2021 USDA EXPLANATORY NOTES – ANIMAL AND PLANT HEALTH INSPECTION SERVICE

AGENCY-WIDE

PURPOSE STATEMENT

The Secretary of Agriculture established the Animal and Plant Health Inspection Service (APHIS) on April 2, 1972, under the authority of Reorganization Plan No. 2 of 1953 and other authorities. The mission of the Agency is to safeguard the health, welfare, and value of American agriculture and natural resources.

Together with its stakeholders, APHIS promotes the health of animal and plant resources to facilitate their movement in the global marketplace and to ensure abundant agricultural products and services for U.S. customers. APHIS also ensures that biotechnology-derived agricultural products are safe for release in the environment. APHIS strives to assure its stakeholders that it is on guard against the introduction or re-emergence of animal and plant pests and diseases that could limit agricultural production and damage export markets. At the same time, APHIS monitors and responds to invasive species, diseases of wildlife and livestock, and conflicts between humans and wildlife. The Agency also helps to resolve sanitary (animal) and phytosanitary (plant) trade barriers and addresses certain issues relating to the humane treatment of animals.

APHIS' mission is carried out using three major areas of activity, as follows:

Safeguarding and Emergency Preparedness/Response

In addition to APHIS' domestic monitoring, APHIS monitors animal and plant health throughout the world and uses the information to set effective agricultural import policies to prevent the introduction of foreign animal and plant pests and diseases. APHIS and the U.S. Department of Homeland Security cooperate to ensure that these policies are enforced at U.S. ports of entry. These policies prevent the entry of many invasive pests, including crop, pollinator, woodland, and livestock pests. APHIS also develops and conducts pre-clearance programs to ensure that foreign agricultural products destined for the United States do not present a risk to U.S. agriculture. The Agency engages in cooperative programs to control pests of imminent concern to the United States and to strengthen our relationships with international animal and plant health regulatory authorities and coordinating bodies. APHIS certifies plants and plant products for export to other countries and regulates imports and exports of designated endangered plant species.

Should a pest or disease enter the United States, APHIS works cooperatively with other Federal, State, and industry partners to conduct animal and plant health monitoring programs to rapidly determine if there is a need to establish new pest or disease management programs. APHIS, in conjunction with States, industry, and other stakeholders, protects American agriculture by eradicating harmful pests and diseases or, where eradication is not feasible, by minimizing their economic impact. The Agency monitors endemic pests and diseases through surveys to detect their location and through inspection to prevent their spread into non-affected parts of the country.

The Agency maintains a cadre of trained professionals prepared to respond immediately to potential animal and plant health emergencies. Program personnel investigate reports of suspected exotic pests and diseases and take emergency action if necessary. To facilitate these efforts, APHIS develops pathway studies and thoroughly investigates outbreaks to determine the origin of animal and plant pests and diseases and the most appropriate response actions to take including the development of tools and technologies to help manage these pests. APHIS also actively engages State, Tribal, and local governments, and industries to advance their emergency preparedness and response capabilities.

APHIS develops methods to control animals and pests that are detrimental to agriculture, wildlife, and public safety through its Wildlife Services program. The Agency's regulatory structure brings the benefits of genetic technologies to the marketplace, while ensuring they do not pose a pest risk to plants. APHIS also conducts diagnostic laboratory activities that support the Agency's veterinary disease prevention, detection, control, eradication, and response programs.

Safe Trade and International Technical Assistance

Sanitary and phytosanitary (SPS) measures implemented by U.S. trading partners can have a significant impact on market access for the United States as an exporter of agricultural products. APHIS plays a central role in resolving technical trade issues to ensure the smooth and safe movement of agricultural commodities into and out of the United States. APHIS' role is to negotiate animal and plant health certification requirements, assist U.S. exporters in meeting foreign regulatory requirements, ensure requirements are proportional to risk without being excessively restrictive, and provide any necessary technical information to support the safety of U.S. agricultural products destined for foreign markets.

APHIS helps to protect the United States from emerging animal and plant pests and diseases while meeting obligations under the World Trade Organization's SPS agreement by assisting developing countries in improving their safeguarding systems. APHIS collaborates with other Federal agencies including the Foreign Agricultural Service, the U.S. Agency for International Development, the U.S. State Department, and the Office of the U.S. Trade Representative, to implement technical and regulatory capacity building projects with shared resources. APHIS develops and implements programs designed to identify and reduce agricultural pest and disease threats while still outside of U.S. borders, to enhance safe agricultural trade, and to strengthen emergency response preparedness.

Animal Welfare

The Agency conducts regulatory activities to ensure the humane care and treatment of certain animals and horses as required by the Animal Welfare Act of 1966 as amended (7 U.S.C. 2131-2159), and the Horse Protection Act of 1970 as amended (15 U.S.C. 1821-1831). These activities include inspection of certain establishments that handle animals intended for research, exhibition, and sale as pets, and monitoring of certain horse shows.

Statutory Authorities

APHIS operates under the following authorities:

General:

7 U.S.C. 1633	Talmadge-Aiken Act (cooperation with States)
7 U.S.C. 7759	User Fees (for export certification of plants)
21 U.S.C. 136-136a	User Fees
31 U.S.C. 9701	User Fees (offsetting collections and miscellaneous receipts)
7 U.S.C. 3291(a)	Authority to provide technical assistance and training
7 U.S.C. 5680	Farm Security and Rural Investment Act of 2002 (reporting on SPS issues and trade barriers)
7 U.S.C. 5925	Food, Agriculture, Conservation, and Trade Act of 1990 (authorizes funding for national honeybee pest survey)
7 U.S.C. 2279g	Marketing Services; cooperative agreements

Animal Health:

7 U.S.C. 8301-8317	Animal Health Protection Act
49 U.S.C. 80502	28-Hour Law (feed, water, and rest for animals)
19 U.S.C. 1202, Part I, Item 100.01	Purebred animal duty-free entry
7 U.S.C. 1622	Section 203 of the Agricultural Marketing Act of 1946
7 U.S.C. 1624	Section 205 of the Agricultural Marketing Act of 1946
7 U.S.C. 398	Section 101(d) of the Organic Act of l944
7 U.S.C. 3801-3813	Swine Health Protection Act
7 U.S.C. 851-855	Anti-hog cholera serum and hog cholera virus
7 U.S.C. 2274	Firearms (tick inspectors)
7 U.S.C. 1901 note	Transportation of Equines to Slaughter
21 U.S.C. 151-159	Virus-Serum-Toxin Act
21 U.S.C. 113a	Authority to establish research facilities for Foot-and-Mouth and other diseases
21 U.S.C. 618	Section 18 of the Federal Meat Inspection Act, as amended, as it pertains to the issuance of certificates of condition of live animals for export
7 U.S.C. 8401 and 8411	Title II, Subtitles B and C of the Public Health Security and Bioterrorism Preparedness and Response Act of 2002
7 U.S.C. 8318	Section 10504 of the Farm Security and Rural Investment Act of 2002 (training of accredited veterinarians)

Plant Health:

7 U.S.C. 7701-7772; and 7781-7786	Plant Protection Act
7 U.S.C. 1581-1610	Title III, Federal Seed Act
7 U.S.C. 2801 note; 2814	Federal Noxious Weed Act
7 U.S.C. 281-286	Honeybee Act
7 U.S.C. 7760	Terminal Inspection Act
7 U.S.C. 2279e and 2279f	Title V of the Agricultural Risk Protection Act of 2000 (penalties for interfering with inspection animals)
16 U.S.C. 1531-1544	Endangered Species Act (plants)
16 U.S.C. 3371-3378	Lacey Act (importation or shipment of injurious mammals, birds, fish)
7 U.S.C. 8401	Title II, Subtitle B of the Public Health Security and Bioterrorism Preparedness and Response Act of 2002
39 U.S.C. 3015	Alien Species Prevention and Enforcement Act of 1992

Wildlife Services:

7 U.S.C. 8351-8354	Control of predatory and other wild animals

Animal Welfare:

7 U.S.C. 2131-2159	Animal Welfare Act
15 U.S.C. 1821-1831	Horse Protection Act

There were 5,489 permanent full-time employees as of September 30, 2019. Of the total, 1,203 full-time employees were located at headquarters. APHIS manages programs on a national basis through two regional offices and 431 field offices, including area offices, work stations, technical centers, and animal import centers. APHIS conducts much of its work in cooperation with State and local agencies, private groups, and foreign governments. APHIS performs work in the 50 States, Washington, D.C., Guam, Puerto Rico, Virgin Islands, Mexico, Central America, South America, the Caribbean, Western Europe, Asia, and Africa.

Each year, the Office of Inspector General (OIG) and the Government Accountability Office (GAO) audits selected programs to examine the efficiency of the programs and operations including program results, compliance with applicable laws and regulations, and fair presentation of financial reports. Audits in which APHIS has been involved during FYs 2019 – 2020 include those listed below.

OIG and GAO Reports

Completed OIG Reports

ID	Date	Title	Result
33099-01-23	05/2018	Texas Boll Weevil Eradication Foundation Grant	OIG report was issued with 6 recommendations. APHIS implemented one recommendation. APHIS is in the process of implementing the 5 remaining recommendations.
33601-01-31	05/2017	Animal Welfare Act – Marine Mammals	OIG report was issued with 6 recommendations. APHIS has implemented all 6 recommendations. Audit is officially closed.
33601-01-41	12/2014	APHIS Oversight of Research Facilities	OIG report was issued with 15 recommendations. Of the 15 recommendations, 14 recommendations are closed. Recommendation #15 is still pending implementation and will remain open until APHIS revises Form #7023 and develops related guidance.
50099-03-21	09/2018	USDA's Management over the Misuse of Government Vehicles	Audit includes APHIS and other USDA Agencies. Audit work is on-going.
50601-01-32	11/2013	Controls Over APHIS' Introduction of Genetically Engineered Organisms	OIG report was issued with 13 recommendations. APHIS implemented and received official closure on 11 of the 13 recommendations. Recommendations #2 and 8 are pending implementation. Recommendation #8 is related to the e-File system. Once the e-File pilot launch is completed, APHIS will submit its closure requests.
50601-04-31	03/2016	USDA Response to Antibiotic Resistance	OIG report was issued with 6 of the 19 recommendations for APHIS. All 6 APHIS related recommendations have been implemented. Audit is officially closed.

ID	Date	Title	Result
50601-08-TE	12/2005	Controls Over APHIS Issuance of Genetically Engineered Organisms	OIG report was issued with 28 recommendations. Of the recommendations, 25 are closed. Recommendations #1-3 remain open, until the publication of the final rule.
50701-01-21	09/2018	Release Permits USDA Activities for Agro-terrorism Prevention, Detection and Response	OIG report was issued with 5 recommendations for APHIS. APHIS is in process of implementing the recommendations.

In-Progress OIG Reports

ID	Title
33601-01-21	Plant Pest and Disease Management and Disaster Prevention Program - Audit started November 2019.
33601-02-31	Animal Care Program Oversight of Dog Breeders - Audit started September 2019.
33601-03-23	Follow-up on APHIS Controls Over Licensing of Animal Exhibitors - Audit will start December 2019.
33601-04-23	Follow-Up on Smuggling, Interdiction and Trade Compliance - Audit started November 2019.
33701-01-21	National Veterinary Stockpile Oversight - Audit started August 2018.
33701-01-AT	Controls Over Select Agents - Audit started October 2019.
50501-17-12	Security Over Select USDA Agencies' Networks and Systems – Audit started January 2018.
50501-21-12	Data Encryption Controls Over Personally Identifiable Information on USDA Information Technology Systems- Audit started May 2018.

Completed GAO Reports

ID	Date	Title	Result
100267	03/2017	Federal Actions to Monitor and Control Antibiotic Resistance in Food and Animals	Audit includes APHIS and other USDA and non-USDA agencies. GAO report was issued with one recommendation with 3 parts for APHIS. APHIS has implemented two parts, and is in the process of implementing the remaining part of the recommendation.
101016	10/2017	Comparative Oversight of High-Containment Laboratories	Audit includes APHIS and other non-USDA agencies. GAO report was issued with 6 recommendations for APHIS. APHIS has implemented 3 recommendations, and is in the process of implementing the other 3 recommendations.
101657	05/2018	Financial Rewards for Reporting Illegal Activities Related to Plants, Wildlife, and Antiquities	Audit report was issued May 2018. No recommendations were made for APHIS. The report is officially closed.
101732	08/2018	Federal Grants Workforce Training	Audit report was issued August 2018. No recommendations were made for APHIS. The report officially closed.
101985	05/2018	Multilateral Organizations Animal Use in Federal Research: Agencies Share Information, but Reporting and Data Quality Could Be Strengthened	Audit report was issued with 4 recommendations for APHIS. APHIS implemented 1 recommendation and is in the process of implementing the remaining 3 recommendations.

ID	Date	Title	Result
102051	05/2019	USDA's Preparedness for Foot-and-Mouth Disease	The report was issued May 2019 with 2 recommendations for APHIS. APHIS is in the process of implementing the 2 recommendations.
102509	03/2017	Federal Preparedness for Responding to Antimicrobial-Resistant Pathogens	APHIS is no longer part of this audit. Thus audit/report is officially closed for APHIS.
102874	09/2019	Federal Government's Efforts to Develop, Validate, and Promote Alternatives to the Use of Animals in Research, Testing and Training	The report was issued September 2019 with no recommendations for APHIS. The report is officially closed for APHIS.
291264	03/2016	High-Containment Laboratories: Comprehensive and Up-to-Date Policies and Stronger Oversight Mechanisms Needed to Improve Safety	Audit report was issued with 5 recommendations. APHIS has implemented all recommendations and is awaiting final closure from GAO. In February 2019, GAO requested additional information from agencies. In March 2019, APHIS provided GAO with the additional information requested for the final closure on recommendations.
361562	05/2015	Federal Veterinarian Workforce	The audit includes the Office of Personnel Management. GAO report was issued with 1 recommendation for APHIS. APHIS implemented the recommendation. Report is officially closed.
361589	04/2016	Genetically Engineered Crops	The audit includes APHIS and USDA's National Agricultural Statistics Service. GAO report was issued with 3 recommendations for APHIS.

ID	Date	Title	Result
			APHIS is in process of implementing the three recommendations.
460640	09/2016	Improved Oversight of Dangerous Pathogens Needed to Mitigate Risk	GAO report was issued with 5 recommendations for APHIS and several non-USDA Agencies. APHIS has implemented 4 recommendations. APHIS will coordinate to implement the remaining recommendation.

In-Progress GAO Reports

ID	Title
102432	Federal Efforts in Environmental Justice - Audit started November 2017.
102916	Federal Cybersecurity Requirements and Assessments for State Programs - Audit started August 2018.
102947	National Bio- and Agro-Defense Facility Operations Transfer - Audit started July 2018.
103085	U.S. Postal Service's Delivery Network - Audit started May 2019.
103113	National Biodefense Strategy - Audit started November 2018.
103335	USDA Business Centers - Audit started February 2018.
103549	Federal Government's Use of Internet of Things Technologies. Audit will start December 2019.

LEAD-OFF TABULAR STATEMENT

2020 Appropriations	$1,045,886,000
Change in Appropriation	-10,324,000
2021 Request, Current Law	1,035,562,000

AVAILABLE FUNDS AND STAFF YEARS

Animal and Plant Health Inspection Service
(Dollars in Thousands)

Item	2018 Actual	SY	2019 Actual	SY	2020 Enacted	SY	2021 Budget	SY
Salaries and Expenses:								
Discretionary Appropriations	$981,893	4,827	$1,011,136	4,869	$1,042,711	4,969	$1,032,988	4,983
Citrus Greening a/	7,500	-	8,500	-	8,500	-	-	-
Subtotal Discretionary Funding	989,393	4,827	1,019,636	4,869	1,051,211	4,969	1,032,988	4,983
Mandatory Funding:								
Farm Bill - Section 7721	70,050	26	70,350	26	70,575	26	75,000	26
Farm Bill - Section 12101	-	-	120,000	30	-	-	-	-
Farm Bill - Section 2408	-	-	37,500	200	-	-	-	-
Agricultural Quarantine Inspection User Fees:								
Total Collections	796,584	1,325	826,724	1,325	844,258	1,325	894,656	1,325
Buildings and Facilities:								
Discretionary Appropriations	3,175	-	3,175	-	3,175	-	2,574	-
Trust Funds:								
Mandatory Appropriations	9,514	50	8,471	50	9,005	50	9,000	50
Foreign Service National Separation Liability Trust	157	-	2,778	-	400	-	400	-
Transfers Out	-539,000	-	-539,000	-	-582,187	-	-582,187	-
Adjusted Appropriation	1,329,873	6,228	1,549,634	6,500	1,396,437	6,370	1,432,431	6,384
Balance Available, SOY	415,469	498	457,880	516	599,199	996	580,219	935
Other Adjustments (Net)	36,492	-	-9,474	-	-	-	-	-
Total Available	1,781,835	6,726	1,998,040	7,016	1,995,636	7,366	2,012,650	7,319
Lapsing Balances	-4,221	-498	-333	-365	-	-	-	-
Transferred Balances	-	-	6,492	-	-	-	-	-
Balance Available, EOY	-457,880	-516	-599,199	-996	-580,219	-935	-561,885	-928
Subtotal Obligations, APHIS	1,319,734	5,712	1,405,000	5,655	1,415,417	6,431	1,450,765	6,391
Obligations Under Other USDA Appropriations:								
Agricultural Marketing Service	9,819	-	23,823	-	23,800	-	23,800	-
Agricultural Research Service	4,889	-	36,378	-	36,400	-	30,400	-
Departmental Administration	80	-	9	-	-	-	-	-
Food Safety and Inspection Service	364	-	-	-	-	-	-	-
Foreign Agricultural Service	4,757	-	5,774	-	5,800	-	5,800	-
Forest Service	697	-	333	-	300	-	300	-
National Appeals Division	7	-	-	-	-	-	-	-
National Institute of Food and Agriculture	106	-	-	-	-	-	-	-
Natural Resources Conservation Service	11	-	-	-	-	-	-	-
Office of Chief Financial Officer	145	-	-	-	-	-	-	-
Office of the Chief Information Officer	84	-	-	-	-	-	-	-
Office of the Secretary	24	-	-	-	-	-	-	-
Risk Management Agency	42	-	-	-	-	-	-	-
Total, Other USDA	21,025	-	66,317	-	66,300	-	60,300	-
Total, Agriculture Appropriations	1,340,759	5,712	1,471,317	5,655	1,481,717	6,431	1,511,065	6,391
Other Federal Funds:								
DOD, U.S. Air Force	11,096	-	17,195	-	17,200	-	17,200	-
DOD, Air National Guard	2,947	-	70	-	100	-	100	-
DOD, U.S. Navy	4,810	-	4,407	-	4,400	-	4,400	-
DOD, U.S. Marine Corps	2,133	-	1,227	-	1,200	-	1,200	-
DOD, U.S. Army	1,365	-	2,150	-	2,100	-	2,100	-
DOD, U.S. Army Corp of Engineers	1,687	-	1,789	-	1,800	-	1,800	-
DOD, Defense Threat Reduction Agency	76	-	21	-	20	-	20	-
Department of Energy	190	-	239	-	200	-	200	-

Item	2018 Actual	SY	2019 Actual	SY	2020 Enacted	SY	2021 Budget	SY
Department of Health and Human Services	104	-	22	-	20	-	20	-
DHS: for Coast Guard and other services and support	394	-	1,126	-	1,100	-	1,100	-
Federal Emergency Management Agency	332	-	9,160	-	300	-	300	-
National Aeronautics and Space Administration	347	-	216	-	200	-	200	-
USDOI, Geological Survey, National Park Service, Office of Insular Affairs	1,401	-	1,808	-	1,800	-	1,800	-
USDOI, Bureau of Land Management & Reclamation: for administrative and technical support	471	-	639	-	600	-	600	-
USDOI, Fish and Wildlife Services: for natural resources and endangered species	2,479	-	2,402	-	2,400	-	2,400	-
USDOT: Federal Aviation Administration	857	-	1,022	-	1,000	-	1,000	-
Department of State: for miscellaneous services	3	-	-	-	-	-	-	-
Department of Veterans Affairs	24	-	81	-	100	-	100	-
Environmental Protection Agency	-	-	-	-	-	-	-	-
for miscellaneous services	1,034	-	1,499	-	1,500	-	1,500	-
GSA: for miscellaneous services	2	-	2	-	2	-	2	-
Other Federal Funds	251	411	788	418	800	410	800	410
Total, Other Federal	32,003	411	45,863	418	36,842	410	36,842	410
Non-Federal Funds:								
Funds from organizations, states, and local entities for wildlife, plant, and animal services support	58,001	636	64,447	660	64,400	665	64,400	665
Import-Export User Fees	42,569	336	44,411	353	44,455	355	44,500	355
Phytosanitary Certificate User Fees	18,983	137	19,282	139	19,301	140	19,321	140
Reimbursable Overtime	9,379	83	9,074	88	9,083	90	9,092	90
Veterinary Diagnostics User Fees	6,319	54	6,689	54	6,696	60	6,702	60
Other User Fees	3	-	2	-	2	-	2	-
Total, Non-Federal	135,254	1,246	143,905	1,294	143,937	1,310	144,017	1,310
Total, APHIS	1,508,016	7,369	1,661,085	7,367	1,662,496	8,151	1,691,924	8,111

PERMANENT POSITIONS BY GRADE AND STAFF YEAR

Item	2018 Actual			2019 Actual			2020 Enacted			2021 Budget		
	Hdqts	Field	Total	Hdqts	Field	Total	Hdqts	Field	Total	Hdqts	Field	Total
SES	26	10	36	28	9	37	29	10	39	29	10	39
GS-15	77	59	136	78	67	145	82	63	145	82	63	145
GS-14	333	290	623	338	299	637	340	306	646	340	323	663
GS-13	284	507	791	289	541	830	312	525	837	313	548	861
GS-12	200	974	1,174	208	981	1,189	318	995	1,313	322	1,016	1,338
GS-11	95	769	864	93	761	854	99	785	884	102	769	871
GS-10	-	8	8	1	8	9	1	12	13	1	12	13
GS-9	70	451	521	72	417	489	72	467	539	75	469	544
GS-8	7	259	266	10	256	266	10	265	275	10	274	284
GS-7	61	597	658	53	561	614	62	600	662	62	602	664
GS-6	8	155	163	5	185	190	8	155	163	8	161	169
GS-5	7	103	110	8	68	76	8	105	113	8	105	113
GS-4	15	18	33	7	21	28	15	18	33	15	18	33
GS-3	3	14	17	-	11	11	3	14	17	3	14	17
GS-2	-	-	-	-	-	-	-	-	-	-	-	-
GS-1	-	-	-	-	-	-	-	-	-	-	-	-
Other Graded	15	109	124	13	101	114	15	112	127	15	112	127
Ungraded	-	-	-	-	-	-	-	-	-	-	-	-
Total Perm. FT EOY	1,201	4,323	5,524	1,203	4,286	5,489	1,374	4,432	5,806	1,385	4,496	5,881
Staff Year Est	1,434	5,935	7,369	1,434	5,933	7,367	1,549	6,602	8,151	1,541	6,570	8,111

SIZE, COMPOSITION, AND ANNUAL COSTS OF VEHICLE FLEET

Motor Vehicle Fleet

APHIS uses vehicles to deliver mission critical services. The Agency's veterinarians, animal health technicians, inspectors, plant protection and quarantine officers, wildlife biologists, and other technical personnel use motor vehicles in their daily responsibilities, which entail travel between inspection sites, farms, ranches, ports, nurseries, and other commercial firms. In some cases, APHIS' cooperators use Agency vehicles as authorized in program cooperative agreements.

To maximize the life span of vehicles, operators are required to keep historical maintenance records and submit the vehicles' operational and cost data for review and report on the vehicle's condition and usage statistics at least once a year. Periodic maintenance surveys and reviews of consolidated vehicle fleet data ensure optimal use of each vehicle in the fleet.

Replacement Criteria

APHIS replaces vehicles in accordance with Title 41, CFR § 102–34.270. Agency programs replace and retire vehicles using data on utilization, age, condition, and funding availability. The average age of APHIS' vehicle fleet is six years. APHIS has implemented efforts to both increase the number of alternative fuel vehicles and extend the life cycle of each vehicle.

Reductions to Fleet

APHIS ended FY 2019, with 4,463 vehicles (leased and owned), which is a reduction of 132 vehicles. The projected number of vehicles for FY 2020 and FY 2021 continue to reduce because the agency plans to purchase replacement vehicles, only. Fleet additions are determined and approved on a case-by-case basis by the Deputy Administrator for Marketing and Regulatory Programs Business Services.

Size, Composition, and Annual Costs of Motor Vehicle Fleet [a]

Fiscal Year	Sedans and Station Wagons	Lt. SUVs and Vans	Lt. Trucks (4x2)	Lt. Trucks (4x4)	Medium Duty Vehicles	Heavy Duty Vehicles	Total Vehicles	Annual Operating Costs [b]
2018	246	1,073	272	2,092	896	16	4,595	$19,466
Change	-26	-42	-24	-46	+8	-2	-132	-153
2019	220	1,031	248	2,046	904	14	4,463	19,313
Change	-43	-16	-1	-28	-1	-	-89	-193
2020	177	1,015	247	2,018	903	14	4,374	19,120
Change	-12	-15	-9	-16	-	-	-52	-191
2021	165	1,000	238	2,002	903	14	4,322	18,929

[a] Vehicle count includes those owned by agency and leased from commercial sources or GSA.

[b] Excludes acquisition costs and gains from sale of vehicles as shown in FAST.

Aircraft

APHIS uses aircraft to conduct mission critical activities such as aerial resource and surveillance surveys, aerial application tests, equipment demonstration and testing, implementation of methods for the control and/or eradication of destructive plant pests or wildlife to reduce damage to agricultural crops, among others.

The annual appropriations act provides APHIS with authority to acquire up to five aircraft of which two shall be for replacement. The agency replaces aircraft when necessary to maintain fleet safety and efficient operating conditions.

The APHIS aircraft fleet consists of 71 aircraft of which there are 7 operable aircraft for domestic plant pest and disease management programs, and 64 aircraft used for the wildlife damage management programs. Of the 64 aircraft used for the wildlife damage management programs: 58 are owned, 4 are borrowed from State cooperators, and 2 are rented. Of the 58 owned aircraft, 5 of them are non-operational. APHIS uses the non-operational aircraft for parts.

SHARED FUNDING (dollars in thousands)

Item	2018 Actual	2019 Actual	2020 Enacted	2021 Budget
Working Capital Fund:				
Administrative Services:				
Material Management Service Center	$858	$981	$880	$893
Mail and Reproduction Services	208	173	171	178
Integrated Procurement Systems	1,655	1,602	1,605	1,605
Procurement Operations Division	40	51	75	60
Human Resources Enterprise System Management	105	106	120	126
Subtotal	2,866	2,913	2,851	2,862
Communications:				
Creative Media and Broadcast Center	654	48	333	237
Finance and Management:				
National Finance Center	2,425	2,216	2,130	1,988
Financial Shared Services	7,059	9,803	12,085	11,339
Internal Control Support Services	153	118	150	124
Subtotal	9,637	12,137	14,365	13,451
Information Technology:				
Client Experience Center	3,571	4,671	20,089	29,575
Department Administration Information Technology Office	-	-	10	10
Digital Infrastructure Services Center	12,389	6,981	10,901	10,632
Enterprise Network Services	1,503	3,428	7,369	7,514
Subtotal	17,463	15,080	38,369	47,731
Correspondence Management Services	953	1,371	1,379	1,479
Total, Working Capital Fund	31,573	31,549	57,297	65,760
Department-Wide Shared Cost Programs:				
1890's USDA Initiatives	-	-	-	-
Advisory Committee Liaison Services	5	5	6	6
Agency Partnership Outreach	580	590	614	614
Classified National Security Information	-	-	-	-
Continuity of Operations Planning	-	-	-	-
Emergency Operations Center	-	-	-	-
Facility and Infrastructure Review and Assessment	-	-	-	-
Faith-Based Initiatives and Neighborhood Partnerships	-	-	-	-
Hispanic-Serving Institutions National Program	-	-	-	-
Honor Awards	2	1	1	1
Human Resources Self-Service Dashboard	45	46	47	-
Human Resources Transformation	69	-	-	-
Identity Access Management	-	-	-	-
Intertribal Technical Assistance Network	-	-	-	-
Medical Services	8	7	4	-

Item	2018 Actual	2019 Actual	2020 Enacted	2021 Budget
Office of Customer Experience	149	199	234	234
People's Garden	37	-	-	-
Personnel Security Branch	204	189	194	194
Physical Security	-	-	460	333
Pre-authorizing Funding	-	-	-	-
Retirement Processor/Web Application	-	-	-	-
Security Detail	344	331	363	363
Security Operations	807	806	456	498
TARGET Center	102	94	91	91
USDA Enterprise Data Analytics Services	-	-	424	424
Virtual University	78	-	-	-
Total, Department Shared Cost Programs	2,430	2,268	2,894	2,758
E-Gov:				
Budget Formulation and Execution Line of Business	6	6	6	7
Disaster Assistance Improvement Plan	-	-	-	-
Enterprise Human Resources Integration	142	142	-	-
E-Rulemaking	69	57	81	81
E-Training	-	-	-	-
Financial Management Line of Business	10	10	10	10
Geospatial Line of Business	13	13	13	13
GovBenefits.gov	-	-	-	-
Grants.gov	1	1	-	-
Human Resources Line of Business	22	22	22	22
Integrated Acquisition Environment	138	149	101	101
Total, E-Gov	401	400	233	234
Agency Total	34,404	34,217	60,424	68,752

SALARIES AND EXPENSES

LEAD-OFF TABULAR STATEMENT

2020 Appropriations	$1,042,711,000
Change in Appropriation	-9,723,000
2021 Request, Current Law	1,032,988,000

APPROPRIATIONS LANGUAGE

The appropriations language follows (new language underscored; deleted matter enclosed in brackets):

For necessary expenses of the Animal and Plant Health Inspection Service, including up to $30,000 for representation allowances and for expenses pursuant to the Foreign Service Act of 1980 (22 U.S.C. 4085), [1,042,711,000]$1,032,988,000, of which [$470,000]$484,000, to remain available until expended, shall be available for the control of outbreaks of insects, plant diseases, animal diseases and for control of pest animals and birds ("contingency fund") to the extent necessary to meet emergency conditions; of which [$11,520,000]$11,659,000, to remain available until expended, shall be used for the cotton pests program, including cost share purposes or for debt retirement for active eradication zones; of which [$37,857,000]$42,285,000, to remain available until expended, shall be for Animal Health Technical Services; of which [$1,000,000]$721,000 shall be for activities under the authority of the Horse Protection Act of 1970, as amended (15 U.S.C. 1831); of which [$62,840,000]$63,517,000, to remain available until expended, shall be used to support avian health; of which $4,251,000, to remain available until expended, shall be for information technology infrastructure; of which [$192,013,000]$183,079,000, to remain available until expended, shall be for specialty crop pests; of which, [$13,826,000]$12,037,000, to remain available until expended, shall be for field crop and rangeland ecosystem pests; of which [$16,523,000]$16,699,000, to remain available until expended, shall be for zoonotic disease management; of which [$40,966,000]$41,512,000, to remain available until expended, shall be for emergency preparedness and response; of which [$60,000,000]$56,336,000, to remain available until expended, shall be for tree and wood pests; of which [$5,725,000]$5,744,000, to remain available until expended, shall be for the National Veterinary Stockpile; of which up to $1,500,000, to remain available until expended, shall be for the scrapie program for indemnities; of which $2,500,000, to remain available until expended, shall be for the wildlife damage management program for aviation safety: *Provided*, That of amounts available under this heading for wildlife services methods development, $1,000,000 shall remain available until expended: *Provided further*, That of amounts available under this heading for the screwworm program, $4,990,000 shall remain available until expended; of which [$20,800,000]$20,252,000, to remain available until expended, shall be used to carry out the science program and transition activities for the National Bio and Agro-Defense Facility located in Manhattan, Kansas: [*Provided further*, That of the

amounts avaialble to the Animal and Plant Health Inspection Service for the National Bio and Agro-Defense Facility, no funds may be obligated above the amount provided for the facility in Public Law 116-6 until the Secretary of Agriculture submits to the Committees on Appropriations of both Houses of Congress, and recieves written or electronic notification of receipt from such Committees, a strategic plan as required in House Report 116-107:] *Provided further*, That no funds shall be used to formulate or administer a brucellosis eradication program for the current fiscal year that does not require minimum matching by the States of at least 40 percent: *Provided further,* That this appropriation shall be available for the purchase, replacement, operation, and maintenance of aircraft: *Provided further*, That in addition, in emergencies which threaten any segment of the agricultural production industry of the United States, the Secretary may transfer from other appropriations or funds available to the agencies or corporations of the Department such sums as may be deemed necessary, to be available only in such emergencies for the arrest and eradication of contagious or infectious disease or pests of animals, poultry, or plants, and for expenses in accordance with sections 10411 and 10417 of the Animal Health Protection Act (7 U.S.C. 8310 and 8316) and sections 431 and 442 of the Plant Protection Act (7 U.S.C. 7751 and 7772), and any unexpended balances of funds transferred for such emergency purposes in the preceding fiscal year shall be merged with such transferred amounts: *Provided further*, That appropriations hereunder shall be available pursuant to law (7 U.S.C. 2250) for the repair and alteration of leased buildings and improvements, but unless otherwise provided the cost of altering any one building during the fiscal year shall not exceed 10 percent of the current replacement value of the building.

In fiscal year [2020]2021, the agency is authorized to collect fees to cover the total costs of providing technical assistance, goods, or services requested by States, other political subdivisions, domestic and international organizations, foreign governments, or individuals, provided that such fees are structured such that any entity's liability for such fees is reasonably based on the technical assistance, goods, or services provided to the entity by the agency, and such fees shall be reimbursed to this account, to remain available until expended, without further appropriation, for providing such assistance, goods, or services.

The first change (lines 3, 4, 7, 9-10, 12, 15-17, 19-21 and 29) delete 2020 appropriation amounts and replace it with the 2021 requests.

The second change (lines 31-37) deletes the language restricting the use of FY 2020 appropriations above the FY 2019 level for the National Bio and Agro-Defense Facility until USDA has submitted the ten-year NBAF strategic plan to Congress.

The third change (line 56) in language deletes 2020 and replaces it with 2021.

PROJECT STATEMENT

Animal and Plant Health Inspection Service
Salaries and Expenses
(Dollars in Thousands)

Program/Activity	2018 Actual B.A.	2018 Actual SY	2019 Actual B.A.	2019 Actual SY	2020 Enacted B.A.	2020 Enacted SY	2021 Budget Request B.A.	2021 Budget Request SY	Chg Key	Change from 2020 Enacted B.A.	Change from 2020 Enacted SY
Direct Appropriations:											
Safeguarding and Emergency Preparedness/Response											
Animal Health Technical Services	$37,857	156	$37,857	156	$37,857	156	$42,285	165	(1)	$4,428	9
Aquatic Animal Health	2,253	13	2,253	13	2,253	13	2,289	13	(2)	36	0
Avian Health	62,840	247	62,840	247	62,840	247	63,517	247	(3)	677	0
Cattle Health	96,500	473	96,500	473	104,500	508	97,797	473	(4)	-6,703	-35
Equine, Cervid & Small Ruminant Health	20,000	120	20,800	120	26,500	120	21,129	120	(5)	-5,371	0
National Veterinary Stockpile	5,725	$7	5,725	7	5,725	7	5,744	7	(6)	19	0
Swine Health	24,800	146	24,800	146	24,800	146	25,200	146	(7)	400	0
Veterinary Biologics	16,417	101	16,417	101	17,417	108	20,694	128	(8)	3,277	20
Veterinary Diagnostics	39,540	151	50,140	158	57,340	172	52,063	172	(9)	-5,277	0
Zoonotic Disease Management	16,523	64	16,523	64	16,523	64	16,699	64	(10)	176	0
Subtotal, Animal Health	322,455	1,478	333,855	1,485	355,755	1,541	347,417	1,535		-8,338	-6
Agricultural Quarantine Inspection (Appropriated)	31,330	372	32,330	372	32,330	372	33,350	372	(11)	1,020	0
Cotton Pests	11,520	51	11,520	51	11,520	51	11,659	51	(12)	139	0
Field Crop & Rangeland Ecosystems Pests	9,326	77	11,826	77	13,826	77	12,037	77	(13)	-1,789	0
Pest Detection	27,446	190	27,446	190	27,446	190	27,967	190	(14)	521	0
Plant Protection Methods Development	20,686	131	20,686	131	20,686	131	21,045	131	(15)	359	0
Specialty Crop Pests	178,170	718	186,013	753	192,013	793	183,079	784	(16)	-8,934	-9
Tree & Wood Pests	56,000	301	60,000	301	60,000	301	56,336	291	(17)	-3,664	-10
Subtotal, Plant Health	334,478	1,840	349,821	1,875	357,821	1,915	345,473	1,896		-12,348	-19
Wildlife Damage Management	108,376	589	108,376	589	109,756	589	109,991	589	(18)	235	0
Wildlife Services Methods Development	18,856	125	18,856	125	18,856	125	19,199	125	(19)	343	0
Subtotal, Wildlife Services	127,232	714	127,232	714	128,612	714	129,190	714		578	0
Animal & Plant Health Regulatory Enforcement	16,224	116	16,224	116	16,224	116	16,542	116	(20)	318	0
Biotechnology Regulatory Services	18,875	96	18,875	96	18,875	96	27,638	139	(21)	8,763	43
Subtotal, Regulatory Services	35,099	212	35,099	212	35,099	212	44,180	255		9,081	43

Animal and Plant Health Inspection Service
Salaries and Expenses
(Dollars in Thousands)

Program/Activity	2018 Actual B.A.	2018 Actual SY	2019 Actual B.A.	2019 Actual SY	2020 Enacted B.A.	2020 Enacted SY	2021 Budget Request B.A.	2021 Budget Request SY	Chg Key	Change from 2020 Enacted B.A.	Change from 2020 Enacted SY
Contingency Fund	470	5	470	5	470	5	484	5	(22)	14	0
Emergency Preparedness & Response	40,966	199	40,966	199	40,966	199	41,512	199	(23)	546	0
Subtotal, Emergency Management	41,436	204	41,436	204	41,436	204	41,996	204		560	0
Subtotal Safeguarding and Emergency Preparedness/Response	860,700	4,448	887,443	4,490	918,723	4,586	908,256	4,604		-10,467	18
Safe Trade and International Technical Assistance											
Agriculture Import/Export	15,599	81	15,599	81	15,599	81	15,822	81	(24)	223	0
Overseas Technical & Trade Operations	22,115	55	24,115	55	24,115	55	24,265	55	(25)	150	0
Subtotal Safe Trade and International Technical Assistance	37,714	136	39,714	136	39,714	136	40,087	136		373	0
Animal Welfare											
Animal Welfare	30,810	232	31,310	232	31,310	232	31,947	232	(26)	637	0
Horse Protection	705	6	705	6	1,000	10	721	6	(27)	-279	-4
Subtotal, Animal Welfare	31,515	238	32,015	238	32,310	242	32,668	238		358	-4
Agency Wide Programs											
APHIS Information Technology Infrastructure	4,251	0	4,251	0	4,251	0	4,251	0	(28)	0	0
Physical/Operational Security	5,146	5	5,146	5	5,146	5	5,159	5	(29)	13	0
Rental and DHS Security Payments	42,567	0	42,567	0	42,567	0	42,567	0	(30)	0	0
Subtotal, Agency Management	51,964	5	51,964	5	51,964	5	51,977	5		13	0
Subtotal, Appropriated	981,893	4,827	1,011,136	4,869	1,042,711	4,969	1,032,988	4,983		-9,723	14
General Provisions:											
General Provision 757 - Citrus Greening	0	0	8,500	0	0	0	0	0		0	0
General Provision 771 - Citrus Greening	7,500	0	0	0	0	0	0	0		0	0
General Provision 744 - Citrus Greening	0	0	0	0	8,500	0	0	0		-8,500	0

Animal and Plant Health Inspection Service
Salaries and Expenses
(Dollars in Thousands)

Program/Activity	2018 Actual B.A.	2018 Actual SY	2019 Actual B.A.	2019 Actual SY	2020 Enacted B.A.	2020 Enacted SY	2021 Budget Request B.A.	2021 Budget Request SY	Chg Key	Change from 2020 Enacted B.A.	Change from 2020 Enacted SY
Transfers In:											
Department of Homeland Security - National Bio and Agro-Defense Facility	0	0	6,492	0	0	0	0	0		0	0
Congressional Relations	90	0	90	0	0	0	0	0		0	0
	90	0	6,582	0	0	0	0	0		0	0
Total, Discretionary Funding	**989,483**	**4,827**	**1,026,218**	**4,869**	**1,051,211**	**4,969**	**1,032,988**	**4,983**		**-18,223**	**14**
Authority from Offsetting collections	206,990	1,785	273,962	1,785	270,600	1,785	264,600	1,785		-6,000	0
Mandatory Funds:											
Farm Bill, Section 7721	75,000	26	75,000	26	75,000	26	75,000	26		0	0
Farm Bill, Section 2408	0	0	37,500	200	0	0	0	0		0	0
Farm Bill, Section 12101	0	0	120,000	30	0	0	0	0		0	0
Sequester P.L. 113-6…Farm Bill	-4,950	0	-4,650	0	-4,425	0	0	0		4,425	0
Subtotal, Farm Bill	70,050	26	227,850	256	70,575	26	75,000	26		4,425	0
Trust Funds	9,510	50	8,466	50	8,923	50	9,000	50		77	0
Trust Funds Sequester Restored P.L. 113-6	91	0	87	0	82	0	0	0		-82	0
Foreign Service National Separation Liability Trust	157	0	2,778	0	400	0	400	0		0	0
Agricultural Quarantine Inspection User Fees:											
Total Collections	795,675	1,325	825,524	1,325	844,812	1,325	844,812	1,325		0	0
Less: Transfer to DHS	-539,000	0	-539,000	0	-582,187	0	-582,187	0		0	0
Sequester P.L. 113-6 …AQI	-50,490	0	-49,290	0	-49,844	0	0	0		49,844	0
Sequester Restored…AQI User Fees	51,399	0	50,490	0	49,290	0	49,844	0		554	0
Subtotal, AQI User Fees (APHIS)	257,584	1,325	287,724	1,325	262,071	1,325	312,469	1,325		50,398	0
Total, Mandatory Funding	**337,392**	**1,401**	**526,904**	**1,631**	**342,051**	**1,401**	**396,869**	**1,401**		**54,819**	**0**
Total, Appropriations	**1,533,865**	**8,013**	**1,827,084**	**8,285**	**1,663,862**	**8,155**	**1,694,457**	**8,169**		**30,596**	**14**
Carryover from Prior Years:											
Animal Health Technical Services	9,846	10	11,088	10	14,987	46	13,500	46		-1,487	0
Avian Health	13,650	15	14,930	15	20,031	30	18,790	30		-1,241	0
Cattle Health	3,448	0	3,254	0	2,962	0	3,000	0		38	0

Animal and Plant Health Inspection Service
Salaries and Expenses
(Dollars in Thousands)

Program/Activity	2018 Actual B.A.	2018 Actual SY	2019 Actual B.A.	2019 Actual SY	2020 Enacted B.A.	2020 Enacted SY	2021 Budget Request B.A.	2021 Budget Request SY	Chg Key	Change from 2020 Enacted B.A.	Change from 2020 Enacted SY
Equine Cervid & Small Ruminant Health	562	0	1	0	501	0	500	0		-1	0
National Veterinary Stockpile	7,152	3	7,737	3	4,195	3	4,000	3		-195	0
Veterinary Diagnostics	2,886	0	3,340	0	12,062	0	19,200	0		7,138	0
Zoonotic Disease Management	5,998	0	3,889	0	5,540	0	5,000	0		-540	0
Emergency Preparedness & Response	17,941	15	18,442	15	19,335	15	19,301	15		-34	0
Cotton Pests	2,726	8	1,749	8	1,309	31	2,000	31		691	0
Field Crop & Rangeland Ecosystems Pests	2,610	15	2,583	10	3,360	34	5,300	34		1,940	0
Specialty Crop Pests	24,930	90	36,938	74	25,608	198	31,079	198		5,471	0
Tree & Wood Pests	7,982	57	6,322	36	9,521	102	9,000	102		-521	0
Wildlife Damage Management	3,165	0	3,380	0	4,161	0	3,800	0		-361	0
Wildlife Services Methods Development	294	0	1,024	0	1,040	0	1,000	0		-40	0
Contingency Funds	1,409	5	1,879	5	2,349	10	2,819	15		470	5
APHIS Information Technology Infrastructure	768	0	1,735	0	600	0	600	0		0	0
HUB Relocation	2	0	2	0	6	0	0	0		-6	0
Commodity Credit Corporation (CCC)	122,731	0	129,657	171	92,586	54	74,837	0		-17,749	-54
Agricultural Quarantine Inspection User Fees (AQI)	122,316	150	146,478	169	168,556	228	198,028	273		29,472	45
Farm Bill Section 10202	166	0	220	0	20	0	0	0		-20	0
Farm Bill Section 12101	0	0	0	0	120,000	30	85,000	25		-35,000	-5
Farm Bill Section 2408	0	0	0	0	33,948	200	28,948	148		-5,000	-52
General Provision 757 - Citrus Greening	5,401	0	0	0	685	0	0	0		-685	0
General Provision 771 - Citrus Greening	0	0	7,500	0	0	0	0	0		0	0
H1N1 Supplemental	2,214	0	2,766	0	2,358	0	1,358	0		-1,000	0
Offsetting Collections	162,761	181	177,371	109	177,561	109	201,082	174		23,521	65
Trust Funds	8,117	0	9,265	0	8,644	15	8,649	15		5	0
Adjustment of unobligated balance brought forward, Oct 1	0	0	-29,973	0	0	0	0	0		0	0
Subtotal, Carryover	529,075	549	561,576	625	731,925	1,105	736,791	1,109		4,866	4

Animal and Plant Health Inspection Service
Salaries and Expenses
(Dollars in Thousands)

Program/Activity	2018 Actual B.A.	2018 Actual SY	2019 Actual B.A.	2019 Actual SY	2020 Enacted B.A.	2020 Enacted SY	2021 Budget Request B.A.	2021 Budget Request SY	Chg Key	Change from 2020 Enacted B.A.	Change from 2020 Enacted SY
Transfers Out	-450	0	-350	0	0	0	0	0		0	0
Sequestration P.L. 113-6….Trust Funds	-87	0	-82	0	0	0	0	0		0	0
Recoveries	37,139	0	9,243	0	0	0	0	0		0	0
Recoveries, Trust Funds	122	0	38	0	0	0	0	0		0	0
Total Available	**2,099,665**	**8,562**	**2,397,510**	**8,910**	**2,395,787**	**9,260**	**2,431,248**	**9,278**		**35,462**	**18**
Lapsing Balances	-8,875	-568	-6,416	-438	0	0	0	0		0	0
Balances, Available End of Year	-591,549	-625	-731,925	-1,105	-736,791	-1,109	-764,436	-1,167		-27,645	-58
Total Obligations	**$1,499,241**	**7,369**	**$1,659,169**	**7,367**	**$1,658,996**	**8,151**	**$1,666,812**	**8,111**		**$7,817**	**-40**

JUSTIFICATION OF INCREASES/DECREASES

A large portion of APHIS' budget is in support of personnel compensation. The request includes a total of $13,352,000 to cover increases in pay for associated employees including $2,321,000 to cover the annualization of the 2020 pay increase, $2,748,000 for the 1 percent pay increase in 2021, and $8,283,000 for additional benefit compensation.

An increase of $5,069,000 for pay costs ($2,321,000 for annualization of the 2020 pay increase and $2,748,000 for the 2021 pay increase). This increase will allow APHIS to continue to meet its mission to safeguard the health, welfare, and value of American agriculture and natural resources. This critical increase is needed to support and maintain current staffing levels to meet the demands and statutory requirements imposed on APHIS, including the agency's emergency response capabilities for pest and disease outbreaks. Without the pay cost increase APHIS would need to reduce a number of program activities that protect animal and plant health. Approximately 46 percent of our budget supports personnel compensation and benefits. We would have to accomplish this reduction through reductions in Federal contributions to support States and other cooperators in combatting animal and plant pests and diseases. The reduction would impact our response capabilities, and APHIS may not respond as quickly to potential pest or disease outbreaks which could negatively impact U.S. producers and trade.

An increase of $3,663,000 for performance awards. This increase will support a 1 percent increase in awards spending, consistent with objectives outlined in the President's Management Agenda, to develop a workforce for the 21st Century. Without this additional funding, APHIS will need to absorb these costs in FY 2021, resulting in reductions to planned programmatic work, eroding USDA's ability to meet key Administration priorities contained in this Budget.

An increase of $4,620,000 for the Department's increased contribution to the Federal Employees Retirement System (FERS). This increase will cover the expenses for the mandated increase of USDA's contribution to FERS. These increases were effective January 1, 2020, and impact approximately 4,800 employees' retirement packages.

(1) Animal Health Technical Services, An increase of $4,428,000 and 9 staff years ($37,857,000 and 156 staff years available in the FY 2020 Enacted)

APHIS' Animal Health Technical Services (AHTS) program develops and enhances the tools available for acquiring and managing vital animal health information. Incorporating national surveillance data standards into data management applications enables animal health information to be compiled nationally, thus leveraging the work of animal health professionals nationwide to meet local, State, and national veterinary health objectives. Private veterinarians, trained and accredited through APHIS' National Veterinary Accreditation Program (NVAP), help producers meet export requirements and disease program standards, allowing U.S. animals and animal products to compete in the global economy. APHIS' shared disease transmission and spread models, developed for the

NVAP, improve planning, managing, and responding to an animal health incident.

The national animal disease traceability (ADT) framework allows Federal, State, local, Tribal, and private animal health professionals to quickly identify diseased animals, trace their movements, and control disease spread to protect U.S. livestock, valued at $69 billion in FY 2018 (National Agricultural Statistics Services). APHIS' ADT system helps reduce the number of animals involved in an investigation, reduces the time to respond, and ultimately decreases the cost of an animal health incident to producers and taxpayers. Moreover, this system assures trading partners that USDA is committed and able to rapidly contain an animal disease event. Each year, APHIS provides cooperative agreement funds to States to help them establish and maintain support for State ADT activities. Currently all States receiving program funds have approved ADT strategic plans in place with APHIS. In FY 2019, APHIS initiated national priority trace exercises where States treat the trace as a national emergency. After the first round of these national priority trace exercises, States averaged approximately 2.5 hours to complete the exercise at a success rate of 98 percent.

The AHTS program evaluates existing animal health data systems and applications to determine if they are functioning as intended and meeting customer needs, or if they should be modified, enhanced, or replaced. APHIS makes these systems available to States and Tribal Nations to support their traceability plans and other animal health activities. For example, in FY 2019, APHIS analyzed the ADT Information System, which provides traceability data to the Agency, States, and Tribal Nations. APHIS identified opportunities to reduce querying times for traceability databases by completing a large-scale tag retirement from the system. Removing tens of thousands of tags from the ADT Information System will reduce query/transaction time for completing a trace investigation.

Additionally, the AHTS program uses epidemiologic and economic models to improve the understanding of historical events, estimate future consequences, and inform strategic, logistical, and budgetary decisions. In FY 2019, APHIS continued to update foot-and-mouth disease, classical swine fever, and avian influenza models for contingency planning, evaluating potential control strategies, estimating potential consequences of disease introduction and spread, and analyzing surveillance and response activities for recent outbreaks. APHIS also continues to address animal health incident challenges by developing models designed to advance our understanding of disease epidemiology for the purposes of emergency preparedness and management. In FY 2019, APHIS initiated parameter development for the Australian Animal Disease Spread Model (AADIS) with U.S. data to support future regional-level simulations of bluetongue disease, the first APHIS modeling effort simulating vector-borne disease in AADIS.

The NVAP authorizes private veterinary practitioners to work cooperatively with Federal veterinarians and State animal health officials to report when there are suspect animal diseases. NVAP offers educational modules to more than 71,000 highly-trained accredited veterinarians, significantly expanding public outreach. This provides the first step in rapid

diagnosis, quarantine, and other control measures to safeguard our nation's animal and human health. Accredited veterinarians also provide official animal, flock, and herd health certifications, disease testing, and traceability practices for billions of animals each year. Mandatory training and renewal of accreditation provide increased knowledge of animal disease surveillance, prevention, zoonosis, judicious use of antimicrobials, animal welfare, and disaster preparedness. APHIS currently hosts 30 web-based supplemental training modules for accredited veterinarians. Since FY 2011, accredited veterinarians have completed more than 700,000 web modules, with more than 40,000 modules completed at veterinary conferences nationwide.

In FY 2021, the program will continue to focus on the highest priority technology investments that fully integrate animal health information for State and Tribal partners; collaborate with State animal health officials to identify diseased animals and trace their movements; and train veterinarians to help producers meet export requirements and disease program standards.

Overall, base funding for the Animal Health Technical Services program currently supports salaries and benefits of personnel, contracts and agreements, and other normal operating costs such as travel, supplies, rent, and utilities necessary to conduct program activities.

APHIS is requesting a $4,000,000 million increase to enhance the tracking and reporting of animals through the end of their lifespan, and to improve the record keeping systems that support the national ADT framework. With the additional funds, APHIS would invest in electronic ID readers at slaughter plants, allowing the Agency to better track and report when animals are no longer in the system, and can retire the identification tags. Currently, the system tracks the animals from the beginning of their movement, but does not continue through processing at slaughter plants and livestock markets. This presents a significant gap in traceability since there is no documentation for animals that have been removed from the population. The new system will enhance the tracking through the lifespan of the animal and its unique identification tag. Retiring identification tags for dead animals requires removing and cleaning each ear tag, manually entering identification numbers into the system to find a match, and then closing the number. Manually reading animal ID numbers slows commerce and potentially leads to transcription errors. With electronic ear tags and scanners, however, identification numbers could be scanned, matched, and closed quickly, efficiently, and accurately. In addition, APHIS would also improve the software that it uses with the record keeping systems, including electronic health certification. With improved software, the Agency would be able to fully implement an electronic Health Certification System for the interstate movement of livestock. Under this system, accredited veterinarians may enter all animal health certificate data online, where the animal's movements will be tracked and stored through its lifespan. The online system also could produce paper or electronic certificates, whereas the current system requires the entry of certificate data from a paper document.

APHIS is requesting increased funding of $428,000 for a pay increase, performance awards, and for FERS benefits.

(2) Aquatic Animal Health, An increase of $36,000 ($2,253,000 and 13 staff years available in the FY 2020 Enacted)

The Aquatic Animal Health program protects the health and value of U.S. farm-raised aquatic animals and natural resources by carrying out activities consistent with the National Aquatic Animal Health Plan (NAAHP), which calls for surveillance and testing for high-consequence aquatic animal diseases. USDA, the U.S. Department of Commerce, and the U.S. Department of the Interior implement the NAAHP, which helps the Federal government develop policies and programs to address aquatic animal diseases for the benefit of aquaculture and aquatic animal resources. This program's efforts protect commercial producers in domestic and international trade markets, valued at $1.8 billion in 2017 (National Agricultural Statistics Service, 2017 Census of Agriculture), and helps the commercial aquaculture industry demonstrate adherence to sound aquatic animal health practices.

APHIS and the National Aquaculture Association are working to develop the Commercial Aquaculture Health Program Standards (CAHPS), a national and uniform approach to health standards for aquaculture. The goal of CAHPS is to support improved health management, protection and expansion of aquaculture business opportunities, promotion and facilitation of trade, and improved resource protection. The CAHPS establishes site-specific plans for biosecurity, surveillance, and response related to animal health events.

Overall, base funding for the Aquatic Animal Health program currently supports salaries and benefits, and other program operating costs such as travel, supplies, rent, and utilities necessary to conduct program activities.

APHIS is requesting increased funding of $36,000 for a pay increase, performance awards, and FERS benefits.

(3) Avian Health, An increase of $677,000 ($62,840,000 and 247 staff years available in the FY 2020 Enacted)

The Avian Health program protects the U.S. poultry industry, valued at $46.3 billion in 2018 (USDA, National Agricultural Statistics Service), while facilitating trade in poultry and poultry products. This program consists of the surveillance, prevention, and control of avian diseases; disease threat planning and response; international avian health activities; and modeling activities.

To ensure the poultry industry maintains worldwide competitiveness, it is essential to

quickly detect and address endemic, emerging, and foreign disease threats. APHIS' surveillance programs detect foreign, zoonotic, and domestic diseases that could substantially impact domestic production and the economy. Surveillance information facilitates trade and protects public health by demonstrating that certain diseases do not exist in U.S. poultry populations. Prevention and control programs minimize the disease threat and protect the value of poultry markets. The Agency also maintains regulations and national program standards and guidelines that direct avian health activities at the Federal, State, and Tribal levels. Maintaining these standards supports interstate and international commerce by providing assurances about the health of avian species and products that are moved or traded. In addition, APHIS uses models to improve the understanding of historical events, estimate consequences, and inform decisions by evaluating the effectiveness of varying interventions. This program has the expertise and infrastructure to work with avian health industries, universities, and State and Federal partners to collect, analyze, and disseminate vital avian health information to those who might take action. The Agency helps prevent and/or control the spread of avian diseases through collaboration, education, and regulatory enforcement. To quickly detect avian diseases, APHIS conducts surveillance in domestic poultry, live bird marketing systems (LBMS), and wild birds. APHIS designed these prevention and control activities to quickly diagnose disease, improve biosecurity conditions, and minimize the effects of avian influenza (AI) on the LBMS and commercial poultry industry.

The LBMS is a voluntary network of U.S. live poultry markets and their production and distribution systems, which provides fresh poultry meat to consumers. Thirty-three States and the U.S. Virgin Islands have live bird markets that participate in the APHIS AI prevention and control program. State cooperators help conduct surveillance and diagnostic activities for the LBMS. When these tests yield presumptive positive results, APHIS confirms the presence and strain of AI. LBMS testing prevents and controls the disease in markets and among producers and distributors that supply those markets. Since the H5/H7 low pathogenicity avian influenza LBMS prevention and control program began in 2004, the number of AI-positive premises has been trending downward.

The National Poultry Improvement Plan (NPIP) is a cooperative Federal-State-industry program that helps participants guard against disease incursion and enhance the marketability of poultry and poultry products. The NPIP AI prevention and control program involves all 50 States and Puerto Rico; more than 95 percent of commercial broiler, turkey, and egg industries; and the entire primary poultry breeding industry. Approximately 100 authorized and approved laboratories provide diagnostic testing for the program. APHIS provides guidance to commercial poultry operations, who must have successfully audited biosecurity plans by August 2020 to qualify for indemnity and compensation payments. In FY 2018, the NPIP General Conference Committee revised the NPIP Program Standards to update testing procedures and add or clarify compartmentalization requirements and sanitation standards. In April 2019, USDA published a notice advising the public about these changes.

APHIS manages the NPIP U.S. Poultry Primary Breeder AI Compartmentalization program which audits and certifies pedigree poultry stock breeding companies that practice high-level biosecurity measures to keep their flocks free of AI. Compartmentalization represents a major shift from the traditional paradigm of disease control in that it defines the health status of a subpopulation of animals by common biosecurity and management principles rather than a shared geographic boundary. The voluntary program supports the trade of poultry and poultry products if the United States encounters an AI outbreak. Participating breeders must meet the program's extensive biosecurity, training, disease monitoring, and laboratory infrastructure requirements, which are designed from evidence-based principles known to prevent AI virus introduction and spread. APHIS administers the program and serves as the regulatory authority that international trading partners can trust to verify that a participant meets the requirements.

USDA confirmed Virulent Newcastle disease (vND) in Southern California in May 2018. APHIS and the California Department of Food and Agriculture (CDFA) immediately initiated a unified command to respond to and eradicate vND from the region. To eliminate the vND virus, a joint APHIS-CDFA incident management team worked to depopulate infected premises and exposed flocks, and to conduct diagnostic testing to identify new or potential infection sources. In March 2019, APHIS and CDFA intensified efforts to identify remaining affected premises and stamp out the disease. As of September 30, 2019, 473 vND infected premises had been identified. While most of these cases involved backyard birds, four commercial chicken flocks in Riverside County, California, were confirmed infected between November 2018 and January 2019. The eradication effort, while achieving significant success to date, continues in FY 2020. Even so, APHIS had identified 473 vND infected premises by September 30, 2019.

Internationally, APHIS facilitates agricultural trade, works with agricultural officials, monitors agricultural health, and supports efforts in sanitary and phytosanitary standard-setting. In addition, the agency works with the USDA Foreign Agricultural Service and the U.S. Trade Representative's Office to maintain a coordinated, strategic approach to resolving avian health issues that affect U.S. exports. Further, APHIS coordinates with the World Organisation for Animal Health (OIE) and other international organizations to assist with disease prevention, management, and eradication activities in highly pathogenic avian influenza -affected regions. In addition, APHIS sponsors and staffs the Emergency Management Center at the Food and Agriculture Organization of the United Nations in Rome, Italy. This Center enables rapid response to animal disease outbreaks in countries where the United States would have difficulties placing personnel or responding bilaterally. This approach reduces the threat of disease outbreaks becoming widespread and evolving into pandemics. APHIS ensures that U.S. trading partners adhere to the Sanitary and Phytosanitary rules of the World Trade Organization and other international standards-setting organizations.

Overall, base funding currently for the Avian Health program supports salaries and benefits, cooperative agreements and programmatic contracts, and other normal operating costs such as travel, supplies, rent, and utilities to conduct program activities.

APHIS is requesting increased funding of $677,000 for a pay increase, performance awards, and FERS benefits.

(4) Cattle Health, A net decrease of $6,703,000 and 35 staff years ($104,500,000 and 508 staff years available in the FY 2020 Enacted)

The Cattle Health program protects and improves the quality, productivity, and economic viability of the U.S. cattle and bison industry, valued at $102 billion in 2018 (National Agricultural Statistics Service, USDA). The Cattle Health program has two major goals: to rapidly detect and respond to diseases that could significantly affect the U.S. cattle and bison population, and to prevent the spread of any newly detected disease in the United States as well as endemic domestic cattle and bison diseases of concern. To accomplish these goals, APHIS conducts activities related to surveillance and monitoring, disease prevention, and disease investigation and outbreak response actions. In addition, APHIS maintains regulations, national program standards, and guidelines that direct cattle health activities at the Federal, State, and Tribal level. Maintaining these standards is a vital Federal responsibility that supports both animal health and interstate and international commerce.

APHIS conducts surveillance and monitoring activities for diseases to protect the health of U.S. cattle and facilitate trade. Surveillance information within the Cattle Health program verifies that certain diseases do not exist in the cattle population, thus facilitating trade and protecting public health. For example, surveillance information on bovine spongiform encephalopathy (BSE) has been instrumental in allowing the United States to maintain export markets for all beef, which were worth approximately $7.2 billion in 2018 (United Nations Comtrade Database).

APHIS conducts surveillance for diseases of concern including bovine tuberculosis (TB), brucellosis, and BSE. APHIS' surveillance and disease prevention activities for bovine TB includes testing live cattle and using slaughter surveillance data from the USDA's Food Safety and Inspection Service. Since the bovine TB program began in 1917, the prevalence of TB has significantly decreased in U.S. livestock. Today, the prevalence rate in cattle herds is at less than 0.001 percent. We also have had success in reducing the prevalence of brucellosis. The U.S. is considered Class-Free of brucellosis; however, there continues to be a presence of brucellosis in free-ranging bison and wild elk in the Greater Yellowstone Area (GYA). APHIS provides expertise to land and wildlife management agencies to manage brucellosis in the GYA, which includes parts of Idaho, Montana, and Wyoming.

APHIS, with cooperation from the State of Texas, also maintains a permanent quarantine zone on the Texas/Mexican border to prevent cattle fever ticks (CFT) from spreading within

the United States. Since white tail deer and exotic nilgai act as a carrier for the pests, the risk of ticks crossing the Rio Grande River and leaving quarantines areas continue. The program increased its mitigation efforts by conducting more individual animal inspections, restricting wildlife movement, treating additional white tail deer populations with medicated corn, and increasing the use of vaccines that fight tick infestations. In FY 2019, APHIS conducted 114,463 individual animal inspections and 95,145 treatments throughout South Texas. This program's goal for FY 2021 is to continue to eliminate all CFT outbreaks that occur outside the quarantine area within 12 months.

APHIS also conducts preventive programs to exclude exotic pests and diseases from the country. The Agency works with neighboring countries to prevent the entrance of cattle diseases such as bovine TB, foot-and-mouth disease, and BSE, as well as invasive livestock pests such as screwworm. APHIS estimates that the benefits for U.S. livestock producers remaining free of screwworm to be approximately $796 million a year, resulting in $2.8 billion a year in general benefits to the wider economy. APHIS partners with screwworm-free nations to maintain import protocols and quarantine processes to prevent infested animals from entering the United States. In addition, APHIS works with the Panamanian government to maintain a screwworm prevention barrier at the Darien Gap and to be prepared to respond to outbreaks in the United States.

Overall, base funding for the Cattle Health Program currently supports salaries and benefits, cooperative and programmatic contracts, and other normal operating costs such as travel, supplies, rent, and utilities to conduct program activities.

APHIS is requesting increased funding of $1,297,000 for a pay increase, performance awards, and FERS benefits.

APHIS proposes a decrease of $8,000,000 for Cattle Health program activities in FY 2021. At the proposed funding level, APHIS would reduce cooperative agreement funding to the Agricultural Research Service (ARS) and Customs and Border Patrol (CBP) for developing biological and mechanical control methods to reduce non-native Carrizo cane from the banks of the Rio Grande River. Carrizo cane is a tall, perennial cane that provides a favorable habitat to harbor CFT. Additionally, APHIS would reduce Federal contributions to maintaining game fencing on private lands designed to prevent wildlife from spreading CFT. At the proposed funding level, APHIS would restore activities back to the FY 2019 levels and continue to focus efforts on mitigation activities that reduce CFT from the permanent quarantine zone. These include employing mounted patrol inspectors to survey and apprehend stray and unauthorized animals crossing the southern border; maintaining the number of individual animal inspections; and treating wildlife with an anti-parasitic drug to prevent livestock from carrying ticks and infesting premises.

(5) Equine, Cervid and Small Ruminant Health, A net decrease of $5,371,000 ($26,500,000 and 120 staff years available in FY 2020 Enacted)

The Equine, Cervid, and Small Ruminant Health (ECSRH) program protects the health and improves the quality, productivity, and economic viability of the equine, cervid, sheep, and goat industries. The program conducts surveillance, investigates and responds to disease outbreaks, and carries out disease prevention and preparedness activities when animal health issues are identified. APHIS also works with international and domestic trading partners to facilitate safe trade in equine, cervids, and small ruminants and their products and ensures that cases of diseases of trade concern are reported to the World Organisation for Animal Health (OIE). The ECSRH program conducts surveillance activities for the following diseases: equine infectious anemia, equine piroplasmosis, Eastern equine encephalitis, Western equine encephalitis, West Nile virus, equine herpes virus, and scrapie.

The program protects the equine industry by helping State animal health officials monitor equine diseases that threaten animal and human health, such as equine infectious anemia and equine piroplasmosis. The United States is the world's leading exporter of live horses by value, accounting for 18 percent of the $2.9 billion worldwide market value (International Trade Centre 2018). APHIS collaborates with Federal, State, and industry partners to protect the equine industry from disease, improve the health of our domestic herd, and to protect human health. These activities improve trade and facilitate equine movement, which are vital to maintaining the industry's economic value. APHIS also provides veterinary support and consultation to the U.S. Department of the Interior's Bureau of Land Management Wild Horse and Burro Program through an interagency cooperative agreement. In FY 2019, APHIS coordinated with States and industry to develop national disease control strategies, and provided oversight, coordination and implementation of appropriate policies.

Scrapie is a fatal, degenerative disease that affects the central nervous system of sheep and goats. The industry loss due to scrapie is estimated to be $10 to $20 million annually, including lost market opportunities due to export restrictions (National Institute for Animal Agriculture 2005). Since 2003, the percentage of cull sheep sampled at slaughter that tested positive for classical scrapie has decreased significantly. In FY 2019, APHIS collected samples from 34,730 sheep and goats for scrapie testing, detecting seven classical scrapie positive (0.02 %) animals. The National Scrapie Eradication Program has a voluntary Scrapie Free Flock Certification Program (SFCP) which enables producers to enhance the marketability of their animals by protecting them from scrapie and provides participants an avenue to export sheep and goats. At the end of FY 2019, 235 flocks were enrolled in the SFCP. Of these, 43 were export certified (scrapie-free), 48 were export monitored (working toward scrapie freedom), and 144 were select monitored (reduced scrapie risk).

APHIS also conducts monitoring and surveillance activities to detect diseases that affect cervids, including chronic wasting disease (CWD) and tuberculosis (TB). APHIS' voluntary national CWD Herd Certification Plan (HCP) works with States, Tribes, and the cervid industry to control CWD in farmed cervids by allowing the interstate movement only from certified herds. Currently, 28 States participate in the national CWD HCP. In FY 2019 APHIS

tested more than 11,000 farmed cervids for CWD. As a result, APHIS identified 17 new CWD positive farmed cervid herds. In FY 2019, the program also tested 10,285 animals utilizing the Dual Path Platform blood test and 2,658 animals utilizing the Single Cervical Test for TB.

Overall, base funding for the ECSRH program currently supports salaries and benefits, contracts and agreements, equipment, and other normal operating costs such as supplies, rent, and travel to conduct program activities.

APHIS is requesting increased funding of $329,000 for a pay increase, performance awards, and FERS benefits.

APHIS proposes a decrease of $5,700,000 to reduce Federal contributions for State cooperators to develop and implement CWD surveillance, testing, management, and response activities. At the proposed funding level, APHIS would continue to maintain its voluntary CWD HCP to support the domestic and international marketability of U.S. cervid herds. APHIS will also continue to use funding to carry out CWD surveillance; conduct testing using current methods; and provide indemnity to producers with CWD infected herds.

(6) National Veterinary Stockpile, An increase of $19,000 ($5,725,000 and 7 staff years available in FY 2020 Enacted)

The National Veterinary Stockpile (NVS) is a component of APHIS' Field Operations Logistics Center and serves as the primary source of materials, supplies, and equipment for the response to, control of, and containment of significant animal disease outbreaks. The NVS has two primary objectives: to deploy countermeasures, within 24 hours of approval, against the most damaging animal diseases including highly pathogenic avian influenza, foot-and-mouth disease (FMD), virulent Newcastle disease (vND), and classical swine fever; and, to assist States, Tribes, and Territories with planning, training, and exercises for the rapid request, receipt, processing, and distribution of NVS countermeasures during an event. To prepare for an incident response, the NVS works with these partners to develop their logistical plans, conduct logistical training, and organize full-scale logistical exercises.

To maximize cost-efficiency and response capabilities, NVS personnel work with industry modelers and academic institutions to develop a scientifically estimated quantity of supplies to stockpile for each of the diseases on APHIS' high-consequence diseases list. The NVS personnel gather input from Federal agencies on strategies such as commercially available countermeasures including vaccines, criteria for deploying countermeasures, and ways to leverage stockpiles. The program continues to maintain its capabilities to address high consequence animal diseases, manage inventories, and develop ways to best address the Agency's response capabilities by quickly deploying animal health response resources. For

example, the NVS acquired additional euthanasia equipment, specifically trailers used for euthanizing poultry in response to the vND outbreak in California within 24 hours.

A portion of the NVS funding is used to maintain the North American FMD Vaccine Bank (NAFMDVB) as part of the agency's animal health readiness initiative. The NAFMDVB is a vaccine stockpile that APHIS and our counterparts in Mexico and Canada cooperatively manage. Each country contributes funding to acquire vaccine and maintain a stockpile of vaccine concentrate, from which FMD vaccine is derived. This funding is used to acquire a new antigen for FMD preparedness and to perform critical quality control testing of other newly acquired antigens held in the Bank to maintain current stockpile levels.

Without NVS' efforts, disease outbreak response efforts would quickly deplete State resources and overwhelm industry, leading to larger and more serious animal disease outbreaks. In FY 2021, the NVS will continue to deploy countermeasures against the most damaging animal diseases, and assist States, Tribes and Territories with preparing countermeasures during an animal health event.

Overall, base funding for the NVS program currently supports salaries and benefits, supplies, and contracts and agreements, as well as other normal operating costs like rent, travel, and equipment to conduct program activities.

APHIS is requesting increased funding of $19,000 for a pay increase, performance awards, and FERS benefits.

(7) Swine Health, An increase of $400,000 ($24,800,000 and 146 staff years available in the FY 2020 Enacted)

APHIS' Swine Health program protects the health and improves the quality, productivity, and economic viability of the swine industry. The 2018 production value of the swine industry was approximately $21 billion (National Agricultural Statistics Service). In addition, the program facilitates trade in swine and pork products, and addresses swine health issues at the human-swine interface and between wildlife and domestic swine. APHIS activities include comprehensive and integrated swine surveillance, emergency preparedness and response planning, disease investigation and control activities, zoonotic disease prevention and response, swine health studies and special projects, collaborations on emerging issues, and outreach and communication with stakeholders. In addition, the Agency maintains regulatory and programmatic guidelines to direct activities at the Federal, State, and Tribal levels. Establishing and maintaining national standards support interstate and international commerce by ensuring the health of animals and products being moved or traded.

APHIS collects swine samples from various surveillance streams as part of a comprehensive integrated surveillance approach to detect swine diseases that could substantially affect

domestic producers and the national economy. Comprehensive integrated surveillance includes field work and epidemiological investigations, designated surveillance streams, a veterinary diagnostic laboratory infrastructure, data management systems, and methodologies for data analysis and reporting. Surveillance testing supports the swine industry by assuring trading partners and other stakeholders of the status of swine diseases in the United States. This comprehensive surveillance approach has enabled APHIS to maintain effective surveillance using a risk-based approach that targets high-risk samples and reduces surveillance costs. The Agency tests for pseudorabies virus (PRV), swine brucellosis, influenza A viruses (IAV-S), classical swine fever (CSF), and African swine fever (ASF). Testing results received as of October 11, 2019, continue to confirm that all commercial swine herds were free from swine brucellosis and PRV. However, these diseases continue to be found in non-commercial herds after exposure to feral swine. In FY 2019, two non-commercial herds were identified as PRV test-positive, and five non-commercial herds were found to be test-positive for swine brucellosis in four States. In all test-positive cases, APHIS and States investigate and quarantine infected herds, conduct outbreak testing to determine herd disease levels, and depopulate or remove infected animals through a test-and-removal strategy to eliminate disease risk from these herds. These efforts protect commercial herds that may be exposed to infected backyard herds. Because APHIS has eliminated PRV and swine brucellosis from all U.S. commercial swine herds, the Agency continues to modernize surveillance activities to reflect a comprehensive, risk-based, and science-based approach to swine surveillance to support trade efforts while reducing burdens on States and producers. CSF remains eradicated from the United States, and the U.S. also continues to be free of ASF.

APHIS has the responsibility under the Swine Health Protection Act to partner with the States to license and inspect swine production facilities that feed cooked garbage to swine, and to conduct searches for unlicensed facilities that may illegally feed raw garbage to swine. This practice could transmit infectious diseases such as ASF, foot-and-mouth disease, or CSF to swine. APHIS works with States to either bring unlicensed facilities into compliance or force them to cease their illegal activities. By ensuring that food waste fed to swine does not threaten domestic swine, APHIS protects the commerce, health, and welfare of U.S. citizens.

Swine can harbor several zoonotic disease agents, such as IAV-S, swine brucellosis, and trichinellosis. In such cases, APHIS works with the Centers for Disease Control and Prevention under the “One Health” concept, which promotes healthy animals, people, and eco-systems by addressing zoonotic diseases, those that pass between animals and people. APHIS support investigations conducted by State public health and animal health officials. Joint animal health and public health investigations support the “One Health” concept and strengthen APHIS’ ability to respond when both animal and human health might be compromised. In FY 2019, APHIS continued working with the swine industry to design and implement a national trichinae prevalence study. The study which is projected to be completed by the end of CY 2020 is expected to strengthen U.S. pork industry access to

international markets.

The Swine Health Program has the expertise and infrastructure to work with the swine industry, universities, and Federal and State partners to collect, analyze, and disseminate vital swine health information to those who might take action. The program continues to develop and maintain swine surveillance protocols to assure the availability of safe and plentiful swine and swine products.

Overall, base funding for the Swine Health program currently supports salaries and benefits, contracts, and agreements, as well as other normal operating costs such as travel, supplies, and rent, and utilities.

APHIS is requesting increased funding of $400,000 for a pay increase, performance awards, and FERS benefits.

(8) Veterinary Biologics, An increase of $3,277,000 and 20 staff years ($17,417,000 and 108 staff years available in FY 2020 Enacted)

APHIS' Center for Veterinary Biologics (CVB) regulates veterinary biological products under the Virus-Serum-Toxin Act to ensure that they are pure, safe, potent, and effective. Organizations develop these products, which include vaccines, bacterins, antisera, diagnostic test kits, and analogous products, to prevent, diagnose, and treat animal diseases in a wide variety of animal species. CVB develops regulations concerning the production and licensing of veterinary biologics, evaluates pre-licensing dossiers and issuance of licenses and permits, tests products submitted for licensure, inspects facilities and products, approves product certifications, investigates non-compliance, and conducts post-marketing surveillance to ensure that manufacturers comply with all relevant regulations and policies. This comprehensive regulatory approach is the most effective way to ensure that only quality, Federally-licensed, veterinary biological products are available to U.S. consumers and U.S. export markets. This approach plays an essential role in protecting animal health and agriculture.

APHIS licenses and inspects facilities to ensure that all veterinary biological products produced and distributed in, imported into, or exported from, the United States are of the highest quality, and are not worthless, contaminated, dangerous, or harmful. Before the Agency began regulating these products, farmers and animal health officials found products to be ineffective or contaminated with harmful diseases, including foreign animal diseases (FADs). While most of the time required in the licensing process is in the control of the potential licensee in developing manufacturing processes and conducting required studies, CVB analyzes data and conducts confirmatory testing before issuing licenses. In FY 2019, APHIS received 154 applications for new and renewal licenses/permits, and issued 26 licenses/permits for the prevention, diagnosis, management, or cure of existing or

new/emerging animal diseases. In addition, the Agency licensed 90 manufacturers and permittees for approximately 1,630 active veterinary biological product licenses/permits for the control of 280 animal diseases. These products are vital for protecting American agriculture, facilitating trade, and enhancing agricultural economic opportunities.

The United States and foreign countries require import and export certificates to certify that products are prepared according to the Virus-Serum-Toxin Act. In FY 2019, APHIS reviewed/processed 4,612 certificates of licensing and inspection, and 1,024 export certificates for veterinary biological products. APHIS also helped to ensure there were no FAD events related to the importation of 50 million doses of biologic products.

Overall, base funding for the Veterinary Biologics program currently supports salaries and benefits of personnel, and contracts and agreements, as well as normal operating costs such as supplies, travel, rent, and utilities to conduct program activities. In addition, APHIS will pursue rulemaking to recover portion the cost of providing this activity and return the collections to Treasury.

An increase of $3,000,000 and 20 staff years to support the growing needs of the U.S. veterinary biologics regulatory system. Veterinary Biologics funding has been relatively flat for almost a decade and funding has not kept pace with the rising costs of CVB facility operations, which has resulted in diminished staffing levels. For example, CVB laboratory staffing decreased 62 percent from 2000 to 2019, an unsustainable level for a properly functioning regulatory oversight process. Additionally, in the CVB's program areas (i.e. the Inspection and Compliance unit; and the Policy, Evaluation, and Licensing unit) approximately 40 percent of current experienced personnel will be eligible to retire by the end of FY 2021. New personnel need a significant training period, from 18 months to 3 years, to be able to successfully perform the functions of their position. In recent years, this program has undergone several business process improvement efforts and has implemented as many efficiencies as available resources have allowed. However, the program is no longer able to sustain the demand for current and expanding industry needs.

APHIS plans to add seven staff years using the FY 2020 enacted funds. The requested increase for FY 2021 will support a staffing level that can better addresses the growing needs of the U.S. veterinary biologics regulatory system. In addition, the program will upgrade antiquated equipment to expand its molecular biology capabilities; develop and expand certain vaccine policies; improve services and systems that support application and licensing processes and help industry gain license approval; improve facility conditions; and, enhance education and outreach to industry on the biologics approval processes. In addition, the increase will support necessary repairs to the CVB facility housed at the National Centers for Animal Health to maintain a safe environment for employees and to secure the biologics under review.

The funds will also promote pharmacovigilance which involves the detection and investigation of the effects of biological products after the product is put into general use. With increased staffing, the program will be able to analyze and investigate these pharmacovigilance reports, and provide complete and accurate information to consumers, producers, and biologic companies regarding reactions or other problems associated with the use of licensed biological products.

Through these actions, APHIS will help ensure an effective, efficient, and responsive veterinary biologics program that can provide timely approvals and availability of veterinary vaccines, diagnostics, and other novel biologics to protect animal health, and enhance export opportunities for U.S. veterinary biologics companies. APHIS must ensure that new veterinary biologics meet safety, efficacy, and potency standards but strives to do so efficiently. The CVB needed an average of 587 work days to issue a license for a veterinary biologic product in FY 2018, and 630 in FY 2019. However, the requested increase would enable APHIS to reduce the average licensing time to 350 work days, which is more in line with industry expectations and historical averages.

APHIS is requesting increased funding of $277,000 for a pay increase, performance awards, and FERS benefits.

(9) Veterinary Diagnostics, A net decrease of $5,277,000 ($57,340,000 and 172 staff years available FY 2020 Enacted)

Laboratory and diagnostic services are essential components of the U.S. animal health infrastructure. The Veterinary Diagnostics line item provides partial funding for the National Veterinary Services Laboratories (NVSL), which consists of laboratories in Ames, Iowa, and Plum Island, New York. The World Organisation for Animal Health and the Food and Agriculture Organization recognize NVSL as an international reference laboratory for significant animal diseases such as highly pathogenic avian influenza and foot-and-mouth disease (FMD). It provides diagnostic test services ranging from a single laboratory test to comprehensive laboratory services covering many pathogens for suspected domestic and foreign animal disease (FADs) outbreaks. The line item also supports the National Animal Health Laboratory Network (NAHLN), which is an animal disease surveillance and monitoring system that interconnects Federal and State laboratory resources to improve the security of the nation's livestock by providing disease diagnostics daily and at increased levels during outbreaks.

Diagnostic testing and confirmation of surveillance samples improves the security of the nation's livestock. The NVSL is on the forefront of emerging and re-emerging diseases including virulent Newcastle disease virus, tilapia lake virus, infectious hypodermal and hematopoietic necrosis virus, Senecavirus A (SVA), and bluetongue. Since 2014, APHIS has experienced a sevenfold increase in FAD investigations, largely due to the emergence of SVA. SVA is an infectious, non-fatal disease that primarily affects pigs. Because SVA

symptoms mimic FMD, APHIS must provide a diagnosis to exclude FMD in each case. SVA is emerging with new disease pathology in young pigs and has been reported across the United States and Canada as well as in Australia, Brazil, and New Zealand.

The NAHLN serves as an early warning system for foreign and emerging animal diseases. In this regard, the NAHLN program staff conducts exercises to prepare participating laboratories for animal disease outbreak scenarios, enabling the laboratories to remain proficient in animal disease testing. It also enables them to generate a rapid, local preliminary diagnostic result while confirmatory testing is performed at the NVSL. As of October 2019, the NAHLN consisted of 59 Federal, state, and university veterinary diagnostic laboratories in 42 States. These laboratories work with the NVSL reference laboratories to test for 14 economically devastating and/or FADs and potentially zoonotic diseases such as FMD, influenza in avian and swine species, bovine spongiform encephalopathy, and classical swine fever. The NVSL trains NAHLN laboratory personnel to ensure proficiency and standardization for performing diagnostic tests. The Veterinary Diagnostics program also provides support for NAHLN program staff and infrastructure costs; the APHIS Laboratory Portal; personnel to provide information management support for electronic messaging of diagnostic results; and online quality management training. The Portal provides secure communication for NAHLN laboratories and proficiency test management for NAHLN and non-NAHLN APHIS-approved laboratories. The quality management training helps NAHLN laboratories maintain qualifications for participating in the network.

APHIS conducts proficiency testing of Federal, State, and university-sponsored laboratories when these laboratories perform authorized diagnostic testing as part of APHIS-approved surveillance and/or response programs. This is done to ensure that they use standardized, rapid diagnostic techniques and to maintain the credibility of U.S. diagnostic test results in the international marketplace. In addition, the Agency provides proficiency test panels to any laboratory for purchase. The laboratories use these panels to evaluate their testing processes. In FY 2019, APHIS provided 21 types of proficiency panels to international, Federal, State, and private laboratories within and outside the NAHLN network. APHIS made the necessary controls and reference strains available for approximately 200 diseases to help other laboratories develop and validate diagnostic tests. Veterinary diagnostic user fees cover the cost of some services, including: import and exports testing, interstate testing, reference assistance testing, and diagnostic reagents.

In FY 2021, APHIS will continue to work with the U.S. Department of Homeland Security (DHS) and USDA's Agricultural Research Service (ARS) to plan for the move from the Plum Island Animal Disease Center (PIADC) in New York to the state-of-the-art National Bio and Agro-Defense Facility (NBAF) in Manhattan, Kansas. The PIADC, home to APHIS' Foreign Animal Disease Diagnostic Laboratory (FADDL), is the only U.S. laboratory permitted to work with FMD virus. In addition, FADDL is the custodian of the North American FMD Vaccine Bank and now manages the new U.S. National Animal Vaccine and

Veterinary Countermeasures Bank, as outlined in the 2018 Farm Bill. NBAF will be a key national asset to protect the U.S. animal agriculture industry and will be the first and only facility in the United States with large animal Biosafety Level-4 containment capability.

USDA and DHS are working closely to plan for the transfer of management and oversight of NBAF from DHS to USDA. NBAF construction is projected to be substantially complete in December 2020 and commissioning is projected for May 2021. At that point, NBAF systems and components will be operable and USDA will phase-in live agent work. In December 2020, USDA will begin an endurance testing period which will require staff to test the animal handling and animal disposal capability, operate laboratories, and use many other NBAF components. To accomplish these tasks and still meet current timelines, USDA has recruited key positions, and is accelerating hiring in FY 2020. After the transfer, ARS will manage the building and facilities. Both ARS and APHIS will have leadership responsibilities on operational aspects of the facility and for their own science programs. The NBAF should reach full operational capability in December 2022; the NBAF transition will continue through the closure of PIADC in August 2023. USDA is confident it can effectively and efficiently operate this state-of-the-art facility.

In FY 2020, APHIS is using available funds from current and prior years to further address NBAF transition costs such as the purchasing of additional laboratory equipment and associated information technology equipment and software, records management, and additional workforce development investments. Some of the laboratory equipment needs to be installed before the endurance testing period begins to ensure the facility operates as designed when laboratories are functioning, animal rooms are being used, and decontamination systems are in operation. APHIS is continuing efforts to develop a workforce of subject matter experts in foreign, emerging, and zoonotic diseases to conduct diagnostics in preparation for the transition. Workforce development is critical given the significant loss of expertise expected during the transition and the need to transfer the U.S. FAD diagnostic institutional knowledge to NBAF. While the program can train diagnosticians to perform specific tests, interpreting unclear results and troubleshooting diagnostic assays when they do not perform properly requires a high level of experience.

Based on the time required to develop expertise in this area, APHIS anticipates a potentially significant expertise gap, particularly during the first 5-10 years of operations at NBAF. To address this possible workforce gap, APHIS developed the NBAF Scientist Training Program (NSTP) to meet the workforce needs for experts in foreign animal and zoonotic diseases. Through this workforce development program, USDA is developing personnel to fill NBAF positions through continued service agreements. This program is critical because subject matter expertise and international recognition in FAD diagnostics take years to develop, yet only a small percentage of the current FADDL workforce with that expertise is expected to relocate to NBAF. This development program will help preserve and transfer the U.S. FAD diagnostic institutional knowledge to NBAF. Some of the additional staff years included in the FY 2021 request represent individuals who will be transitioned from NSTP

students to full-time employees at NBAF. The Agency also developed a Laboratorian Training Program to train future NBAF laboratory technicians.

In FY 2019, APHIS and ARS began recruiting to fill more than 100 key operational positions. APHIS filled 43 of these positions in FY 2019, and continues to recruit for additional positions for the operational stand up, in addition to the initial priority positions identified. APHIS prioritized certain positions for hiring before FY 2021. Most of these positions will train on FADDL-specific test protocols and instrumentation systems at the FADDL, before transitioning to NBAF between 2021 and 2023. They will directly support the critical mission objectives of diagnostic testing, reagent production, training in FAD detection, and management of the FMD Vaccine Bank. APHIS is placing the remainder of these positions at NBAF since they are critical to developing standard operating procedures, ordering equipment and supplies, developing the International Organization for Standardization (ISO) accreditation paperwork, and assisting with the select agent registration process. The overarching responsibilities of all priority hires include the validation of the space for work flows and laboratory practices for both select agent registration and ISO 17025 accreditation, as well as proficiency in the required equipment care, use, and calibration to meet ISO accreditation and biosafety standards. APHIS will continue to rely on funds available from prior years to implement activities in FY 2021.

The diagnostics testing conducted under this line item can rapidly confirm the presence or absence of a particular animal disease and can promptly provide decision makers with vital information that could have significant trade impacts and prevent or mitigate the spread of significant animal diseases.

APHIS is requesting increased funding of $433,000 for a pay increase, performance awards, and FERS benefits.

APHIS proposes a decrease of $5,110,000, for NAHLN activities in FY 2021. At the proposed funding level, the program would continue working with the NAHLN-participating laboratories on the highest-priority animal health issues but would reduce the funding the agency provides to support their infrastructure needs, primarily related to quality management systems and their ability to provide real-time results. The agency is proposing to redirect these funds in order to support higher priority programs.

APHIS requests $20.3 million for NBAF activities, a net decrease of $600,000. The requested funding will continue to support the transition to NBAF. USDA and DHS currently expect Substantial Completion of Construction by December 2020, and to reach Initial Operating Capability in May 2021. USDA will need to test the facility during an endurance testing period beginning in December 2020 which will require significant staff on site to test the animal handling and animal disposal capability, operate multiple laboratories simultaneously provide safety, health and environmental management oversight, and test many other NBAF components.

In addition to the $20.3 million requested, the Agency would also use available funds from prior years to assist with transition needs and ensure a smooth transition of diagnostic program operations from the PIADC to the NBAF in the coming years.

ARS is requesting additional funding, a net increase of $9.9 million for FY 2021. This net increase consists of an additional $15 million for operations and maintenance of the new facility, an additional $8 million for research, and a reduction of $13.1 million for transition costs that will not be necessary after FY 2020. Without the necessary funding, the program would not be able to transition these functions and the timeline would be delayed. All costs are closely associated with and largely dependent on the DHS timeline for construction, commissioning, and select agent registration.

(10) Zoonotic Disease Management, An increase of $176,000 ($16,523,000 and 64 staff years available in FY 2020 Enacted)

The Zoonotic Disease Management (ZDM) program collaborates with local, State, Tribal, national and international partners to promote healthy animals, people, and eco-systems by addressing zoonotic diseases, those that pass between animals and people. This collaborative approach is known as "One Health". APHIS provides leadership in addressing the animal health component of One Health by contributing animal health expertise, infrastructure, networks, and systems to collaborate with our partners. Program personnel develop strategies, policies, and training to help animal health stakeholders effectively engage with public health counterparts, provide guidance, facilitate information exchange, and enhance responses to One Health issues. Through the ZDM program, APHIS is able to protect animal health and marketability, while also promoting public health.

In collaboration with other One Health partners, the program provides leadership to address the animal health components of zoonotic diseases. For example, according to a 2011 Centers for Disease Control and Prevention analysis, *Salmonella* bacteria causes an estimated 1.2 million human illnesses, 19,000 hospitalizations, and 370 deaths annually in the United States. It has been estimated that *Salmonella* infections transmitted through animal contact cause 11 percent of all salmonellosis annually. In FY 2019, APHIS collaborated with Centers for Disease Control and Prevention and State Departments of Public and Animal Health to investigate several multistate outbreaks of human *Salmonella* infections linked to contact with live poultry in backyard flocks, especially chicks and ducklings obtained from mail-order hatcheries. These outbreaks resulted in a total of 1,003 people infected with the outbreak strains of *Salmonella* reported from 49 states. To prevent infections linked to live poultry, APHIS applied a One Health approach for control and prevention. This approach unifies animal and human health needs and takes into account the environments at the hatcheries where poultry are produced, the agricultural retail stores where poultry are sold, and the customers who own and raise poultry.

APHIS also partners with the U.S. Food and Drug Administration (FDA) to develop practical mitigation strategies to limit or reduce the prevalence of antimicrobial resistance (AMR). AMR is the ability of a microbe to resist the effects of medication previously used to treat them. The ZDM program works with State and Federal partners, veterinarians, and producers to promote the judicious use of antimicrobials, which will support a strong, healthy, and thriving U.S. animal agriculture system. This work includes surveillance at the farm level, collection of antimicrobial drug use data, and efforts to promote stewardship of antimicrobial drugs by animal owners and veterinarians. The program completed two studies of on-farm antimicrobial use and stewardship in FY 2018: one on swine operations, and one on cattle feedlot operations. In FY 2019, APHIS published reports of these two studies which updated information about antimicrobial use and stewardship for both commodity groups. Internationally, the program provided expertise on several chapters of the World Organisation for Animal Health (OIE) Terrestrial Animal Health Code related to AMR. APHIS also collaborated with the FDA to provide input to the OIE ad hoc group in charge of developing a global database on antimicrobial drug use.

In FY 2021, APHIS will continue to provide leadership in addressing the animal health component of zoonotic diseases, and collaborate with State and Federal partners, veterinarians, and producers to promote the judicious use of antimicrobials, which will support a strong, healthy, and thriving U.S. animal-agriculture system as well as public health.

Overall, base funding for the ZDM program currently supports salaries and benefits, as well as other normal operating expenses such as travel, supplies, equipment, and rent, and utilities to conduct program activities.

APHIS is requesting increased funding of $176,000 for a pay increase, performance awards, and FERS benefits.

A net decrease of $8,338,000 and 6 staff years for Safeguarding and Emergency Preparedness/Response – Animal Health.

(11) Agricultural Quarantine Inspection, An increase of $1,020,000 for the program ($32,330,000 and 372 staff years available in the FY 2020 Enacted)

APHIS conducts predeparture agricultural quarantine inspections of passengers and cargo traveling from Hawaii and Puerto Rico to the continental United States to prevent the introduction of non-native agricultural pests and diseases into the mainland. Hawaii and Puerto Rico have pests and diseases harmful to agriculture that are not established in the continental United States. For example, a variety of economically devastating fruit flies – particularly the Mediterranean fruit fly (Medfly) and Oriental fruit fly – and scale pests are present in Hawaii. In FY 2015, Puerto Rico experienced its first Medfly outbreak,

along with an outbreak of the old world bollworm. Plant and plant products, such as fruits and other commodities, easily carry pests long distances and can cause significant economic damage to the mainland United States. In addition to the citrus industry that may be at risk (with a production value of more than $3 billion, according to USDA's National Agricultural Statistics Service, Quick Stats), cut flower and nursery stock production is also at risk from the pests and diseases present in Hawaii and Puerto Rico. Additionally, two significant cotton pests, pink bollworm and the cottonseed bug, are present in Puerto Rico and could be brought into the United States on cargo shipments without an effective inspection program. The pre-departure inspection program facilitates tourism and agricultural trade between Hawaii and Puerto Rico and the mainland United States, while protecting farmers and producers in the continental United States from the entry of various plant pests and diseases.

Because of the significant risks associated with numerous fruits, vegetables, and other plant products from Hawaii and Puerto Rico, APHIS inspects all baggage of passengers leaving these islands (more than 13 million passengers in FY 2019). In FY 2019, 98 percent of passengers were in compliance with agriculture quarantine regulations. APHIS conducts these activities as the national plant health regulatory authority in the United States charged with protecting the health and value of agricultural resources. For commercial cargo, the program oversees treatments and conducts inspections in Puerto Rico for mangoes, cotton, tomatoes, cut flowers, and a variety of other commodities to allow them to be transported and sold in the continental United States. In Hawaii, the program oversees treatments for and inspects a variety of commodities destined for the continental United States, including papayas, bananas, sweet potatoes, herbs such as basil, cut flowers, and ginger root.

The Agriculture Quarantine Inspection (AQI) program keeps interstate trade flowing smoothly and safely and allows for efficient processing of tourists, protecting both the economies of Hawaii and Puerto Rico and the agricultural health of the continental United States. The Hawaii Department of Transportation is modernizing its airport infrastructure, starting with the Kona Airport on the island of Hawaii. APHIS is adjusting its operations to cover additional terminals in FY 2020 and FY 2021, including the purchase of additional x-ray machines to inspect passenger baggage. The program's inspections reduce the impact of agricultural pests and diseases on farmers in the continental United States, minimizing production losses and pest control costs and preserving export markets for U.S. agricultural products. Without this program, the risk of pest or disease introduction from Hawaii and Puerto Rico to the mainland United States would greatly increase. Additionally, many commodities would not be allowed entry to the continental United States without the inspections and treatments provided by the program, impacting Hawaiian and Puerto Rican producers. Maintaining the safeguards this program provides is essential, especially considering the increasing U.S. consumer demand for year-round fruits and vegetables.

Overall, base funding for the AQI program currently supports salaries and benefits of inspectors and other staff, as well as normal operating expenses such as rent, utilities, travel, and supplies to conduct program activities.

APHIS is requesting increased funding of $1,020,000 for a pay increase, performance awards, and FERS benefits.

(12) Cotton Pests, An increase of $139,000 ($11,520,000 and 51 staff years available in FY 2020 Enacted)

The Cotton Pests program, in cooperation with States, the cotton industry, and Mexico, works to eradicate the boll weevil (BW) and pink bollworm (PBW) from all cotton-producing areas of the United States and northern Mexico. For decades, these pests have cost cotton growers tens of millions of dollars each year in control costs and crop losses, according to the National Cotton Council APHIS provides national coordination, operational oversight, technology development (such as sterile PBW moths), and a portion of funding through cost-share programs with States. APHIS' partners have provided more than two-thirds of the funding for the boll weevil eradication effort and most of the operational funds for PBW eradication. The program also maintains capabilities to address other cotton pests that could enter the United States.

APHIS provides technical advice on trapping and treatment protocols to our partners in Mexico to aid in their efforts to eradicate boll weevil and PBW. Without continued Federal funding, support and technical expertise for the final phase of the program, eradication would not be possible, and previously eradicated cotton acreage would be vulnerable to reinfestation. Additionally, U.S. cotton production may be at risk of new pests approaching the country through the Caribbean Basin and Mexico.

APHIS and our State and cotton industry partners have eradicated boll weevil from 99.5 percent of the 13.7 million acres of U.S. cotton (National Agricultural Statistics Service June 2019). The Lower Rio Grande Valley (LRGV) in Texas is the last zone within the United States where active boll weevil eradication efforts continue due to the neighboring Mexican cotton producing state of Tamaulipas. In FY 2021, APHIS will continue to reduce the boll weevil population in the LRGV and partner with the U.S. cotton industry on boll weevil surveillance efforts for all U.S. cotton production. In addition, APHIS will continue to partner with the Mexican boll weevil eradication program to provide technical assistance and funding through the North American Plant Protection Organization agreement for their parallel program to the LRGV program.

APHIS' Cotton Pests program also partners with States and industry to address PBW. On October 19, 2018, U.S. Secretary of Agriculture Sonny Perdue, in conjunction with industry partners, officially announced the successful eradication of PBW from all commercial cotton-producing areas in the continental United States. APHIS will continue to monitor

areas in Florida, where PBW is present. The affected areas in Florida are wilderness areas where there is no commercial cotton production, but APHIS monitors the population to ensure that the program could respond quickly if the population spreads.

According to the National Cotton Council of America, where boll weevil has been eradicated, the combined annual direct economic benefits from increased yields, reduced insect damage and lower insect control costs are more than $80 million. The value of this permanent stream of benefits exceeds $1.2 billion every year.

Overall, base funding for the Cotton Pest program currently supports salaries and benefits, cooperative agreements and programmatic contracts, as well as other normal operating expenses such as travel, rent, and utilities to conduct program activities.

APHIS is requesting increased funding of $139,000 for a pay increase, performance awards, and FERS benefits.

(13) Field Crop and Rangeland Ecosystem Pests, A net decrease of $1,789,000 ($13,826,000 and 77 staff years available in the FY 2020 Enacted)

The Field Crop and Rangeland Ecosystem Pests (FCREP) program protects U.S. agricultural crops and rangelands from the establishment or spread of invasive or economically significant pests. In doing so, it facilitates safe international trade and domestic commerce, preserves economic opportunities for U.S. farmers and ranchers, and fosters healthy ecosystems in rangelands and other areas. APHIS conducts survey and suppression activities in western States to reduce grasshopper and Mormon cricket (GMC) infestations that could cause significant economic losses for livestock producers by requiring them to buy supplemental feed or sell their livestock at reduced prices.

APHIS conducts behavioral studies and develops advanced survey and control methods. In addition, the Agency develops treatments for land managers to remove imported fire ant (IFA) from their products and prevent re-infestation; conducts regulatory activities to prevent Karnal bunt (KB) and IFA from "hitchhiking" on regulated articles (i.e., nursery stock and farm equipment) to uninfested areas of the United States and foreign countries through trade; and, conducts survey, treatment, and regulatory activities for witchweed infestations in North and South Carolina to protect U.S. corn production. This program directly protects more than 230,000 acres of wheat and corn worth more than $18 million (based on APHIS analysis). It indirectly protects all U.S. wheat and corn production, which was worth approximately $61 billion in 2018 (National Agricultural Statistics Service, Crop Values 2018 Summary), from the spread of KB and witchweed.

When grasshopper populations reach outbreak levels, they can decimate grasslands. APHIS' GMC program monitors and protects 661 million acres of rangeland each year worth a total of nearly $8.7 billion according to a 2012 economic analysis University of Wyoming

researchers prepared through a cooperative agreement with APHIS. Each year, APHIS conducts surveys in western States for GMC, collecting data at more than 29,000 survey points in FY 2019, to determine where potential outbreaks could occur and where treatments might be necessary. The program also addresses witchweed, a parasitic plant that can significantly damage corn, sorghum, and sugarcane. If witchweed were to spread throughout the Corn Belt, crop yields for corn and sorghum could decrease by 10 percent and trade in commodities from these areas could be negatively impacted.

APHIS' IFA program works to prevent human-assisted spread of this pest through requiring that materials capable of harboring IFA, such as nursery stock and hay, are treated before leaving infested areas. Based on studies of areas with climate suitable for IFA (Korzukhin et. al, Environmental Ecology, 2001) APHIS estimates that preventing human-assisted spread is protecting up to 10 States from potential infestations. APHIS will continue conducting annual surveys and other activities to manage these pests in FY 2021.

APHIS coordinates an annual voluntary survey of the grain delivered to elevators to check for KB across the country and conducts regulatory activities to prevent the spread of the disease from the remaining infested area in Arizona. Based on the program's quarantine and survey data, APHIS issues export certificates that are required by countries importing U.S. wheat. These certificates demonstrate to trading partners the safety of U.S. wheat exports, retaining export markets and facilitating wheat movement into international markets. If KB funding was eliminated, the disease could enter the grain market system and directly impact almost every State. Many trading partners will not accept U.S. wheat exports unless the commodity is certified to be from areas where KB is not known to occur. Working with cooperators, APHIS has reduced the wheat production areas regulated for KB from all or portions of four States to approximately 170,000 acres in Arizona since 1996. APHIS will continue survey and regulatory activities aimed at keeping KB from causing damage and/or trade disruptions in FY 2021.

Overall, base funding for the FCREP program currently supports salaries and benefits, cooperative agreements, and programmatic contracts. Other funding supports normal operating expenses such as rent, utilities, travel, supplies, and equipment to conduct program activities.

APHIS is requesting increased funding of $211,000 for a pay increase, performance awards, and FERS benefits.

A decrease of $1,000,000 for activities to control scale insect pests that affect Roseau cane in the Mississippi River Delta wetlands. APHIS will use funding provided in FY 2020 to continue methods development work including developing control methods targeting the scale insect, evaluating Roseau cane's defenses against the scale insect, and evaluating restoration techniques for areas that have experienced Roseau cane die-off. In FY 2021,

APHIS will have completed evaluating various control methods and will focus on implementing the most promising methods.

A decrease of $1,000,000 for activities to control cogongrass infestations. APHIS anticipates publishing an environmental assessment (EA) for public comment in the *Federal Register* in early FY 2020 related to cogongrass control activities. Once the EA is finalized, pending public comments, APHIS anticipates providing funding through cooperative agreements to Alabama, Mississippi, Georgia, and South Carolina (and potentially other affected States as well) for cogongrass control. In FY 2021, APHIS will fund these activities at a reduced level; States may contribute additional funding if they wish to continue at the higher level.

(14) Pest Detection, An increase of $521,000 ($27,446,000 and 190 staff years available in the FY 2020 Enacted)

The Pest Detection program serves as the early warning system for the detection of plant pests of economic and environmental significance in the United States. The program helps farmers and producers by documenting the status (or absence) of plant pests and diseases that could impact trade opportunities, both interstate and international. It also helps APHIS' state-level partners by providing funding and infrastructure to conduct surveys for high-risk pests that may affect their State. The information the program collects provides the basis for APHIS' emergency response and regulatory efforts that preserve economic opportunities for farmers and safeguard U.S. agricultural and natural resources. Specifically, the program identifies and prioritizes plant pest and disease threats; develops scientifically sound pest survey protocols; procures essential survey materials (traps, lures, etc.); cooperates with State partners to conduct the pest surveys; and, shares data with States about significant pest detections.

APHIS provides national coordination for the program and develops policies and procedures for commodity-based and resource-based pest surveys. These surveys enable APHIS and cooperators to target high-risk hosts and commodities, gather data about pests specific to a commodity, and provide accurate assessments of pest distribution, including pest-free areas. Negative data from program surveys supports U.S. market access for several important commodities by demonstrating that the pests are not present. Examples include data showing that major pests such as the Khapra beetle, a serious pest of wheat and grain, and the European grapevine moth, a pest of grapes, are not present in the United States. Additionally, while many entities are involved in protecting crops and resources, APHIS' role is to verify that U.S. exported products do not pose risks to other countries. For example, when a survey first detected the pale cyst nematode in Idaho, the program had data demonstrating negative survey results in other potato-producing States that kept export markets open for U.S. potatoes. The value of the markets that remained open was $236 million in 2018 (United Nations Comtrade). Without funding, APHIS would be unable to conduct surveys for high-risk pests or provide funding to cooperators for these surveys. As a result of APHIS' funding, highly skilled, national cadres of surveyors are in the field on

a daily basis looking for high-risk pests. In FY 2019, the program and its cooperators conducted surveys in 50 States and three territories for 238 individual pests, pathogens, and noxious weeds. The program also conducted 217 commodity- and taxon-based surveys, with an average of more than five pests per survey. APHIS and state cooperators conduct surveys for multiple pests at each location for efficiency and economy of survey.

Early pest detection is important to avert economic and environmental damage; once a pest becomes established or spreads significantly, the mitigation costs can reach millions of dollars, in addition to lost farm revenues and damage to ecosystems. The Pest Detection program communicates and develops partnerships through cooperative agreements with state departments of agriculture and natural resources, universities, industry partners, tribal and local governments and communities, non-profit organizations, and individuals in all 50 States.

Overall, base funding for the Pest Detection program currently supports salaries and benefits, and cooperative agreements, as well as other normal operating expenses such as travel, rent, utilities, and supplies to conduct program activities.

APHIS is requesting increased funding of $521,000 for a pay increase, performance awards, and FERS benefits.

(15) Plant Protection Methods Development, An increase of $359,000 ($20,686,000 and 131 staff years available in the FY 2020 Enacted)

The goal of the Plant Protection Methods Development (PPMD) program is to develop scientifically viable and practical tools for exotic plant pest exclusion, detection, and management. The program plays an essential role in APHIS' mission by developing tools for the detection of exotic plant pests in survey programs; molecular diagnostic tests and identification tools for pest identification; integrated pest management methods, including biological control, to help eradicate or manage invasive pests; and treatments to support interstate and international trade.

APHIS' nationwide pest detection surveys and pest management programs depend on accurate and effective tools. The PPMD program supports development of pest trapping, identification, and survey technologies. Digital pest identification tools and molecular diagnostics developed through PPMD funding supports both domestic programs and import pest identification responsibilities. APHIS uses these tools to conclusively identify exotic species introductions in order to take appropriate regulatory actions. The program also develops pest management techniques that APHIS national programs use to manage or eradicate invasive pest threats.

The PPMD program aims to develop new, or improve existing, tools each year to enhance APHIS' safeguarding capabilities. For pest identification, the program continues to design,

develop, and deliver digital, media-rich, identification tools for APHIS to support trade and domestic, port, and offshore pest identification responsibilities.

The PPMD program also maintains its own quarantine and/or rearing facilities for biological control agents in Arizona, California, Colorado, Massachusetts, Michigan, Texas and Guatemala. APHIS partners with USDA's Agricultural Research Service, the U.S. Fish and Wildlife Service, State departments of agriculture, universities in 30 States and territories, and 2 Native American Tribes to evaluate and establish biological control agents for invasive plants, pests, and diseases. Some key program targets included Asian citrus psyllid (ACP), brown marmorated stink bug, emerald ash borer, spotted lantern fly, and Asian longhorned beetle. As of the end FY 2019, a biocontrol rearing facility in Mission, Texas, produced a cumulative total of 10.96 million biological control agents for ACP, the vector for citrus greening. Assessments of area-wide management in south Texas showed a 90.4 percent reduction in the ACP population since the program started.

The PPMD program also supports methods development related to invasive honey bee pests, specifically Varroa mites. A Varroa mite feeds on the honey bee's fat body tissue (an organ similar to the human liver) rather than on its blood, in turn weakening and shortening the bee's life. The Varroa mite is considered the greatest single driver of the global honey bee colony losses. According to a USDA analysis, managed honey bee colonies add at least $15 billion to the value of U.S. agriculture each year through increased yields and superior quality harvests. In FY 2019, the program funded priority projects with other Federal and State agencies, as well as the public, that support managing, suppressing, and eradicating Varroa mites, small hive beetles, and other pests and diseases contributing to a decline in honey bee health. These projects included investigating new management pesticide control options for Varroa mites, as well as breeding bees resistant to Varroa mites. In FY 2021, the program will continue to fund similar priority projects to combat this destructive pest.

In FY 2021, the program will continue working to develop new management tools and pest detection methods for the highest priority pests and diseases.

Overall, base funding for the PPMD program currently supports salaries and benefits, contracts, and agreements, as well as other normal operating expenses such as travel, rent, and supplies to conduct program activities.

APHIS is requesting increased funding of $359,000 for a pay increase, performance awards, and FERS benefits.

(16) Specialty Crop Pests, A net decrease of $8,934,000 and 9 staff years ($192,013,000 and 793 staff years available in FY 2020 Enacted)

The Specialty Crop Pests (SCP) program protects U.S. farmers and producers of fruits and vegetables, tree nuts, horticulture, and nursery crops from adverse impacts associated with

invasive pests, such as crop damage or threats to international trade and interstate commerce. APHIS works in coordination with State, Tribal, university, and industry partners to prevent or mitigate impacts from invasive pests of Federal regulatory significance. These efforts promote the ability of U.S. farmers and producers to export their products, prevent damage to specialty crop production, and protect natural resources, including forests and residential landscapes. Specialty crops are of high value and are grown in all 50 States. APHIS' SCP program directly protects production (including citrus, grapes, potatoes, nursery stock, and tree fruit) worth more than $9.5 billion in FY 2017, based on internal analysis using data from the USDA National Agricultural Statistics Service's (NASS) Census of Agriculture and the Economic Research Service (ERS). APHIS is currently using SCP resources to address the following pests and diseases: exotic fruit flies, a variety of citrus pests and diseases, pale cyst nematode (PCN), light brown apple moth (LBAM), plum pox virus (PPV), European grapevine moth (EGVM), glassy-winged sharpshooter (GWSS), and spotted lanternfly (SLF), among others.

The SCP program partners with affected industries, States, Tribes, academic institutions, and other Federal agencies to deliver domestic programs. Additionally, the program works with its counterparts in foreign countries to address pest risks offshore. For example, the SCP program works with Mexico and Guatemala to mitigate the risk of exotic fruit flies entering the United States. The program has kept the United States free of Mediterranean fruit fly (Medfly) and Mexican fruit fly (Mexfly) for many years by conducting preventive releases of sterile insects to disrupt normal population growth in at-risk areas; detecting and responding to outbreaks when they occur; and maintaining a barrier against the natural spread of the Medfly in Mexico and Central America and developing advanced methods for survey and control. Medfly has a host list that includes 300 cultivated and wild fruits. The Mexfly also has a wide-ranging host list and presents a particular threat to the Texas citrus industry due to its proximity to infested areas in Mexico. Increasingly, tephritid fruit flies of the genus Bactrocera have been responsible for numerous outbreaks. APHIS and cooperators maintain 160,000 fruit fly traps in vulnerable areas to ensure that any introductions of exotic fruit flies are quickly detected. In FY 2019, the program responded to 11 new exotic fruit fly outbreaks, all of them related to Mexfly. To reduce ongoing risks related to Mexfly infestations, the program is replacing its outdated sterile Mexfly facility in Texas and expanding capacity to more than double the number of sterile insects produced to improve the program's preventive efforts. Without the program's efforts to detect and eradicate these outbreaks when they occur, many important crops would become impossible to grow due to fruit fly infestations. APHIS will continue activities to prevent, detect and respond to any outbreaks that occur in FY 2021.

APHIS also works with citrus producing States and industry groups to support industry's ability to grow and market U.S. citrus despite the presence of devastating diseases such as citrus greening, also known as Huanglongbing (HLB). Through the Citrus Health Response Program, APHIS supports cooperators' in citrus producing States with on-the-ground operations, such as surveys, regulatory inspections, and outreach to affected growers and

the public, as well as methods development activities at other USDA agencies. APHIS conducts inspections of Florida citrus shipments destined for export to the European Union and other countries, allowing citrus producers to take advantage of export opportunities. Because of the ongoing threat HLB poses, APHIS, other Federal agencies, State partners and the citrus industry work together on the HLB Multi-Agency Coordination (MAC) group to identify and implement tools to combat the disease. The MAC Group has funded research to quickly identify practical tools that can aid the citrus industry to combat HLB. Growers and commercial firms are using one in three of the tools funded through HLB-MAC projects. The solutions found through this effort will continue to help citrus growers manage the disease while research into long-term solutions for HLB continues. APHIS will continue to address HLB and other citrus diseases in FY 2021.

Federal response activities take place in concentrated areas where the infestations occur (e.g., PCN in Idaho or SLF in Pennsylvania and surrounding States), but also work to protect all at-risk States producing specialty crops. For example, while the SCP program works to address the PCN in Idaho, it also conducts nationwide surveys for the pest to demonstrate to trading partners that potato-producing areas outside of the quarantined area are not affected by PCN, protecting fresh potato export markets worth $236 million in FY 2018 (UN Comtrade Database). The program also addressed PPV, a devastating viral disease of stone fruit, in New York, Michigan, and Pennsylvania. USDA declared the United States free of PPV in October 2019 which protects more than 1 million acres of stone fruit across the United States. APHIS will continue post-eradication surveys in New York, the site of the most recent infestation in the United States. Without the SCP program, various export markets for U.S. specialty crops would be at risk—the program protected trade worth more than $8.9 billion in 2017 (based on APHIS analysis using NASS and ERS data).

To protect the U.S. grape and wine industries, APHIS has partnered with California grape growers to eradicate EGVM and prevent the spread of GWSS into grape-producing areas. In the collaborative effort against EGVM, APHIS provided funding, expertise, and operational support for surveys and regulatory efforts to find and prevent the spread of the target pest, while industry funded and conducted necessary control treatments (with technical guidance from APHIS and State officials). APHIS and its State, county, and industry partners declared EGVM eradicated in FY 2016, after an intensive, 7-year cooperative effort. Eradicating this pest dramatically lowers growers' production costs and protects or expands export opportunities. APHIS conducted post-eradication surveys to ensure that this pest is not present, and to protect the Federal and industry investment in the eradication effort. FY 2019 was the third and final year in the post-eradication survey plan.

APHIS has partnered with tree nut industries as well as Arizona and California State cooperators to develop sterile insect technology to address the navel orangeworm (NOW), a serious pest of pistachios, almonds, and walnuts. With funding provided in FY 2020, APHIS will continue producing sterile NOW and working with industry and State partners to develop and implement a cooperative, area-wide control program targeting this pest in

California. These efforts will help protect nut production worth more than $8.9 billion for the 2018/2019 season (ERS Fruit and Tree Nut Yearbook Tables).

Within SCP, APHIS will shift $4 million from the LBAM program to the SLF program. APHIS has been working with trading partners, particularly Canada and Mexico, to eliminate LBAM as a trade concern. Since LBAM was first detected in the United States in 2006, APHIS, State cooperators, and growers have learned that the pest can be effectively controlled with existing integrated pest management practices used to target similar moth species. Additionally, commodity risk analyses have shown that fruits and vegetables are unlikely pathways for LBAM transport. At the same time, control efforts targeting SLF, which involve intensive survey and treatment activities, are expanding. The SLF program assessed 4,187 parcels and treated 339 in FY 2018, when it initiated survey and control efforts. In FY 2019, the program assessed more than 64,000 parcels and identified more than 1,600 needing treatment. The program treated 640,000 trees in FY 2019 and expects to treat at least that number in FY 2021. Additionally, APHIS and cooperators are continuing to develop new methods to control SLF, including improved traps and an egg mass treatment that can be used in winter (current treatment methods—herbicides for SLF's preferred host tree, an invasive weed, and insecticides targeting the insect—are used in warmer weather). APHIS will build these new tools into the program if the ongoing pilot projects for these new methods continue to show success. SLF impacts a variety of crops, including grape, apple, hops, walnut trees, and other hardwood trees. Increasing funds available for treatment activities will allow the program to protect agricultural production areas near the current infestation from the spread of SLF. With this shift, APHIS would reduce LBAM staffing by 5 staff years and increase SLF staffing by the same number. Shifting the additional $4 million to SLF will allow APHIS to protect agricultural production areas in Pennsylvania, New Jersey, Delaware, Virginia, and surrounding States. Pennsylvania has approximately 22,000 acres of apple production and 13,000 acres of grape production, according to the 2017 Census of Agriculture (NASS). Controlling the current infestation will also protect other nearby States, such as New York, which has more than 50,000 acres of apple production and more 33,000 acres of grape production (NASS). The entire mid-Atlantic region with diverse agricultural production is vulnerable to SLF.

Overall, base program funding supports salaries and benefits, cooperative agreements, as well as other normal operating expenses such as supplies, equipment, and rent to support program activities.

APHIS is requesting increased funding of $2,066,000 for a pay increase, performance awards, and FERS benefits.

A decrease of $6,000,000 and 5 staff years for the glassy-winged sharpshooter program: APHIS will reduce Federal funding for this program and allow industry to contribute more funds toward program operations. The GWSS is not a Federally regulated pest and the program currently directly benefits one industry within one State.

A decrease of $5,000,000 and 4 staff years for the European grapevine moth program: APHIS and cooperators eradicated EGVM in FY 2016 and completed a 3-year, post-eradication monitoring program in FY 2019. At the proposed funding level, APHIS will continue to monitor for the pest at a reduced level.

(17) Tree and Wood Pests, A net decrease of $3,664,000 and 10 staff years ($60,000,000 and 301 staff years available in FY 2020 Enacted)

America's forests are valuable resources that provide jobs and recreation opportunities and create habitat for wildlife. Through the Tree and Wood Pests (TWP) program, APHIS addresses devastating pests such as the Asian longhorned beetle (ALB), emerald ash borer (EAB), and European gypsy moth (EGM). Numerous native hardwood tree species that are common throughout U.S. forests and urban landscapes are hosts to these pests. When forest pests like EAB kill large numbers of trees in urban and suburban areas, they can cause tremendous, wide-ranging impacts to communities, landscapes, and commerce. In addition, exports of forest products such as logs and timber could be at risk due to trade restrictions put in place by other countries.

Nationwide, APHIS programs protect 596 million acres of forested land by preventing the spread of damaging pests. Without Federal funding, forest pests would spread more rapidly throughout the United States, and responding to newly introduced pests would become increasingly difficult. The value of forest products that APHIS protects is over $200 billion (U.S. Forest Service).

APHIS cooperates with State and local agencies and organizations in 48 States to conduct various activities to manage and, when feasible, eradicate forest pests. These activities include conducting surveys, implementing control measures, developing methods and processes to combat pests, and conducting outreach efforts to prevent pest spread. APHIS' role in the TWP program is to oversee the regulatory framework to prevent the human-assisted movement of these pests and to provide national oversight and coordination for program activities to detect and eradicate or manage the pests.

In FY 2019, APHIS addressed ALB outbreaks in Massachusetts, Ohio, and New York, and continued pursuing biological control options as a long-term EAB management strategy. In addition, APHIS, alongside the Forest Service and the EGM Slow-the-Spread Foundation, continued its work to slow the spread of EGM and eradicate isolated populations, keeping this pest from becoming a larger issue.

Overall, base funding for the TWP program currently support salary and benefits, contracts, and cooperative agreements, as well as other normal operating expenses such as rent, supplies, travel, and equipment to conduct program activities.

APHIS is requesting increased funding of $826,000 for a pay increase, performance awards, and FERS benefits.

APHIS proposes a decrease of $4,490,000 and 10 staff years for the EAB pest program. The Agency and its cooperators at the State, local, and industry levels work together to achieve overall program goals. At the proposed funding level, the program will reduce Federal contributions towards managing this pest. If cooperators are unable to increase their contributions, the program would adjust the rate at which it conducts surveys and implements control measures.

A net decrease of $12,348,000 and 19 staff years for Safeguarding and Emergency Preparedness/Response – Plant Health.

(18) Wildlife Damage Management, A net increase of $235,000 ($109,756,000 and 589 staff years available in FY 2020 Enacted)

The Wildlife Damage Management (WDM) program resolves human/wildlife conflicts and protects agriculture, human health and safety, personal property, and natural resources from wildlife damage and wildlife-borne diseases in the United States. This program protects livestock from predators, manages damage from invasive species, such as feral swine and brown tree snakes; conducts a national rabies management program; and manages damage, conflicts, and diseases caused by various wildlife species, such as beavers, double crested cormorants, and other migratory birds. APHIS conducts these activities under the authority of the Animal Damage Control Act, which allows the Agency to control mammals and birds that are a nuisance or serve as reservoirs for zoonotic diseases. These activities benefit farmers, ranchers, other private landowners, businesses, and Federal, State, county, and city government offices. APHIS carries these activities out with appropriated funding the Agency receives as well as funding from Federal, State and local cooperators.

APHIS supports cooperators by providing both technical and direct control assistance. For example, the Agency will provide technical assistance if a rancher is experiencing predators killing his cattle and sheep, or if a farmer is having trouble with fish-eating birds damaging their catfish and other aquaculture crops. This could include providing advice, information, recommendations, and materials (and in some cases the necessary equipment) to the producer, farmer, or rancher to resolve the wildlife-caused damage themselves. In FY 2019, APHIS provided assistance to more than 12,625 livestock producers.

APHIS maintains specially trained staff around the nation to provide direct control assistance, which can be necessary when the problem cannot be resolved through technical assistance. In FY 2019, the Agency helped producers protect approximately 15.8 million head of livestock.

APHIS' wildlife disease biologists provide technical assistance, conduct surveillance, and maintain control of more than 30 wildlife diseases, pathogens, and syndromes, as well as collaborate with domestic and international academic and research institutions regarding wildlife disease surveillance. Ongoing surveillance of avian influenza in wild bird populations and diseases in feral swine is critical to manage and determine threats to the U.S. poultry and swine industries. Wildlife disease biologists also serve as multi-hazard first responders, providing support on foreign animal disease introductions (e.g., Virulent Newcastle disease, avian influenza) and natural disasters (e.g., floods, hurricanes, forest fires). By providing these specialized and coordinated services, APHIS supports USDA's goal of maximizing the ability of American agricultural producers to feed and clothe the world.

Overall, base funding for the WDM program currently supports salary and benefits, supplies, and equipment, as well as other normal operating expenses such as cooperative agreements, rent, and travel, to conduct program activities.

A decrease of $1,380,000 and 0 staff years for predator depredation program activities. At the proposed funding level, APHIS will reduce development of additional non-lethal strategies and instead focus efforts on current effective methods to avoid or reduce predation. APHIS will continue to provide technical assistance to producers on preventative measures for predator control activities, which producers can then implement themselves. Additionally, APHIS will assist Federal, State, and private cooperators in obtaining depredation permits and conducting predator management workshops.

APHIS is requesting increased funding of $1,615,000 for a pay increase, performance awards, and FERS benefits.

(19) Wildlife Services Methods Development, An increase of $343,000 ($18,856,000 and 125 staff years available from the FY 2020 Enacted)

The Wildlife Services Methods Development (WSMD) program works with cooperators to conduct research to develop and implement socially responsible methods to prevent and mitigate damage caused by wildlife and invasive species on agricultural production and to detect and prevent wildlife diseases that may impact animal health and agricultural biosecurity. APHIS provides the only dedicated Federal leadership in developing methods to manage wildlife-related damage programs and to resolve human-wildlife-agricultural conflicts. These methods enable APHIS, cooperators, and individuals to protect crops, livestock, natural resources, property, and public health and safety.

In FY 2019, NWRC initiated 86 new studies and published 133 scientific papers, book chapters and technical reports in 85 professional scientific journals. Scientists also made 216 presentations to scientific and stakeholder audiences. Many non-lethal methods that Federal, State, and private sector wildlife professionals use today stem from APHIS' research. Examples of methods developed include a potential new toxicant and delivery

system for managing feral swine populations; a repellent application for blackbirds who cause extensive crop damage and lower yields at harvest for sunflower growers; and adaptation of an effective non-lethal tool for managing wolves for coyote control. Each of these tools has enabled APHIS to reduce damage to property, agriculture, human health and safety, and/or native wildlife and ecosystems.

Additionally, the WSMD program develops data to register products that enable the private sector to further manage human-wildlife conflicts. An example of this type of technology transfer is the APHIS registration of a contraceptive vaccine to control the white-tail deer and feral horse and burro populations with the U.S. Environmental Protection Agency. The program also explores ways to reduce the spread and transmission of zoonotic diseases, and develops disease diagnostic methods.

The program develops and evaluates new tools and strategies to manage wildlife damage to agriculture. These methods are essential to cooperators, and preserve businesses and regional employment opportunities. In FY 2021, the WSMD program will continue to serve as an international leader in non-lethal research to reduce wildlife damage.

Overall, base funding for the WSMD program currently supports salary and benefits, contracts, and cooperative agreements, as well as other normal operating expenses such as, supplies, equipment, travel, and rent to conduct program activities.

APHIS is requesting increased funding of $343,000 for a pay increase, performance awards, and FERS benefits.

A net increase of $578,000 for Safeguarding and Emergency Preparedness/Response – Wildlife Services.

(20) Animal and Plant Health Regulatory Enforcement, An increase of $318,000 ($16,224,000 and 116 staff years available in the FY 2020 Enacted)

The Animal and Plant Health Regulatory Enforcement (APHRE) program provides investigative, enforcement, and regulatory support services to the Agency's four regulatory programs and Agricultural Quarantine Inspection activities carried out through the Department of Homeland Security's Customs and Border Protection. APHRE investigates alleged violations of Federal laws under its jurisdiction and pursues appropriate enforcement actions through administrative, civil, or criminal procedures.

The APHRE program ensures compliance through comprehensive investigations, sound enforcement actions, and strong educational efforts. The program uses monetary penalties and alternative enforcement actions, including non-monetary settlement agreements, and works with USDA's Office of the Inspector General and Office of the General Counsel (OGC), and/or the U.S. Department of Justice to pursue administrative, civil, or criminal

action, as appropriate, in response to alleged violations of APHIS-administered laws. Program activities serve to deter individuals and companies from engaging in acts to cause extensive economic damage and/or excessive expenses related to eradication or mitigation efforts designed to protect the American agriculture system. In FY 2019, APHRE initiated 1,359 new cases, issued 218 official warnings, issued 339 pre-litigation settlements resulting in the collection of $714,665 in stipulated penalties, and obtained administrative orders assessing $308,660 in civil penalties. The Agency considers a case complete after it issues an official warning or voluntary settlement to which the recipient agrees, finds there is insufficient evidence to support enforcement action, or refers a case to the USDA OGC.

Overall, base funding for the APHRE program supports salaries and benefits and contracts, as well as other normal operating expenses including travel, supplies, printing, rent, and utilities to conduct program activities.

APHIS is requesting increased funding of $318,000 for a pay increase, performance awards, and FERS benefits.

(21) Biotechnology Regulatory Services, An increase of $8,763,000 and 43 staff years ($18,875,000 and 96 staff years available in FY 2020 Enacted)

The biotechnology industry develops innovative products that can greatly benefit the public. Every day, American farmers and consumers benefit from USDA's role in bringing biotechnology products to the marketplace. On the plant health side, farmers benefit from genetically engineered (GE) crops through improved yields while consumers benefit from improved traits, such as healthier oils and reduced exposure to potential carcinogens. According to the USDA Economic Research Service, farmers use biotechnology to grow more than 90 percent of the soybeans, corn, and cotton in the United States. However, before any of these products can be brought to market, it is essential to demonstrate, through rigorous, scientific review, that they do not pose a risk to America's agricultural and natural resources.

APHIS ensures new GE crops will not pose plant health risks when released into the environment. APHIS' reviews and regulatory determinations support producers of new and innovative GE technologies in their efforts to enter commerce and the worldwide marketplace. These controls instill confidence in the public and in our trading partners that GE products produced in the United States are safe and of the highest quality. APHIS ensures that developers, growers, and others take important steps to prevent unauthorized releases of GE organisms. Depending on the characteristics of the GE organism, the developer files an application in the form of either a permit or a notification. To ensure that GE organisms meet standards outlined in the permit or notification, APHIS inspects fields, equipment, and other facilities. In FY 2019, APHIS and the States (authorized by APHIS) conducted more than 600 site inspections, 43 of which were unannounced, and 53 were virtual. The virtual inspection process, launched in FY 2018, enhanced effectiveness of

oversight while leveraging technology through virtual monitoring and evaluations of field trials.

Once a developer can demonstrate a GE plant does not pose a risk to plant health, the developer can petition for determination of nonregulated status (also known as deregulation) of the plant. APHIS' review and deregulation of these GE crops are essential in making these products available in the marketplace. Agricultural biotechnology gives farmers and producers more tools to address pest, disease, and weed management issues, contributes to the adoption of no-till and low-till practices, and helps safeguard crops against disease. USDA expects the cumulative number of determinations of nonregulated status to increase from 132 in FY 2019 to more than 135 by the end of FY 2021. The Agency would expect the number of determinations to increase significantly by FY 2021 if there are changes made in the regulations. In FY 2021, APHIS will continue to devote resources to meet target timelines of 13 to 15 months for petitions that do not require an Environmental Impact Statement.

APHIS takes a coordinated and collaborative approach to ensure the safe development of products derived through genetic engineering. This includes working with the Environmental Protection Agency and the Food and Drug Administration consistent with the principles of the Coordinated Framework for the Regulation of Biotechnology; partnering with the National Plant Board to allow State inspectors to conduct inspections of field release sites, which ensures cost-effective use of resources; working with international partners to enhance the coordination of regulatory approaches for the safe use of GE organisms; and providing capacity building assistance to developing countries for the regulation of GE crops.

Overall, base funding for the Biotechnology Regulatory Services (BRS) program currently supports salaries and benefits, contracts, and agreements, as well as other normal operating costs, such as travel, equipment, and supplies to conduct program activities. In addition, APHIS will pursue rulemaking to recover portion the cost of providing this activity and return the collections to Treasury.

An increase of $8,500,000 and 43 staff years to continue to implement Executive Order 13874. Executive Order (EO) 13874 (Modernizing the Regulatory Framework for Agricultural Biotechnology Products) identifies a number of directives for USDA that address recommendations of the Agriculture and Rural Prosperity Task Force that are within the core and support functions of the BRS program: reforming regulatory programs to reduce burdens, promote efficiency and provide a clear path to commercialization, improving international trade compatibility and policy alignment, expanding domestic and international acceptance of products made using biotechnology products, and establishing a unified web presence for U.S. biotechnology regulatory requirements and guidance. In FY 2021 and beyond, APHIS will implement a new federal regulatory approach for all products of biotechnology, which, among other things, will establish clear timeframes for completing

certain regulatory steps, thereby promoting greater certainty in the timing for commercializing biotechnology products.

Under the EO, APHIS is responsible for managing and enhancing the unified regulatory website, which allows developers of agricultural biotechnology products to promptly receive a single, coordinated response from Food and Drug Administration, Environmental Protection Agency and USDA to inquiries about Federal regulatory review of a particular product, requiring additional staffing for web development and communications. APHIS will develop additional partnerships to promote good stewardship of agricultural biotechnology and make investments in information technology (e.g., improved electronic permitting systems, CLIMEX modelling, and ARCGIS) and associated personnel to improve customer service and to enhance control of regulated biotechnology field trials. APHIS will also invest in strategic placement of analysts who conduct compliance assessments to ensure its regulatory program keeps ahead of the fast-paced, technological innovations in agricultural biotechnology and protects American agriculture.

As part of supporting both the EO and the its new regulatory framework, APHIS will increase its efforts internationally to communicate the effectiveness of the U.S. regulatory system in ensuring biotechnology product safety and to support risk-proportionate and science-based regulation of GE plants and other GE organisms; thereby facilitating international trade of U.S. agricultural products. Domestically, APHIS, in conjunction with its inter-agency partners will dedicate resources to ensuring that biotechnology information is accessible and understandable to the broadest base of stakeholders and consumers, as well as develop curricula for STEM students at the K-12 levels.

To meet these requirements and support the commitments in the EO, APHIS is requesting $8.5 million to support the staffing resources needed to build, initiate, and sustain the initiatives outlined above, while keeping ahead of the pace of innovation and the needs of the agriculture community.

APHIS is requesting increased funding of $263,000 for a pay increase, performance awards, and FERS benefits.

A net increase of $9,081,000 and 43 staff years Safeguarding and Emergency Preparedness/Response – Regulatory Services.

(22) Contingency Fund, An increase of $14,000 ($470,000 and 5 staff years available in the FY 2020 Enacted)

The APHIS Contingency Fund is the Agency's resource to immediately implement short-term, coordinated, emergency activities that are relatively small in scale and not otherwise supported by the Agency's other appropriated commodity line items. APHIS uses this fund

to respond to small, isolated pest and disease outbreaks before they can spread and cause significant economic and financial damage to producers across the United States. Specific examples include addressing outbreaks of the European grapevine moth in California, rabies in the Eastern United States and Texas, contagious equine metritis in Kentucky and other States, giant African land snail in Florida, feral swine in New Mexico, and cattle fever ticks in Texas.

The Contingency Fund allows APHIS programs to promptly address small scale outbreaks, decreasing the likelihood of pest and disease spread that could cripple otherwise healthy agricultural production systems and export markets.

Overall, base funding for the program currently supports salaries and benefits, equipment, contracts, and agreements, as well as other normal operating costs, such as travel and supplies to conduct program activities.

APHIS is requesting increased funding of $14,000 for a pay increase, performance awards, and FERS benefits.

(23) Emergency Preparedness and Response, An increase of $546,000 ($40,966,000 and 199 staff years available in FY 2020 Enacted)

The Emergency Preparedness and Response (EPR) Program improves APHIS' capability to prevent, prepare for, respond to, and recover from animal health emergencies. It develops strategies, policies, and procedures for incident management and response coordination that meet national and international standards. The program's goal is to respond to animal health events within 24 hours from the time APHIS decides it is appropriate to be involved in the response effort. Effective preparation for, and rapid response to, animal health events requires advance and continuous planning, training, and exercises. The program participates in joint Federal, State, and local animal health and all-hazards exercises to improve response capabilities, and performs post- exercise reviews. In addition, this program works with major commodity groups to ensure the continuous movement of livestock products during animal health emergencies. This line item funds activities that enable APHIS to achieve a high state of readiness and respond rapidly and effectively to emergency events, thus lessening the impact of those events, should they occur, on producers, consumers, taxpayers, and the economy.

In addition, APHIS and the Centers for Disease Control and Prevention (CDC) jointly manage the Federal Select Agent Program (FSAP). The FSAP administers the select agents and toxins regulations in coordination with the Federal Bureau of Investigation. Any individuals or entities possessing, using, or transferring select agents or toxins must register them with APHIS (if the agent affects animal or plant health) or the CDC (if the agent affects human health). Facilities must meet biosafety requirements, including measures to ensure the safety and security of the agents and prevent their release. APHIS and CDC inspect

facilities that use or transfer these agents to ensure compliance, and inspect each other's facilities to eliminate potential conflicts. APHIS' Agriculture Select Agent Services (AgSAS) ensures that facilities address non-compliances appropriately, and initiate enforcement actions. APHIS and CDC maintain a joint database to improve reporting and workload management capabilities. Since FY 2018, FSAP established regular coordination with USDA representatives overseeing the stand-up of the National Bio and Agro-Defense Facility (NBAF) in Manhattan, Kansas to provide guidance on the select agent registration process. FSAP assigned staff liaisons to collaborate with NBAF project leadership, performed annual on-site visits to review the facility design, and provided input into regulatory standards, the process, and timelines for select agent registration.

The EPR program supports coordinators in each of the 10 Federal Emergency Management Agency (FEMA) regions for Emergency Support Function #11: Agriculture and Natural Resources (ESF #11). These coordinators work with local, State, Tribal, Territorial, Insular Area Governments, and other Federal agencies during actual and potential incidents to respond to animal and agricultural health issues; provide technical expertise to support animal and agricultural emergency management; ensure the safety and defense of the Nation's supply of meat, poultry, and processed egg products; provide nutrition assistance to animals; and ensure the protection of historic properties and natural and cultural resources in partnership with the Department of the Interior. Often, ESF #11 support uses numerous USDA capabilities and resources from within APHIS, the Food and Nutrition Service, and the Food Safety Inspection Service, along with collaboration with the Farm Service Agency, the Natural Resources Conservation Service, and Rural Development to provide support to disaster-impacted areas. In addition, APHIS provides technical support to FEMA for the care of pets and service animals during disasters.

APHIS also serves as a liaison between State and local officials to protect pets, breeders, and exhibitors regulated by the Animal Welfare Act to enhance coordination on animal disease preparedness efforts. The agency works through ESF #11 (Agriculture and Natural Resources) and ESF #6 (Mass Care, in coordination with FEMA) to support pet owners in disasters. In addition, APHIS invests in the Zoo and Aquariums All Hazards Preparedness, Response and Recovery Fusion Center to help the exotic animal industry during emergencies. This Center reaches corners of the exotic animal industry that APHIS has had difficulty reaching.

The EPR program bolsters and deploys its emergency response capabilities in several ways. For example, the program maintains emergency qualifications system dispatchers, who coordinate the delivery of emergency resources. The EPR Program also supports the Voluntary Emergency Ready Response Corps, a pool of APHIS employees who are trained to fill commonly requested emergency response positions, as well as the APHIS security coordinator program which provides occupational safety and health support and physical and operational security support for emergency responses.

In FY 2019, APHIS continued to expand its animal health readiness capacity by increasing the number of first responders to enable the Agency to respond more rapidly and effectively to animal health emergency events. The EPR program supports the Agency's National Incident Management System emergency response training and exercise program, focusing on building the plant and animal health response capabilities of all APHIS emergency responders.

APHIS, State cooperators, and industry stakeholders exercised the Secure Milk Supply and Secure Pork Supply Plans. These plans provide continuity-of-business guidance for premises with no evidence of foreign animal disease infection in a regulatory control area. Under the plans, such an operation could move raw milk or live swine to processing if approved by local, State, tribal, and Federal regulatory officials. The secure food supply plans resulted from a multi-year collaboration by industry, State, Federal, and academic representatives. They provide guidance only; in an actual outbreak, the responsible regulatory officials will make decisions based on the unique characteristics of the outbreak.

This program uses modeling to determine disease spread and evaluate surveillance strategies. APHIS continues to enhance disease-spread and control models for avian influenza, classical swine fever, and highly pathogenic avian influenza (HPAI) to evaluate the effects of alternative control strategies and potential economic consequences of disease introduction and spread. APHIS also analyzes results from simulated foot-and-mouth disease outbreak and historical HPAI outbreak response data to develop demand estimates for veterinary medical officers and other response personnel. The Agency has generated virulent Newcastle disease models to evaluate the potential impact of incomplete depopulation of detected backyard poultry units and comparative outcomes from various surveillance strategies. APHIS has developed and enhanced African swine fever disease-spread and control models to investigate the effects of various strategies on the severity and duration of outbreaks.

Overall, base funding for the Emergency Preparedness and Response Program currently supports salaries and benefits of personnel and contracts, as well as other normal operating costs such as travel, supplies, rent, and utilities to conduct program activities.

APHIS is requesting increased funding of $546,000 for a pay increase, performance awards, and FERS benefits.

A net increase of $560,000 for Safeguarding and Emergency Preparedness/Response – Emergency Management.

An overall net decrease of $10,467,000 and 18 staff years for Safeguarding and Emergency Preparedness/Response.

(24) Agriculture Import/Export, An increase of $223,000 ($15,599,000 and 81 staff years available in the FY 2020 Enacted)

Import/Export program protects U.S. agriculture by facilitating the safe trade of animals and animal products. APHIS works with other Federal agencies, States, foreign governments, industry, and academia to conduct import risk analyses that evaluates the animal health status of countries and regions requesting approval to export animals and/or animal products into the United States. APHIS' animal health experts ensure that U.S. import requirements safeguard U.S. livestock through an evaluation process, and negotiate requirements for the export of U.S. animals and animal products worldwide. These requirements are based on complying with international standards, sound scientific principles, and fair trading practices for animals and animal products. APHIS also sets quarantine and testing requirements for animals and animal products being shipped to help ensure that global markets can be accessed, expanded, or maintained with little or no risk to U.S. animal production. Additionally, APHIS conducts activities related to the Lacey Act, which prohibits the importation of any plant, with limited exceptions, that are taken or traded in violation of domestic or international laws. The Act requires a declaration for imported shipments of most plants or plant products.

Imports

Safeguarding against the importation of significant animal diseases is vital to protecting U.S. industries, producers, and consumers. APHIS bases its regulations that minimize the risk of introducing animal diseases on evaluations of the animal health status of countries or regions. The Agency evaluates the animal health status of regions that wish to export animals and/or animal products to the United States through completing a risk assessment that documents the evaluation process and final conclusions. Based on the conclusion of the evaluation, the Agency may recognize the animal health status of the region and lift the import prohibitions related to the disease in question. In FY 2019, for example. APHIS published notices to recognize the State of Baja California, Mexico as free of cattle fever ticks, Singapore as free of foot-and-mouth disease and Romania as free of Newcastle disease and highly pathogenic avian influenza. These changes in regional animal health status allow U.S. importers to streamline processes associated with importing products from these countries. APHIS also recognizes that disease risks may be mitigated by treatments or processes applied to animal products, and import permits allow evaluation of these risk mitigations. In FY 2019, APHIS conducted four site visits in various regions to confirm that the regions' surveillance, prevention, and control measures are sufficient to minimize the likelihood of an introduction of foreign animal diseases into the United States. The Agency continues to ensure that import regulations are effective and science-based, and to work with U.S. businesses and importers to facilitate safe trade. For example, the Agency is working to improve traceability of imported animals by implementing the use of identification scanners at the Mexican border that will upload ear tag information into our traceability databases. APHIS also continues to develop more regulatory flexibility,

including removing the import permit requirement for certain low risk and exempted animal origin ingredients and products. In FY 2019, APHIS issued 17,933 import permits for live animals, animal products, organisms, and vectors. These include new permits, renewals, and amendments.

Exports

APHIS negotiates export protocols with trading partners for various commodities that protect their country while also facilitating trade. In FY 2019, APHIS negotiated or re-negotiated 103 export protocols for animal products (22 new or reopened markets, 22 expanded markets, and 59 retained markets). This includes retaining market access for poultry exports in numerous countries that imposed restrictions due to outbreaks of avian influenza and Newcastle disease. APHIS also negotiated 165 export protocols for live animals (86 new or reopened markets, 32 expanded, and 47 retained markets).

APHIS endorses export certificates for live animals and inedible animal-origin products, documenting the animal health status, and facilitating export to all markets. APHIS continued to increase the number of animal health export certificates issued electronically in FY 2019 by expanding the capabilities of the online Veterinary Export Health Certification System (VEHCS). VEHCS capabilities include: digital signature capabilities, multiple user roles, a certificate upload feature, certificate re-issuance, and inclusion of supporting documents and payment information. APHIS is working to expand the number of countries and commodities for which electronic certification is available. Due to more trading partners accepting electronically issued and/or digitally endorsed export health certificates in FY 2019, the number of export health certificates issued within VEHCS increased by 54.3 percent from FY 2018.

Lacey Act

APHIS conducts activities related to the Lacey Act. The Lacey Act prohibits the importation of any plant - with limited exceptions - taken or traded in violation of domestic or international laws. The Act requires a declaration for imported shipments of most plants or plant products. A 2012 United Nations Environmental Programme study estimated the value of illegal logging, including processing, to be between $30 to $100 billion dollars, or 10 to 30 percent of the global wood trade. The Lacey Act helps combat this illegal logging, often connected to organized crime, by encouraging importers to research their supply chains and be aware of the laws governing products they purchase in other countries. APHIS works with an interagency group to implement the provisions. APHIS' role is to manage the declaration requirement, provide guidance to importers regarding the declaration, perform compliance checks, and provide enforcement agencies with information to assist their investigations. APHIS collected approximately 830,000 declarations in FY 2019. The Agency will continue conducting these activities in FY 2021.

In FY 2021, the program will continue to conduct import risk analyses activities and set quarantine and testing requirements to protect U.S. agriculture while facilitating safe trade of animals and animal products. This program will also continue to enforce the Lacey Act to ensure imported plants and plant products are in compliance with domestic and international laws.

Overall, base funding for the Agriculture Import/Export program currently supports salaries and benefits of personnel, contracts, and agreements, as well as other normal operating costs such as travel, supplies, rent, and utilities to support program activities.

APHIS is requesting increased funding of $223,000 for a pay increase, performance awards, and FERS benefits.

(25) Overseas Technical and Trade Operations, An increase of $150,000 ($24,115,000 and 55 staff years available in the FY 2020 Enacted)

Through the Overseas Technical and Trade Operations (OTTO) program, APHIS helps U.S. farmers, ranchers, and producers export their products to other countries by resolving concerns over animal and plant health issues that affect trade in agricultural products. Exports are crucial to economic viability of U.S. farmers, ranchers, and producers. According to USDA's Economic Research Service, the United States exports 20 percent of its agricultural production. However, agricultural trade is subject to costly disruptions related to animal and plant health issues. APHIS works to continually support economic opportunities by keeping markets open for U.S. agricultural products. Working with other Federal partners, such as the U.S. Trade Representative's Office and USDA's Foreign Agricultural Service, APHIS provides the technical expertise to successfully address animal and plant health regulatory issues associated with trade negotiations for new markets and to reopen markets when they are closed or threatened due to pest or disease issues.

In addressing animal and plant health trade issues, APHIS uses its strong scientific base and team of technical experts located in the United States and abroad to advocate on behalf of U.S. agriculture. APHIS officials negotiate animal and plant health requirements for exports to other countries, ensuring requirements are proportional to risk without being excessively restrictive; assist U.S. exporters in meeting foreign regulatory requirements; provide technical information to support the safety of U.S. agricultural products destined for foreign markets; and safeguard the United States from foreign agricultural pests and diseases. Highlights of FY 2019 successes include opening new markets for U.S. beef to Morocco, potentially worth $80 million per year; cattle, sheep, and goats to Turkmenistan valued at $20 million per year; and blueberries to Vietnam worth $1 million (values based on industry, APHIS, and USDA Foreign Agricultural Service analysis).

Even for markets that are open to U.S. agricultural products, APHIS must continually address issues to keep trade flowing smoothly. APHIS works with foreign counterparts to clarify or streamline certification requirements, making it easier and less costly for U.S. exporters to move their products overseas. When shipments are held up at foreign ports, APHIS works with its counterparts to resolve the issues and secure the release of the shipments. In FY 2019, APHIS successfully secured the release of nearly 200 shipments worth more than $68 million.

APHIS fosters a successful trading environment for U.S. exports by working to ensure that the same rules apply to countries around the world through international standard setting. APHIS emphasizes the use of scientific principles as a basis for international trade decisions and works with international standard setting bodies such as the World Organisation for Animal Health and the International Plant Protection Convention. By supporting scientific decision making internationally and following international standards when considering what can be imported into the United States, APHIS encourages trading partners to do so as well, helping provide a level playing field for U.S. agricultural exports.

Agricultural trade is essential for U.S. farmers, ranchers, and producers, and APHIS' technical and regulatory trade activities support their export opportunities. In FY 2021, APHIS will continue to support international trade opportunities for America's animal and plant products while ensuring that U.S. agriculture is safe from pests and diseases.

Overall, base funding for the OTTO program currently supports salaries and benefits of personnel, contracts, and agreements, and travel, as well as other normal operating costs such as supplies, rent, and utilities to support program activities.

APHIS is requesting increased funding of $150,000 for a pay increase, performance awards, and FERS benefits.

A net increase of $373,000 for Safe Trade and International Technical Assistance.

(26) Animal Welfare, An increase of $637,000 ($31,310,000 and 232 staff years available in the FY 2020 Enacted)

The Animal Welfare Act (AWA) requires animals bred for commercial sale, used in research, transported commercially, or exhibited to the public receive Federal standards of care and treatment. APHIS' Animal Welfare Program ensures the humane care and treatment of animals covered by the AWA through inspection, learning opportunities, and enforcement actions. Since the AWA became law in 1966, APHIS has protected millions of regulated animals used in research, exhibition, and the pet trade as well as those transported in commerce.

Before issuing a license, APHIS works closely with potential licensees to ensure they understand the requirements of the AWA regulations and standards, and will be able to maintain compliance after obtaining a license from the Agency. In FY 2019, APHIS conducted 752 pre-licensing inspections, and issued 661 new licenses.

For licensed and registered facilities, the Agency determines on-going compliance by conducting unannounced inspections. APHIS uses a risk-based inspection system to support its focused inspection strategy, allowing more frequent and in-depth inspections at facilities with a higher risk of animal welfare concerns, and fewer at those that are consistently in compliance. During these inspections, APHIS officials examine and inspect all areas of animal care and treatment covered under the AWA. The Agency reviews the animals, premises, facilities, husbandry practices, program of veterinary care, records, and animal handling procedures. APHIS confirms that the animals receive adequate housing, transport, veterinary care, and meet husbandry standards as described in the AWA.

Whenever possible, APHIS takes a coordinated and collaborative approach to improve the welfare of animals. Using non-regulatory methods such as education, training, and outreach to stakeholders to convey critical and current animal welfare information, APHIS has been able to reduce inspection frequencies (while staying within legal requirements) for facilities that have implemented strong animal welfare programs and routinely demonstrate substantial compliance during unannounced inspections. This allows the Agency to remain focused on addressing the egregious alleged violators of the AWA, representing approximately four percent of all licensees/registrants.

When APHIS inspectors discover conditions or records that are noncompliant with AWA regulations, the Agency may establish a deadline for corrective action and increase frequency of unannounced inspections to determine whether the facility made the necessary modifications. Continued, serious noncompliance may warrant an investigation that can result in sanctions ranging from monetary penalties to suspension or revocation of the facility's license, after notice and an opportunity for a hearing. The welfare of animals nationwide is subject to significant media attention and passionate public engagement. The American public holds APHIS accountable for ensuring all regulated animals are healthy and treated humanely. Without this program, the Agency would be unable to enforce the AWA, and the health and welfare of millions of animals would be severely compromised.

Overall, base funding for the Animal Welfare program currently supports salaries and benefits of personnel and travel, as well as other normal operating costs such as contracts, supplies, and equipment to support program activities. In addition, APHIS will pursue rulemaking to recover portion the cost of providing this activity and return the collections to Treasury.

APHIS is requesting increased funding of $637,000 for a pay increase, performance awards, and FERS benefits.

(27) Horse Protection, A net decrease of $279,000 and 4 staff years ($1,000,000 and 10 staff years available in the FY 2020 Enacted)

APHIS' Horse Protection program strives to eliminate the cruel and inhumane practice of soring, which involves applying caustic chemicals and/or mechanical devices to a horse's pasterns, causing the horse to experience pain or distress while walking or moving. Soring changes the gait of a horse so that the animal steps higher, allowing its rider to gain a competitive edge at horse events. APHIS has the Federal responsibility to uphold the Horse Protection Act (HPA), which prohibits sore horses from being shown, sold, or transported.

There are an estimated 200,000 Tennessee Walking and Racking Horses in the United States, with potential show winnings reaching as high as $2.5 million. The management of horse shows, exhibitions, sales and auctions have statutory responsibility under the HPA to prevent unfair competition and must identify and disqualify sored horses prior to participating in HPA-covered events. USDA-certified horse industry organizations train and license third party inspectors, known as Designated Qualified Persons (DQPs). DQPs conduct horse inspections at horse shows, exhibitions, sales, and auctions affiliated with these organizations. APHIS attends a select number of HPA-covered events each year to observe DQP performance and inspect horses for HPA compliance. APHIS' presence at horse show events serves as a deterrent; without this program, the Agency would expect to see an increase in the abusive practice of soring.

Overall, base funding for the Horse Protection program currently supports salaries and benefits of personnel, and travel, as well as other normal operating expenses such as necessary contracts, agreements, and equipment for completing programmatic functions.

APHIS is requesting increased funding of $16,000 for a pay increase, performance awards, and FERS benefits.

A decrease of $295,000 and 4 staff years for diagnostic testing activities. In addition to physical inspection, APHIS uses diagnostic tools such as foreign substance testing (e.g. masking and numbing agents that temporarily block the pain of soring) in support of the oversight process. At the proposed funding level, APHIS would reduce testing and continue to rely primarily on physical inspection.

A net increase of 358,000 and a decrease of 4 staff years for Animal Welfare.

(28) APHIS Information Technology Infrastructure, no change ($4,251,000 and 0 staff years available in the FY 2020 Enacted)

The APHIS Information Technology Infrastructure (AITI) program provides funding for the hardware, software (including licensing and support costs) and telecommunications

infrastructure that gives Agency employees office automation tools, Internet access, and access to mission-critical programs and administrative applications. Funding for this program supports the stable and secure information infrastructure for those mission-critical applications and the day-to-day business of APHIS. The AITI priorities are to continually improve sharing of information across the Agency; improve coordination and accessibility of information, processes, and resources available to enable APHIS employees to provide day-to-day services, and support programs in emergencies; and improve APHIS' cyber-security.

APHIS works with USDA's Office of the Chief Information Officer to support the program goals and manage information technology in a manner consistent with both USDA and Federal requirements. APHIS also works with other Federal partners, including the Department of Homeland Security's Customs and Border Protection and the Department of Health and Human Services' Centers for Disease Control and Prevention to ensure that AITI provides interoperability and required availability for partner agencies, as needed for program delivery.

In support of the Federal Information Technology Acquisition Reform Act and the USDA Data Center Optimization Initiative, APHIS completed migration of all business applications from on-site data centers to the remote cloud servers. As of April 2019, APHIS closed all on-site Agency data centers. This migration decreases the Agency's carbon footprint by using a more energy efficient infrastructure, such as cloud services, and improves data management, application development, and cost control measures.

APHIS continues to review system security patching rates for the APHIS Enterprise Infrastructure workstations and servers ensure all systems are kept current with the latest security patches. In FY 2019, APHIS IT maintained the current version of National Institute of Standards and Technology and Federal Information Security Management Act testing standards to continue protecting our cyber security infrastructure and reducing vulnerabilities of our systems. In addition, the APHIS IT security monitoring system continues to track and mitigate improper use of personally identifiable information data stored in the APHIS infrastructure, helping to protect confidential information that could potentially identify a specific individual.

In addition to security, accessibility to information technology tools is vital to the operations of the Agency. In FY 2019, AITI maintained its 99.97 percent availability for its key computing systems as well as a 20.6 minute service-desk response time for the occasions when personnel experience difficulties accessing computing systems, making this the eighth consecutive year of high availability and quick response times. In addition, AITI re-emphasized the avoidance of misuse and/or abuse of IT systems to Agency employees in support of continued cyber security strengthening efforts.

Overall, AITI expenditures fund day-to-day operations for the Agency's IT infrastructure, including software license renewals and support, as well as other normal operating costs, such as supplies and equipment.

(29) Physical and Operational Security, An increase of $13,000 ($5,146,000 and 5 staff years available in the FY 2020 Enacted)

APHIS oversees and implements precautionary measures to ensure continued, efficient mission operations, and protection from disruption, degradation, or destruction of its facilities through the Physical and Operational Security (POS) program. The program provides year-round security measures, such as physical security upgrades, alarms, badging and identification systems, guard services, security assessments, safety and risk assessments, workplace violence training, and investigations of both internal and external threats. These measures protect APHIS employees, as well as visitors and stakeholders from harm, acts of terrorism, and violence. In addition, this program supports part of USDA's contribution to the U.S. Department of State's continuing implementation of the Capital Security Cost Sharing program, which provides safe and secure workplaces for all government employees located overseas.

APHIS provides numerous types of security training, using a variety of formats. In FY 2019, the program provided training to more than 1,600 agency employees, including seminars relating to active shooter response, situational awareness, scenario-based role playing, illegal drugs, self-defense, terrorism, local crime trends, and travel safety. The program also provided workplace violence training seminars and multiple security briefings for employees who work along the border or in foreign countries. To enhance preparedness and response, APHIS continued its required on-line and classroom based active shooter training for all employees and performed 19 live active shooter training exercises at agency offices in California, Florida, Missouri, New York, Ohio, Oregon, and Puerto Rico. This scenario-based training provided a dynamic, interactive exercise for 400 APHIS personnel, and over 140 participating local law enforcement, fire, and emergency medical service personnel. The APHIS active shooter training plan and materials were evaluated by 40 law enforcement agencies, as well as one of the nation's leading active shooter private consulting firm.

APHIS investigates, assesses, and mitigates all internal and external threats directed at agency facilities, programs and personnel. These threats include, but are not limited to, death threats, terrorist threats, and assaults. APHIS also works to ensure employee safety in the same manner, at or near the Mexican border, and at APHIS offices in Mexico, Panama, and Guatemala. Specifically near the Mexican border, the program investigate threats and responds to requests for protection for APHIS employees such as veterinarians and inspectors who enforce regulations in challenging environments. As a result, in FY 2019, APHIS investigated 80 external threats to its employees, and 63 workplace violence incidents to ensure employee safety.

Additionally, APHIS ensures the safety of its employees who enforce the Animal Welfare Act (AWA) and Horse Protection Act (HPA). APHIS security specialists investigate threats and respond to requests for protection throughout the country for APHIS veterinarians and inspectors who are enforcing regulations in challenging environments. In FY 2019, the program provided security during 16 inspections of regulated AWA entities, 49 HPA events, and provided protection for more than 20 personnel representing Federal agencies at a multi-day AWA hearing. Program personnel also worked across the agency to develop standard operating procedures for security support for AWA and HPA inspections and investigations.

The Homeland Security Presidential Directive-12 and Interagency Security Committee (ISC) directives create the standard for secure and reliable forms of identification for facility and network access and compliance regarding physical security at Federal facilities. In support of this standard, APHIS completed physical security assessments at 12 facilities, and began reassessing 184 previous facility assessments using the updated ISC criteria and USDA reporting format. As a result, APHIS provided security upgrades and repairs for a total of 108 facilities in FY 2019. In addition, the program is also responsible for issuing, activating, or updating approximately 3,800 new or renewed personal identification verification cards to APHIS personnel.

APHIS also works with other USDA agencies, the U.S. Department of Justice, U.S. Department of Homeland Security, the U.S. Department of State, and local law enforcement agencies to ensure that the appropriate organization takes the lead, contributes to program costs, and integrates security where employees are co-located overseas. APHIS maintains a presence overseas to facilitate agricultural trade and monitor pest and disease threats. The Security Embassy Construction Counterterrorism Act's Capital Security Cost Sharing Program requires the agency to help fund the construction of new Embassy compounds based on the number of authorized positions. The program worked with the U.S. Department of State to establish a security baseline for APHIS facilities overseas. In FY 2019, APHIS had approximately 300 full-time employees based in countries around the world. This program provides safe and secure diplomatic facilities for the agency's overseas personnel. In FY 2020, the program will ensure continued mission operations and protection from disruption, degradation, or destruction of its facilities.

Overall, base funding for the POS program currently supports contracts, programmatic agreements, and personnel costs, as well as other normal operating expenses such as travel and supplies. In addition, this program supports the mandatory cost share with the Department of State for the Capital Security Cost-Sharing program.

APHIS is requesting increased funding of $13,000 for a pay increase, performance awards, and FERS benefits.

(30) Rent and Department of Homeland Security (DHS) Security Payments, no change ($42,567,000 and 0 staff years available in the FY 2020 Enacted)

APHIS personnel are in every State working to carry out our mission and the Rental and DHS Security Payments program assists the agency in strategically managing the payment portfolio of approximately 230 General Services Administration occupancy agreements, DHS security payments, as well as other leased, owned, and agreement funded facilities. For example, the funding for this program ensures that APHIS programs and employees can effectively and efficiently carry out all mission-related activities, including surveillance for animal and plant pests and diseases, pest and disease eradication programs, diagnostic and methods development work at laboratories, animal welfare inspections, and wildlife damage management activities. APHIS continually identifies opportunities to consolidate, reduce or transform spaces to most effectively and efficiently manage space. For example, in FY 2019 the Agency consolidated three leases into one Raleigh Hub lease. Without funding for rent and security payments, APHIS would have to cover these costs by reducing program activities, decreasing levels of service, and diverting fiscal resources from other appropriated line items. Additionally, this funding will support the agency in continuing to meet the new Departmental goal of reducing its footprint by 5 percent (1 percent annually) by 2022.

Overall, base funding for the program currently maintains rent payments and security agreements in support of program activities.

A net increase of $13,000 for Agency-Wide Programs.

NEW ADMINISTRATIVE ACTION

Administrative Collection of User Fees

In FY 2021, USDA will administratively implement fees to cover the Government's full cost for providing certain services to certain beneficiaries. The Administration will promulgate regulations for the following new or expanded fees for services provided by the Animal and Plant Health Inspection Service related to: licenses for animal dealers, veterinary biologics product approval, and regulatory review of genetically engineered organisms.

Unlike some fees which are specifically authorized in statute and where USDA is allowed to retain proceeds from collections, the fees assessed under this administrative authority would be returned to Treasury and offset Government spending. For this reason, the FY 2021 Budget fully funds the underlying costs incurred by the agency in providing the services for which the user fees will be developed. These costs are estimates that will be refined as the agency moves forward with rulemaking to define the scope of services covered by these user fees and the associated cost of providing those services.

Fees to Cover Costs of Licensing and Other Related Activities (millions of dollars)	**2021**	**2022**	**10 Year Total**
Animal Welfare Licensing for Animal Dealers	-$5	-$9	-$94
Regulatory Review of Genetically Engineered Organisms	-$2	-$5	-$48
Veterinary Biologics Product Approval	-$5	-$10	-$107

GEOGRAPHICAL BREAKDOWN OF OBLIGATIONS AND STAFF YEARS

((dollars in thousands; staff years (SY))

State/Territory/Country	2018		2019		2020		2021	
	Actual	SY	Actual	SY	Enacted	SY	Budget	SY
Alabama	$4,587	27	$5,412	30	$5,529	36	$5,615	35
Alaska	556	1	587	2	600	2	606	2
Arizona	9,839	53	9,114	50	9,311	59	9,409	58
Arkansas	4,053	20	4,099	21	4,188	26	4,273	25
California	89,184	141	124,760	185	127,460	218	119,144	191
Colorado	56,522	341	56,561	320	57,785	378	59,273	372
Connecticut	1,285	5	1,107	6	1,131	7	1,156	7
Delaware	1,040	4	2,032	3	2,076	4	2,073	4
Florida	47,670	239	53,503	216	54,661	255	55,115	253
Georgia	6,366	40	6,495	39	6,636	46	6,738	45
Hawaii	25,912	283	26,335	285	26,905	336	27,591	331
Idaho	9,026	64	9,861	66	10,075	78	10,217	77
Illinois	3,712	28	3,648	29	3,727	35	3,809	34
Indiana	4,111	26	4,223	27	4,315	33	4,396	32
Iowa	73,028	319	74,974	274	76,596	324	76,335	348
Kansas	4,020	25	4,722	25	4,824	29	11,650	42
Kentucky	4,786	28	4,828	31	4,932	36	5,051	35
Louisiana	4,280	25	4,764	26	4,867	31	4,920	30
Maine	1,390	9	1,325	8	1,354	9	1,371	9
Maryland	282,321	814	281,530	744	287,622	879	294,682	870
Massachusetts	20,214	100	22,024	103	22,501	121	22,699	120
Michigan	6,576	45	7,878	49	8,048	58	3,591	47
Minnesota	21,886	160	29,644	181	30,286	214	30,706	212
Mississippi	8,671	47	8,554	43	8,739	51	8,834	50
Missouri	10,026	47	9,400	47	9,603	56	9,718	56
Montana	6,190	41	6,629	40	6,773	48	6,879	47
Nebraska	4,027	23	3,173	22	3,242	26	3,513	26
Nevada	2,537	20	2,561	22	2,616	26	2,672	25
New Hampshire	16,988	20	16,850	18	17,215	21	17,145	21
New Jersey	3,976	18	8,046	20	8,220	23	8,247	23
New Mexico	5,220	36	4,566	33	4,665	39	4,756	38
New York	36,826	126	34,961	111	35,718	131	35,837	129
North Carolina	41,703	214	42,498	182	43,418	214	44,133	212
North Dakota	2,742	16	2,978	17	3,042	20	3,104	20
Ohio	16,912	75	16,519	80	16,876	94	17,030	93
Oklahoma	5,705	43	7,076	42	7,229	50	7,355	49
Oregon	6,778	27	6,582	27	6,725	32	6,791	31

State/Territory/Country	2018 Actual	SY	2019 Actual	SY	2020 Enacted	SY	2021 Budget	SY
Pennsylvania	17,975	50	25,390	94	25,939	111	29,660	116
Rhode Island	354	1	336	1	343	1	347	1
South Carolina	3,346	22	3,705	25	3,786	29	3,858	28
South Dakota	2,656	15	2,198	15	2,245	17	2,296	17
Tennessee	7,608	40	7,068	40	7,220	48	7,326	47
Texas	58,192	342	58,400	343	59,664	405	60,380	400
Utah	7,017	42	7,465	41	7,626	48	7,720	47
Vermont	1,217	9	1,289	9	1,316	11	1,354	11
Virginia	8,783	31	9,420	31	9,624	37	9,715	36
Washington	8,668	29	8,821	28	9,012	33	9,085	32
West Virginia	2,606	16	2,683	17	2,741	20	2,796	20
Wisconsin	3,990	23	4,668	22	4,769	27	4,839	26
Wyoming	3,727	30	4,367	28	4,462	34	4,525	33
U.S. TERRITORIES:								
District of Columbia	20,629	72	22,449	80	22,934	80	22,977	80
Guam	873	3	854	1	873	1	869	1
Puerto Rico	8,968	113	9,580	116	9,787	116	10,041	116
Virgin Islands	231	1	187	1	191	1	195	1
INTERNATIONAL REGIONS								
AFRICA:								
Egypt	-	-	-	-	-	-	918	2
Ethiopia	-	-	-	-	-	-	1,050	2
South Africa	713	2	865	2	864	2	864	2
Senegal	735	1	888	2	887	2	-	-
Other	159	-	150	-	150	-	150	-
ASIA/PACIFIC:								
China	1,602	2	1,936	4	1,933	4	1,933	4
Japan	1,412	2	1,507	2	1,505	2	1,505	2
South Korea	500	1	529	1	528	1	528	1
United Arab Emirates	-	-	-	-	-	-	2,066	2
Other	2,645	5	3,446	6	3,441	6	3,015	5
CARIBBEAN:								
Dominican Republic	600	1	506	1	505	1	505	1
Other	131	-	42	-	42	-	42	-
CENTRAL AMERICA:								
Guatemala	21,283	2	31,700	5	31,655	5	31,655	5
Panama	14,944	7	14,569	4	14,548	4	14,548	4
Other	1,081	1	878	-	877	-	99	-

State/Territory/Country	2018 Actual	SY	2019 Actual	SY	2020 Enacted	SY	2021 Budget	SY
EUROPE/NEAR EAST:								
Austria	321	-	352	-	352	-	352	-
Belgium	1,376	2	1,527	2	1,525	2	1,525	2
Other	689	2	265	1	265	1	265	1
NORTH AMERICA:								
Canada	238	-	-	-	-	-	-	-
Mexico	7,112	2	5,300	3	5,292	3	5,292	3
SOUTH AMERICA:								
Brazil	835	2	1,027	2	1,026	2	1,026	2
Chile	248	-	238	-	238	-	238	-
Other	1,915	2	2,245	3	2,242	3	1,666	3
Obligations	1,066,044	4,421	1,146,670	4,354	1,169,917	5,101	1,183,653	5,061

CLASSIFICATION BY OBJECTS

(dollars in thousands)

Item No.	Item	2018 Actual	2019 Actual	2020 Enacted	2021 Budget
	Personnel Compensation:				
	Washington D.C.	$82,205	$82,126	$88,063	$91,558
	Personnel Compensation, Field	275,208	274,944	299,400	306,520
11.0	Total personnel compensation	357,413	357,070	387,463	398,078
12.0	Personal benefits	120,731	122,554	138,316	142,081
13.0	Benefits for former personnel	571	1,306	651	651
	Total, personnel comp. and benefits	478,714	480,930	526,430	540,810
	Other Objects:				
21.0	Travel and transportation of persons	29,579	32,284	32,284	32,707
22.0	Transportation of things	2,117	2,479	2,279	2,280
23.1	Rental payments to GSA	39,315	36,746	36,746	36,800
23.2	Rental payments to others	9,938	10,763	10,463	10,563
23.3	Communications, utilities, and misc. charges	16,010	18,202	18,202	18,302
24.0	Printing and reproduction	627	765	765	765
25.0	Other contractual services	11,722	34,190	25,190	26,948
25.1	Contractual Services Performed by Other Federal Agencies	78,286	80,025	80,405	82,570
25.2	Related Expenditures	4,651	4,322	4,322	4,798
25.3	Repair, Alteration or Maintenance of Equipment, Furniture or Structure	8,085	6,007	6,007	7,150
25.4	Contractual Services - Other	49,102	53,670	53,797	54,110
25.5	Agreements	242,667	287,819	285,819	278,246
25.6	IT Services and Supplies	12,501	3,906	3,906	4,156
25.7	Operation and maintenance of equipment	7,722	5,580	5,580	4,962
25.8	Subsistence and support of persons	644	1,210	1,010	1,010
26.0	Supplies and materials	44,230	46,464	45,464	45,538
31.0	Equipment	22,679	28,149	25,089	26,779
32.0	Land and structures	-	127	127	127
41.0	Grants, Subsidies, and Contributions	366	249	249	249
42.0	Insurance Claims and Indemnities	7,088	12,783	5,783	4,783
	Total, Other Objects	587,330	665,740	643,487	642,843
99.9	Total, new obligations	1,066,044	1,146,670	1,169,917	1,183,653
	DHS Building Security Payments (included in 25.3).....	$2,810	$3,099	$3,107	$3,115
	Position Data:				
	Average Salary (dollars), ES Position	$183,124	$183,728	$186,484	$189,281
	Average Salary (dollars), GS Position	$84,962	$87,208	$88,516	$89,844
	Average Grade, GS Position	10.8	10.9	10.9	10.9

STATUS OF PROGRAMS – SALARIES AND EXPENSES

SAFEGUARDING AND EMERGENCY PREPAREDNESS/RESPONSE

Selected Examples of Recent Progress - Animal Health:

1. Animal Health Technical Services

APHIS' Animal Health Technical Services (AHTS) develops and enhances tools for acquiring and managing information vital for improving global market access for U.S. livestock and animal products.

Animal Disease Traceability (ADT)

In FY 2019, APHIS initiated national priority trace exercises where States treat the trace as a national emergency. After the first round of these national priority trace exercises, States averaged approximately 2.5 hours to complete the exercise at a success rate of 98 percent. The ADT Program will continue to administer national priority trace exercises in FY 2020, as part of its performance-based program to evaluate States' ability to successfully complete a trace investigation.

In FY 2019, APHIS began the planning process to move away from free metal ear tags and towards using official radio frequency identification (RFID) tags. In FY 2020, APHIS plans to seek comment on a proposal to discontinue providing free metal tags as part of the program. APHIS is working with State animal health officials to identify funding to offset the cost of official RFID ear tags, reducing the cost that producers pay for RFID ear tags. Additionally, in FY 2019, APHIS and State partners began a pilot to provide funding to support electronic readers for slaughter facilities and accredited veterinarians as a critical component to implementing the electronic system.

To further strengthen the nation's animal disease traceability capabilities, the ADT program began several information technology initiatives. In FY 2019, APHIS worked with States and industries to increase the volume of electronically generated and stored Interstate Certificates of Veterinary Inspection (ICVI), which are the primary documents the Agency uses to track animal movement. Data can now be captured electronically without entering data from handwritten documents or scanning paper records.

Information Management

In FY 2019, APHIS analyzed the ADT Information System and identified business improvement opportunities, including a large-scale retirement of animal health tags. Removing tens of thousands of tags from the ADT Information System will reduce query/transaction time for

completing a trace investigation. APHIS will complete the analysis in FY 2020, and initiate the modernization project.

Additionally, in FY2019, APHIS began its modernization project for the Mobile Information Management system which captures data from multiple input systems and provides messages of collated data to State, Tribal, and Federal information systems. The system's modernization effort will minimizes the burden of manually recording animal information by producers and accredited veterinarians, while improving data collection, retrieval and sharing processes. APHIS was able to complete phase I of this modernization project in FY 2019. Phases II and III are projected to be completed by the end of FY 2020.

Modeling

In FY 2019, APHIS continued to develop and/or update disease-spread and control models for African swine fever, classical swine fever, foot-and-mouth disease (FMD), highly pathogenic avian influenza, and virulent Newcastle disease.

National Veterinary Accreditation Program (NVAP)

APHIS currently hosts 30 web-based supplemental training modules for accredited veterinarians. Since FY 2011, accredited veterinarians have completed more than 700,000 web modules, with more than 40,000 modules completed at veterinary conferences nationwide.

2. Aquatic Animal Health

In FY 2019, APHIS continued working with the National Aquaculture Association to develop the Commercial Aquaculture Health Program Standards (CAHPS), a national and uniform approach to health standards for aquaculture. The goal of CAHPS is to support improved health management, protection and expansion of aquaculture business opportunities, promotion and facilitation of trade, and improved resource protection.

There were three detections of infectious hypodermal and hematopoietic necrosis virus (IHHNV) in crustaceans within the United States. IHHNV is a viral disease that causes mass mortality among Western blue shrimp and severe deformations in Pacific white shrimp. During the investigation of IHHNV, APHIS' National Veterinary Services Laboratories tested more than 1,900 animals for IHHNV.

3. Avian Health

The Avian Health program protects the U.S. poultry industry, while facilitating agricultural trade in poultry and poultry products.

Surveillance, Prevention, and Control of Avian Diseases

In FY 2019, APHIS continued to provide guidance to commercial poultry operations who now must have successfully audited biosecurity plans by August 2020 to be eligible for indemnity and compensation payments. In April 2019, USDA published a notice advising the public about changes to the National Poultry Improvement Plan (NPIP) Program Standards including updated testing procedures and added or clarified compartmentalization requirements and sanitation standards.

In FY 2019, there were two detections of H5/H7 low pathogenic avian influenza (LPAI) in the U.S. Live Bird Marketing Systems (LBMS). Both premises were depopulated and cleaned and disinfected before quarantine release and restocking. Virulent Newcastle disease (vND) was not detected in U.S. live bird markets in FY 2019.

In FY 2019, there were two confirmed LPAI detections in U.S. commercial poultry. H5N2 LPAI was confirmed in October 2018 in a Minnesota commercial turkey flock, and H5N2 LPAI was also confirmed in a separate incident in April 2019 in a California flock of commercial ducks.

In FY 2019, APHIS coordinated the collection and laboratory analysis of approximately 1,100 wild bird samples from Alaska and California. No HPAI was detected in the FY 2019 samples. In addition, the agency continued to collaborate with researchers in China on HPAI surveillance and at the University of Missouri and Mississippi State University on ecological and genetic studies of avian influenza in wild birds. Scientists at the WS-National Wildlife Research Center identified several species of wildlife commonly found on farms that may play an important role in facilitating viruses in breaching biosecurity.

Regulatory enforcement is critical to contain HPAI. To deter the entry and support the containment and eradication of HPAI, in FY 2019 APHIS investigated five cases involving avian health issues and entered into pre-litigation settlements with three alleged violators of the Animal Health Protection Act. APHIS also conducted surveillance on multiple live bird markets within one geographic area after several area markets tested positive for low path avian influenza.

Despite increasingly intensified efforts by APHIS and the California Department of Food and Agriculture (CDFA) to contain the spread of vND, APHIS had identified 473 infected premises by September 30, 2019. While most of these cases involved backyard birds, four commercial chicken flocks in Riverside County, California, were confirmed infected between November 2018 and January 2019. To eliminate the vND virus, a joint APHIS-CDFA incident management team (IMT) worked to depopulate infected premises and exposed flocks, and to conduct diagnostic testing to identify new or potential infection sources. The CDFA established a Regional Quarantine Area (RQA) to require the reporting of sick birds, and to prohibit poultry owners from moving birds from all of Los Angeles County and from large areas of San Bernardino and Riverside counties. The IMT has been creating outreach information and educational

opportunities, and delivering them to industry, backyard bird owners, stakeholders, and the public on disease prevention, mitigation, and biosecurity procedures. In addition to managing infected backyard premises, the IMT is working with commercial premises in and around the RQA to prevent infection, monitor for disease, and restock previously affected commercial premises. The California Animal Health and Food Safety Laboratory System tests samples, and APHIS' National Veterinary Services Laboratories in Ames, Iowa, confirms all findings.

Disease Threat Planning and Response

APHIS manages the NPIP U.S. Poultry Primary Breeder AI Compartmentalization program which audits and certifies pedigree poultry stock breeding companies that practice high-level biosecurity measures to keep their flocks free of AI. In FY 2019, APHIS conducted recertification audits for Aviagen, the first company to attain poultry primary breeder status as an NPIP U.S. AI Clean Compartment. In August 2019, NPIP certified Cobb-Vantress' U.S. operations as the second AI Clean Compartment.

In FY 2019, APHIS continued to support the Zoo and Aquariums All Hazards Preparedness, Response, and Recovery (ZAHP) Center to facilitate business continuity during disasters and foreign animal disease (FAD) events. The Agency continues to refine the Secure Zoo Strategy, which addresses the challenges that FADs pose to the managed wildlife community through mitigation, protection, response, and recovery efforts. ZAHP raised concerns from California zoos during the 2019 vND outbreak and produced an April 2019 memorandum "vND Response 2019 Euthanasia of Non-Poultry Species, version 4.16.2019" to exempt zoological collections from the depopulation efforts described in national FAD policy.

International Avian Health Activities

In FY 2019, APHIS delivered more than 10 capacity-building activities in the areas of biosecurity, poultry disease diagnostics, quality assurance in the laboratory, poultry and wildlife surveillance. APHIS conducted two projects in South America related to improving emergency preparedness and HPAI surveillance in Paraguay, Uruguay, Brazil, Ecuador, Chile and Colombia. APHIS also worked with 13 wildlife veterinarians from Africa and Asia on HPAI surveillance. In addition, APHIS conducted a training in India on the World Health Organization's code of regionalization to increase understanding and utilization of regionalization as a disease control strategy for avian diseases and provided the up-to-date science-based knowledge on surveillance, zoning, and compartmentalization for avian disease control and to facilitate trade.

In addition, APHIS sponsors and staffs the Emergency Management Center at the Food and Agriculture Organization of the United Nations, in Rome, Italy. APHIS provided one full-time veterinarian for this Center, which helps countries respond to animal disease threats, and reduces the threat of outbreaks from becoming widespread and evolving into pandemics. APHIS also ensures that U.S. trading partners adhere to the sanitary and phytosanitary rules of

the World Trade Organization and other international standard-setting organization. For example, the United States established a new partnership with OIE and placed a veterinarian at the organization's headquarters in Paris, France.

The WS-National Wildlife Research Center, in collaboration with Wildlife Services, Veterinary Services, and International Services, hosted an International Wildlife Disease Surveillance and Monitoring Course, an international group of wildlife veterinarians in September for a week-long course on wildlife disease surveillance including mammals and birds. The 14 participants from 9 countries learned about all aspects of wildlife disease surveillance, including hands on necropsy and sample collection.

4. Cattle Health

The Cattle Health Program has two major goals: to rapidly detect and respond to diseases that could significantly affect the U.S. cattle and bison population, and prevent the spread of any newly detected disease in the United States as well as endemic domestic cattle and bison diseases of concern.

Bovine tuberculosis

Bovine TB primarily affects cattle but has the potential to affect other animal species and humans as well. Today the prevalence rate in cattle herds is less than 0.001 percent. In FY 2019, approximately 140 Federally-inspected slaughter establishments submitted 4,141 samples for TB testing.

Through these slaughter surveillance efforts, the program detected TB in nine animals in FY 2019: one from Texas, two from North Dakota, one from New Mexico, and 1 from Mexico. The investigations to determine the herd of origin are still ongoing for the remaining 4 animals. APHIS uses a mix of depopulation and test-and-removal strategies to address bovine TB-affected herds. The herds of origin linked in the epidemiological investigations were all placed under herd management plans, except for the Mexican herd. The herds identified are either completing or have completed a test and remove protocol or were depopulated. At the end of FY 2019, 49 States, two Territories (Puerto Rico and the U.S. Virgin Islands), and one zone were TB accredited free.

Bovine brucellosis

Bovine brucellosis is an infectious disease that can cause decreased milk production, weight loss, abortions, infertility, and lameness. These effects can negatively impact the livelihood of cattle producers and the supply of meat and dairy products.

In FY 2019, APHIS tested approximately 639,000 head of cattle under the market cattle identification national slaughter surveillance program. The Agency, in conjunction with States,

also tests cattle and domestic bison on farms or ranches for movement, private sale, issue of herd certification, and for show or exhibition purposes. In FY 2019, the program tested and vaccinated over 3.7 million calves and 18,000 adult cattle for brucellosis, and certified 337 herds as brucellosis-free cattle herds. Agency-accredited veterinarians perform most of the vaccinations and the collection of samples, and State laboratories test the samples.

There were three new brucellosis affected herds detected in FY 2019. All three herds were beef herds detected in Wyoming's designated surveillance area during annual certification tests. Two herds underwent a test-and-remove herd management plan and were subsequently released from quarantine in FY 2019. The third herd was depopulated due to owner preference. There is no indication that brucellosis has spread outside the Greater Yellowstone Area (GYA). This area is APHIS' main focus for brucellosis in livestock because the disease is endemic there in wild elk and bison.

Bovine spongiform encephalopathy

Bovine Spongiform Encephalopathy (BSE), widely referred to as "mad cow disease," is a progressive and fatal neurologic disease of cattle. The primary route of spread of classical BSE infection in cattle is feed contaminated with the infectious agent.

In FY 2019, the Agency tested for BSE in 17,886 cattle, resulting in 278,846 points, exceeding the OIE's international surveillance standards (21,429 points per year) by 13 times. No cases of BSE were detected in FY 2019.

Cattle fever tick

The Federal-State Cattle Fever Tick Eradication Program is a partnership between APHIS and the Texas Animal Health Commission. The cattle fever tick (*Boophilus annulatus*) and the southern cattle tick (*B. microplus*) are vectors for spreading babesiosis, also known as cattle fever.

The United States remains free of cattle fever. There is a permanent quarantine buffer zone established between Texas and Mexico.

In FY 2019, APHIS conducted 114,463 individual animal inspections and 95,145 treatments throughout South Texas. For FY 2019, the quarantine zone and the free area of Texas contained 79 newly quarantined premises, compared to 110 in FY 2018. Additionally, APHIS collaborated with the Agricultural Research Service on several projects in FY 2019, including studies on long-lasting anti-parasitic products that prevent or control ticks and on-going research to create cost-efficient ultra-quiet sprayers for treating ticks found in wildlife animals such as nilgai and white tail deer. In FY 2019, APHIS commissioned an external review of the cattle fever tick eradication program to evaluate the efficacy of current mitigation and control strategies. The findings from this review will help APHIS and its partner agencies improve upon current strategies that

prevent tick infested wildlife coming into contact with U.S. livestock, and integrate new mitigation techniques for eradicating the tick from infested premises.

Screwworm

APHIS and its cooperators have eradicated screwworm from the United States, Mexico, Belize, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, and down to the southern-most portion of Panama. In FY 2019, there were 63 positive screwworm cases in the barrier zone, with 52 of them located in the area of Jaque near the border with Colombia. The cases in Jaque are primarily due to inclement weather limiting the ability of the dispersal planes to fly at low altitudes and continued illegal movement of infested animals from Colombia into Panama. In response, the program is conducting ground releases in the infected area and continuing to monitor for additional cases.

5. Equine, Cervid and Small Ruminant Health

The Equine, Cervid, and Small Ruminant Health (ECSRH) program conducted disease surveillance and/or monitoring for the following diseases in FY 2019: scrapie, bovine tuberculosis (TB), chronic wasting disease (CWD), vesicular stomatitis virus (VSV), contagious equine metritis (CEM), equine piroplasmosis (EP), Eastern equine encephalitis (EEE), West Nile Virus (WNV) and equine infectious anemia (EIA).

Sheep and Goat

The National Scrapie Eradication Program (NSEP) focuses on improving the health of the national sheep flock and goat herd, reducing scrapie-associated economic losses and increasing international marketing opportunities.

In FY 2019, APHIS collected samples from 34,730 sheep and goats for scrapie testing, detecting 7 classical scrapie positive animals. Of these animals, five sheep and one goat were from a source flock in Pennsylvania that was found in August 2018, depopulated in October 2018, and tested for scrapie in November 2018. A second goat, which was from an Indiana herd, was sampled at slaughter in June 2019. The source flock completed a cleanup plan and was placed on a 5-year monitoring plan. The source herd of the positive Indiana goat no longer contained any exposed animals and was also placed on a 5-year monitoring plan. A trace-back investigation narrowed the goat's birth herd to two possible herds. Animals in both herds tested negative for scrapie and were placed on 5-year monitoring plans. There were no classical scrapie cases detected in slaughter sheep in FY 2019. Also in FY 2019, two sheep tested positive at slaughter for non-classical scrapie (Nor98-like) and were traced back to Colorado flocks. Unlike classical scrapie, non-classical scrapie is either not laterally transmissible or is transmissible at a very low rate, and the OIE and APHIS determined that it is not a disease of trade concern.

The NSEP has a voluntary flock certification component, the Scrapie Free Flock Certification Program (SFCP). Participation in the SFCP enables producers to enhance the marketability of their animals by protecting them from scrapie and provides participants an avenue to export sheep and goats. At the end of FY 2019, 235 flocks were enrolled in the SFCP. Of these, 43 were export certified (scrapie-free), 48 were export monitored (working toward scrapie freedom), and 144 were select monitored (reduced scrapie risk).

In FY 2019, APHIS updated the National Scrapie Surveillance Plan and sampling minimums to align scrapie surveillance efforts with the current disease situation and the recently published Scrapie Final Rule. The surveillance plan and the new sampling minimum calculations will go into effect for FY 2020. The new rule allows for a more flexible approach to disease investigations and affected flock management, and brings goat identification and recordkeeping requirements up to the same level as was previously in place for sheep.

Cervids

In FY 2019, the program tested 10,285 animals utilizing the Dual Path Platform (DPP) blood test and 2,658 animals utilizing the Single Cervical Test (SCT) for TB. Of the cervids tested using DPP, 27 suspects were identified on the first round of testing and 9 were classified as reactors based on the second round of testing. Of the cervids tested using SCT, 41 suspects were identified on the first round of testing, and 0 were classified as suspects or reactors on the follow up Comparative Cervical Test. The program necropsied 8 of the 9 reactors from the DPP test, and their tissues were tested and ultimately found negative for TB. The remaining reactor is scheduled for necropsy in FY 2020.

In FY 2019, APHIS started a pilot project to evaluate the DPP test for TB in mule and sika deer. The project utilizes serum samples that designated accredited veterinarians submitted for herd TB certification purposes. The project will collect samples from 306 animals of each species submitted in accordance with APHIS guidelines. The agency will consider tests conducted as part of the pilot to be official TB tests. In FY 2019, 10 mule deer were tested as part of the project and all 10 tested negative.

Currently, 28 States participate in APHIS' voluntary national CWD Herd Certification Plan (HCP). In FY 2019 APHIS tested more than 11,000 farmed cervids for CWD. As a result, APHIS identified 17 new CWD positive farmed cervid herds. APHIS provided Federal indemnity to depopulate 7 of the 17 newly identified deer herds in FY 2019. The remaining infected herds found in FY 2019 are under State quarantines.

Equines

APHIS provides expertise and helps develop the industry's National Equine Health Plan, which functions as a roadmap for owners, veterinarians, and industry organizations to coordinate

with State and Federal animal health officials to recognize, prevent, control, and respond to diseases.

In FY 2019, APHIS coordinated with States and industry to develop national disease control strategies, and provided oversight, coordination and implementation of appropriate policies. In FY 2019, positive detections of VSV, EIA and EP, identified during routine surveillance, led to robust response activities. These responses include: the coordination of State and Federal activities; investigations by APHIS trained Foreign Animal Disease Diagnosticians who diagnose, sample, and test cohorts; trace-back investigations; euthanasia for EIA; treatment for EP; or lifetime quarantines in the case of EIA and EP; notification of OIE or trading partners; the gathering of epidemiologic data; and data analysis.

APHIS collaborated with States and other Federal agencies in the reporting of equine cases of certain zoonotic diseases such as EEE and WNV. In FY 2019, APHIS maintained certification and annual proficiency testing for 20 equine viral arteritis laboratories, 13 EP laboratories, and 13 CEM laboratories and additionally certified and conducted annual proficiency testing for 429 EIA laboratories.

6. National Veterinary Stockpile

The National Veterinary Stockpile (NVS), overseen by APHIS' Field Operations Logistics Center, serves as the primary source of materials, supplies, and equipment for the response to, control of, and containment of significant animal disease outbreaks.

The NVS continuously evaluates their inventory of supplies and replaces expired inventory. In FY 2019, the NVS acquired additional euthanasia equipment, specifically trailers used for euthanizing poultry during an emergency response. The NVS provided numerous shipments of personal protective equipment, supplies and equipment that were used by on-the-ground responders to combat the virulent Newcastle disease outbreak in California, within 24 hours. The NVS is continuously seeking additional technology to support a response to an incursion of foreign animal diseases, such as African swine fever.

The NVS seeks opportunities to coordinate and support activities with States. In FY 2019, the program focused its activities on State preparedness, and conducted exercises with Minnesota, Oklahoma, and Iowa. NVS personnel facilitated planning and training exercises to identify resource gaps and improve state preparedness plans. In addition to exercise activities, the NVS conducted additional outreach by partnering with APHIS Field Operations personnel to conduct training and drills to improve communication, collaboration, and integration during a logistics emergency response.

Also, in FY 2019, APHIS continued to update and maintain the North American Foot and Mouth Disease Vaccine Bank (NAFMDVB) as part of the agency's animal health readiness

initiative. The NAFMDVB is a vaccine stockpile that APHIS, Mexico, and Canada cooperatively support.

7. Swine Health

APHIS' Swine Health Program facilitates trade in swine and pork products, and addresses swine health issues at the human-swine interface and between wildlife and domestic swine. APHIS activities include comprehensive and integrated swine surveillance, emergency preparedness and response planning, disease investigation and control activities, zoonotic disease prevention and response, swine health studies and special projects, collaborations on emerging issues, and outreach and communication with stakeholders.

APHIS collects swine samples from various surveillance streams as part of a comprehensive integrated surveillance approach to detect various swine diseases that could substantially affect domestic producers and the national economy.

In FY 2019, APHIS tested 86,742 samples for pseudorabies virus (PRV); 86,742 for swine brucellosis; 1,055 for influenza A virus – swine (IAV-S); and 12,705 for Classical Swine Fever (CSF). Of the samples tested for CSF, the Agency's Foreign Animal Disease Diagnostic Laboratory on Plum Island, New York tested 2,643 samples, the Agency's National Veterinary Services Laboratory at Ames, Iowa tested 4,305 samples and the National Animal Health Laboratories Network (NAHLN) tested 5,757 samples. APHIS began an active African swine fever (ASF) surveillance program in June 2019 and tested 1,550 samples at approved NAHLN laboratories. The testing received as of October 2019, continued to confirm that all commercial swine herds were free from swine brucellosis and PRV, however swine brucellosis and PRV continue to be found in non-commercial herds following exposure to feral swine. In FY 2019, two non-commercial herds were identified as PRV test-positive, and five non-commercial herds were found to be test-positive for swine brucellosis in four States, some States have ongoing investigations and complete FY 2019 herd data will not be available until after January 2020. CSF remains eradicated from the United States, and the United States also continues to be free of ASF.

In FY 2019, APHIS efforts led to whole genomic sequencing of approximately 250 IAV-S samples entered into this program. In FY 2019, APHIS performed 1,135 (1,095 were vesicular) investigations in swine for foreign animal diseases (FAD), and all were negative.

In FY 2019, public health officials reported one human variant influenza A case but it is unclear from available data whether the case was a result of swine exposure. State public health and animal health officials, with support from APHIS and the Centers for Disease Control and Prevention, investigated all outbreaks. The Agency offers assistance to States and industry to identify the isolates from the swine associated with these outbreaks, if warranted. In FY 2019, APHIS continued working with the swine industry to further evaluate the development of a negligible risk compartment for trichinella. Establishment of a negligible risk compartment will

allow the U.S. pork industry to access and protect international markets for fresh pork without need for other mitigations such as individual carcass testing or freezing.

In FY 2019, APHIS supported special projects to advance scientific knowledge, situational awareness, rapid disease detection, advance information technology to support comprehensive surveillance and to advance diagnostic tests that are critical to the Agency's ability to respond to swine and human health events. Specifically, APHIS and industry stakeholders continued validating tests for use of oral fluids in swine FAD diagnostics (CSF, ASF, and FMD). Oral fluids testing validation is still in progress and additional information is needed to complete validation.

8. Veterinary Biologics

APHIS' Center for Veterinary Biologics (CVB) regulates veterinary biological products under the Virus-Serum-Toxin Act to ensure that these products are pure, safe, potent, and effective.

Licensed Products and Inspections

In FY 2019, APHIS received 154 applications for new and renewal licenses/permits, and issued 26 licenses/permits for the prevention, diagnosis, management, or cure of existing or new/emerging animal diseases. In FY 2019, the Agency licensed 90 manufacturers and permittees for 1,638 active product licenses/permits for the control of 280 animal diseases. APHIS continued implementing the single-tier labeling rule, which changes the efficacy descriptions for veterinary biologics to a single, uniform label claim. This simpler format better communicates product performance, saves time and money for the manufacturer, and makes U.S. labeling more consistent with other products in international markets. In addition, APHIS clearly defined policy to allow the use of platform and prescription vaccines. These innovative policies allow stakeholders the flexibility to quickly change vaccines to match emerging and changing pathogen threats with very limited risk to people, animals or the environment.

APHIS' National Centers for Animal Health (NCAH) Portal allows real-time communication and data exchange between APHIS and biologics manufacturers, eliminating the time and costs of deliveries. By the end of FY 2019, 89 percent of licensed firms were using the NCAH Portal. The total number of submissions CVB received from the NCAH Portal increased from 35,243 submissions in FY 2018 to 37,886 submissions in FY 2019. Overall, 91 percent of CVB submissions were received through the NCAH Portal.

In FY 2019, APHIS reviewed/processed 4,612 Certificates of Licensing and Inspection, and reviewed/processed 1,024 export certificates for veterinary biological products. The significant increase in the number of certificates processed from FY 2018 demonstrates that companies are able to produce and export more of their established products, even though new product pipelines have been slowed by the mergers. The Agency processed all export certificates within 4 days, and all certificates of licensing and inspection within 28 days. Timely processing helps

ensure that markets are accessible for manufacturers who export their product. APHIS also helped ensure there were no FAD events related to the importation of more than 50 million doses of biological products.

In FY 2019, APHIS conducted 54 on-site inspections, 24 percent of which supported a new establishment/facility or product license for the industry. Licensed veterinary biologics are vital since manufacturers can use them to make products to diagnose, prevent, or treat animal diseases, or improve existing biologics. In FY 2019, APHIS also performed 256 regulatory actions, issued 34 violation notices, and conducted 20 investigations of possible regulation violations. In addition, the Agency received 306 adverse event reports regarding veterinary biological products.

Collaborative Efforts

In FY 2019, APHIS provided expertise and training at a joint Institute for International Cooperation in Animal Biologics education program to educate domestic and international industry personnel and foreign officials on U.S. regulatory processes. There were 138 registrants including 38 international attendees from 14 countries. The program promotes U.S. policy as a regulatory model for both established and developing markets, and it improves worldwide marketability of USDA-licensed biologics. APHIS also participated in harmonization efforts with major trading partners including Japan and the European Union through the International Cooperation on Harmonization of Technical Requirements for Registration of Veterinary Medicinal Products. Additionally, CVB participates in the Veterinary International Conference on Harmonization's (VICH) Outreach Forum. This forum promotes the use of VICH harmonized guidelines in countries with developing regulatory systems for veterinary medicinal products.

9. Veterinary Diagnostics

Laboratory and diagnostic services are essential components of the U.S. animal health infrastructure. The National Veterinary Services Laboratories (NVSL) has laboratories in Ames, Iowa, and at Plum Island, New York. The NVSL is recognized by the World Organisation for Animal Health and the Food and Agriculture Organization as an international reference laboratory for significant animal diseases such as highly pathogenic avian influenza and foot-and-mouth disease (FMD). It provides diagnostic test services ranging from a single laboratory test to comprehensive laboratory services covering many pathogens for suspected outbreaks of domestic and foreign animal diseases (FADs).

NVSL

In FY 2019, the NVSL managed more than 407,740 diagnostic tests and approximately 45,796 accessions (one or more diagnostic samples received from the same submitter on the same day). The laboratories produced and filled more than 99,830 reagent order items in FY 2019,

representing approximately 550 different types of products used in veterinary diagnostic testing. Many of these products are only available to stakeholders through APHIS. In support of diagnostic testing and the development of vaccines for use in animal disease prevention, NVSL produced more than 507,700 milliliters of cell culture material, representing a broad spectrum of 29 cell culture lines. The Agency also validated new test methods and platforms, and provided training and assistance to domestic and international laboratories.

In FY 2019, NVSL conducted testing on 2,842 diagnostic accessions to support FAD investigations and also supported international capacity building and collaborative activities in Australia, Canada, China, Columbia, Denmark, France, Germany, Italy, Mexico, Spain, United Kingdom, and Vietnam. In FY 2019, the NVSL's Foreign Animal Disease Diagnostic Laboratory delivered four FAD training courses to State and Federal participants, including military veterinarians. In collaboration with the Canadian Food Inspection Agency, APHIS worked on a strategy to improve and harmonize available diagnostic methods to enhance North American African swine fever (ASF) preparedness. In FY 2019, the program received and tested 5,443 classical swine fever (CSF) surveillance samples. Of this total, NVSL tested 217 samples, and NAHLN laboratories tested 5,226 samples.

APHIS conducts proficiency testing of Federal, State, and university-sponsored laboratories when these laboratories perform authorized diagnostic testing as part of APHIS-approved surveillance and/or response programs. In FY 2019, APHIS provided 21 types of proficiency panels to international, Federal, State, and private laboratories, both within and outside the NAHLN network. APHIS made the necessary controls and reference strains available for approximately 200 diseases to help other laboratories develop and validate diagnostic tests. User fees cover the cost of some reagents and proficiency panels.

NAHLN

The NAHLN serves as a vital early warning system for foreign and emerging animal diseases. The NVSL trains NAHLN laboratory personnel to ensure proficiency and standardization for performing diagnostic tests.

In FY 2019, the network laboratories performed approximately 150,630 diagnostic tests to support APHIS' animal health surveillance and response programs for NAHLN scope diseases. This number includes the NAHLN CSF testing numbers from October 1, 2018 through May 31, 2019 as well as ongoing testing for ASF/CSF active surveillance, which began in June 2019. The NAHLN program staff conduct exercises to prepare participating laboratories for animal disease outbreak scenarios; this enables the laboratories to remain proficient in animal disease testing. It also enables them to generate a rapid, local preliminary diagnostic result while confirmatory testing is performed at the NVSL. In FY 2019, the NAHLN laboratory in California supported a response to vND in exhibition and commercial birds as well as an outbreak of low pathogenic avian influenza. In support of ASF preparedness, the NAHLN quadrupled the number of laboratories approved to use the ASF polymerase chain reaction (PCR) test to 47.

These ASF-approved NAHLN laboratories have the capacity to provide greater than 40,000 PCR tests in 24 hours. As of the end of FY 2019, the NAHLN consisted of 59 State, Federal, and university veterinary diagnostic laboratories in 42 States. These laboratories work with the NVSL reference laboratories to test for 14 economically devastating and/or foreign animal diseases and potential zoonotic diseases such as FMD, influenza in avian and swine species, bovine spongiform encephalopathy, and CSF.

The NAHLN Coordinating Council continued to maintain electronic messaging as a priority in the laboratory assessments for FY 2019 designation. A NAHLN laboratory designated as Level 1, 2, or 3 receives infrastructure support from USDA, and also conducts fee-for-service testing for the USDA. All Level 1 laboratories achieved the ability in FY 2019 to message test results for all NAHLN-approved testing where a message can be sent. Overall for FY 2019, 52 laboratories were capable of messaging results for at least one NAHLN scope disease, and APHIS projects that number will increase to 55 in FY 2020, and 58 in FY 2021. The commitment is to have all Level 2 laboratories messaging their NAHLN-approved assay results by the end of FY 2020. To maintain a designation, qualifying laboratories must undergo annual reviews to demonstrate adherence to NAHLN policies and procedures, and adjust levels accordingly. Based on the level of infrastructure funding provided to Level 1, 2, and 3 NAHLN laboratories, the laboratories maintained a high level of required quality standards, increased their capacity for electronic messaging, and increased the capacity to provide early detection and surge testing by increasing testing capacity. Specifically for ASF, NAHLN quadrupled the number of laboratories approved to test for ASF by PCR and increased the number of analysts proficiency tested to over 170.

National Bio and Agro-Defense Facility (NBAF)

In FY 2019, APHIS continued to work with the Department of Homeland Security (DHS) and USDA's Agricultural Research Service (ARS) to plan for the move from the Plum Island Animal Disease Center (PIADC) in New York to the state-of-the-art NBAF that DHS is building in Manhattan, Kansas. NBAF will be a key national asset to protect the U.S. animal agriculture industry and will be the first and only facility in the United States with large animal Biosafety Level-4 containment capability.

USDA and DHS have been working closely together to plan for the transfer of management and oversight of NBAF from DHS to USDA when construction and commissioning of the facility is complete. To accomplish these tasks and still meet current timelines, USDA successfully recruited key positions in FY 2018 and FY 2019, and will accelerate hiring in FY 2020. In FY 2019, APHIS and ARS continued efforts to develop a workforce of subject matter experts in foreign, emerging, and zoonotic diseases to conduct diagnostics in preparation for the NBAF transition. Workforce development is critical given the significant loss of expertise expected during the transition and the need to transfer the U.S. FAD diagnostic institutional knowledge to the NBAF. APHIS developed the NBAF Scientist Training Program to meet the workforce needs for subject matter experts in foreign animal and zoonotic diseases. In FY 2019, it was

expanded to now include 15 fellows from 10 different universities. APHIS has also developed an NBAF Laboratorian Training Program to train future NBAF laboratory technicians. In FY 2019, APHIS and ARS began recruitment actions to fill more than 100 key operational positions in FY 2019 and FY 2020. APHIS filled 43 of these positions in FY 2019, and continues to recruit for additional key positions needed for the operational stand up, outside of the initial priority positions identified.

10. Zoonotic Disease Management

"One Health" is a collaborative, multisectoral, and trans-disciplinary approach—working at the local, regional, national, and global levels—with the goal to achieve optimal health outcomes while recognizing the interconnection between people, animals, plants, and their shared environment. The Zoonotic Disease Management Program enhances State, national, and international collaborative efforts to promote healthy animals, people, and ecosystems by addressing zoonotic diseases (those that pass between animals and people) and other relevant One Health issues.

According to the U.S. Centers for Disease Control and Prevention (CDC) and the World Organisation for Animal Health (OIE), 60 percent of human pathogens are zoonotic and 75 percent of emerging diseases are zoonotic (including Ebola, Zika, MERS, and SARS). Most zoonotic diseases originate from animal reservoirs. APHIS leads the national effort to address the animal health component of the One Health approach. By enhancing APHIS' efforts to address the animal health component of One Health, the program protects public health and improves animal health and marketability.

Zoonotic Disease and One Health Engagement, Investigation, and Response

APHIS works with international, national, State, and industry partners to address zoonotic diseases. Some examples of zoonotic diseases APHIS addressed in FY 2019 include *Salmonella* and variant influenza.

In 2019, APHIS collaborated with CDC and State Departments of Public and Animal Health to investigate outbreaks of human *Salmonella* infections linked to contact with live poultry in backyard flocks, especially mail-order chicks and ducklings. Additionally, APHIS provided epidemiologic and laboratory support to the CDC outbreak investigations, and distributed educational and outreach materials directed to the consumer, backyard flock owner, feed stores, and mail-order hatcheries. APHIS continues to assist this segment of the poultry industry through a voluntary *Salmonella* monitoring program and publication of best management practices to mitigate *Salmonella* contamination at poultry hatcheries.

Typically, influenza A viruses in swine do not infect humans, but there have been rare reports of human infections after direct or indirect exposure to pigs. In 2019, CDC received only one report of human infection. APHIS continues to work with CDC, State public and animal health

officials, and academia to investigate these detections and provide diagnostic results. APHIS, CDC, and State laboratories rapidly share diagnostic sequence findings.

Antimicrobial Resistance

Antimicrobial resistance (AMR) is the ability of a microbe to resist the effects of medication previously used to treat them. APHIS works with its State, Federal, and industry partners to promote the judicious use of antimicrobials, which supports a strong, healthy, and thriving U.S. animal agriculture system as well as public health. Additionally, APHIS collaborates with State Departments of Agriculture, diagnostic laboratories, and public health officials to address AMR infections in humans found to have an animal component.

In FY 2019, APHIS continued to work with other USDA agencies to develop practical mitigation strategies to reduce AMR prevalence in human and animal health. These strategies cover a variety of efforts including AMR surveillance at the farm level, collection of antimicrobial drug use data, and efforts to promote stewardship of antimicrobial drugs by animal owners and veterinarians. In FY 2019, APHIS published reports of these two studies which updated information about antimicrobial use and stewardship. In FY 2019, APHIS collected data on antimicrobial use and stewardship on goat operations, and sampled for AMR in bacterial organisms. In FY 2019, APHIS also collaborated with other agencies, including the Food and Drug Administration's (FDA) Center for Veterinary Medicine (CVM) and the CDC, to publish a review article for the World Organisation for Animal Health describing the One Health AMR activities performed in the U.S. within each agency.

In FY 2019, APHIS participated in developing the next National Action Plan for Combating Antimicrobial Resistant Bacteria for 2020-2025. In FY 2019, APHIS, in conjunction with FDA, completed the second year of a program for collecting antimicrobial susceptibility data from veterinary diagnostic laboratories. The program was successful in meeting its second-year objective of expanding the number of labs providing data, expanding the options for reporting to include a graphic interface for real-time data reporting, and expanding the analysis of the data to include sequencing of bacterial isolates to better understand the genetic determinants of resistance.

In FY 2019, APHIS continued to study 17 common *Salmonella* serotypes across all major animal groups, which incorporated antimicrobial susceptibility testing. APHIS also worked closely with the CDC to investigate human outbreaks of drug resistant bacterial organisms stemming from animal origins. APHIS continues to be involved with the National Antimicrobial Resistance Monitoring System (NARMS), participating in strategic planning for the next five years at the NARMS Scientific Planning Meeting. In FY 2019, APHIS sponsored the National Institute for Animal Agriculture's annual Antibiotics Symposium to promote antimicrobial stewardship and judicious use and share best practices with producers.

APHIS participated in several international AMR activities in FY 2019. APHIS provided expertise on several chapters of the OIE Terrestrial Animal Health Code related to AMR. Additionally, APHIS and FDA provided input to the OIE ad hoc group developing a global database on antimicrobial drug use. APHIS participated in a workshop for all OIE countries in the Americas regarding their database on antimicrobial drug use. APHIS provided input on the definitions of therapeutic uses of antimicrobial drugs in animals developed by the American Veterinary Medical Association Committee on Antimicrobials.

Pandemic Disease and One Health Preparedness

In FY 2019, APHIS continued work with Canada and Mexico on the North American Plan for Animal and Pandemic Influenza, which strengthens trilateral preparedness and response capabilities for human and animal health in Mexico, Canada, and the United States. APHIS also provided animal health subject matter expertise at a workshop to develop standard operation procedures for Highly Pathogenic Avian Influenza (HPAI) outbreaks, strengthening human and animal health preparedness and response capabilities in a number of African countries that participated.

APHIS works to strengthen emergency preparedness and response to zoonotic diseases using a One Health approach. In FY 2019, APHIS, CDC, and the Department of the Interior established the One Health Federal Interagency Network which brings together representatives from Federal agencies and departments on a regular basis to exchange information, updates, and opportunities for collaboration in support of One Health activities.

In FY 2019, APHIS and Food Safety and Inspection Service (FSIS) met with the CDC to share information from the animal sector meeting on pre-harvest process improvement, discuss strategies related to pre-harvest food safety assessments, and organize the next cross-sector stakeholder meetings for FY 2020. The focus of these workshops is to continue cross sector discussions on pre-harvest food safety communication, collaboration, and process improvements. APHIS, FSIS, CDC, and the FDA also participate in monthly Interagency Foodborne Outbreak Response Collaboration meetings. These meetings improve collaboration on foodborne outbreaks and reduce pathogen transmission between animals and humans.

Global Health Security

In FY 2019, APHIS provided animal health subject matter expertise for a Global Health Security Agenda (GHSA) workshop on HPAI held in Africa. Additionally, APHIS represented USDA at the GHSA Ministerial Meeting in Bali, Indonesia and provided input towards the organization's strategic plan.

Selected Examples of Recent Progress - Plant Health:

1. Agricultural Quarantine Inspection

Through the Agricultural Quarantine Inspection (AQI) program, APHIS and the Department of Homeland Security's (DHS) Customs and Border Protection (CBP) safeguard U.S. agricultural and natural resources from the introduction of invasive pests and diseases.

Cooperative Program Management

APHIS works with CBP to protect America's agricultural resources and food supply through inspecting international passenger baggage, cargo, and conveyances. APHIS and CBP share management of the program through working groups and close day-to-day collaboration. APHIS and CBP improved communication at ports of entry through data system integration improvements, which facilitated the processing of 67,786 diagnostic requests of potential pests or diseases and 52,000 notifications on incoming cargo that required mitigation to reduce pest risks or that may not have been allowed entry due to agricultural risks. In FY 2019, APHIS and CBP continued to implement the Risk Based Sampling cargo inspection program to target higher risk plant pests potentially entering the country and utilize current inspection resources more efficiently. The Agencies have planned trials at several maritime and southern border ports for FY 2020. APHIS also trained 144 new CBP agriculture specialists, conducted basic agricultural threat training for 1,872 first-line CBP officers, and provided agriculture fundamentals training for 72 CBP import specialists. In addition, APHIS certified 23 experienced CBP agriculture specialists to deliver the military cooperator inspector training to the Department of Defense to use in preventing agricultural pests and diseases from returning to the United States with military equipment and personnel returning from overseas posts in FY 2019. Additionally, APHIS trained 28 canine teams, 18 agriculture field trainers, and 12 agriculture canine team supervisors for CBP.

Pre-Clearance Inspections

One of the most effective ways to facilitate the safe movement of commodities into the United States is to address pest threats where they originate. In FY 2019, APHIS inspected and precleared 2.5 billion pounds of fresh fruits and vegetables and 1.15 billion plants before they were shipped to the United States, resulting in zero pest interceptions detected at the U.S. ports of entry. This offshore work, which importers fully fund, allows inspected and precleared perishable products to enter through the U.S. ports of entry without delays. APHIS operates the commodity preclearance program in 25 countries for 72 different types of commodities. Additionally, APHIS inspected 1.88 billion pounds of avocado in Mexico as a part of a systems approach to facilitate safe trade. APHIS has overseen this program since 1997 and the program accounts for about 90 percent of avocado imports to the United States. There are 57 APHIS-certified facilities in Mexico. As with the preclearance programs, there were no quarantine pest interceptions at U.S. ports of entry in avocado shipments from Mexico.

To help the U.S. military prevent the spread of foreign animal diseases and plant pests, APHIS worked with the U.S. Department of Defense (DOD) to inspect military equipment, cargo, and personal goods returning stateside after overseas operations. In FY 2019, APHIS worked with DOD across 5 geographic regions to inspect 137,816 military passengers, 405,598 shipments of personal goods (including household goods and vehicles), and 513,157 pieces of cargo prior to return to the United States after extended overseas tours. APHIS inspected and recertified 108 military preclearance programs in 18 countries in Europe and Africa, ensuring that each program met safeguarding requirements. APHIS also supported a military exercise in Australia involving six countries, including the United States. APHIS ensured that 500 pieces of equipment and 120 military service members aboard 3 U.S. Navy vessels complied with Australia's strict biosecurity requirements.

Offshore Risk Reduction

In FY 2019, APHIS inspected and certified 27 offshore facilities in 7 countries to support safe trade of several agricultural commodities such as *Pelargonium* (geranium) and Niger seed, a 28 percent increase in the number of facilities from last year. Completed, in partnership with U.S. industry, a second year pilot of the offshore cuttings greenhouse certification program. Throughout the last two months of the 2019 six-month pilot, participants consistently averaged 90 percent compliance, and several facilities repeatedly achieved 100 percent compliance. These offshore programs allow for the import of desirable products into the United States while mitigating the pest risks.

Pre-Departure Inspections

APHIS inspected the baggage of more than 13 million passengers before they left Hawaii and Puerto Rico and intercepted approximately 304,000 prohibited items and 2,000 quarantine-significant pests in FY 2019. APHIS evaluates the effectiveness of its pre-departure program by measuring the percentage of passengers destined for the continental United States from Hawaii and Puerto Rico that comply with agriculture quarantine regulations. In FY 2019, 98 percent of passengers were in compliance (calculated by determining how many passengers are carrying prohibited items through random sampling and comparing it to the actual number of prohibited items intercepted through inspections). To facilitate interstate trade between Hawaii and Puerto Rico and the continental United States, APHIS conducts commodity certification and inspection programs. In FY 2019, the program conducted 83,598 inspections of regulated agricultural commodities shipped from Hawaii and 13,003 inspections of regulated agricultural commodities shipped from Puerto Rico. In addition, the program oversaw or conducted 2,114 cargo treatments in Hawaii and 3,335 cargo treatments in Puerto Rico. APHIS continues to conduct methods development activities that expand the treatments available to allow additional fruits and vegetables to be shipped from these islands to the continental United States.

Port-of-Entry Inspections and Pest Interceptions

In FY 2019, more than 200 million passengers and pedestrians entered the United States by air, bus, ship, train, or on foot. CBP agriculture specialists inspected the baggage of 20 million of these travelers for agricultural risks through manual inspection, x-ray technology, or detector dogs. The program also conducted secondary agricultural inspections of 338,943 of the 93 million passenger vehicles entering the United States from Canada and Mexico in FY 2019. In addition, inspectors cleared 30,227 ships and more than 1.2 million cargo, mail, and express carrier shipments, intercepting 79,388 pests. Of the travelers inspected, the Agency found approximately 96.3 percent of international air passengers, 96.5 percent of southern border vehicles, and 93.8 percent of northern border vehicles to be in compliance with agriculture quarantine regulations.

Plant Inspection Stations

Importations of nursery stock and other propagative plant materials can serve as significant pathways for invasive pests and diseases. In FY 2019, inspectors cleared 20,917 imported shipments containing more than 1.7 billion plant units (cuttings, rooted plants, tissue culture, etc.) and 382,699 kilograms of seeds of woody plants. Through these inspections, APHIS employees intercepted 1,119 quarantine significant pests at the plant inspection stations. In addition, the stations conducted 884 treatment or other action to remediate pests on more than 12.4 billion plant units and 38,384 kilograms of seed.

Plant Germplasm Quarantine

APHIS' Plant Germplasm Quarantine Program (PGQP) provides quarantine services for importing plant cultivars and germplasm safely to prevent foreign pathogens from entering our agricultural production areas and environment. In FY 2019, PGQP released from quarantine 17 bamboo clones, 63 grass clones, 15 kiwis, 23 pome fruits, 66 potato clones, 78 potato true seed lots, 37 stone fruit clones, 22 sugarcane clones, 4 sweet potatoes, 9 woody ornamental clones, and 73 ornamental seedlings. Fifteen of the 23 pomes, 14 of the 37 stone fruit clones, 7 of the 66 potato clones, and 17 of the 22 sugarcane clones released this year resulted from therapy performed on the infected imported plants. New crops imported in FY 2019 included boxwood, euonymus, leucothoe, mulberry, red bud, spruce, and a juniper bonsai. Quarantine regulations prohibit entry of these high-risk crops into the United States in commercial quantities, but importers can bring in small quantities through an APHIS-approved plant quarantine program, like the one at PGQP. This year, PGQP continued implementing next generation sequencing (NGS) for testing imported plants for pathogens. With this technology, scientists can sequence a plant's nucleic acids and find the pathogens infecting that plant in one operation that is faster and more accurate than previous technologies. New pathogens were detected by NGS in bamboo, grasses, and pome fruits. In FY 2019, PGQP sequenced its 400th plant for the detection of pathogens. The program is initiating preliminary experiments using NGS to detect potato, sweet potato, cassava, and stone fruit viruses.

Pest Identification

When pests are detected in cargo, the program must identify them to determine if they are considered quarantine significant under APHIS regulations (i.e., they are exotic and could pose a significant threat to U.S. plant health, therefore regulated by APHIS as a result) and if the program can allow the cargo entry into the United States (and what, if any, mitigation measures would be required). In FY 2019, APHIS' National Identification Services oversaw the processing and identification of 129,169 pests, with 69,891 being quarantine significant pests. Also in FY 2019, APHIS completed a three year business process improvement to expedite the issuance of Identification Authority (IDA) for field personnel, allowing experienced botany and entomology area identifiers to make final determinations at their local ports. The 934 IDAs issued in FY 2019, along with associated policy changes, contributed to a 2 percent increase in cargo pest interceptions that were handled locally compared to FY 2018, amounting to approximately 3,000 interceptions where decisions could be made locally without involvement of a National Specialist, thus significantly reducing agriculture related cargo hold times and associated costs to importers. APHIS and CBP also continued the Cargo Release Authority (CRA) program to reduce the pests that CBP must submit to APHIS for identification, speeding up the inspection process for shipments with no quarantine pests. Through the CRA program, APHIS provides training and job aids that allow CBP agriculture specialists to recognize frequently intercepted, easily identifiable, low-risk organisms and release the cargo if the organism is not a quarantine significant pest. APHIS grants CRA after the agriculture inspector has successfully identified a particular pest a certain number of times and submitted documentation to APHIS. In FY 2019, a total of 45 CBP Agriculture Specialists earned 371 CRAs. Since the inception of the CRA program, APHIS has provided CRA training to 2,466 CBP Agriculture Specialists and granted a total of 15,750 CRAs to CBP Agriculture Specialists.

Risk Analysis

APHIS' Plant Epidemiology and Risk Analysis Laboratory (PERAL) develops pest risk analyses and epidemiological approaches to pest exclusion. In FY 2019, PERAL completed 305 risk analyses associated with imports, exports, invasive pest threats, and programmatic requirements. This total includes 50 analyses to open, expand, or maintain export markets for U.S. producers and 50 risk assessments for import requests from foreign countries. The laboratory's work also included evaluations of 26 newly detected pests by the New Pest Advisory Group, 11 pathway analyses, 7 economic analyses supporting operational and policy decisions, and 12 New Pest Response Guidelines for preparedness purposes. In addition, PERAL completed 70 impact analyses supporting the Cooperative Agricultural Pest Survey, and 17 host lists for significant pests.

Smuggling Interdiction and Trade Compliance (SITC)

SITC's core responsibility is to analyze, identify, and close potential smuggling pathways into U.S. commerce. SITC, working closely with CBP, uses a multi-pronged approach that focuses on

traces for non-compliant import materials, coordinating with investigative organizations across USDA and CBP, and extensive outreach to industry to increase compliance with APHIS' regulatory requirements. In coordination with CBP, SITC conducted 12 port-of-entry operations that focused on specific pathways, prohibited commodities, and higher risk countries of origin. In FY 2019, SITC seized 1,314 prohibited agricultural items in retail commercial locations, 617 items from internet sales, and 1,907 from courier surveys. Those seizures totaled 293,013 pounds of prohibited and/or restricted plants and plant products and meat and meat products valued at $3.1 million. Additionally, SITC conducted 30 recalls for various items, including wooden handicrafts with bark that did not meet treatment and entry requirements, posing a risk for borers (insects that bore into trees and that could pose risks to U.S. forests). Other recalled items include birdhouses with rice straw roofs that did not meet treatment and entry requirements, posing a risk for rice diseases. Total seizures as a result of recalls weighed 136,563 pounds and were worth an estimated value of $1.7 million.

Phytosanitary Export Certification

APHIS facilitates the export of agricultural shipments by tracking plant health import requirements for approximately 200 countries and provides certifications to U.S. exporters to help ensure that U.S. products meet other countries' requirements. In FY 2019, APHIS collected more than $38.5 million for certificates and remitted more than $20 million to State and County cooperators for certificates they issued. Currently, 35 States and 34 counties use this feature. Additionally, the Agency is continuing its effort with international counterparts to begin exchanging phytosanitary certificates electronically. APHIS worked with the International Plant Protection Convention to establish an electronic hub that countries can access to exchange export certificates with trading partners. The hub provides a central point for document exchange that eliminates the need for countries to establish electronic connections with each trading partner individually. Recent studies by industry have shown that paperwork errors slow down exports, leading to the majority of costly delays. The United States began using the hub in May 2018 and is actively exchanging certificates with Argentina, Chile, Netherlands, Samoa, Jamaica, Sri Lanka, Ghana, and New Zealand, with more than 40,000 phytosanitary certificates received and more than 15,000 sent. APHIS conducted more paperless case studies in conjunction with industry participants this year with an average cost savings of $70 per shipment in shipping costs and up to 2 days saved in time. In FY 2019, APHIS, State, and county officials issued more than 678,000 Federal export certificates for agricultural shipments.

2. Cotton Pests

The Cotton Pests program works with growers, the cotton industry, states, and Mexico to eradicate the boll weevil (BW) and pink bollworm (PBW) from all cotton-producing areas of the United States and northern Mexico. Collectively, the BW and PBW are the most destructive pests of cotton worldwide. The Cotton Pests program also maintains preparedness capabilities to address other cotton pests that could enter the United States.

To date, APHIS and cooperators have eradicated BW from 99.5 percent of the 13.7 million acres of U.S. cotton (Acreage. USDA, National Agricultural Statistics Service. June 2019*).* The Lower Rio Grande Valley (LRGV) is the last zone within the United States where the pest persists. The LRGV is impacted by the neighboring Mexican cotton producing State of Tamaulipas and the area's security issues. In FY 2019, APHIS continued to work with partners in overcoming program challenges. The Agency, along with the Mexican cotton industry and U.S. cotton industry, are working together to eradicate BW from Tamaulipas. For example, APHIS is in its fourth year of an agreement with the North American Plant Protection Organization to assist the Tamaulipas BW Eradication Program by funding treatment expenses.
APHIS continued meeting every six weeks from October to April 2019 with Mexico's National Service for Agrifood Health, Safety and Quality (SENASICA) to discuss the boll weevil program in Tamaulipas. SENASICA increased their involvement in the Tamaulipas program in FY 2019 and developed an organized program operational structure to do so. However, due to recent organizational changes in SENASICA that impacted the Cotton Pests personnel, and to restrictions on international travel for Mexican government officials, the monthly meetings between SENASICA and APHIS have been put on hold.

In FY 2019, the program saw a 52 percent decrease in BW captures totaling 40,761 in the LRGV, compared to 77,410 at the same time in FY 2018. In addition, captures decreased 88 percent in Tamaulipas with 6,424 BWs captured in FY 2019, compared to 54,316 at the same time in FY 2018.

APHIS will continue to reduce the BW population in the LRGV and partner with the U.S. cotton industry on BW surveillance efforts for all U.S. cotton production areas in FY 2020. APHIS will also continue to partner with SENASICA's Mexican BW eradication program in Tamaulipas to provide technical assistance and funding for their parallel program to the LRGV program. APHIS is committed to monitoring BW to ensure the detection any of reintroductions quickly, and to work toward successful eradication of BW in the United States in the coming years.

On October 19, 2018, APHIS in conjunction with industry partners, officially announced the successful eradication of PBW from all commercial cotton-producing areas in the continental United States. In FY 2020, APHIS will continue to survey areas in Florida to ensure that pink bollworm does not move into the areas surrounding the Everglades.

3. Field Crop & Rangeland Ecosystems Pests

The Field Crop and Rangeland Ecosystem Pests (FCREP) program protects U.S. agricultural crops and rangelands from the establishment or spread of invasive or economically significant pests, facilitates safe international trade and domestic commerce, preserves economic opportunities for U.S. farmers, and fosters healthy ecosystems in rangelands and natural lands.

Grasshoppers and Mormon crickets

In FY 2019, APHIS conducted surveys in 14 States for Grasshoppers and Mormon crickets (GMC), collecting data at more than 29,000 survey points. Based on the results of the surveys and needs of land managers, the program treated approximately 116,530 acres of rangeland, which protected rangeland forage and wildlife habitat on approximately 230,500 acres. APHIS conducted three large aerial treatments in Wyoming and two small ground treatments in Arizona and Montana for grasshoppers and two large aerial treatments in Idaho, one small aerial treatment in Nevada, and several small ground treatments in Washington and Idaho for Mormon cricket populations. Before conducting any grasshopper treatments, APHIS confirms the species of the grasshopper as some do not cause damage to rangeland and others can even provide ecological benefits by eating weeds (leaving grasses for grazing livestock).

Imported fire ants (IFA)

In FY 2019, the IFA program expanded its use of a rapid identification test kit for red IFA, "InvictDetect". This immune-assay uses a type of dip-stick test to provide preliminary identification of red imported fire ants (Solenopsis invicta) in as little as 5 minutes. While official confirmation of IFA is still required for regulatory actions, the kit makes it easier to release shipments with suspect IFA that could be held at agricultural checkpoints for up to 24 hours before an official identification is made. APHIS provided the test kits to State departments of agriculture in FY 2019 for additional field-testing in support of its efforts to deploy an enhanced kit that will also identify black imported fire ant and hybrids. In FY 2020, APHIS will provide the improved kit to cooperators and continue field testing. Additionally, APHIS updated its interactive IFA quarantine map with features that display the quarantine boundaries to assist stakeholders in determining if they are located within the IFA quarantine area. The map allows shippers of regulated articles to determine whether they are subject to IFA quarantine requirements. In 2019, APHIS provided technical support for IFA issues to States and industry seeking to safeguard radioactive contaminated soil and its movement out of IFA-regulated areas into Superfund mediation sites (deep burial in Utah). In FY 2019, the quarantine area expanded into new counties in Arkansas, North Carolina and Tennessee. In FY 2020, the program will coordinate with the Agricultural Research Service and universities to identify additional promising biological control opportunities.

Karnal bunt

In FY 2019, 22 wheat-producing States participated in the Karnal bunt national survey. The program tested 466 samples with no positive detections as of October 2019. Based on this national survey, the program certifies wheat exports free of Karnal bunt, assuring trading partners about the safety of U.S. wheat exports, retaining export markets, and facilitating wheat movement into domestic and international markets.

Witchweed

The program surveyed a total of nearly 55,000 acres in the 2019 growing season for witchweed. Approximately 1,117 acres were infested at the beginning of the 2019 season, and 142 acres were newly infested or re-infested during the season. In 2019, APHIS treated 1,830 acres.

Roseau Cane Scale

In FY 2019, APHIS provided funding to Louisiana State University to develop control methods against the scale insect, evaluate Roseau cane's defenses against the scale insect, and evaluate restoration techniques for areas that have experienced Roseau cane die-off. Additionally, APHIS, in cooperation with the Agricultural Research Service, is investigating natural enemies of Roseau cane scale in its native range in Asia as potential biological control agents.

Cogongrass

In FY 2019, APHIS provided funds to Alabama, Mississippi, and South Carolina to support survey and outreach activities related to cogongrass infestations in these States. Additionally, APHIS drafted an environmental assessment (EA) in preparation for control treatment activities to ensure that the program is compliant with the National Environmental Policy Act. APHIS anticipates publishing the EA for public comment in the Federal Register in early FY 2020. Once the EA is finalized, pending public comments, APHIS anticipates to provide additional funding to Alabama, Georgia, Mississippi, and South Carolina for cogongrass control activities in FY 2020.

4. Pest Detection

The goal of the Pest Detection Program is to document the presence or absence of plant pests and diseases of Federal regulatory significance in the United States. This documented information is the basis of APHIS' regulatory efforts and pest management programs that preserve economic opportunities for farmers (i.e., interstate commerce and international trade) and safeguard U.S. agricultural and natural resources.

In FY 2019, APHIS and cooperators conducted a total of 217 commodity- and taxon-based surveys in 50 States and 3 territories (APHIS conducted 104 surveys and the States conducted 113 surveys). The program targeted 128 high-risk priority pests of national concern for survey in corn, oak, pine, small grains, soybean, and nursery crop commodities, as well as exotic wood boring bark beetles and cyst nematodes, among others, representing 96 percent of the target pests suggested for survey in the 2019 Pest Surveillance Guidelines. Including pests of State priority, the program targeted 238 unique pests for survey in FY 2019. Surveys consisted of multiple pests for efficiency and economy of survey, with an average of 6.5 pests per survey, 24.8 pests per State, and 3-4 surveys per State. Along with surveys conducted through the FY 2019 Farm Bill Plant Pest and Disease Management and Disaster Prevention program, APHIS

and cooperators added 180 additional taxon and specialty crop commodity surveys resulting in the targeting of 363 unique pests in the overall pest surveillance effort.

The program's target for FY 2019 was to detect, through the surveys, 90 percent of the significant pest introductions before they spread from the area of original colonization and caused significant economic or environmental damage. The program exceeded the target in that all (100 percent) new detections were localized at the time of their detection in FY 2019. One of these pests (*Lymantria umbrosa* in Washington) was a high-risk pest of national concern specifically targeted for survey through the two programs. The negative survey results for the remaining pests demonstrate freedom from these pests in the United States.

Plant Protection Methods Development

The Plant Protection Methods Development (PPMD) program develops scientifically viable and practical tools for exotic plant pest exclusion, detection, and management. These tools preserve economic opportunities for farmers and industries who engage in interstate commerce and international trade, and safeguard U.S. agricultural and natural resources from invasive plant pests.

The PPMD program advanced new technologies for pest detection and management, including the use of unmanned aerial systems and detector canines. In FY 2019, the program improved unmanned aerial systems for use in a number of applications, including detecting signs of Asian longhorned beetle infestations in trees and releasing sterile insects for pest eradication programs. The program also began deploying canines to detect Mexican fruit fly, coconut rhinoceros beetle, and citrus greening to support pest detection in management programs. Other advances in domestic pest program technology include methods to support the emergency programs for spotted lanternfly in Pennsylvania and European cherry fruit fly in New York. APHIS developed improved traps for spotted lanternfly (SLF), and developed effective insecticide application methods for host trees involved in the eradication program. For the European cherry fruit fly program, APHIS developed improved traps and new rapid diagnostics to support survey and management efforts, as well as developed a systems approach that would allow fruit movement from quarantine areas.

In support of the EAB eradication efforts, new research on EAB biological control agents has identified species that climatologically adapt to cooler or warmer U.S. regions and surrounded areas. This discovery allows the program to better target biocontrol releases, while protecting the next generation of trees in eastern region forests. As a result, EAB biocontrol rearing facility in Brighton, Michigan, produced four different parasitoid species in FY 2019 and released over 750,000 insects in 28 states, the District of Columbia, and 3 Canadian Provinces. This includes releases in 67 new counties and 90 new release sites in counties, as well as 2 new states added in FY 2019.

The PPMD program also supports research related to invasive honey bee pests, specifically Varroa mites. A Varroa mite feeds on the honey bee's fat body tissue (an organ similar to the human liver) rather than on its blood, in turn weakening and shortening the bee's life. In FY 2019, the program funded priority projects with other Federal and State agencies, as well as the public, that support managing, suppressing, and eradicating Varroa mites, small hive beetles, and other pests and diseases contributing to a decline in honey bee health. These projects included investigating new pesticide control options for Varroa mites, as well as breeding bees resistant to Varroa mites.

5. Specialty Crop Pests

The goal of the Specialty Crop Pests (SCP) Program is to protect U.S. fruits and vegetables, tree nuts, horticulture, and nursery crops from adverse impacts associated with invasive pests, such as crop damage or threats to international trade and interstate commerce.

Grapes

The SCP program targets several devastating pests and diseases, including glassy winged sharpshooter (GWSS) and the European grapevine moth (EGVM) that could affect grape production and impact export markets. In FY 2019, APHIS, the California Department of Food and Agriculture (CDFA), and industry partners completed the final year of a three year post-eradication surveillance monitoring effort for EGVM in 38 participating counties. APHIS and cooperators found no infestations. While the three-year post-eradication monitoring is complete, APHIS and cooperators are evaluating what level of survey to continue for EGVM.

APHIS also continued the successful, cooperative GWSS program designed to suppress populations of this pest where established in grapes, citrus, and nursery stock. In FY 2019, the program continued to conduct surveys and other regulatory activities including inspections of nursery stock and bulk citrus for the pest in 49 California counties, and continued area-wide suppression activities in affected agricultural production areas of 4 California counties. With citrus growers' voluntary suppression treatments, the program covered 21,000 acres. Of the more than 28,000 shipments of nursery stock from infested areas, State inspectors did not reject any shipments due to GWSS. Together, the EGVM and GWSS programs directly protected 863,000 acres of grape production worth nearly $6.3 billion in the State of California in 2018 (NASS Noncitrus Fruit and Nuts 2018 Summary).

Citrus

APHIS supports the citrus industry's continued ability to produce, harvest, process, and ship citrus fruits and nursery stock despite the presence of diseases such as citrus canker, citrus greening or Huanglongbing (HLB or citrus greening), and citrus black spot. APHIS and cooperators in citrus-producing States survey more than 385,000 acres of citrus across the country, providing timely information about the presence of pests and diseases to growers and State government partners. This information allows growers to take necessary actions to

manage their groves and allows APHIS and States to update quarantine boundaries and regulations to prevent the spread of serious citrus pests and diseases through the movement of regulated materials. Based on the results of surveys, APHIS adjusted quarantine boundaries in California, Louisiana, and Texas for HLB, Asian citrus psyllid (ACP), or citrus canker. The areas quarantined for HLB in California expanded in FY 2019 due to the detection of additional infected trees in Los Angeles, Orange, Riverside and San Bernadino Counties. The areas quarantined for HLB in Texas and Louisiana also expanded in FY 2019 due to citrus greening detections in plant tissue samples. In FY 2019, the areas quarantined for citrus canker in Texas also expanded to include additional areas. In FY 2019, APHIS and cooperators conducted risk-based surveys in residential and commercial citrus areas in California to ensure they detect the disease quickly if it is present. In areas affected by citrus pests and diseases, APHIS' flexible regulatory protocols have minimized the impact of the quarantines on growers, who can move citrus out of quarantined areas to packinghouses if they follow mitigation procedures to prevent the disease or its insect vector from spreading. Nearly 10,000 businesses moved regulated host materials such as citrus fruit and nursery stock under compliance agreements with APHIS in FY 2019.

APHIS and cooperators continued extensive surveys that establish citrus black spot free production units and low prevalence areas for citrus canker in Florida for export packing to the European Union. The European Union updated its import requirements for citrus imports during FY 2019, and APHIS worked with growers to ensure that U.S. shipments meet the new requirements. APHIS also continued to support area-wide management of the ACP in Florida by providing survey data every three weeks to the growers participating in Citrus Health Management Areas (CHMAs). Citrus growers participating in CHMAs, which the Florida Department of Agriculture and Consumer Services manages, coordinate the applications of pesticides to suppress ACP populations in commercial citrus groves. Citrus production in Florida for the 2018-2019 season increased 55 percent over the previous season (NASS 2018-2019 Citrus Summary), which was impacted by severe hurricanes. APHIS continued working closely with citrus nurseries that suffered hurricane damage and conducted surveys for citrus black spot to detect any hurricane-assisted spread of this disease (need results).

In FY 2019, APHIS continued a biological control program targeting ACP. This program, which employs a predatory wasp against ACP, augments current management methods, especially in residential areas in Arizona, California, Louisiana, and Texas, where use of chemical pesticides is undesirable. Biological control efforts in Texas have reduced the ACP population by more than 90 percent and by as much as 99 percent around California release sites. Projects funded by the HLB Multi-Agency Coordination Group produce and release 12 million biological control agents annually to help reduce ACP populations in residential and urban areas. APHIS also releases biological control agents in areas of Mexico (Baja California and Tamaulipas) adjacent to citrus production areas in California and Texas to suppress ACP populations and prevent them from spreading into the United States. APHIS works with citrus nurseries across the United States to ensure that nursery stock produced in areas quarantined for citrus diseases is

free from the pests ensuring that clean plants are moving between the states and available for citrus producers and residential use.

Tree Fruit and Nursery Stock

APHIS protects a wide variety of specialty crops (especially tree fruit and citrus) through exotic fruit fly exclusion and detection activities. One of the Agency's key strategies is maintaining a barrier against the spread of the Mediterranean fruit fly (Medfly) northward from Central America. Medfly is one of the most destructive agricultural pests in the world, attacking more than 300 cultivated and wild fruits and vegetables. APHIS and cooperators produced an average of 1.16 billion sterile Medflies per week in FY 2019, to maintain the barrier in Mexico, Guatemala, and Belize, and to release in high-risk areas of California and Florida on a preventive basis. In FY 2019, the international cooperative program experienced a record number of Medfly outbreaks in the program-designated free areas of Mexico and Guatemala. The number of detections were considerably higher than the target of no more than 50 detections, with detections increasing from 159 in FY 2018 to more than 40,000 in FY 2019. Most captures occurred in Mexico due to outbreaks in Colima and Chiapas, accounting for more than 35,000 of the reported captures. In response, APHIS and its counterparts in Mexico increased control and surveillance activities in areas of Mexico with high detections and in neighboring areas of northwest Guatemala. The program maintained the Medfly-free area in Mexico and Guatemala, and Belize at 147,247 square kilometers with these additional activities.

In FY 2019, the program responded to 11 new fruit fly outbreaks (ten Mexfly outbreaks in Texas and one Mexfly outbreak in California) and completed eradication for six of these outbreaks during the fiscal year. The remaining outbreaks are in the Lower Rio Grande Valley of Texas, which APHIS continues to address. APHIS produced and released an average of 162 million sterile Mexflies per week in Texas and northern Mexico in FY 2019, to support eradication and control programs in that region. APHIS also used the sterile Mexflies to eradicate the one Mexfly outbreak in California. During the year, APHIS and cooperators managed Mexfly quarantines covering 1,400 square miles in Texas and California. As the program completed operations, they released many of these areas from quarantine. At the end of FY 2019, 267 square miles remain under quarantine (related to Mexfly in Texas).

APHIS continued to address the European cherry fruit fly (ECFF) in New York during FY 2019. In part because of the ECFF's relatively long life cycle and the abundance of ECFF's primary host, the honeysuckle plant, throughout New York APHIS has shifted from the goal of eradication to management and is continuing to evaluate the best methods for controlling the species and reducing the risk that it will spread to other cherry-producing areas. The ECFF quarantine includes 1,612 square miles in northwestern New York. Cherry producers are able to mitigate damage it might cause to crops through current management practices.

In FY 2019, 16 Caribbean countries participated in this effort with active trapping and surveillance programs, with the addition of the Bahamas in FY 2019. The Bahamas is an important tourist destination presenting a proximity risk to the United States.

APHIS and cooperators also work to address plum pox virus (PPV), the light brown apple moth (LBAM), and SLF to protect producers of tree fruit and other specialty crops. PPV is one of the most devastating viral diseases of stone fruit in the world. On October 17, 2019, USDA declared the United States free of this disease. PPV was first detected in Pennsylvania in 1999 and then found in Michigan and New York in 2006. The eradication program was a cooperative effort among APHIS and USDA's Agricultural Research Service, departments of agriculture in impacted States, the Tuscarora Nation, industry, academia, growers, and homeowners. APHIS is continuing to conduct post-eradication surveys in the Hudson Valley, Adirondack, and Niagara regions of New York for two more years. APHIS also continues to support yearly PPV detection surveys through Plant Protection Act Section 7721 to ensure that any PPV would be found if it appeared in other States.

In FY 2019, APHIS and the State of California continued to monitor for LBAM across California and found that the pest had not spread to any new counties. The quarantined area continues to include 22 counties in California.

In FY 2019, APHIS and cooperators in Delaware, Maryland, New Jersey, Pennsylvania, and Virginia continued addressing SLF. APHIS and cooperators assessed more than 64,000 properties covering 125,865 acres in FY 2019, for presence of SLF's preferred host (an invasive plant, the tree of heaven) and treated approximately 690,000 trees. The program is continuing to evaluate treatment strategies and implement new approaches, such as treating areas along rail lines, targeting SLF's preferred host tree, the invasive tree of heaven.

APHIS protects natural resources and nursery stock production and trade by limiting the spread of Phytopthora ramorum (P. ramorum), which causes sudden oak death, from quarantine areas and affected nurseries through regulatory strategies and adoption of mitigations and changes to cultural practices. APHIS and State efforts have kept the disease from impacting natural resources, outside of 15 counties in California and a small area in Curry County, Oregon, for more than 10 years. Over the last several years, APHIS has streamlined the P. ramorum regulatory framework for nurseries shipping host nursery stock interstate through an update to the regulations that relieved regulatory requirements on 2,800 low-risk nurseries. Currently, 17 nurseries are participating in the program. Along with the streamlined regulatory program, APHIS and State cooperators have targeted inspection efforts toward the highest risk nurseries.

Potatoes

APHIS addresses two major potato pests, the pale cyst nematode (PCN) in Idaho and the golden nematode (GN) in New York. APHIS and cooperators have confined each to a relatively

small area, and continued survey and regulatory efforts to protect export markets for U.S. potatoes from 36 States. In Idaho in FY 2019, APHIS collected 16,958 soil samples and processed 9,094 soil samples for the PCN eradication effort. PCN has not been detected outside of Idaho, and fumigations of infested fields in Idaho have reduced PCN populations by 99 percent since the pest was first detected in 2006. Based on survey results in FY 2019, APHIS released 759 acres of fields from regulation and added 327 acres to the regulated area. This brings the total number of PCN-infested fields to 29 and infested area to 3,277 acres. The PCN program regulates a total of 7,544 acres. In FY 2019, the program conducted eradication treatments on five infested fields with a total of 655 acres. In the treated fields that no longer show PCN viability according to a greenhouse bioassay test, producers can plant potatoes with continued monitoring by APHIS and cooperators to ensure PCN is not present. Four fields were planted with potatoes in FY 2019, and samples will be collected from each field following harvest and analyzed for the presence of viable PCN, with results expected in early FY 2020. The program is also continuing to develop new mitigation tools for PCN that may serve as alternatives to methyl bromide fumigations or provide additional control following fumigation. These include the use of trap crops (planting a crop similar to potatoes that will stimulate nematodes to hatch but not allow them to reproduce) and fungus and biological control agents as control tools. APHIS and cooperators planted the trap crop on 71 acres in FY 2018, and will have treatment results in FY 2020.

In FY 2019, APHIS and New York cooperators continued an effective survey and regulatory program targeting GN with a focus on deregulation of all eligible land. As of October 2019, approximately 1,000 soil samples for the GN program in New York and 1,400 samples from neighboring states for potato cyst nematodes have been submitted to the APHIS laboratory for testing. Due to wet soil conditions the sampling season is later than usual. The program continued conducting regulatory treatments to ensure that equipment moving out of the affected area does not pose a risk for spreading the GN, with the 500 treatments conducted in FY 2019. In FY 2019, eight potato production fields continue to undergo eradication activities for GN. The fields remain regulated, some because of proximity to infested fields, but benefit from relaxed sanitation requirements and enhanced crop options. APHIS has cooperated with USDA's Agricultural Research Service, the New York State Department of Agriculture, and Cornell University to develop GN-resistant potato varieties for several decades. The program is transitioning to a newly renovated laboratory on the Cornell University campus to continue this and other work on methods of eradicating GN. The program has developed a total of 45 GN-resistant varieties. Because the pest can overcome resistant potato varieties over time, continued development of new GN-resistant varieties is necessary.

Together, these efforts to address PCN and GN protected 315,000 acres of potatoes in Idaho valued at $1 billion and 14,300 acres in New York valued at $45 million in FY 2019.

6. Tree & Wood Pests

The Tree and Wood Pests (TWP) program protects forests, private working lands, and natural resources from the Asian longhorned beetle (ALB), emerald ash borer (EAB), gypsy moths, and most recently shot hole borers (SHB).

Asian longhorned beetle

In FY 2019, the program completed the final cycle of survey work for Asian longhorned beetle in Queens and Brooklyn, New York. This completed survey officially marked the end of a 23-year long battle with APHIS and this pest in New York City. This final survey cycle allowed the program to declare full eradication and issue a Federal Order, on September 12, 2019, rescinding the established ALB quarantine of 58 square miles in Brooklyn and Queens. This reduces the total regulated areas in New York State to 53-square miles in Nassau and Suffolk counties on Long Island. APHIS, along with State and local officials held a ceremony marking the event in Brooklyn on October 10, 2019.
In FY 2019, the program began a long term study investigating the use of targeted seasonal insecticide treatments in Ohio. This analysis will continue into FY 2020, and be used to guide decision making regarding the cost-benefit ratio for treating select trees versus removing infected trees. In addition, APHIS continued investigating the use of unmanned aerial systems (UASs) equipped with digital cameras as an additional survey tool in FY 2019. If successful, the Agency could use UASs to examine trees too risky to climb or in otherwise difficult to access areas, improving safety for program personnel and lowering the cost to survey these types of trees.

Emerald ash borer

In FY 2019, APHIS did not detect emerald ash borer (EAB) in any new States, but confirmed detections in new counties of 13 States with previous infestations. Maine implemented a partial State quarantine, and Minnesota expanded their State quarantine area. The program continued to use a risk-based model to determine the best places for States to focus survey and trapping efforts along a 100 mile leading edge of the quarantine. APHIS, along with Federal, State, and local agencies and stakeholder groups, continues to mitigate the human-assisted and natural spread of the pest and is continuing development of a biological control initiative designed to effectively manage EAB populations.

In FY 2019, the Brighton, Michigan EAB parasitoid rearing facility produced more than 750,000 parasitic wasps for release in 28 States, as well as 3 Canadian Provinces. To date, the parasitic wasps have been released in 301 counties, with 67 new counties added in 2019. APHIS and cooperators also assessed the impacts of the parasitic wasps on EAB populations and tree health at and near release sites. They have recovered the parasitic wasps in 17 States, demonstrating that the biological control agents are reproducing and becoming established in the areas released.

In FY 2019, the Federally contracted trapping survey for EAB ceased in order to focus resources on biocontrol and outreach efforts. APHIS is continuing to provide traps and lures to States and Tribal cooperators that conduct EAB surveys without cost, as well as providing training for EAB biocontrol release and recapture efforts. In FY 2019, APHIS provided a total of 3,000 EAB traps to cooperators in 12 States for EAB survey, and held hands-on and virtual training workshops for EAB personnel. APHIS expanded the Federal regulated area in portions of Alabama, Minnesota, Nebraska, and Maine in August 2019. Based on State survey results, the program expanded the quarantine area to include more than 1,100 counties, encompassing nearly 880,000 square miles. In FY 2019, APHIS maintained more than 1,000 compliance agreements with businesses that handle EAB host materials. With these agreements, the program regulates the treatment and movement of host materials from quarantined areas.

Gypsy Moths

European Gypsy Moth (EGM) is a destructive pest for some of North America's most beautiful and popular deciduous trees, including maples, oaks, and elms. This pest is established in all or parts of 20 northeastern, mid-Atlantic, and Midwestern States, as well as the District of Columbia. In FY 2019, APHIS and State cooperators continued to conduct EGM surveys to detect, delimit, and eradicate any isolated populations.

To gain more cooperation from the National Plant Protection Organizations (NPPOs) of the countries where AGM is present, as well as the certifying agencies in each country, APHIS coordinated joint U.S./Canada technical trilateral meetings with Russia, Japan, Korea, and China in FY 2019. APHIS also is working with NPPOs of countries such as Chile and New Zealand that regulate AGM to harmonize the programs in an effort to send a unified message to the stakeholder, specifically the maritime shipping industry. As a result, the rate of compliance to the AGM requirement of vessels calling on U.S. ports after visiting Asian ports during the risk period, to present a valid certificate of inspections for AGM is at an all-time high, exceeding 92 percent.

In 2019, APHIS and State cooperators performed eradication treatments for Asian and European gypsy moths at two locations in Washington and a single location in Oregon.

Shot Hole Borers

In recent years the polyphagous (PSHB) and Kuroshio shot hole borers (KSHB) and diseases they cause have been devastating riparian habitats in southern California and urban areas in other parts of California. Additionally, the pathogen *Ceratocystis,* which is vectored by a non-native shot hole borer (ambrosia beetle), causes rapid Ohi'a death (ROD). The host, `ōhi`a lehua (*Metrosideros polymorpha*), is the most common native tree in Hawaii and has considerable cultural, biological, ecological, and economic significance. In FY 2019, the APHIS-supported

survey for ROD concluded, allowing personnel to make informed decisions for addressing and mitigating the damage caused by the disease.

In FY 2019, APHIS also conducted a study focusing on the use of steam and vacuum as a regulatory treatment for wood infested with shot hole borers. This study provided affected industry members an option for the safe movement of timber products out of areas known to harbor infestations.

Selected Examples of Recent Progress – Wildlife Services:

1. Wildlife Damage Management

APHIS provides Federal leadership and expertise to resolve wildlife conflicts. Specifically, APHIS works to protect agriculture, human health and safety, property, and natural resources from disease and damage caused by wildlife. Cooperator participation and support is critical to the success of the Wildlife Damage Management (WDM) Program. APHIS' wildlife biologists coordinate activities in every State with Federal and State agencies, Tribes, local governments, private homeowners, farmers, ranchers, and other property owners to protect lands.

Agriculture

Feral swine are a harmful and destructive invasive species whose geographic range is rapidly expanding and populations are increasing across the nation. These invasive animals cause significant damage to property, agricultural animal health and crops, natural resources, public health and native ecosystems. The University of Georgia, using a broader data set than previously available, has more recently estimated feral swine damage nationwide to cost at least $2 to $2.5 billion annually, exceeding previous estimates of $1.5 billion annually based on a more limited data set.

In FY 2019, APHIS conducted cooperative, cost-share operational feral swine programs on approximately 191 million acres in 37 States and 3 Territories, directly protecting 106 threatened and endangered species and habitats. APHIS considers feral swine eliminated from a State after the State is able to complete two years of detection status with no additional sightings. Over the past 5 years of the program, APHIS and partners successfully eliminated feral swine from four States, and have moved six States to detection status. In collaboration with our partners, APHIS conducted disease surveillance and monitoring, and assessed disease risk, to protect the health of domestic swine, other livestock, and people by collecting 8,000 samples from feral swine during FY 2019. The Agency, along with university partners, is working to develop a feral swine toxicant. Other activities include conducting several economic analyses to better assess feral swine damage to agriculture, livestock, and limited resource farmers; collecting and analyzing environmental DNA to detect feral swine presence through genetic markers in water; and maintaining a National Feral Swine Genetic Archive to assess the movement of feral swine and determine source populations.

APHIS prevents and reduces livestock predation through technical assistance (education and outreach) to producers, and operational management programs. In FY 2019, APHIS provided assistance to more than 12,625 livestock producers to prevent and reduce livestock losses from predators.

In FY 2019, livestock producers reported 2,186 animals killed by wolves. APHIS responded by providing a combination of direct control and technical assistance for wolf depredation to 6,437 reports. To avoid or reduce predation, APHIS provides technical assistance to producers on preventative measures to supplement direct control activities, which producers then implement themselves. In FY 2019, APHIS conducted 76 predator management workshops attended by 5,218 individuals in 21 States and Puerto Rico. APHIS estimates that these efforts help protect more than 15.8 million head of cattle, sheep, and goats valued at more than $2.5 billion (based on an internal APHIS estimate).

The Migratory Bird Treaty Act, enforced by the FWS, protects black vultures, which prey on livestock. Under the Migratory Treaty Bird Act, the public cannot kill, destroy, or remove migratory birds, their nests, or their eggs without a Migratory Bird Depredation Permit from FWS. APHIS works collaboratively with FWS recommending short and long-term options to provide producers with relief from damage. With cooperator funding, APHIS conducted direct control in 13 States in FY 2019, removing approximately 10,850 black vultures and dispersing approximately 58,626 black vultures, in addition to providing technical assistance to guide private management efforts.

APHIS provides operational and technical assistance to aquaculture producers to prevent losses from fish-eating birds, specifically on roost management of double-crested cormorant, harassment of fish-eating birds on catfish facilities, and helping farmers acquire depredation permits under the Migratory Bird Treaty Act. Work is concentrated at lower Mississippi valley and southeastern aquaculture facilities in the fall and winter. During this timeframe in FY 2019, APHIS removed 1,298 and dispersed 146,478 double-crested cormorants from 38 roosts at 185 aquaculture facilities in 3 States.

The National Wildlife Disease Program (NWDP) provided technical assistance, and conducted surveillance and management for more than 30 wildlife diseases, pathogens, and syndromes. On a national level, the program sampled for avian influenza, feral swine diseases, and plague & tularemia. The NWDP also provided assistance on Lyme disease (2 States), avian botulism (2 States), Toxoplasmosis (2 States), rabies (7 States), chronic wasting disease (8 States) tick surveillance (10 States) as well as canine heartworm, canine distemper, Norovirus, and porcine endogenous retrovirus. The Program assisted with APHIS virulent Newcastle disease response, deploying 31 personnel on 77 deployments to the incident in Southern California. Wildlife Services deployed 22 personnel to provide aerial surveillance and Command support to assist with the response and recovery of flooding in Nebraska, and deployed 11 personnel to respond

to wildfires in California. Collectively, the Wildlife Services NWDP coordinated 1,878 deployment days either on site or virtually for 8 different responses during fiscal year 2019.

Human Health and Safety

Rabies is one of the oldest known viral diseases, yet it remains a significant wildlife-management and public-health challenge. APHIS is the lead Federal agency to prevent the further spread of wildlife rabies, with the goal of eliminating rabies in carnivores in the United States using oral rabies vaccination (ORV). In FY 2019, APHIS and cooperators distributed nearly 10 million ORV baits, including 9 million in the eastern United States, to combat raccoon rabies in 17 States and more than 1 million in Texas to prevent the reemergence of rabies in coyotes and gray foxes along the border with Mexico.

APHIS works with the Centers for Disease Control and Prevention, and the Wistar Institute, an infectious disease and vaccine research institute, to streamline the use of a rapid rabies diagnostic field procedure to diagnose the disease within an hour. In FY 2019, APHIS collected more than 4,600 raccoon blood and 3,700 tooth samples in 14 States to estimate rabies antibody levels and bait uptake in target species in or near ORV zones. An improved vaccine-bait combination holds promise for enhanced raccoon rabies control in the United States.

Increased air traffic, faster and quieter aircraft, increased populations of federally protected species of birds, and increased populations of other wildlife all impact the safety of aircrafts, particularly in rural communities. In FY 2019, APHIS mitigated wildlife hazards by assisted nearly 870 civil and military airports worldwide which included 135 Department of Defense airports in domestic and international settings. Of those airports, APHIS biologists estimated that technical or direct management assistance resulted in a reduction, suppression or prevention of wildlife hazards at approximately 67 percent of those airports.

Property

To address and prevent costly beaver damage, APHIS provides assistance by removing beaver dams that clog waterways and flood roads and timber sources. Every dollar invested in beaver damage management protects approximately $45 in natural resources on average. With cooperator funding, APHIS conducted beaver damage management activities in 43 States in FY 2019.

Natural Resources

APHIS focuses on eliminating damage from brown tree snakes (BTS), nutria, and other invasive species. In Guam, BTS have eliminated most species of native birds, lizards, and bats, and continue to cause power outages leading to economic losses and public safety problems. In FY 2019, APHIS continued the multi-agency partnership to prevent BTS movement from Guam to

other Pacific Islands, Hawaii, and the continental United States. It is through this partnership that the Agency intercepted 18,470 BTS in Guam during FY 2019.
Nutria damage wetlands, agricultural crops, and structural foundations such as dikes and roads. APHIS is leading the first large-scale North American effort to eradicate a mainland nutria population in the Chesapeake Bay through agreements with the U.S. Fish and Wildlife Service and other cooperators. In FY 2019, APHIS monitored approximately 245,200 acres in 4 watershed areas. As a result of these efforts, marsh grasses and native muskrat populations are quickly recovering.

APHIS partners with various Federal and State resource agencies, private organizations, and community groups to conduct damage management that benefit protected bird species by preventing predation from other birds and mammals to nests, eggs, and juveniles. In FY 2019, APHIS conducted more than 489 conservation actions that benefitted protected species in 40 States, Guam, Virgin Islands, and Cuba (Guantanamo Bay).

2. Wildlife Services Methods Development

The Wildlife Services Methods Development (WSMD) Program develops effective and socially responsible methods and information to manage conflicts between people and wildlife to protect agriculture, natural resources, and human health and safety. APHIS' National Wildlife Research Center (NWRC) provides the only dedicated Federal leadership in developing methods to manage wildlife-related damage problems. In FY 2019, the National Wildlife Research Center initiated 86 new studies and published 133 scientific papers, book chapters and technical reports in 85 professional scientific journals. Scientists also made 216 presentations to scientific and stakeholder audiences.

Agriculture

In FY 2019, NWRC found that after 4 years of activities, the probability of feral swine invading a new county decreased by 8 percent overall and by 15 percent in States with low-density feral swine populations. If feral swine had continued to expand their range at pre-program levels, the models predicted they would have invaded 122 more counties in 11 States. Additionally, in FY 2019, NWRC determined the impacts of feral swine on livestock producers were greatest on cattle and pig producers, as compared to sheep and goat producers. Specifically, across a 13-State region, the estimated annual damages to cattle production were approximately $40 million alone.

The Agency is moving to have a completed toxicant and delivery system available for use in 2023. This system is a critical component to reduce feral swine populations and the damage they cause in the long term. The Agency continues to make refinements to the bait formulation. In FY 2019, NWRC, with approval from the Environmental Protection Agency, conducted a field trail focused on reducing risks to non-target (i.e. non-feral swine) species. Results demonstrated

good efficacy in feral swine and also reduced bird mortality. An additional field trial in Texas is planned in early 2020.

Red-winged blackbirds are an important economic pest to sunflower growers in the Prairie Pothole region of North Dakota, where they cause extensive crop damage and lower yields at harvest. In FY 2019, NWRC conducted studies to determine how the birds interact with their surroundings and identify food sources. Results showed that blackbirds have a relatively wide field of vision and are able to gather information about foraging opportunities and potential risks while their heads are down in a foraging posture. I

In FY 2019, research showed that resident and migratory populations of double crested-cormorants are managed for different and conflicting goals; where resident birds are managed for conservation and migratory birds are managed for damage management goals. A model was developed for phenotype and habitat preferences of the two groups which may aid in the different targeted management objectives, while complying with their protected status under the Migratory Bird Treaty Act.

Natural Resources

Some wildlife species, including coyotes, readily adapt to changing landscapes and urban environments. To help understand how coyotes have adapted to living in cities, NWRC compared two ecologically and evolutionarily important behavioral traits: bold-shy and exploration-avoidance behaviors. Boldness relates to an animal's reaction to a risky situation, whereas exploration relates to an animal's willingness to explore novel objects or situations. Results showed that urban coyotes are bolder and more exploratory than rural coyotes and that within urban and rural coyote populations there are individuals that vary across both spectrums.

Human Health and Safety

Wildlife-aircraft collisions (wildlife strikes) with civil and military aircraft pose important risks and economic losses. NWRC develops risk and management models for the Federal Aviation Administration, as well as develops methods of mitigation. In FY 2019, a data-based model was generated that identified bird attributes that correlated with airstrikes. Species with low wing-loading were more likely to be struck by aircraft (these tend to be small, highly maneuverable species that cause less damage). Birds were more likely to be hit by jets over propeller aircraft, and strikes were less likely if the aircraft approached the bird head on as opposed to from the side. Also in FY 2019, wildlife hazard scores for risk of airstrikes were developed for military aircraft. The most hazardous species for military aircraft were snow geese, Canada geese, common loon, and black vulture.

Partnerships and Technology Transfer

Most NWRC technology development activity and partnerships involve partnerships with universities and small businesses. Technologies pursued include development of devices, baits, formulations and vaccines. In FY 2019, NWRC furthered its partnership efforts to make sure its research and development activity had a path for commercial development and operational management with the following new activity: 8 Confidentiality Agreements, 9 Material Transfer Agreements, 13 Material Transfer Research Agreements, 1 Memorandum of Understanding, 3 Cooperative Research and Development Agreements, 6 Invention Disclosures, 4 Provisional Patent Applications, 1 Non-provisional patent application and 1 patent issued.

NWRC collaborates on average with 140 unique entities each year. Since 2013, these collaborations have led to nearly 400 intellectual property agreements, including 27 Cooperative Research and Development Agreements, Examples of recently patented and licensed NWRC technologies include a wildlife contraceptive, bird repellents, and an automated bait delivery system to manage invasive brown treesnake populations on Guam. In FY 2019, the automated bait delivery system to manage brown treesnakes was successfully transferred from a Research and Development status to an operational status and is now being operationally used.

Selected Examples of Recent Progress – Regulatory Enforcement:

1. Animal and Plant Health Regulatory Enforcement

Animal and Plant Health Regulatory Enforcement (APHRE) provides investigative, enforcement, and regulatory support services to the Agency's four regulatory programs and Agricultural Quarantine Inspection (AQI) activities carried out through the Department of Homeland Security, Customs and Border Protection.

In FY 2019, APHRE initiated 1,359 new cases, issued 218 official warnings, issued 339 pre-litigation settlements resulting in the collection of $714,665 in stipulated penalties, and obtained administrative orders assessing $308,660 in civil penalties.

To support animal health, APHRE initiated 156 cases, issued 52 official warnings, issued 40 pre-litigation settlements resulting in the collection of $67,203 in stipulated penalties, and obtained administrative orders assessing $15,260 in civil penalties against persons for violations of laws aimed at protecting animal health and American agriculture.

To support plant health, APHRE initiated 62 cases, issued 19 official warnings, and negotiated 13 pre-litigation settlement agreements resulting in the collection of $68,125 in stipulated penalties.

To support AQI activities, APHRE initiated 1,121 cases, issued 145 official warnings, and issued 282 pre-litigation settlement agreements resulting in the collection of $562,337 in stipulated penalties.

To support animal welfare, APHRE initiated 17 cases for alleged violations of the Animal Welfare Act (AWA), issued 2 official warnings, issued 4 pre-litigation settlements resulting in the collection of $17,000 in stipulated penalties, and obtained 10 administrative orders, assessing $147,300 in civil penalties. Copies of enforcement records (such as initial decision and orders, default decisions, and consent decisions) are available on the USDA's Office of Administrative Law Judge's website: https://oalj.oha.usda.gov/.

To support horse protection, APHRE initiated two cases and, working with the OGC, obtained 85 administrative orders assessing $71,100 in civil penalties, and disqualifying 66 persons for a total of 78.5 years from participating in activities regulated under the Horse Protection Act.

To support biotechnology, APHRE initiated one case relating to the possible detection of genetically engineered (GE) wheat in Washington State. The case was initiated as part of an internal collaborative effort with the Agency's Biotechnology Regulatory Services program to further the protection and safeguarding of plant health throughout the United States. The investigation found that there was no evidence that any GE wheat had entered commerce or the food supply. APHIS strengthened its oversight of regulated GE wheat field trials by requiring developers to apply for a permit for field trials beginning with GE wheat planted on or after January 1, 2016.

2. Biotechnology Regulatory Services

Authorizations

In FY 2019, APHIS authorized nearly 1,500 permits and notifications in 51 States (plus Puerto Rico) for 130 different species of organisms.

Risk Assessment and Petitions

In FY 2019, APHIS reviewed and deregulated 3 petitions for GE cotton, GE canola, and GE soybean, bringing the cumulative total of APHIS deregulations to 132. In recent years, APHIS continues to provide the public with opportunities to review and comment on both the petition request and scientific assessments of the GE organisms in the *Federal Register*.

Since 2011, APHIS' "Am I Regulated?" (AIR) process allows potentially regulated entities to ask the Agency if an organism is a regulated article by providing specific information including scientific data, the technology used, and other information about the GE organism. In FY 2019, APHIS responded to 12 AIR inquiries; since inception, the Agency has responded to more than 80 inquiries thus, facilitating movement of new products to farmers' fields.

Compliance and Inspections

APHIS ensures developers, growers, and other individuals, organizations and universities take the important steps to prevent unauthorized releases of regulated GE organisms. In FY 2019, APHIS and the States (authorized by APHIS) conducted more than 600 site inspections, 43 of which were unannounced, and 53 were virtual. The virtual inspection process, launched in FY 2018, enhanced effectiveness of oversight while leveraging technology through virtual monitoring and evaluations of field trials.

Following recommendations from the USDA's Office of Inspector General's office, APHIS has taken steps in recent years to strengthen its oversight of regulated GE field trials. In FY 2019, APHIS continued to develop and implement an improved risk-based inspection selection process and enhanced compliance oversight of regulated GE field trials. As part of this effort, the Agency utilized technology to develop and transition digital mapping capabilities, enhance effectiveness of oversight while utilizing technology through its virtual monitoring and evaluations of field trials. These virtual inspections focused on the review of post-harvest recordkeeping and oversight practices as well as field trials with compliance issues. APHIS also updated certain standard reporting and recordkeeping requirements for GE field trials authorized under permits, increasing consistency and improving clarity of requirements for regulated entities and increasing enforceability of requirements for the Agency.

Partnerships

APHIS continued to work with the Environmental Protection Agency (EPA), and the Food and Drug Administration (FDA) to balance regulatory oversight of GE organisms in support of a White House Executive Order on Modernizing the Regulatory Framework for Agricultural Biotechnology Products. In particular, APHIS worked with EPA and FDA to develop a Memorandum of Understanding governing the development of a Unified Biotechnology web-based platform that will provide a single point of entry for the regulated community and the public to obtain and access information on the Coordinated Framework and the U.S. biotechnology regulatory system. This includes a mechanism for developers to submit questions to regulators and obtain a single coordinated response from the agencies.

APHIS is engaged in capacity building efforts for foreign regulatory officials and scientific advisors by hosting visitors at APHIS headquarters and by serving as resource persons in biotech regulation training In FY 2019, APHIS organized sessions with FDA and EPA counterparts to present information to over 100 visitors, representing 12 countries.

Regulatory Changes

APHIS is working to update the Agency's biotechnology regulations to better ensure that regulatory oversight is commensurate with plant pest risks. APHIS published the proposed

rule, in June 2019, after conducting extensive stakeholder outreach in FY 2018, to engage in an open and robust policy dialog to more effectively address the issues raised in public comments submitted on the previously proposed rule. The Agency is currently analyzing and preparing a response to over 6,150 comments before issuing a final draft rule.

Selected Examples of Recent Progress – Emergency Management:

1. Emergency Preparedness & Response

The Emergency Preparedness and Response (EPR) program improves APHIS' capability to prevent, prepare for, respond to, and recover from animal health emergencies. This program's goal is to respond to an animal health event within 24 hours from the time APHIS decides that it is appropriate to be involved in the response effort.)

Preparedness, Partnerships, & Planning

In FY 2019, APHIS continued to expand its animal health readiness capacity by increasing the number of first responders to enable the Agency to respond more rapidly and effectively to animal health emergency events. As of the end of FY 2019, 119 of the 130 (92 percent) National Incident Management Team Command and General Staff positions were filled. These are collateral-duty volunteer positions which involve a consistent turnover of personnel from year to year. In FY 2019, Emergency Support Function #11: Agriculture and Natural Resources (ESF #11) Coordinators participated in the planning and execution of more than 32 FEMA and State-led exercises ranging from tabletop exercises to drills providing cross-functional coordination and assistance. These exercises covered various scenarios including hurricane response, earthquakes, evacuation and sheltering, agro-terrorism, animal disease response, and radioactive release response.

APHIS, State cooperators, and industry stakeholders exercised the Secure Milk Supply and Secure Pork Supply Plans. These plans provide continuity-of-business guidance for premises with no evidence of foreign animal disease infection in a regulatory control area. Under the plans, such an operation could move raw milk or live swine to processing if approved by local, State, tribal, and Federal regulatory officials.

APHIS also serves as a liaison between State and local officials to protect pets, breeders, dealers, and exhibitors regulated by the Animal Welfare Act to enhance coordination on animal disease preparedness efforts. The agency works through ESF #11 (Agriculture and Natural Resources) and ESF #6 (Mass Care, in coordination with FEMA) to support pet owners in disasters. In FY 2019, APHIS held 17 meetings with state emergency management and industry partners and 4 workshops in connection with the Zoo and Aquarium All Hazards Preparedness Response and Recovery Fusion Center. These partnerships raised awareness of potential emergency situations and the importance of preparedness. In addition, they positioned the Agency to play

a critical role supporting animal rescue and sheltering during the California Camp Fire and the Nebraska floods, and helped the regulated exhibitor community in these areas recover quickly.

In September 2019, APHIS hosted the Swine Fever Exercise for Agriculture Response functional exercise to target specific areas of an African swine fever (ASF) response with Federal, State, and local agencies, and industry. Fourteen States participated in the exercise, which focused on foreign animal disease investigation, movement standstill, depopulation and disposal, and continuity of business. Participants tested operational and logistical plans, developed or strengthened relationships and communications, and increased emergency response preparedness.

Response Efforts and Foreign Animal Disease (FAD) Investigations

In FY 2019, APHIS conducted 1,701 FAD investigations, of which 1,346, or 79 percent, were vesicular. The high number of vesicular investigations resulted from the ongoing Seneca Valley A virus (SVA) disease in pigs in the United States and Canada. Although SVA is not regulated, it mimics foot-and-mouth disease (FMD), which is the highest consequence FAD in terms of regulatory intervention and economic consequences. In addition, APHIS continued its response to the May 2018 confirmation of virulent Newcastle disease (vND) in southern California. APHIS contributed 570 personnel for 743 deployments to California, with the average deployment being three weeks.

In FY 2019, FEMA activated ESF-11 coordinators nine times for incidents including typhoons, wildfires, flooding, earthquakes, a hurricane, a blizzard, and 29 alerts.

APHIS' Wildlife Services (WS) Emergency Response System participated in various responses in FY 2019 including vND, Nebraska floods, contaminant spills, exotic invasive pest species, and hurricanes, and typhoons. WS deployed 31 personnel on 77 deployments in response to the vND incident in Southern California. The Program deployed 22 personnel to provide aerial surveillance and Command support to help with the APHIS response and recovery of massive flooding in Nebraska, and deployed 11 personnel to respond to wildfires in California. WS also assisted with natural disaster response and recovery with hurricane Michael and typhoons in the South Pacific. In addition, WS personnel were deployed either on site or virtually for 1,878 days for 8 mobilized responses. The program also worked with other APHIS programs on three ASF tabletop exercises.

Safeguarding of Select Agents

APHIS administers the select agents and toxins regulations jointly with the CDC Division of Select Agents and Toxins, as the FSAP. As of September 30, 2019, 34 entities that contain select agents covered under APHIS authority are registered with AgSAS, and 38 entities are registered with CDC. AgSAS conducted 72 inspections of which 29 were verification inspections, 29 renewal inspections, 3 compliance inspections, 1 new entity, 5 new space, and 5 Biosafety Level

4 (maximum containment) inspections. APHIS issued inspection findings for deficiencies identified, and issued show cause letters providing entities the option to develop Corrective Action Plans to address serious noncompliance issues. The Agency conducted joint inspections with CDC, the Department of Homeland Security, and the Department of Defense. In addition, AgSAS collaborated with the FBI to conduct Security Risk Assessments (SRA) to determine the suitability of individuals requesting access to select agents and toxins. Calendar year 2019 figures will not be available until February 2020; in 2018, however, FSAP facilitated 3,572 SRAs conducted by the FBI, and restricted the access of 28 individuals based on the results. In FY 2019, AgSAS supported entities and other partners during hazardous events, to ensure the safety and security of select agents and toxins during disasters.

In FY 2019, APHIS and CDC jointly continued to institute changes in operations and policies in response to multiple incidents in 2014 involving the possible release of select agents. The two agencies use a select agent information system and external portal for regulated entities, known as the electronic Federal Select Agent Program (eFSAP). The eFSAP system allows registered entities to provide information directly through a secure portal, reducing data entry errors and cycle time for submitting amendment requests and providing responses to APHIS information requests. FSAP implemented individual modules as they were developed, including piloting and testing the system. In addition FSAP developed program guidance for its use and provided training to staff and regulated entities. In FY 2019, FSAP continued to focus on responding to several GAO recommendations related to program assessments. The primary activity has been the development of a Joint FSAP Strategic Plan and associated implementation and monitoring programs. FSAP also solicited external assistance to perform a joint workforce assessment and assessment of the FSAP organizational structure. Since FY 2018, FSAP established regular coordination with USDA representatives overseeing the construction and stand-up of the National Bio and Agro-Defense Facility (NBAF) in Manhattan, Kansas to provide guidance on the select agent registration process. FSAP assigned staff liaisons to collaborate with NBAF project leadership, performed annual on-site visits to review the facility design, and provided input into regulatory standards, the process, and timelines for select agent registration.

Modeling and Monitoring

In FY 2019, APHIS continued to enhance disease-spread and control models for avian influenza, classical swine fever, and HPAI to evaluate the effects of single or integrated alternative control strategies and potential economic consequences of disease introduction and spread.

SAFE TRADE AND INTERNATIONAL TECHNICAL ASSISTANCE
Current Activities

APHIS monitors animal and plant health throughout the world and uses this information to set effective agricultural import policies to prevent the introduction of foreign animal and plant pests and diseases.

APHIS negotiates animal and plant health certification requirements, assists U.S. exporters in meeting foreign regulatory requirements, ensures requirements are proportional to risk without being excessively restrictive, and provides any necessary technical information to support the safety of U.S. agricultural products destined for foreign markets.

Selected Examples of Recent Progress in Facilitating Safe Trade:

1. Agriculture Import/Export

APHIS works with other Federal agencies, States, foreign governments, industry, and academia to protect U.S. agriculture while facilitating the safe trade of animals and animal products. APHIS also conducts activities related to the 2008 Farm Bill amendments to the Lacey Act, which prohibit the importation of any plants, with limited exceptions, that are taken or traded in violation of domestic or international laws. The Lacey Act amendments are designed to help combat this illegal logging by encouraging importers to research their supply chains and be aware of the laws governing products they purchase in other countries.

Imports

To facilitate imports, APHIS evaluates the animal health status of regions that wish to export animals and/or animal products to the United States. FY 2019, APHIS completed several evaluations and published regulatory actions based on those evaluations in the Federal Register. These include notices to recognize the State of Baja California, Mexico as free of cattle fever ticks, Singapore as free of foot-and-mouth disease (FMD), and Romania as free of Newcastle disease and highly pathogenic avian influenza (HPAI). APHIS also published a notice concurring with the World Organization for Animal Health risk designations for bovine spongiform encephalopathy (BSE) of negligible risk status for Nicaragua and controlled risk for Scotland. The conditions for a controlled-risk category are similar to the conditions for a negligible BSE-risk country, except that controlled-risk countries are required to conduct additional BSE surveillance. Additionally, APHIS published the proposed rule for the evaluation and recognition of compartments for animal disease status, consistent with World Organization for Animal Health international standards. Compartments are established through biosecurity and management practices as opposed to regions which are established by geographical boundaries.

APHIS conducted four site visits within several international regions in FY 2019 to confirm their surveillance, prevention, and control measures are sufficient to minimize the likelihood of introducing foreign animal diseases into the United States. These include visits to the States of Sonora and Zacatecas-Jalisco, Mexico for tuberculosis; Ukraine and the Yucatan Peninsula of Mexico for avian diseases; and European Union (EU) Member States as part of a comprehensive swine disease status review for the APHIS-defined European classical swine fever region, that included classical swine fever, FMD, swine vesicular disease, and EU zoning decisions for African swine fever (ASF). Due to continuing spread and new outbreaks, as of September 30, 2019, six more countries were declared affected with ASF, five additional countries are in

various stages of review for publication as affected with ASF, and Bulgaria has been added to regions affected with HPAI. APHIS is working closely with other Federal and State agencies, the swine industry, and producers to take the necessary actions to protect our nation's pigs and keep ASF out of the United States. APHIS and its partners are also conducting exercises and updating response plans as necessary to bolster preparedness efforts as we continue to monitor the global status of ASF.

In FY 2019, the Agency implemented improved traceability of imported animals by implementing the use of identification scanners at the Mexican border that will upload ear tag information into our traceability databases. Additionally, in FY 2019, APHIS issued 17,933 import permits for live animals, animal products, organisms, and vectors. These include new permits, renewals, and amendments.

APHIS worked in collaboration with Canada to harmonize the trade protocols for bulk processed animal proteins, and unprocessed pet food and pet treats. This resulted in removal of requirements for import permits for raw pet food/treats, and streamlined the required health certifications. Additionally, in FY 2019, APHIS published a public stakeholder or Federal Register notice necessitating the filing of APHIS import data for plants, plant products, and animal products into the Automated Commercial Environment (ACE).

Exports

In FY 2019, APHIS negotiated or re-negotiated 103 export protocols for animal products (9 new markets, 13 re-opened markets, 22 expanded markets, and 59 retained markets). This includes retaining market access for poultry exports in numerous countries that imposed restrictions due to outbreaks of avian influenza and Newcastle disease.

APHIS negotiated 165 export protocols for live animals (86 new or reopened markets, 47 retained markets, and 32 expanded markets). To complete export requests, APHIS conducted voluntary inspections of 1,830 U.S. manufacturing facilities to maintain, expand, or open export markets in many countries. APHIS also assisted export markets by participating in industry stakeholder meetings on obtaining new market access, provided technical support to the Office of the U.S. Trade Representative for World Trade Organization cases, coordinated or supported 13 audits on trade partners with whom we have requested new market access, and engaged in bilateral trade meetings with 25 countries. In addition, APHIS developed information packages and questionnaire responses from various countries to maintain, expand, or open export markets as well as to release held shipments.

In FY 2019, APHIS endorsed more than 275,890 export health certificates for animal products, livestock, poultry, germplasm, and pets.

APHIS continued to increase the number of animal health export certificates issued electronically this year by expanding the system capabilities for APHIS' online Veterinary

Export Health Certification System (VEHCS). VEHCS capabilities include: digital signature capabilities, multiple user roles, a certificate upload feature, certificate re-issuance, inclusion of supporting documents and payment information, and is working to expand the number of countries and commodities for which electronic certification is available. Due to more trading partners accepting electronically issued and/or digitally endorsed export health certificates in FY 2019, the number of export health certificates issued within VEHCS increased by 54.3 percent.

Lacey Act

In FY 2019, APHIS received approximately 830,000 Lacey Act declarations electronically or on paper (the vast majority were received electronically). With the electronic declaration collection process fully operational, APHIS enhanced compliance monitoring and enforcement of the Lacey Act requirements in FY 2019. During FY 2019, APHIS began issuing letters of noncompliance for importers whose declarations contain errors. This non-punitive outreach tool informs filers that there are likely errors in their declaration, that corrections should be made in future filings, that enforcement action could be taken on future filings, and provided contact information for questions or concerns. APHIS also worked closely with the Department of Homeland Security's Customs and Border Protection's (CBP) Regulatory Audit and Office of Trade to implement compliance surveys for Lacey Act declarations and requirements. Completed compliance surveys led one surveyed company to persuade their Brazilian supplier to improve traceability throughout the production line. Also as a result of the surveys, a lead third-party supplier of timber audits and timber supply chain traceability began emphasizing Lacey Act requirements and expectation regarding internal compliance programs to their clients, importers of timber and timber products.

2. Overseas Technical & Trade Operations

Through the Overseas Technical and Trade Operations (OTTO) program, APHIS helps U.S. farmers and ranchers export their products to other countries by resolving concerns over animal and plant health issues that affect trade of agricultural products.

In addressing sanitary and phytosanitary (SPS) barriers to trade, APHIS uses its strong scientific base and team of technical experts located in the United States and abroad to advocate on behalf of U.S. agriculture.

Examples of APHIS' efforts for new market access include: beef and meat products to Morocco potentially worth $80 million per year (USDA Foreign Agricultural Service); beef and bone meal to Peru valued at $10 million annually; cattle, goats, and sheep to Turkmenistan valued at $20 million per year; and blueberries to Vietnam valued at $1 million per year (values based on industry and APHIS analysis). APHIS also works to expand U.S. producers' access to export markets and to retain markets that are threatened due to changing requirements in other countries or pest and disease outbreaks in the United States. In FY 2019, APHIS and other

Federal agencies, secured an agreement between the United States and Japan that eliminates Japan's longstanding age restrictions on U.S. beef and cattle imports. This agreement, which was a major accomplishment for U.S. cattle producers, allows U.S. products from cattle, regardless of age, to enter Japan for the first time since 2003.

APHIS continues to enhance U.S. efforts to retain markets threatened or lost due to outbreaks of avian health diseases including highly pathogenic avian influenza (HPAI), low pathogenic avian influenza (LPAI), and virulent Newcastle disease (vND). Key successes in FY 2019 include the limited scope of restrictions placed on the United States after detections of LPAI in Connecticut and vND in Arizona in commercial establishments. APHIS also reopened a variety of export markets for Minnesota poultry and poultry products following the completion of the response to LPAI in that State. APHIS' outreach to its counterparts in other countries on the U.S. surveillance system for avian influenza continues to lessen the impact of individual detections on U.S. poultry trade.

Even for markets that are open to U.S. agricultural products, APHIS must continually address issues to keep trade flowing smoothly. APHIS successfully secured the release of nearly 200 shipments worth more than $68 million in FY 2019. These detained shipments included a shipment of rice to Japan worth $11.5 million and a shipment of walnut plants to Chile worth more than $1.5 million (based on APHIS analysis of industry and shipper-reported values).

In FY 2019, APHIS educated 350 foreign officials about the U.S. regulatory process by hosting them during 60 visits. APHIS also coordinated and prioritized 100 requests received for subject matter expertise, trainings, and other outreach-related activities, and fulfilled 81 of those requests. For example, APHIS worked with the Tuskegee University to train two groups of 43 veterinarians and/or government officials from 11 African countries in SPS risk assessment. Plant health officials representing 20 countries attended the APHIS Plant Health Systems Analysis Course. Additionally, APHIS provided four trainings in animal health, with an emphasis in HPAI and African swine fever (ASF) surveillance and emergency response, to 55 government officials representing approximately 45 countries. Additionally, APHIS supported two courses in Vietnam to assist with ASF response efforts in that country, with 60 veterinarians and/or government officials participating. These activities are designed to help other countries increase their regulatory capacity, which over the long term, help prevent the trans-national spread of serious pests and diseases as well as increase other countries' ability to engage in safe agricultural trade.

APHIS emphasizes the use of scientific principles as a basis for international trade decisions to help ensure that the same rules apply to countries around the world and foster a successful trading environment. To achieve this level playing field, APHIS works with international standard-setting bodies such as the World Organisation for Animal Health and the International Plant Protection Convention to encourage other countries to follow this model. In FY 2019, APHIS participated in a transparency workshop organized by the World Trade Organization's (WTO) SPS Committee offering tools, mechanisms, and other information to

help WTO member countries fulfill their SPS transparency obligations. During FY 2019, APHIS reviewed and commented on WTO notifications on regulations for import risk assessments of propagative materials and on import health standards for equine semen and embryos as well as a draft decree guiding livestock production, among others.

APHIS continued its comprehensive succession planning efforts, with special emphasis on developing the Foreign Service cadre. Through this succession effort, APHIS is augmenting its current overseas Foreign Service cadre, many of whom are eligible for retirement in the next five to ten years. The succession effort helps ensure that APHIS has trained staff to support U.S. exports and overseas animal and plant health programs. As a result of this program, APHIS has deployed eight new Foreign Service personnel to China, Brazil, Peru, Costa Rica, Belgium, the Dominican Republic, Senegal, and South Africa. In addition, APHIS has developed a process to evaluate the location of its overseas offices and the most effective way to support the Agency's mission, strengthening APHIS' ability to address SPS and other issues overseas in traditional and emerging markets.

ANIMAL WELFARE
Current Activities

The Agency ensures the humane care and treatment of certain animals and horses as required by the Animal Welfare Act of 1966 as amended (7 U.S.C. 2131-2159), and the Horse Protection Act (HPA) of 1970 as amended (15 U.S.C. 1821-1831) through inspection, education, and enforcement efforts.

Selected Examples of Recent Progress in Animal Welfare:

1. Animal Welfare

APHIS' Animal Welfare Program has the unique Federal role of ensuring the humane care and treatment of animals covered by the Animal Welfare Act (AWA) through inspection, learning opportunities, and enforcement efforts. In FY 2019, the program oversaw 8,954 licensees and registrants associated with 12,851 facilities.

Licensing Activities

In FY 2019, APHIS conducted 752 pre-licensing inspections, and issued 661 new licenses. The Agency determines initial compliance by conducting unannounced inspections within three months of issuing the license. At the first unannounced inspection, 98 percent of these newly licensed facilities were in substantial compliance, with no critical AWA citations on the inspection report.

For licensed and registered facilities, APHIS inspectors perform primarily unannounced inspections to assess compliance with the AWA. FY 2019, APHIS conducted 9,326 inspections and found 96 percent of all facilities to be in substantial compliance with the AWA.

APHIS' compliance support program assists facilities struggling to achieve or sustain compliance with the AWA. In FY 2019, the program completed 476 non-inspection activities with regulated facilities to work through compliance changes.

In FY 2019, APHIS debuted the Licensing and Registration Assistant, an online self-service tool, to help individuals and businesses identify their licensing and registration needs under the AWA. This tool streamlines the licensing and registration process by allowing potentially regulated entities to first determine which type of license or registration they need. This change prevents unnecessary delays to businesses and improves the cooperative relationship that makes regulatory oversight easier and more effective. Phone calls for assistance have declined 22 percent in the first six months of use. These changes have allowed the Agency to complete 98 percent of renewals in five days or less in 2019.

Registered Research Facilities

Of the 8,954 regulated entities, nearly 1,131 are comprised of Research Facilities (RFs) registered under the AWA. APHIS collaborates with The National Institutes of Health (NIH) and the Food and Drug Administration (FDA) to help oversee the welfare of animals used in research. In FY 2019, APHIS continued to partner with NIH, FDA, and other agencies on the Interagency Collaborative Animal Research Education Project, designed to empower IACUC's and their institutions to improve animal welfare and increase compliance with Federal standards while minimizing regulatory burdens.

In addition to conducting unannounced inspections of research facilities, all USDA-registered research facilities and Federal research facilities are required to submit an Annual Report that documents its use of animals for research, testing, teaching, experimentation, and/or surgery. The reports identify the number of animals used or held for research, testing, teaching, experimentation, and/or surgery. Beginning in FY 2019, the Agency began use of an online reporting option for Annual Report submission. This new web-based option improves the overall customer experience and reduces burden for registered facilities.

Since FY 2016, USDA's Agricultural Research Service (ARS) has voluntarily registered its animal research facilities with APHIS to promote animal welfare and establish the fully functioning IACUC. APHIS has registered 38 ARS research facilities under the AWA. APHIS monitors the health and welfare of animals housed at ARS facilities through the use of our unannounced inspection process. In FY 2019, APHIS conducted 47 inspections at all ARS facility sites. Of those inspected in FY 2019, all but four facilities were found to be in compliance during the unannounced inspection process.

Enforcement Activities

In FY 2019, APHIS initiated 17 cases for alleged violations of the AWA, issued 2 official warnings, issued 4 pre-litigation settlements resulting in the collection of $17,000 in stipulated penalties, and obtained 10 administrative orders, assessing $147,300 in civil penalties. In FY 2019, the Agency focused enforcement efforts on the most serious violations, resulting in the issuance of fewer official warnings and fewer referred cases to the Office of General Counsel.

Outreach/Stakeholder Activities

APHIS' Animal Welfare Program serves as a national resource for policy development and analysis, supports compliance efforts through non-regulatory methods such as education, training, and outreach to stakeholders to convey critical and current animal welfare information, and reviews and promotes science and technology related to improving the welfare of animals. In FY 2019, APHIS led the USDA partnership with the Breeder Leadership Council, a national group of state breeder group representatives. APHIS hosted the 7th annual joint USDA/Breeder Leadership Council meeting with representatives from 12 states representing 90 percent of all licensed dog dealers in the United States. This working relationship impacts the welfare of over 180,000 dogs licensed under the AWA.

The program also issued 20 newly-designed one-page, easy to use "Animal Care Aids" designed to assist customers with the care of their animals. These non-regulatory guides, on topics such as Puppy Socialization and Non-human Primate Enrichment are another opportunity for the Agency to build partnerships with the regulated community and stakeholder groups by focusing on important welfare issues. In addition to the inspectors, the American Veterinary Medical Association and the American Kennel Club distributed the aids toward our common goal of improving welfare.

In FY 2019, APHIS issued 2,002 permits covering 6,263 dogs entering the United States. To ensure the Agency is providing high quality customer service to importers, APHIS has automated the permitting process. Importers can now obtain a permit online, resulting in 50 percent faster permit processing, from 135/month prior to the upgrade to 253/month in the 2 months after implementation.

Regulatory Changes

In March 2019, APHIS requested public comment on proposed updates to the AWA licensing requirements. After carefully considering the more than 110,000 comments it received in response, APHIS has proposed to amend the licensing requirements to eliminate automatic renewals. With this change, licensees would have to demonstrate compliance with the AWA and show that the animals in their possession are adequately cared for in order to obtain a license. These proposed changes would also strengthen existing regulations to prevent individuals and businesses whose licenses were suspended or revoked from working for

regulated entities. For licensees who are fully compliant, the regulatory processes should impose the least burden possible, so the Agency is taking steps to streamline the licensing process by reducing licensing fees and simplifying the payment and collection process.

2. Horse Protection

Inspection Activities

Under the HPA, the management of horse shows, exhibitions, sales, and auctions are responsible for ensuring that sored horses do not unfairly compete alongside horses that are not sore Management may use third-party inspectors that USDA-certified horse industry organizations (HIOs) train and license to inspect horses for compliance with the HPA. These third-party inspectors are known as Designated Qualified Persons (DQPs).

APHIS attends a number of HPA-covered events each year to observe DQP performance and inspect horses for HPA compliance. In FY 2019, APHIS attended 46 horse events, inspected 1,210 horses and identified 250 instances of suspected noncompliance with the HPA. In FY 2019, DQPs attended 254 HPA events and inspected 51,873 horse entries. In total, DQPs identified 990 HPA noncompliances, and management disqualified 910 entries. Inspections conducted by DQP's were similar in number from the previous fiscal year (over 51,000 horses and detected 649 instances of noncompliance with the HPA in FY 2018).

Enforcement Activities

In FY 2019, APHIS presented a training session for industry inspectors. The session refreshed training to existing DQPs and initial training for those interested in becoming DQPs. Agency representatives also attended two HIO training clinics to provide support and clarification regarding HPA requirements. Additionally, APHIS held two shoeing and inspection clinics for walking horse owners, trainers and exhibitors to enhance understanding of the regulatory requirements and inspection processes.

APHIS worked with the Office of the General Counsel to initiate two cases and obtain 85 administrative orders. APHIS assessed $71,100 in civil penalties, and disqualified 66 persons for a total of 78.5 years from participating in activities regulated under the HPA.

AGENCY MANAGEMENT
Current Activities

The Agency Management programs support the daily operations of APHIS and provide for a safe and secure work environment. These programs provide the information technology, space, and telecommunications infrastructure that gives Agency employees the tools they need to carry out their responsibilities. These programs also oversee and implement precautionary security measures for continued mission operations while ensuring the safety of APHIS people and facilities. In addition, these programs support APHIS' contribution to the U.S. Department of State's continuing implementation of the Capital Security Cost Sharing Program, which provides safe and secure workplaces for all U.S. government employees located overseas.

Selected Examples of Recent Progress in Agency Management:

1. APHIS Information Technology and Infrastructure

APHIS' Information Technology Infrastructure (AITI) is comprised of the hardware, software, cloud computing and cyber-security infrastructure that provides Agency employees with office automation tools, Internet access, and access to mission-critical information technology (IT) programs and administrative applications.

License Renewal

APHIS supported approximately 9,700 users with license renewals so they can access and legally use the enterprise software in conducting business.

Availability

APHIS supported internal and external stakeholders by providing optimal levels of service. The Agency continued to maintain 99.97 percent availability for its key computing systems this fiscal year. The AITI program also maintained applications availability outside of the normal operational hours, on weekends, and holidays to ensure availability of systems.

Cloud Services

As a requirement of the Federal government's Data Center Optimization Initiative, APHIS has completed migration of all business applications from on-site data centers to the remote cloud servers. As of April 2019, APHIS closed all on site Agency data centers.

Cyber-Security

APHIS maintained the current version of National Institute of Standards and Technology and Federal Information Security Management Act testing standards to continue protecting our cyber security infrastructure and reducing vulnerabilities of our systems. APHIS also introduced an Agency led intrusion prevention security system called Checkpoint, further increasing security protection.

Security Monitoring

The Agency renewed the upgraded security monitoring system that tracks improper use of personally identifiable information data stored in the APHIS infrastructure. The Agency's security branch is working with the human resources office to mitigate identified vulnerabilities.

2. Physical Operational Security

APHIS oversees and implements precautionary measures to ensure continued, efficient mission operations, and protection from disruption, degradation, or destruction of its facilities through the Physical and Operational Security (POS) program. In FY 2019, the program provided training to more than 1,600 employees, including seminars relating to active shooter response, situational awareness, scenario-based role-playing, illegal drugs, self-defense, terrorism, local crime trends, and travel safety. The program also provided workplace violence prevention seminars and multiple security briefings for employees who work along the international border or in foreign countries.

The POS program performed 19 live active shooter training exercises at Agency offices in California, Florida, Missouri, New York, Ohio, Oregon, and Puerto Rico. This scenario-based exercise provided a dynamic, interactive exercise for 400 APHIS employees, and over 140 participating local law enforcement, fire, and emergency medical service personnel. The APHIS active shooter training plan and materials were evaluated by 40 law enforcement agencies and the Nations' leading active shooter private consulting firm.

The POS program investigates, assesses, and mitigates all internal and external threats directed at Agency facilities, programs and personnel. These threats include death threats, terrorist threats, and assaults, among others. As a result, in FY 2019, APHIS investigated 80 external threats to its employees, and 63 workplace violence incidents to ensure employee safety. The POS program also works to ensure employee safety in the same manner, at or near the Mexican border, and throughout Mexico, Panama, and Guatemala.

184 previous facility assessments using the updated ISC criteria and USDA reporting format. As a result, the POS program provided security upgrades and repairs to 108 facilities. In addition,

the POS program is also responsible for issuing, activating, or updating approximately 3,800 personal identification verification cards to APHIS personnel.

APHIS security specialists investigate threats and respond to requests for protection throughout the country for APHIS veterinarians and inspectors who are enforcing regulations in challenging environments. In support of safety precautions for APHIS employees who enforce the Animal Welfare Act (AWA) and Horse Protection Act (HPA), the POS program provided security during 16 inspections of regulated AWA entities, 49 HPA events, and provided protection for more than 20 personnel representing Federal agencies at a multi-day AWA hearing.

Additionally, in FY 2019 the POS program provided 52 weeks of continuous security support in response to the virulent Newcastle disease outbreak in Southern California. This included providing personnel security escorts on residential properties, threat analyses, security assessments, and law enforcement coordination.

The Security Embassy Construction Counterterrorism Act's Capital Security Cost Sharing Program requires the Agency to help fund the construction of new Embassy compounds based on the number of authorized positions. The POS program worked with the U.S. Department of State to establish a security baseline for APHIS facilities overseas. In FY 2019, APHIS had approximately 300 full-time employees based in countries around the world. This program provides safe and secure diplomatic facilities for the Agency's overseas personnel.

3. Rent and Department of Homeland Security Payments

APHIS continued to take steps to better utilize space within its facilities and offices in FY 2019. In April 2019, the Agency awarded a lease for its Raleigh hub. To maximize the available space at this hub, APHIS is incorporating a number of space management practices in accordance with USDA's design guidelines such as 36 square foot workstations, 120 square foot offices, and several small meeting areas. APHIS will take occupancy of the new space starting in February 2020.

MULTI-AGENCY COORDINATION (MAC) GROUP

Selected Examples of Recent Progress in Multi-Agency Coordination Group:

1. Huanglongbing

In FY 2019, the HLB Multi-Agency Coordination (HLB MAC) funded 32 new projects, and supported several meetings convened to enhance research efforts on finding a cure for HLB. In FY 2019, the HLB MAC coordinated research efforts between citrus research funding organizations, enhanced collaboration between citrus breeders, and addressed barriers to

efficient advancement of research programs. Additionally, HLB MAC continued to support projects on therapeutics for HLB-infected trees, including additional work on thermotherapy and field testing of new chemicals. HLB MAC also supported projects that field tested potentially resistant or tolerant citrus varieties. Early detection technologies for HLB remain a focus for the HLB MAC, especially in California. The HLB MAC continues to support projects to train HLB detector dogs and conducted a review of early detection technologies. The group also supported a project for early detection of HLB using remote sensors mounted to drones. Control of ACP continues to be a top priority for the HLB MAC. In FY 2019, the HLB MAC provided funding for projects on biocontrol efforts and attract and kill technologies, and completed a review of impacts of biocontrol on ACP populations. This year, HLB MAC supported the Citrus Research and Field Trials (CRaFT) project in Florida to improve management of citrus in the face of HLB. The CRaFT Foundation will conduct a broad scale project to field test HLB management practices. This project will evaluate a variety of management practices on a large scale to determine the best techniques for growing citrus in HLB infested areas.

EMERGENCY ACTIVITIES FUNDED BY TRANSFERS FROM COMMODITY CREDIT CORPORATION

Selected Examples of Recent Progress in Transfers from Commodity Credit Corporation:

1. Bovine Tuberculosis

In FY 2019, APHIS spent $2.5 million in Commodity Credit Corporation funds (CCC) on tuberculosis (TB) eradication activities. In FY 2019, APHIS identified four TB affected beef herds in Michigan. Two of these herds were detected in Michigan's modified accredited free zone, and the other two were detected in the State's accredited free zone. Additionally, APHIS identified five TB affected dairy herds (two in Texas and one in Wisconsin, North Dakota and New Mexico, respectively) and one TB affected calf raiser herd (Texas). APHIS used CCC funds to conduct test-and-remove protocols and depopulation activities in accordance with each herd's management plan.

2. Spotted Lanternfly

In FY 2019, APHIS and cooperators used approximately $7.1 million in emergency funds to continue addressing the SLF infestation in the southeast portion of Pennsylvania (which extended into New Jersey, Maryland and Delaware). The program used appropriated funds and funding available under Plant Pest and Disease Management and Disaster Prevention Program, not only to address a smaller infestation in Virginia, but to conduct surveys in other states, including New York and Massachusetts.

In FY 2019, the program assessed more than 64,000 properties covering 125,865 acres and found SLF in 2 new locations outside the expected area of spread. During FY 2019, the program improved treatment efficiency and treated 690,000 trees, 6 times the amount initially planned.

Additionally, the program began treating areas along rail lines, creating a web of treated areas to stop both artificial and natural pest spread. APHIS continues to evaluate the effectiveness of the control strategy through tracking population levels.

3. Virulent Newcastle Disease

In FY 2019, APHIS spent approximately $28 million in emergency funds to address an outbreak of virulent Newcastle disease (vND) mainly in California, and safeguard U.S. poultry and egg producers. Since May 2018, APHIS identified vND infection on 471 premises in California, one premises in Utah, and a single location in Arizona. Although the vast majority of confirmed cases have occurred in backyard exhibition birds, four commercial flocks in California have also been affected. This ongoing outbreak has affected approximately 1.2 million birds in six counties in southern California and one. Since the latest case was detected and depopulated in September 2019, APHIS efforts are focusing on intensive surveillance and outreach activities in the affected areas to identify and eliminate any remaining cases of disease. Completing surveillance testing goals will allow State officials to release quarantine areas and provide data for APHIS to report to the OIE and assure trading partners that the U.S. is again free of vND.

4. Farm Bill

For FY 2019, the Farm Bill provided approximately $75 million. These funds are subject to the sequestration of mandatory funds ($4.65 million in FY 2019).

Plant Pest and Disease Management

APHIS and cooperators have identified six major strategies (the first with two sub-goals) to implement Plant Pest and Disease Management efforts: 1a) enhancing plant pest/disease analysis; 1b) enhancing plant pest survey; 2) targeting domestic inspection activities at vulnerable points; 3) enhancing pest identification tools and technology; 4) developing programs to safeguard nursery production; 5) enhancing outreach and education; and 6) enhancing mitigation capabilities. APHIS funded 386 projects in FY 2019, supporting a variety of Federal, State, academic, Tribal, and private entity stakeholders.

Enhance Plant Pest/Disease Analysis

Under this goal, APHIS supports projects that compile, synthesize, or evaluate data to inform or enhance risk and pathway analysis, surveillance methodology, or resource prioritization. In FY 2019, the program provided approximately $2.1 million for 18 projects in this goal area.

Enhance Plant Pest Survey

Under this goal, APHIS supports surveys for multiple, high-risk pests in port environs, across pathways of introduction, and in specialty crop commodities nationally. In FY 2019, the National Survey Supply Program used Farm Bill funds to distribute over 400,000 different plant pest trap and lure units to 49 states and 3 territories; and executed approximately 2,000 different trap and lure procurement orders. The orders consisted of approximately 125 different products to support the various detection and surveys that APHIS and State Cooperators conduct. These surveys complement those the Cooperative Agricultural Pest Survey conduct, and have expanded the number and scope of pest survey activities across the United States as well as help demonstrate our country's freedom from certain high-risk pests. In FY 2019, this program supported 180 multi-pest surveys and 269 unique pests targeted for survey in all 50 States and one territory. These included commodity surveys of apple, grape, stone fruit, palm, solanaceous, small fruit and berries, and other orchard crops, as well as surveys for Asian defoliators, exotic woodborers, bark beetles and other forest pests, cyst nematodes, mollusks, and pathway surveys covering multiple agricultural systems. Overall, the program provided approximately $14.4 million for 151 projects in this goal area.

Targeting Domestic Inspection Activities at Vulnerable Points

Under this goal, APHIS supports domestic inspection activities at high risk sites (e.g., warehouses and parcel facilities), inspects regulated articles moving interstate, and uses trained canine detection teams to improve detection capabilities. In FY 2019, the program continued to support canine team efforts in California where 14 teams work at Express Couriers and U.S. Postal Service offices in 10 counties, and in Florida where 6 teams work at Express Couriers in 4 counties and are cross trained to detect giant African snails. Overall, the program provided approximately $5.75 million for five projects in this goal area in FY 2019.

Enhance Pest Identification Tools and Technology

Under this goal, APHIS supports the ongoing development of improvements in pest identification and detection. This includes improved identification capacity and taxonomic understanding of groups of organisms, taxonomic support for surveys targeting high consequence pests, and the development of pest detection technology. APHIS spent approximately $6.3 million on 49 projects in support of this goal in FY 2019.

Developing Programs to Safeguard Nursery Production

Under this goal, APHIS supports projects to develop science-based best management practices and risk mitigation practices to exclude, contain, and control regulated pests from the nursery production chain, and developing and harmonizing audit-based nursery certification programs. The program provided approximately $2 million for 14 projects in this goal area in FY 2019.

Enhancing Outreach and Education

Under this goal, APHIS works to engage the public in early detection efforts by strengthening existing volunteer networks. APHIS emphasizes efforts that can lead to behavior changes among the public and the regulated community to prevent the introduction or spread of high-consequence pests into and throughout the United States. Overall, the program provided approximately $3.9 million for 60 projects in this goal area in FY 2019.

Enhance Mitigation Capabilities

Under the goal of enhancing mitigation capabilities, APHIS provides technical assistance prior to, during, and immediately following a plant pest outbreak, develops new mitigation tools and strategies, and increases emergency preparedness through the development of New Pest Response Guidelines and Incident Command System training. APHIS spent approximately $28.5 million on 89 projects in this goal area in FY 2019.

National Clean Plant Network (NCPN)

In FY 2019, APHIS used $6.5 million in Section 10007 funds to provide NCPN support to qualified clean plant centers through a cooperative agreements program. The application process allowed stakeholders to offer input into projects proposed for funding through pre-proposals, which are designed to help clean plant centers prioritize and harmonize their resourcing requests. As a result, APHIS entered into 25 cooperative agreements with clean plant centers and related entities in 15 States and one U.S. territory (Puerto Rico). The clean plant centers that receive NCPN funding are using the resources to: 1) diagnose for harmful pathogens that cause disease in covered specialty crops; 2) apply therapeutic measures to eliminate these pathogens; 3) establish plantings of clean plant 'starter' material and make this material available to nurseries and growers; 4) work with nurseries and growers in education/outreach programs to communicate the economic value to industry of using clean nursery stock; 5) advance quality management initiatives to further strengthen confidence in program processes and products, and 6) engage in the process of establishing and governing a network of collaborative clean plant centers.

Feral Swine Eradication and Control Pilot Program

The Feral Swine Eradication and Control Pilot Program (FSCP) was authorized by Section 2408 of the Agriculture Improvement Act of 2018 (P.L. 115-334). The Farm Bill provided $75 million in mandatory funding for fiscal years 2019 through 2023 and this funding is equally divided between the Natural Resources Conservation Service (NRCS) and the Animal and Plant Health Inspection Service (APHIS) to carry out the pilot program

In this first year of the program, USDA has identified 20 pilot projects in 10 of the highest density States, and has prepared for project implementation beginning in early fiscal year 2020. In

addition to conducting necessary planning, APHIS purchased necessary equipment required for further implementation in FY 2020. For example, APHIS purchased five helicopters which are critical to reducing feral swine populations in difficult to reach areas. APHIS also entered into an agreement with Texas A&M University to identify and implement best practices for feral swine removal and implementation of agency pilot projects. APHIS will begin full implementation of the pilot projects across all 10 states in FY 2020.

SUMMARY OF KEY FY 2019 CCC FUNDED EMERGENCY ACTIVITIES

	Emergency/Activity	Total Available in FY 2019	Total Obligations in FY 2019
1	Bovine Tuberculosis	$21,457,755	$2,504,961
2	Spotted Lanternfly	7,078,368	7,078,368
3	Virulent Newcastle Disease	44,979,576	28,010,895
4	Farm Bill - Plant Protection Act, Section 7721	70,569,649	70,507,875
5	Farm Bill - Animal Disease Prevention and Management, Section 12101	120,000,000	0
6	Farm Bill - Feral Swine Eradication and Control Pilot Program, Section 2408	37,500,000	3,551,669
	Total	$301,585,348	$111,653,768

a/ Total Available includes account recoveries, where applicable.

BUILDINGS AND FACILITIES

LEAD-OFF TABULAR STATEMENT

2020 Appropriations	$3,175,000
Change in Appropriation	-601,000
2021 Request, Current Law	$2,574,000

APPROPRIATIONS LANGUAGE

The appropriations language follows (new language underscored; deleted matter enclosed in brackets):

For plans, construction, repair, preventive maintenance, environmental support, improvement, extension, alteration, and purchase of fixed equipment or facilities, as authorized by 7 U.S.C. 2250, and acquisition of land as authorized by 7 U.S.C. 2268a, [$3,175,000] $2,574,000, to remain available until expended.

The first change (line 4) deletes 2020 appropriation amounts and replace it with the 2021 requests.

PROJECT STATEMENT

Buildings and Facilities
(Dollars in Thousands)

Program/Activity	2018 Actual B.A.	2018 Actual SY	2019 Actual B.A.	2019 Actual SY	2020 Enacted B.A.	2020 Enacted SY	2021 Budget Request B.A.	2021 Budget Request SY	Change from 2020 Enacted B.A.	Change from 2020 Enacted SY
Direct Appropriations:										
Buildings and Facilities	$3,175	0	$3,175	0	$3,175	0	$2,574	0	-$601	0
Total, Appropriations	**3,175**	**0**	**3,175**	**0**	**3,175**	**0**	**2,574**	**0**	**-601**	**0**
Carryover from Prior Years:										
Buildings and Facilities	2,261	0	1,409	0	2,724	0	2,399	0	-325	0
General Provision 743 Fruit Fly Rearing Facility	46,888	0	42,165	0	42,112	0	42,112	0	0	0
Subtotal, Carryover	49,149	0	43,574	0	44,836	0	44,511	0	-325	0
Recoveries	25	0	2	0	0	0	0	0	0	0
Total Available	**52,349**	**0**	**46,751**	**0**	**48,011**	**0**	**47,085**	**0**	**-926**	**0**
Lapsing Balances	0	0	0	0	0	0	0	0	0	0
Balances, Available End of Year	-43,574	0	-44,836	0	-44,511	0	-21,973	0	22,538	0
Total Obligations	**$8,775**	**0**	**$1,915**	**0**	**$3,500**	**0**	**$25,112**	**0**	**$21,612**	**0**

JUSTIFICATIONS OF INCREASES/DECREASES

(1) Building and Facilities, A decrease of $601,000 and 0 staff years ($3,175,000 and 0 staff years available in FY 2020 Enacted)

The Buildings and Facilities (B&F) program addresses APHIS' facility needs in support of the Agency's mission to protect the health and value of agriculture and natural resources nationwide. The program's goal is to systematically address the Agency's needs for maintaining and repairing existing facilities, as well as constructing new facilities. APHIS' Facility Condition Index (FCI) drives the projects; the FCI is the sum of the costs of needed repairs divided by the replacement value of the facility. APHIS strives to maintain an FCI for facilities assessed of less than 0.10, meaning that the cost to make repairs is less than 10 percent of the estimated replacement value for the facilities. The agency's deferred maintenance backlog and associated cost currently totals $96 million.

This program serves a vital role in maintaining APHIS' facilities so that employees can continue to carry out their responsibilities in a safe and efficient manner. The commitment to maintain the condition and functionality of facilities is an ongoing process that demands significant management of capital resources. The program manages the implementation of scheduled facility improvements, safety, construction, and maintenance. Contractors perform inspections and tests to substantiate that the supplies or services furnished under the contract conform to contract requirements. In addition, a design firm validates that the work aligns with approved plans and specifications. APHIS typically identifies on-site certified personnel to perform the contracting services. The Agency's engineering staff attends on-site construction progress meetings, and APHIS collects performance data through contractor reports and on-site verification.

In FY 2019, APHIS awarded 15 design/construction tasks associated with projects that cost approximately $2 million, and completed 18 construction projects. Approximately 40 percent of these repairs were major renovations, and 60 percent were minor repairs. Among these projects were the modernization of the Pocatello Supply Depot in Pocatello, Idaho; resurfacing selected flooring at the Miami Animal Import Center in Miami, Florida; and designing the replacement of a laboratory chiller plant at the National Wildlife Research Center in Fort Collins, Colorado.

The B&F program allows APHIS to centrally coordinate and prioritize these types of projects. Without necessary maintenance and repairs to facilities there could be program delays, environmental impacts, and noncompliance with State and local laws and codes. Many of APHIS' facilities have specialized functions that support various Federal, State, and local government programs, stakeholders, and customers. B&F projects ensure that

APHIS' programs can be conducted at safe, secure, sustainable, and high-performing facilities.

Approximately 99 percent of B&F funding supports indefinite delivery, indefinite quantity contracts (e.g., architect and engineering support), and construction contracts. These contracts, which provide indefinite supplies or services during a fixed time period, help streamline the contract process and expedite service delivery. The remaining funds support operating costs.

At the requested level, APHIS will reduce funding available by $601,000 for the maintenance and repair of its facilities. The program will continue to centrally coordinate and prioritize facility improvement projects using the remaining available funds.

GEOGRAPHIC BREAKDOWN OF OBLIGATIONS AND STAFF YEARS

(dollars in thousands; staff years (SY))

State/Territory/Country	2018 Actual	SY	2019 Actual	SY	2020 Enacted	SY	2021 Budget	SY
Colorado	$25	-	$100	-	$1,350	-	$150	-
Florida	-	-	104	-	700	-	200	-
Hawaii	-	-	-	-	100	-	-	-
Idaho	194	-	1,312	-	500	-	200	-
Iowa	32	-	-	-	-	-	-	-
Maryland	132	-	57	-	215	-	150	-
Massachusetts	1,700	-	-	-	-	-	-	-
Michigan	12	-	-	-	130	-	-	-
Mississippi	-	-	50	-	-	-	150	-
Montana	20	-	4	-	-	-	-	-
New York	-	-	-	-	150	-	250	-
South Carolina	33	-	-	-	-	-	-	-
Texas	6,566	-	123	-	150	-	23,912	-
Utah	41	-	8	-	-	-	-	-
Virginia	-	-	84	-	150	-	-	-
Wisconsin	-	-	35	-	-	-	50	-
Wyoming	20	-	7	-	-	-	-	-
U.S. TERRITORIES:								
Puerto Rico	-	-	31	-	-	-	-	-
NORTH AMERICA:								
Mexico	-	-	-	-	55	-	50	-
Obligations	8,775	-	1,915	-	3,500	-	25,112	-

CLASSIFICATION BY OBJECTS

(thousands of dollars)

Item No.	Item	2018 Actual	2019 Actual	2020 Enacted	2021 Budget
	Other Objects:				
25.0	Other contractual services	$8,775	$1,915	$3,500	$25,112
	Total, Other Objects	8,775	1,915	3,500	25,112
99.9	Total, new obligations	8,775	1,915	3,500	25,112

STATUS OF PROGRAMS – BUILDINGS AND FACILITIES

The Buildings and Facilities (B&F) appropriation funds major, nonrecurring, construction projects in support of program activities, and recurring construction, alterations, and repairs of existing facilities. These projects and activities allow other programs and employees to focus on APHIS' mission of protecting the health and value of agriculture, and natural resources nationwide.

Facilities Condition Assessment

At the end of FY 2019, the FCI for the 47 facilities assessed was 0.13, meaning the cost to correct currently identified and anticipated deficiencies is 13 percent of the estimated replacement value. Of these 47 facilities, 21 scored below the desired 0.10.

Summary of Current Projects

The B&F program implements scheduled improvements, and conducts security, construction, and maintenance activities.

As of October 2019, APHIS' B&F appropriation supports nine active projects. In FY 2019, APHIS awarded 15 design/construction tasks associated with projects at a cost of approximately $2 million and completed 18 construction projects. Approximately 40 percent of these repairs were major renovations and the remaining 60 percent were for minor repairs. Among these projects were the modernization of an agency facility in Pocatello, Idaho; resurfacing flooring at the Miami Animal Import Center in Miami, Florida; and designing the replacement of a laboratory chiller plant at the National Wildlife Research Center (NWRC), Fort Collins, Colorado.

Supply Depot Modernization Project, Pocatello, Idaho

In FY 2019, the construction contract was awarded to EPMH Joint Venture. The primary objective of this project is to address multiple facility deficiencies including updating the heating, ventilation and air conditioning system, upgrading the fire alarm system, and the installation of a shower and restroom. This construction work remains on going.

NWRC – Chiller Plant Replacement Project, Fort Collins, Colorado

In FY 2019, the design contract was awarded to the same company. The primary objective of this project is to replace the existing chiller plant which is obsolete and approaching the end of its life cycle with one that would offer the most benefits on a long-term basis. This project is currently under design.

SUMMARY OF PERFORMANCE

The Secretary of Agriculture established the Animal and Plant Health Inspection Service (APHIS) on April 2, 1972, under the authority of the Reorganization Plan No. 2 of 1953 and other authorities. The mission of the agency is to safeguard the health, welfare, and value of American agriculture and natural resources. APHIS employs a broad range of programs and unique authorities to deliver this mission. Together with its stakeholders, APHIS promotes the health of animal and plant resources to ensure abundant agricultural products and services for U.S. customers. APHIS monitors and responds to potential diseases of livestock and wildlife, invasive species, and conflicts between humans and wildlife as it strives to assure its stakeholders that it is on guard against the introduction or re-emergence of animal and plant pests and diseases that could limit agricultural production. The agency also balances a regulatory system that safeguards agriculture while fostering innovative research and development in the field of biotechnology. In addition, APHIS has protected the welfare of millions of animals used in research, exhibition, and the pet trade as well as those transported in commerce through inspection, education, and enforcement efforts.

USDA Strategic Goal 2: Maximize the Ability of American Agricultural Producers to Prosper by Feeding and Clothing the World

Key Performance Indicator	2018 Actual	2019 Target	2019 Actual	2020 Target	2021 Target
Number of hours it takes to mobilize resources once it is determined that a Federal emergency response is needed to manage an agricultural outbreak (target of within 24 hours)	24	24	24	24	24
Dollars (in thousands)	$5,723	$5,723	$5,723	$5,723	$5,723
Percent of high-risk plant pests for which early detection surveys are conducted	96	95	96	96	96
Dollars (in thousands)	$27,446	$27,446	$27,446	$27,446	$27,446

SELECTED PAST ACCOMPLISHMENTS TOWARD THE ACHIEVEMENT OF THE KPI OUTCOMES

APHIS conducts surveillance for domestic and foreign animal diseases to ensure the rapid detection of agricultural threats and to document the presence or absence of diseases in support of trade. When a serious pest or disease outbreak occurs, the Agency activates its emergency response mechanisms to contain the outbreak. In FY 2019, APHIS worked with State and industry partners to continue to eradicate virulent Newcastle disease (vND), a contagious and

fatal viral disease affecting the respiratory, nervous and digestive systems of birds and poultry. The Agency mobilized resources and logistics support for the vND control effort in response to multiple outbreaks in California and one each in Arizona and Utah within 24 hours of determining that a Federal response was needed, helping to prevent additional disease spread and eradicate the disease more quickly. APHIS maintains the capacity to respond rapidly to a variety of agricultural emergencies. The program conducted nine workshops and tabletop exercises in FY 2019 to ensure that employees, cooperators, and contractors are trained and prepared for emergencies. Examples include training for staff and contractors involved in maintaining emergency response equipment and exercises related to foot-and-mouth disease and African swine fever. The program also conducts quarterly tests of its 24-hour hotline for animal disease emergencies.

APHIS and cooperators targeted a total of 128 high-risk plant pests of national concern for survey in corn, oak, pine, small grains, soybean, and nursery crop commodities, as well as exotic wood boring bark beetles and cyst nematodes, among others. These pests represent 96 percent of the total target high-risk plant pests suggested for survey in FY 2019. Through the surveys, APHIS and cooperators detected one high-risk pest, a moth species that defoliates trees, in Washington State. Detecting the pest allows APHIS and State officials to take action and reduce impacts from the pest.

SELECTED ACCOMPLISHMENTS EXPECTED AT THE 2021 PROPOSED RESOURCE LEVEL

APHIS will continue to maintain and deploy countermeasures against the most damaging animal diseases within 24 hours and exercise emergency response capabilities with States, territories, and Tribal partners. In FY 2021, the agency will schedule tabletop exercises and trainings in the deployment of resources and response preparedness, ensuring that the agency and its partners are prepared to respond quickly and effectively to animal health events.

APHIS will conduct surveys in 50 States and 3 territories for at least 96 percent of high-risk plant pests identified as having pathways into the United States. APHIS' Pest Detection program personnel will evaluate and analyze additional exotic pests, develop survey methodology, and develop pest lists, datasheets, and survey manuals in support of the 2021 National Pest Surveillance Guidelines. States will use this guidance to plan surveys in FY 2021, allowing for the continued documentation of the presence or absence of plant pests and diseases of Federal regulatory significance in the United States and preserving economic opportunities for farmers (i.e., interstate commerce and international trade).