 million increase in Fund 997) due to agency estimated sources of available funds.
INFRASTRUCTURE SUPPORT C.1.2	\$15,391,370	\$11,154,440	(\$4,236,930)	(27.5%)	Infrastructure Support formula funding General Revenue amount for FY2018-19 is based on FY2016-17 total appropriated levels and adjusted based on updated data. FY2016-17 base amount includes Other Funds (indirect cost recovery, grants, and interagency contracts).
CENTER FOR INFRASTRUCTURE RENEWAL C.1.3	\$4,999,541	\$9,598,097	\$4,598,556	92.0%	Recommendations include \$4.6 million increase in General Revenue for biennialized debt service requirements. FY2016-17 base expenditures included only the first year (FY2017) of debt service for the Center for Infrastructure Renewal (joint facility for TEES and Texas A&M Transportation Institute) and construction is expected to be completed in fall 2017.
Total, Goal C, INDIRECT ADMINISTRATION	\$28,515,881	\$28,877,507	\$361,626	1.3%	
Grand Total, All Strategies	\$244,550,225	\$245,887,190	\$1,336,965	0.5%	

Texas A&M Engineering Experiment Station
Summary of Federal Funds - Senate
(Dollar amounts in Millions)

Appendix B

Program	Est 2016	Bud 2017	Rec 2018	Rec 2019	2016-17 Base	2018-19 Rec	2018-19 Rec % Total	Recommended Over/(Under) Base	% Change from Base
Air Force Defense Research Sciences	\$5.1	\$5.3	\$6.6	\$6.6	\$10.4	\$13.2	14.6%	\$2.8	26.6%
Engineering Grants	\$6.2	\$6.0	\$6.1	\$6.1	\$12.3	\$12.1	13.5%	(\$0.2)	(1.4%)
Computer and Information Science and Engineering	\$4.3	\$4.4	\$4.4	\$4.4	\$8.7	\$8.8	9.8%	\$0.1	1.4%
Nuclear Energy Research, Development, and Demonstration	\$4.0	\$4.0	\$4.4	\$4.4	\$7.9	\$8.7	9.7%	\$0.8	10.0%
Office of Energy Research Financial Assistance Program	\$3.5	\$3.5	\$3.7	\$3.7	\$7.0	\$7.4	8.3%	\$0.5	6.7%
Education and Human Resources	\$2.6	\$2.6	\$2.6	\$2.6	\$5.1	\$5.2	5.8%	\$0.0	0.7%
Biomedical Advanced Research and Development Authority	\$1.7	\$1.3	\$2.1	\$2.1	\$3.0	\$4.1	4.6%	\$1.1	36.4%
Centers for Homeland Security	\$1.4	\$1.5	\$2.0	\$2.0	\$2.9	\$4.0	4.5%	\$1.1	37.9%
Basic and Applied Scientific Research	\$1.1	\$1.1	\$1.7	\$1.7	\$2.1	\$3.4	3.8%	\$1.3	59.5%
Safety & Environmental Research.-Offshore Energy & Mineral	\$0.9	\$0.9	\$1.3	\$1.3	\$1.9	\$2.7	3.0%	\$0.8	41.5%
Mathematical and Physical Sciences	\$1.1	\$1.1	\$1.2	\$1.2	\$2.3	\$2.3	2.6%	\$0.0	0.8%
Clinical Research Related to Neurological Disorders	\$0.7	\$0.7	\$0.8	\$0.8	\$1.5	\$1.7	1.8%	\$0.2	14.0%
Protection, Clearing, and Straightening Channels	\$0.4	\$0.4	\$0.7	\$0.7	\$0.8	\$1.5	1.6%	\$0.6	77.7%
Biomedical Imaging Research	\$0.6	\$0.6	\$0.7	\$0.7	\$1.2	\$1.4	1.6%	\$0.2	16.7%
Biological Sciences	\$0.6	\$0.6	\$0.6	\$0.6	\$1.1	\$1.2	1.3%	\$0.0	4.3%
Aviation Research Grants	\$0.4	\$0.4	\$0.5	\$0.5	\$0.8	\$1.1	1.2%	\$0.3	39.7%
Allergy, Immunology, and Transplantation Research	\$0.4	\$0.4	\$0.5	\$0.5	\$0.9	\$1.1	1.2%	\$0.2	20.6%
Renewable Energy Research and Development	\$0.5	\$0.5	\$0.5	\$0.5	\$1.0	\$1.0	1.2%	\$0.1	8.1%
Basic, Applied, and Advanced Research in Science & Engineering	\$0.3	\$0.3	\$0.5	\$0.5	\$0.7	\$0.9	1.0%	\$0.2	32.3%
National Institutes of Health Research Support	\$0.4	\$0.4	\$0.4	\$0.4	\$0.8	\$0.9	1.0%	\$0.1	10.1%
Cardiovascular Diseases Research	\$0.3	\$0.3	\$0.4	\$0.4	\$0.5	\$0.7	0.8%	\$0.2	41.8%
Employment Service	\$0.3	\$0.3	\$0.4	\$0.4	\$0.6	\$0.7	0.8%	\$0.1	18.4%
Defense Advanced Research Projects Energy Assistance Program	\$0.4	\$0.4	\$0.3	\$0.3	\$0.8	\$0.7	0.7%	(\$0.1)	(16.8%)
Diabetes, Endocrinology, and Metabolism Research	\$0.2	\$0.2	\$0.3	\$0.3	\$0.4	\$0.6	0.7%	\$0.2	44.3%
Conservation Research and Development	\$0.2	\$0.2	\$0.3	\$0.3	\$0.4	\$0.5	0.6%	\$0.1	25.2%
Global Threat Reduction	\$0.2	\$0.2	\$0.3	\$0.3	\$0.5	\$0.5	0.6%	\$0.1	11.4%
Research and Technology Development	\$0.2	\$0.2	\$0.3	\$0.3	\$0.5	\$0.5	0.6%	\$0.0	8.5%
Research Related to Deafness and Communication Disorders	\$0.2	\$0.2	\$0.2	\$0.2	\$0.5	\$0.5	0.5%	\$0.0	7.2%

Texas A&M Engineering Experiment Station
Summary of Federal Funds - Senate
(Dollar amounts in Millions)

Appendix B

Program	Est 2016	Bud 2017	Rec 2018	Rec 2019	2016-17 Base	2018-19 Rec	2018-19 Rec % Total	Recommended Over/(Under) Base	% Change from Base
Basic Scientific Research	\$1.1	\$1.2	\$0.2	\$0.2	\$2.3	\$0.5	0.5%	(\$1.8)	(79.1%)
Energy Efficiency	\$0.2	\$0.2	\$0.2	\$0.2	\$0.5	\$0.5	0.5%	\$0.0	2.5%
Homeland Security Research Related to Nuclear Detection	\$0.2	\$0.2	\$0.2	\$0.2	\$0.3	\$0.4	0.4%	\$0.0	15.0%
University Transportation Centers Program	\$0.1	\$0.1	\$0.2	\$0.2	\$0.3	\$0.3	0.4%	\$0.0	13.1%
Nonproliferation and National Security Research	\$0.2	\$0.2	\$0.2	\$0.2	\$0.3	\$0.3	0.4%	\$0.0	5.0%
Basic Scientific Research Combating Weapons of Mass Destruction	\$0.6	\$0.7	\$0.1	\$0.1	\$1.3	\$0.1	0.2%	(\$1.2)	(89.3%)
Aerospace Education Services Program	\$0.4	\$0.4	\$0.0	\$0.0	\$0.9	\$0.1	0.1%	(\$0.8)	(93.4%)
All Other Grants	\$3.7	\$3.8	\$0.2	\$0.2	\$7.5	\$0.3	0.4%	(\$7.2)	(95.5%)
TOTAL:	\$45.0	\$45.0	\$45.0	\$45.0	\$90.0	\$90.0	100.0%	\$0.0	0.0%

Texas A&M Engineering Experiment Station
Performance Measure Highlights - Senate

	Expended 2015	Estimated 2016	Budgeted 2017	Recommended 2018	Recommended 2019
<ul style="list-style-type: none">Dollar Volume of Research (Millions)	120.1	114.0	114.0	113.5	113.5
<i>Measure Explanation: The total research-related funding (excludes non-appropriated sources) to TEES on a fiscal year basis which identifies a capability level of TEES' divisions, centers, and institutes for obtaining research dollars.</i>					
<ul style="list-style-type: none">Number of Research Projects	4,838	4,252	4,252	4,252	4,252
<i>Measure Explanation: The total number of individual research projects performed by TEES and its principal investigators.</i>					
<ul style="list-style-type: none">Number of Patent Applications	62	65	65	65	65
<i>Measure Explanation: The cumulative count of formal patent applications made for TEES inventions in the United States and foreign countries. Patent applications are sought for TEES' research results with commercial application to secure industry partnerships and investments in continuing research and development.</i>					

Texas A&M Engineering Experiment Station
Summary of Ten Percent Biennial Base Reduction Options - Senate

Priority	Item	Description/Impact	Biennial Reduction Amounts			Potential Revenue Loss	Reduction as % of Program GR/GR-D Total	Included in Introduced Bill?
			GR & GR-D	All Funds	FTEs			
1)	Research Divisions	The Texas A&M Engineering Experiment Station (TEES) reports this reduction option would reduce the scope of its research programs and services. TEES indicates this would have a negative impact on the agency's ability to leverage state funds into external funding, and funding levels could be reduced during the 2018-19 biennium and subsequent biennia. Additionally, TEES indicates this level of reduction could have a negative impact on the agency's ability to ensure compliance with external funding requirements and ability to maintain reasonable customer service levels.	\$1,421,491	\$1,421,491	0.0	\$0	13%	No
2)	Texas Emissions Reduction Plan	TEES reports this reduction option in the agency's Texas Emissions Reduction Plan funding could negatively impact the ability to complete research and the opportunity to leverage these funds into additional contracts and grants.	\$85,883	\$85,883	0.0	\$0	10%	No
3)	Workforce Development	TEES reports this reduction option would reduce workforce development programs. TEES indicates this would negatively impact the ability to deliver programming in pre-kindergarten through 12th grade, engineering outreach, institutional partnerships, and professional and continuing education.	\$73,562	\$73,562	0.0	\$0	2%	No
4)	Indirect Administration	TEES reports this reduction option would reduce Indirect Administration. TEES indicates that as the agency provides a mechanism through which Texas institutions and industry can collaborate, these reductions would impact the contract compliance support used to secure and administer large scale multi-institutional federal and other public funds.	\$640,761	\$640,761	0.0	\$0	10%	No
TOTAL, 10% Reduction Options			\$2,221,697	\$2,221,697	0.0	\$0		