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New World Screwworm: Background and Issues for Congress

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SUMMARY

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The New World screwworm (NWS; *Cochliomyia hominivorax*) is a parasitic fly whose larvae infest warm-blooded animals, including livestock, wildlife, pets, birds, and humans. Female flies lay eggs in wounds or mucous membranes, and the larvae feed on living tissue, causing myiasis. Untreated infestations may result in severe tissue damage, secondary infections, reduced livestock productivity, or death.

NWS was historically endemic throughout portions of the southern United States, Mexico, Central America, and South America. The United States declared itself free of indigenous NWS in 1966 following a multidecade eradication campaign centered on the sterile insect technique (SIT), which suppresses wild populations through the release of sterilized flies. USDA's Animal and Plant Health Inspection Service (APHIS), working with the government of Panama through the Panama-United States Commission for the Eradication and Prevention of Screwworm (COPEG), continues to operate the principal sterile fly production facility in Panama and coordinates regional eradication efforts. Beginning in 2023, NWS spread beyond the biological barrier maintained in Panama's Darién Gap and reached southern Mexico in late 2024. On June 3, 2026, USDA confirmed the first U.S. detection associated with the current outbreak in a calf in Zavala County, Texas. As of July 28, 2026, USDA had confirmed 37 detections in the United States, including 11 in Texas and 1 in New Mexico. USDA responded by expanding surveillance, sterile fly releases, quarantines, animal movement controls, and eradication activities. On July 24, 2026, USDA announced a phased reopening of selected southern ports of entry for livestock imports from Mexico beginning August 24, 2026, contingent on Mexico's continued implementation of a joint action plan to control NWS. Livestock entering through reopened ports are to remain subject to enhanced inspection, and the reopening may be suspended if surveillance or audits indicate increased risk.

The current outbreak has raised questions regarding sterile fly production capacity, domestic response infrastructure, emergency funding authorities, livestock trade and market impacts, wildlife surveillance, and the potential role of biotechnology-enhanced suppression technologies. Some Members have introduced legislation on this subject, and related language was included in the discussion draft of the Agricultural Act of 2026 that the Senate Agriculture Committee chairman released on June 23, 2026. In addition, Congress has raised questions about USDA's NWS response during hearings with the Secretary of Agriculture. Congress may consider issues related to domestic sterile fly production capacity, oversight of USDA emergency funding authorities, livestock industry impacts, biotechnology governance and regulatory uncertainty, wildlife surveillance and interagency coordination, and USDA preparedness and response capabilities. Congress may also consider whether existing statutory authorities, international partnerships, and federal coordination mechanisms are adequate to prevent reestablishment of NWS in the United States and respond to future outbreaks.

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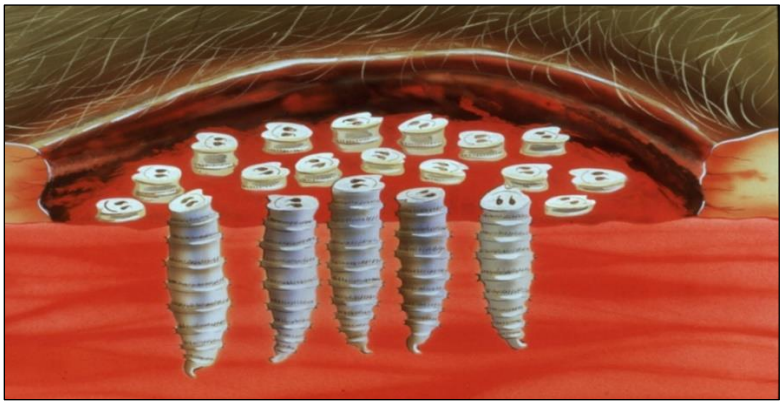
Introduction

The New World screwworm (NWS; *Cochliomyia hominivorax*) is a housefly-sized fly whose larvae stage is parasitic and infests warm-blooded vertebrates, including livestock, wildlife, pets, birds, and humans.[1] Adult female flies deposit eggs in wounds or mucous membranes. After hatching, larvae burrow into living tissue and feed on the host (**Figure 1**), causing a painful condition known as myiasis.[2] Treatment may include wound care, surgical removal, and topical pesticide application.[3] Untreated infestations may result in severe tissue damage, secondary infections, reduced productivity, or death.[4] During periods when animals give birth—often the spring season—the young animals and mother may be at increased risk of contracting NWS as a result of exposed wounds (e.g., navels and birthing injuries). According to the U.S. Department of Agriculture (USDA), "in areas with high NWS populations, the percentage of newborn animals with infested navel wounds can reach 100 percent."[5]

Figure 1. New World Screwworm Larvae Infestation in Wound



Source: U.S. Department of Agriculture, National Agricultural Library, "Slide of Larvae Living in Wound," https://www.nal.usda.gov/exhibits/speccoll/items/show/7325.

Note: Screwworm describes the larvae's appearance as it burrows into the host.

Following a decades-long eradication campaign beginning in the 1950s, USDA and international partners eliminated NWS from the United States, Mexico, and most of Central America through large-scale releases of sterile flies using the sterile insect technique (SIT). Rather than attempting global eradication, the United States, in cooperation with other countries, established a permanent containment barrier (i.e., biological barrier) in the Darién Gap of eastern Panama by continuously releasing sterile flies to prevent the northward spread of screwworm populations from South

[1] U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), "New World Screwworm," updated June 7, 2026, https://www.aphis.usda.gov/livestock-poultry-disease/cattle/ticks/screwworm.

[2] Centers for Disease Control and Prevention (CDC), "Clinical Overview of New World Screwworm," February 24, 2026, https://www.cdc.gov/new-world-screwworm/hcp/clinical-overview/index.html.

[3] For a list of pesticides for control of New World screwworm (NWS), see USDA, APHIS, *Pesticides for Control of New World Screwworm (Cochliomyia hominivorax)*, updated April 2026, https://www.aphis.usda.gov/sites/default/files/pesticides-for-nws.pdf.

[4] USDA, APHIS, Veterinary Services, National Preparedness and Incident Coordination, *The Foreign Animal Disease Preparedness and Response Plan (FAD PReP)—Disease Response Strategy: New World Screwworm Myiasis*, updated June 2025, https://www.aphis.usda.gov/sites/default/files/nws-myiasis-disease-strategy.pdf (hereinafter USDA, APHIS, *Disease Response Strategy—New World Screwworm Myiasis*).

[5] USDA, APHIS, *Disease Response Strategy—New World Screwworm Myiasis*.

America. The biological barrier has served as the primary line of defense preventing the reintroduction of NWS in North America. Beginning in 2023, NWS spread beyond the biological barrier zone. The pest subsequently advanced northward through Central America and reached southern Mexico in November 2024. In response, USDA implemented emergency measures intended to prevent reintroduction into the United States.[6] On June 3, 2026, USDA confirmed the first U.S. detection associated with the current outbreak in a calf located in Zavala County, Texas. As of August 10, 2026, USDA had confirmed 45 detections in the United States, including 44 cases in Texas and 1 case in New Mexico.[7]

This report reviews the current outbreak and USDA response activities, NWS biology, and eradication efforts; discusses USDA authorities and research activities; and outlines selected issues and policy options for Congress. USDA serves as the lead federal agency for animal health monitoring and response and for eradication activities. Other federal agencies contribute to NWS-related activities.[8] For example, the Centers for Disease Control and Prevention (CDC) provides guidance related to the diagnosis and management of human myiasis cases, while the Department of Defense[9]—particularly the Defense Advanced Research Projects Agency (DARPA)—supports research on emerging genetic pest-control technologies to address NWS. This report focuses on USDA's authorities, response activities, research, and policy considerations related to NWS. Where relevant, the report also discusses the roles and activities of other federal agencies.

Historical NWS Eradication Efforts

NWS was historically endemic throughout portions of the southern United States, Mexico, Central America, and South America. During the early 20th century, livestock movements contributed to the spread of NWS across the southern United States, including outbreaks in southeastern states during the 1930s.[10] USDA researchers subsequently developed the sterile insect technique (SIT), which became the principal tool used to suppress and eliminate screwworm populations.[11] Through large-scale sterilization of screwworm flies, USDA progressively reduced wild screwworm populations and declared the United States—except Texas—free of NWS in 1966 (**Figure 2**). Texas was subsequently declared free of NWS in 1982. Eradication efforts then expanded southward through Mexico and Central America.

In 1972, the United States and Mexico established the Mexico-United States Screwworm Eradication Commission to coordinate eradication activities and progressively move the

[6] USDA, APHIS, "Mexico Notifies United States of New World Screwworm Detection," November 2024, https://www.aphis.usda.gov/news/agency-announcements/mexico-notifies-united-states-new-world-screwworm-detection.

[7] For information on USDA emergency response activities, see "Current Eradication and Response Activities."

[8] According to the Centers for Disease Control and Prevention (CDC), "CDC initiated a human health response to New World Screwworm (NWS) infestations in Central America.... In partnership with the U.S. Department of Agriculture and Department of State, CDC developed and shared human health information on the prevention, detection, and clinical management of NWS." CDC, *CDC Global: A Year of Action and Impact*, 2024 Annual Report, https://www.cdc.gov/global-health/media/pdfs/2025/01/2024_GHC_Annual_Report_FINAL.pdf. It is not clear whether the Department of State program has continued under the Trump Administration.

[9] The Department of Defense is "using a secondary Department of War designation" under Executive Order 14347 dated September 5, 2025.

[10] USDA, National Agricultural Library (NAL), "STOP Screwworms: Selections from the Screwworm Eradication Collection: 1930s," https://www.nal.usda.gov/exhibits/speccoll/exhibits/show/stop-screwworms—selections-fr/1930s.

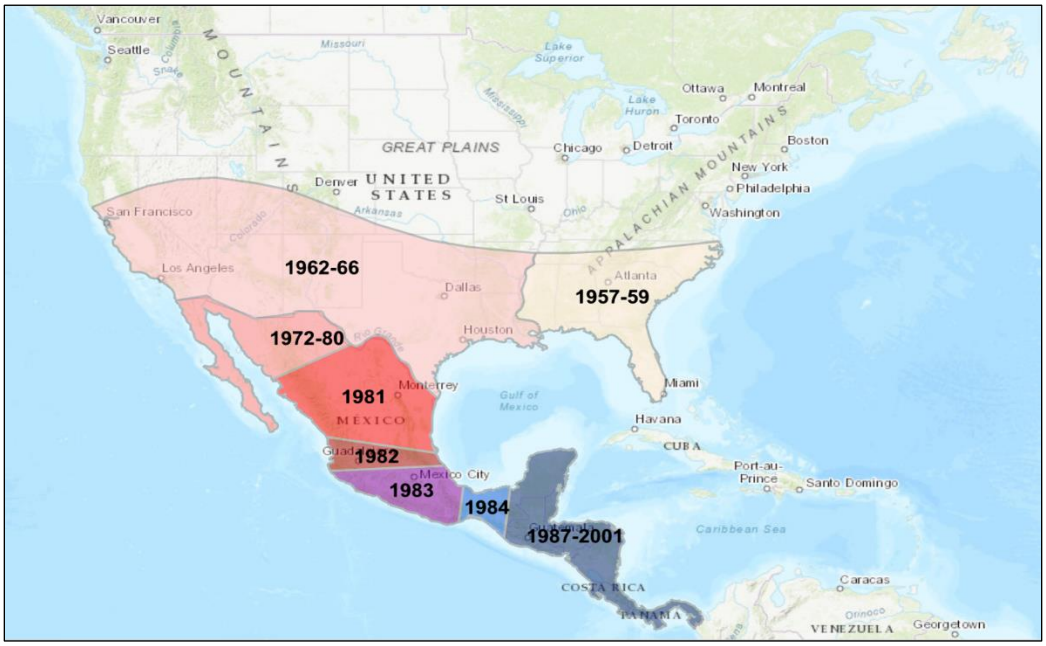
[11] USDA, NAL, "Artifacts: Screwworm Eradication Program Records (special collections)," accessed June 10, 2026, https://www.nal.usda.gov/collections/special-collections/artifacts-screwworm-eradication-program-records.

screwworm barrier southward.[12] Eradication efforts subsequently expanded throughout Central America. In 1994, the Panama-United States Commission for the Eradication and Prevention of Screwworm (COPEG) was established to maintain a permanent biological barrier in Panama's Darién Gap region.[13] COPEG later established a sterile fly production and dispersal facility in Panama, which began operations in 2006 and continues to support regional eradication efforts.

Although NWS was eradicated from the United States, isolated detections and one outbreak have occurred. There was an NWS outbreak in the Florida Keys deer population in 2016. USDA declared the outbreak eradicated in March 2017 after intensive surveillance, treatment, and sterile fly release activities. The federal government spent approximately $3.2 million ($4.2 million in 2026 dollars) to control this outbreak.[14] It is unclear how NWS was introduced into the wild Keys deer population.

According to USDA, the World Organization for Animal Health (WOAH; an intergovernmental organization) does not provide specific criteria for proof of freedom from NWS. Historically, USDA declared a previously endemic area to be *technically free* of NWS after 6 months without detection and *officially free* after 12 months without detection.[15]

Figure 2. Timeline of New World Screwworm Eradication



Source: U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service, *New World screwworm Story Map*, updated March 28, 2017.

Note: USDA documentation suggests New World screwworm has not been detected in Alaska or Hawaii.

[12] USDA, NAL, "Screwworm Eradication Program: Agreement Between the United States of America and Mexico," accessed February 11, 2026, https://www.nal.usda.gov/exhibits/speccoll/items/show/7389.

[13] Panama-United States Commission for the Eradication and Prevention of Screwworm (COPEG), https://www.copeg.org/en/.

[14] USDA, *Final Report for the APHIS Veterinary Services Response to the 2016-2017 Outbreak of New World Screwworm (NWS) in Florida*, Veterinary Services; Surveillance, Preparedness, and Response Services; and Animal and Plant Health Inspection Service, May 30, 2017, https://www.aphis.usda.gov/sites/default/files/public-nws-usdaaphis-final-report.pdf.

[15] USDA, APHIS, *Disease Response Strategy—New World Screwworm Myiasis*.

Status of Current Outbreak

Beginning in January 2023, NWS spread beyond the Panama biological barrier zone, and Panama declared a state of emergency.[16] In July 2023, Panama's minister of agricultural development declared a nationwide outbreak.[17] NWS subsequently advanced northward through Central America and reached southern Mexico by November 2024.[18] During the current outbreak, public health authorities have reported approximately 185,000 NWS animal cases and more than 2,000 NWS human myiasis cases in Mexico and Central America.[19]

On June 3, 2026, USDA confirmed the first U.S. detection associated with the current outbreak in a calf in Zavala County, Texas. As of July 28, 2026, USDA had confirmed 37 detections in the United States, including 11 cases in Texas and 1 case in Lea County, New Mexico. The New Mexico case involved a dog and represented both the first detection outside Texas and the first detection in a companion animal. USDA investigations into the source and movement history associated with individual cases remain ongoing, and the number of confirmed detections may change as additional cases are identified and verified.[20]

Biology and Animal Health Effects

Screwworm larvae feed on healthy living tissue rather than dead tissue. Infestations commonly occur in open wounds, surgical sites, navels of newborn animals, branding injuries, tick bites, or mucous membranes.[21] According to USDA, newborn livestock may face elevated risks during birthing seasons because exposed navels and birthing injuries provide favorable sites for infestation.[22]

If the wound remains untreated, larvae may penetrate deeply into tissue and cause severe trauma within days. Affected animals often exhibit weight loss, reduced feed intake, behavioral distress, and secondary infections. Severe infestations may result in death within one to two weeks.[23] NWS may affect any warm-blooded animal, including cattle, horses, sheep, goats, swine, wildlife species, pets, and humans.

[16] For more information on the history of NWS eradication from the United States and the Panama quarantine zone, see "Historical NWS Eradication Efforts."

[17] USDA, APHIS, "Mexico Notifies United States of New World Screwworm Detection."

[18] USDA, APHIS, "Mexico Notifies United States of New World Screwworm Detection."

[19] For animal cases, see CDC, "New World Screwworm Outbreak," June 4, 2026, https://www.cdc.gov/new-world-screwworm/situation-summary/index.html. For human cases, see CDC, "Current situation," https://www.cdc.gov/new-world-screwworm/situation-summary/index.htm.

[20] USDA, APHIS, "Confirmed Detections of New World Screwworm," updated June 11, 2026, https://www.aphis.usda.gov/animals/animal-health/livestock-and-poultry-disease/current-status/us-confirmed-cases-new-world.

[21] USDA, APHIS, *Response Playbook: New World Screwworm*, April 2026, https://www.aphis.usda.gov/sites/default/files/nws-response-playbook.pdf.

[22] USDA, APHIS, *Disease Response Strategy—New World Screwworm Myiasis*.

[23] USDA, APHIS, *Disease Response Strategy—New World Screwworm Myiasis*.

Livestock Trade Implications

Mexico accounted for more than 60% of cattle imported by the United States during 2023 and 2024, representing approximately 1.25 million head (**Figure 3**).[24] At the same time, the U.S. cattle inventory remained near historically low levels.

USDA first suspended imports of live cattle, horses, and bison through southern ports of entry on November 22, 2024, following the detection of NWS in southern Mexico. Imports resumed under enhanced inspection and treatment protocols on February 1, 2025, after USDA and Mexico agreed to implement strengthened preclearance measures. In May 2025, USDA again suspended imports on a month-to-month basis following what the agency described as the "unacceptable northward advancement" of NWS.[25] USDA later announced a phased reopening beginning July 7, 2025, but paused that plan after additional detections were confirmed farther north in Veracruz.[26]

On July 24, 2026, USDA announced a new phased reopening strategy for selected southern ports of entry after determining that Mexico had met specified benchmarks under a joint action plan to control NWS. Under the plan, the Douglas, AZ, port is scheduled to reopen beginning August 24, 2026, with the Santa Teresa and Columbus, NM, ports potentially reopening following additional evaluations. USDA stated that livestock entering through reopened ports would be subject to inspection for signs of NWS and that reopening could be suspended if surveillance, audits, or epidemiological conditions indicate an increased risk of introduction.[27]

Throughout the outbreak, livestock stakeholders have expressed differing views regarding import restrictions. Many U.S. livestock stakeholder groups supported border restrictions as necessary to reduce the risk of NWS becoming established in the United States.[28] Other industry groups,[29] including some feedlot operators and meat processors, raised concerns that prolonged restrictions could reduce feeder cattle supplies, increase production costs, and place upward pressure on cattle and beef prices, urging USDA to reopen the southern ports once appropriate mitigation measures were in place.[30] Some stakeholders have stated that the economic consequences of a domestic

[24] CRS calculation using data from USDA, Economic Research Service (ERS), "Cattle: monthly U.S. trade (head)," downloaded June 8, 2026.

[25] USDA, "Secretary Rollins Suspends Live Animal Imports Through Ports of Entry Along Southern Border, Effective Immediately," press release, May 22, 2025, https://www.usda.gov/about-usda/news/press-releases/2025/05/11/secretary-rollins-suspends-live-animal-imports-through-ports-entry-along-southern-border-effective.

[26] USDA, APHIS, "UPDATE: Import Alert: New World Screwworm Restrictions for Live Animals Originating from or Transiting Mexico," updated July 9, 2025, https://www.aphis.usda.gov/sites/default/files/import-alert-nws-mexico.pdf.

[27] USDA, "USDA Announces Phased Reopening of Southern Ports for Livestock Trade," https://www.usda.gov/about-usda/news/press-releases/2026/07/24/usda-announces-phased-reopening-southern-ports-livestock-trade.

[28] U.S. Cattlemen's Association, "US Cattlemen's Association Applauds USDA's Decisive Action to Close U.S.-Mexico Border in Response to New World Screwworm Threat," press release, May 12, 2025, https://uscattlemen.org/us-cattlemens-association-applauds-usdas-decisive-action-to-close-u-s-mexico-border-in-response-to-new-world-screwworm-threat/; and National Cattlemen's Beef Association (NBCA), "NCBA Stands with USDA on Border Closure Decision," May 11, 2025, https://www.ncba.org/news-media/news/details/43036/ncba-stands-with-usda-on-border-closure-decision.

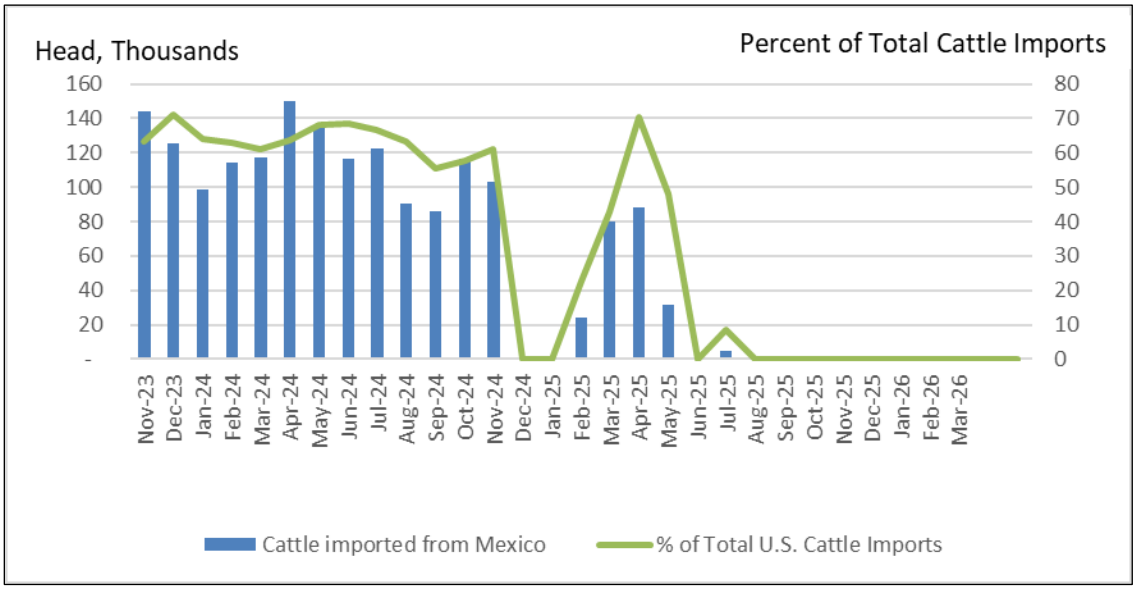
[29] See, for example, Reuters and Tom Polansek, "Chicago Cattle Futures Slide on U.S. Plan to Resume Imports from Mexico," *The Western Producer*, https://www.producer.com/daily/chicago-cattle-futures-slide-on-u-s-plan-to-resume-imports-from-mexico/.

[30] See, for example, "USCA Warns Mexican Cattle Reopening Could Put U.S. Herd Recovery at Risk," *The National Provisioner*, https://www.provisioneronline.com/articles/120972-usca-warns-mexican-cattle-reopening-could-put-us-herd-recovery-at-risk.

NWS outbreak could exceed the impacts associated with temporary import restrictions.[31] Since USDA confirmed cases of NWS in the United States, some Members of Congress have suggested USDA reopen the southern border to imports of livestock,[32] while other Members have urged caution against opening the border prematurely.[33]

Figure 3. U.S. Cattle Imports from Mexico

November 2023 to March 2026



Source: CRS using data from U.S. Department of Agriculture, Economic Research Service, "Cattle: Monthly U.S. Trade," accessed July 19, 2026.

Note: The percentage of total U.S. cattle is calculated using the number of cattle imported into the United States from Mexico divided by the total number of cattle imported into the United States.

Breakdown of the Biological Barrier

Neither USDA, foreign governments, nor international organizations such as the World Organization for Animal Health (WOAH) have publicly announced why the biological barrier in Panama broke down. USDA indicated that in 2022 the number of NWS cases detected in the barrier zone was the highest, at 621 confirmed cases, since eradication was declared in Panama in 2006. USDA suggested contributing factors included an increase in the cattle population in Darién—from approximately 64,000 in 2006 to 133,000 in 2022 (a 108% increase)—lack of producer education on livestock wound care, and reduced supply and quality of certain inputs needed for sterile fly production.[34] COPEG hired additional temporary field inspectors and extension agents to support surveillance, and it increased outreach and education campaigns for

[31] New Mexico University, Cooperative Extension Service, "New World Screwworm and Livestock Border Closures: A Guide for New Mexico Livestock Producers," https://pubs.nmsu.edu/_z/Z131.pdf.

[32] Grace Tarrow, "Trump's Rancher Allies Push Rollins to Reopen Border to Cattle," *Politico*, July 16, 2026, https://www.politico.com/news/2026/07/15/trump-screwworm-pressure-open-border-mexican-cattle-00995699.

[33] See, for example, letter from Senator M. Michael Rounds to Secretary of Agriculture Tom Vilsack, December 12, 2024, https://www.rounds.senate.gov/imo/media/doc/senator_rounds_letter_to_vilsack.pdf.

[34] USDA, *2024 USDA Explanatory Notes—Animal and Plant Health Inspection Service*, p. 83, https://www.usda.gov/sites/default/files/documents/23-2024-APHIS.pdf.

producers. In addition, COPEG increased sterile NWS production from 20 million to 24 million per week to augment aerial and ground release rates over high-risk areas. The number of monthly cases declined by 30% from August to September 2022.[35] Some researchers have suggested that declining effectiveness of the long-established sterile fly strain may have contributed to the breakdown of the biological barrier.[36] Because SIT depends on released sterile males successfully competing with wild males for mates, factors such as reduced genetic diversity associated with long-term mass rearing, laboratory adaptation, or reduced mating competitiveness have been proposed as possible explanations. Researchers have also suggested that available sterile fly production capacity may have been insufficient to rapidly restore suppression after the barrier was breached.[37]

Current Eradication and Response Activities

Sterile Insect Technique (SIT)

USDA uses SIT as the foundation of eradication and containment efforts in Central America and Mexico.[38] Under SIT, NWS flies are mass produced in specialized facilities. Pupae are sterilized using gamma radiation and later released into affected regions through aerial and ground dispersal systems. According to USDA, irradiation sterilizes the flies while maintaining sufficient longevity, dispersal capability, and mating competitiveness for operational eradication programs. Female NWS flies generally mate only once during their lifetimes.[39] When wild females mate with sterile males, they lay unfertilized eggs that do not hatch. Repeated releases progressively suppress wild screwworm populations until eradication is achieved.[40] Although USDA states that SIT irradiation maintains adequate mating performance for operational use,[41] some researchers have suggested that irradiation may reduce male competitiveness relative to wild flies, contributing to interest in alternative sterilization approaches.[42] USDA has stated that NWS SIT does not currently involve the release of genetically engineered insects. USDA further describes SIT as a safe and environmentally friendly alternative to widespread chemical pesticide use because only screwworm larvae—not adult flies—cause damage to animals, and sterile flies do not produce larvae. According to USDA, the technique provides a species-specific, nontoxic alternative to broad chemical pesticide applications and poses no known risk to livestock,

[35] USDA, *2024 USDA Explanatory Notes—Animal and Plant Health Inspection Service*, p. 83, https://www.usda.gov/sites/default/files/documents/23-2024-APHIS.pdf.

[36] Mayren Sánchez-Rosario et al., "The Impact of Sterile Insect Technique Processes on the Performance of Tephritid Flies," *Insect Science*, vol. 32, no. 5 (2025), pp. 1524-1556.

[37] Jessica McDonald, "Democrats' and Republicans' Screwworm Blame Spin," FactCheck.org, July 2, 2026, https://www.factcheck.org/2026/07/democrats-and-republicans-screwworm-blame-spin/. For more information on sterile fly production, see the section titled "Sterile Fly Production and Dispersal Infrastructure."

[38] USDA, APHIS, *Eradicating New World Screwworm with Sterile Insect Technique*, APHIS-25-031, April 2025, https://www.aphis.usda.gov/sites/default/files/factsheet-eradicating-nws-sit.pdf.

[39] Food and Agriculture Organization of the United Nations, (FAO), *Manual for the Control of the New World Screwworm Fly: Cochliomyia hominivorax, Coquerel*, 1990, https://www.iaea.org/sites/default/files/21/06/nafa-ipc-manual-ipc-fao-screwworm-control-manual-1990-english.pdf.

[40] USDA, APHIS, *Eradicating New World Screwworm with Sterile Insect Technique*.

[41] USDA, APHIS, *Sterile Insect Technique: A Proven Tool for Fighting New World Screwworm*, APHIS-26-012, March 2026, https://www.aphis.usda.gov/sites/default/files/factsheet-sit-proven-tool-nws.pdf.

[42] See Shuxing Zhou et al., "Advances in Radiation-Based Sterile Insect technique: A Comprehensive Review of Mechanisms, influencing factors, and its Potential for Sustainable Pest Control," *Ecotoxicology and Environmental Safety*, vol. 319 (2026), art. no. 120291.

wildlife, pets, or humans.[43] The agency combines SIT with surveillance and trapping activities, animal movement restrictions, livestock inspections, wound treatment, quarantine measures, and public outreach efforts.[44]

The goal of SIT is to ensure that wild female flies encounter sterile males, thereby preventing successful reproduction and progressively suppressing wild populations. USDA has applied this approach in prior domestic eradication campaigns and in current containment operations in Central America and Mexico.[45] Current eradication efforts are intended not only to eliminate local infestations but also to progressively push the advancing population southward and reestablish the permanent biological barrier in the Darién Gap. Maintaining that barrier requires continuous sterile fly releases after regional eradication has been achieved because wild screwworm populations remain established throughout much of South America.

Although SIT successfully eliminated NWS from North America, the method has several operational limitations, as evidenced by the barrier being breached in 2023. Current radiation-based SIT requires the mass production and release of both sterile males and sterile females because existing production systems cannot efficiently separate the sexes at operational scales. Only sterile males directly contribute to population suppression by mating with wild females; released sterile females consume production resources and may compete with wild females for mates. Consequently, effective suppression requires production and repeated release of very large numbers of sterile flies over extended periods. These operational limitations have motivated research into technologies intended to improve the efficiency of conventional SIT, including genetically engineered male-only strains and other biotechnology-based suppression approaches. Although the biological barrier protected North America for decades, it was breached in 2023, prompting renewed discussion over whether future eradication efforts should continue relying primarily on conventional SIT or incorporate emerging technologies that could improve suppression efficiency or support broader eradication. Many of these approaches—including male-only strains and gene drive systems—remain under development and would require additional regulatory review, and in some cases additional scientific validation, before operational deployment.

Sterile Fly Production and Dispersal Infrastructure

Sterile fly production capacity remains one of the principal constraints of conventional SIT. Effective suppression requires continuous releases of sterile flies at ratios substantially exceeding the wild population, requiring large-scale insect rearing, irradiation, transportation, and aerial release infrastructure. Production interruptions, transportation delays, or insufficient release numbers may reduce program effectiveness. In addition, because current production systems release both sexes, facilities must rear substantially more insects than would be necessary under a male-only release strategy.[46]

The only fully operational facility in North America is located in Pacora, Panama, and is jointly managed by USDA's Animal and Plant Health Inspection Service (APHIS) and Panama's Ministry of Agricultural Development through COPEG.[47] The facility produces approximately 100 million sterile flies per week and serves as the principal production hub for regional

[43] USDA, APHIS, *Eradicating New World Screwworm with Sterile Insect Technique*.

[44] USDA, APHIS, *Sterile Insect Technique: A Proven Tool for Fighting New World Screwworm*.

[45] USDA, APHIS, *Sterile Insect Technique: A Proven Tool for Fighting New World Screwworm*.

[46] USDA, APHIS *Response Playbook: New World Screwworm*.

[47] USDA, APHIS, *Eradicating New World Screwworm with Sterile Insect Technique*.

eradication efforts.[48] According to USDA, APHIS funds 90% and the Panamanian government funds 10% of COPEG's activities.[49]

USDA is expanding production capacity through additional facilities in Mexico and the United States. A facility in Metapa, Mexico, is currently being converted from an existing fruit fly production facility and is expected to produce an additional 60 million-100 million sterile flies per week once fully operational. In the United States, USDA is constructing a sterile fly production facility at Moore Air Base in Edinburg, TX, with an estimated capacity of up to 300 million sterile flies per week.[50]

Dispersal infrastructure complements production capacity by enabling targeted release operations. In Mexico, APHIS and Mexican counterparts operate dispersal facilities in Tuxtla Gutiérrez, Chiapas, and Tampico, which support aerial and ground releases across southern and northeastern regions.[51] A dispersal facility at Moore Air Base in Texas is also operational and expands U.S. capacity to release sterile flies along the southern border and, if necessary, within domestic territory.[52] Sterile pupae are transported from production facilities to dispersal sites, where they are incubated and released as adult flies. Release patterns are adjusted based on surveillance data, trapping results, and outbreak dynamics.[53]

Effective suppression with current technology requires sustained releases of sterile flies in numbers substantially exceeding the wild population.[54] USDA has indicated that eradication campaigns may require the release of hundreds of millions of sterile flies per week, depending on the geographic extent of an outbreak, surveillance findings, and wild fly population densities.

Surveillance, Release Operations, and Monitoring

USDA and partner agencies use aerial and ground-based systems to distribute sterile flies. Aircraft disperse sterile flies over broad geographic areas, while truck-based systems and stationary release containers are used for targeted deployment. USDA also conducts surveillance and trapping in release zones to evaluate program effectiveness and track wild screwworm populations.[55]

To support surveillance activities, USDA dyes sterile screwworm pupae before release (**Figure 4**).[56] The dye transfers to adult flies as they emerge, allowing animal health officials to distinguish sterile flies from wild screwworm flies captured in traps or reported by the public. According to USDA, the fluorescent dye may glow under ultraviolet light and may also be visible to the naked eye.[57]

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[48] USDA, APHIS, "Sterile Fly Production and Dispersal Facilities," updated April 29, 2026, https://www.aphis.usda.gov/livestock-poultry-disease/stop-screwworm/sterile-fly-production-dispersal-facilities.

[49] USDA, Agricultural Research Service (ARS), *Action Plan: National Program 104—Veterinary, Medical, and Urban Entomology (August 2024-August 2028)*, updated September 27, 2023, https://www.ars.usda.gov/animal-production-and-protection/veterinary-medical-and-urban-entomology/docs/action-plan-2024-2028/.

[50] USDA, APHIS, "Sterile Fly Production and Dispersal Facilities."

[51] USDA, APHIS, "Sterile Fly Production and Dispersal Facilities."

[52] USDA, APHIS, "Sterile Fly Production and Dispersal Facilities."

[53] USDA, APHIS, "Sterile Fly Production and Dispersal Facilities."

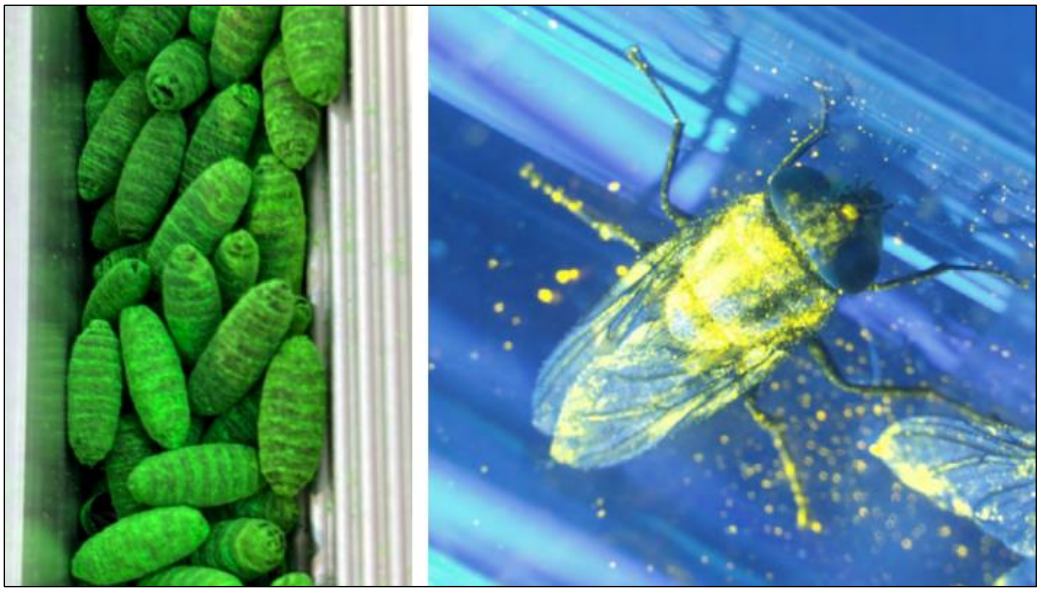
[54] D'Lyn Ford, "NC State Expert Offers Insight on Stopping the New World Screwworm," NC State University News, June 11, 2026, https://news.ncsu.edu/2026/06/expert-insights-on-new-world-screwworm/.

[55] USDA, APHIS, *Eradicating New World Screwworm with Sterile Insect Technique*.

[56] USDA, APHIS, *Sterile Insect Technique: A Proven Tool for Fighting New World Screwworm*.

[57] USDA, APHIS, *Sterile Insect Technique: A Proven Tool for Fighting New World Screwworm*.

Figure 4. Dyed Sterile New World Screwworm (NWS) Pupae and Sterile Fly Under UV Light



Source: U.S. Department of Agriculture, Animal and Plant Health Inspection Service, "Sterile Insect Technique: A Proven Tool for Fighting New World Screwworm," https://www.aphis.usda.gov/sites/default/files/factsheet-sit-proven-tool-nws.pdf.

Notes: Dyed sterile NWS pupae (left); sterile NWS fly glowing under UV light (right).

USDA recommends monitoring animals for larvae or eggs in wounds or body openings; enlarging or draining wounds; foul-smelling lesions; and behavioral signs such as depression, isolation, or reduced feeding.[58]

In response to the confirmed cases in the United States, USDA and Texas officials are taking actions such as

> forming a unified Incident Command Team with the Texas Animal Health Commission and deploying response personnel to the area; establishing a 20 km infested zone around the detection and implementing quarantines, movement controls, and surveillance in this area; expediting targeted release of sterile NWS flies by immediately deploying ground release chambers in the area, in addition to the 4 million sterile flies per week already being released aerially in the area; increasing trapping for NWS flies along the border and just outside of the dispersal area; implementing NWS surveillance and management strategies in wildlife; and conducting targeted outreach in the local area.[59]

International Coordination

International eradication activities continue to rely primarily on SIT and coordinated regional suppression efforts.[60] Current coordination mechanisms are based on institutional arrangements established during earlier eradication campaigns. APHIS, COPEG, and partner governments

[58] USDA, APHIS, *Sterile Insect Technique: A Proven Tool for Fighting New World Screwworm*.

[59] USDA, APHIS, "USDA Confirms Presence of New World Screwworm in the United States," June 3, 2026, https://www.aphis.usda.gov/news/agency-announcements/usda-confirms-presence-new-world-screwworm-united-states.

[60] See USDA screwworm eradication materials, including special collections materials at USDA, NAL, "Artifacts: Screwworm Eradication Program Records."

coordinate sterile fly production, surveillance, and release operations throughout Central America and Mexico to maintain a regional suppression barrier and prevent reintroduction into previously eradicated areas.[61]

In April 2025, Secretary of Agriculture Brooke Rollins wrote to her counterpart in Mexico with concerns that Mexico was impeding eradication efforts. "Despite the fact that all materials and operations are being funded entirely by" the United States, Secretary Rollins stated, Mexico's aviation authorities were imposing restrictions on "USDA APHIS-contracted" aircraft fleets, and its customs authorities were imposing import duties on aviation equipment and "sterile fly shipments."[62] Mexico's secretary of agriculture and rural development, Julio Antonio Berdegué Sacristán, responded to USDA by saying that

> in compliance with the United States-Mexico-Canada Free Trade Agreement (USMCA), the law requires a U.S. airline to partner with a Mexican company if it wishes to operate within our country.... It wasn't until March 6 that Dynamic Aviation [the USDA APHIS contracted aircraft fleet] reached an agreement with a Mexican company to use its operating permit and license, and on March 11, the documentation that allows it to comply with the law was submitted to our aviation authority (AFAC). Furthermore, during this process, we learned that Dynamic Aviation apparently does not have a permit from the U.S. Federal Aviation Administration (FAA) to disperse live insects.[63]

International coordination also extends beyond the Americas through multilateral organizations that support research, technical assistance, and capacity building for sterile insect programs. The Food and Agriculture Organization of the United Nations (FAO) and the International Atomic Energy Agency (IAEA) have collaborated for decades on the development and application of SIT for livestock and agricultural pests.[64] In June 2026, FAO and IAEA launched a coordinated research project involving more than 20 countries to improve sterile fly production, surveillance, mass-rearing, sterilization, and release methods in response to the resurgence of NWS in Central America, Mexico, and the United States. According to FAO and IAEA, the project is intended to strengthen international scientific cooperation and build SIT capacity among participating countries.[65]

Because New World screwworm is not limited within national borders, the effectiveness of U.S. eradication efforts may depend in part on continued international cooperation among national governments, international organizations—including FAO and IAEA—and regional animal health organizations to support surveillance, diagnostics, sterile fly production, technical assistance, and coordinated response activities throughout the region.[66]

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[61] USDA, APHIS, "Current Status," updated June 16, 2026, https://www.aphis.usda.gov/animals/animal-health/livestock-and-poultry-disease/current-status?page=1.

[62] Letter from Secretary of Agriculture Brooke Rollins to Secretary of Agriculture and Rural Development Julio Antonio Berdegué Sacristán, April 26, 2025, https://www.usda.gov/sites/default/files/documents/nws-letter-mexico.pdf.

[63] Letter from Secretary of Agriculture and Rural Development Julio Antonio Berdegué Sacristán to Secretary of Agriculture Brooke Rollins, April 26, 2025, https://www.agri-pulse.com/ext/resources/pdfs/Mexico-April-26-letter-.pdf.

[64] IAEA, "Project Launched on Use of Nuclear Technique to Target New World Screwworm Outbreak in Central America, Mexico and the United States," https://www.iaea.org/newscenter/pressreleases/project-launched-on-use-of-nuclear-technique-to-target-new-world-screwworm-outbreak-in-central-america-mexico-and-the-united-states.

[65] IAEA, "Project Launched on Use of Nuclear Technique to Target New World Screwworm Outbreak in Central America, Mexico and the United States," https://www.iaea.org/newscenter/pressreleases/project-launched-on-use-of-nuclear-technique-to-target-new-world-screwworm-outbreak-in-central-america-mexico-and-the-united-states.

[66] FAO, "IAEA and FAO launch project to combat resurgent New World Screwworm outbreak in Central America, (continued...)

USDA Emergency Authorities and Obligations[67]

APHIS programs conduct NWS surveillance, preparation, eradication, and response activities. APHIS derives its primary legal authorities from the Animal Health Protection Act (AHPA; 7 U.S.C. §§8301 et seq.) as amended, which authorizes USDA to detect, prevent, control, and eradicate livestock and poultry pests and diseases, including NWS. These authorities allow APHIS to conduct surveillance, quarantine, inspection, technical assistance, and cooperative programs with states, tribes, universities, foreign governments, and private entities. APHIS is also authorized to compensate the owner of any animal that the USDA requires to be destroyed.[68] In addition, under the AHPA, the Secretary of Agriculture may transfer funds from other USDA accounts, including the Commodity Credit Corporation (CCC), to support emergency animal disease and pest response activities.[69]

Since the outbreak began in Central America, APHIS has used funding and transfers from USDA accounts (including the CCC) to support sterile fly production, outbreak response operations, surveillance, infrastructure construction, and preparedness initiatives in both domestic and international settings. In December 2023, USDA announced approximately $109 million in emergency transfers from the CCC in response to the NWS detections in Panama and other areas that are critical to preventing the pest from spreading back into North America.[70] In addition, in December 2024, USDA announced approximately $165 million in emergency funding from the CCC to expand surveillance, border preparedness, sterile fly production, and international response activities in Mexico and Central America.[71] USDA stated that the funding would support efforts to establish and maintain a containment barrier near the Isthmus of Tehuantepec and strengthen domestic preparedness capabilities.[72] In May 2025, USDA announced an additional $21 million transfer to convert an existing fruit fly production facility in Metapa, Mexico, into a sterile NWS fly production facility expected to produce between 60 million and 100 million sterile flies weekly.[73]

Mexico and the United States," https://www.fao.org/newsroom/detail/iaea-and-fao-launch-project-to-combat-resurgent-new-world-screwworm-outbreak-in-central-america—mexico-and-the-united-states/en.

[67] Other federal agencies have used their emergency authorizations to respond to NWS. For example, the U.S. Food and Drug Administration (FDA) issued a declaration authorizing emergency use authorizations (EUAs) for animal drugs intended to prevent or treat NWS infestations on August 19, 2025. FDA subsequently issued multiple EUAs and conditional approvals for animal drugs intended for use in cattle, dogs, puppies, and other animals affected by NWS larvae.

[68] 7 U.S.C. §8306(b).

[69] For more information about the Commodity Credit Corporation, see CRS Report R44606, *The Commodity Credit Corporation (CCC)*.

[70] USDA, APHIS, "USDA Protects Fruit, Vegetable and Livestock Producers with Emergency Funding to Address Exotic Fruit Fly and New World Screwworm Outbreaks," December 15, 2023, https://content.govdelivery.com/accounts/USDAAPHIS/bulletins/3802fe4.

[71] USDA, APHIS, "USDA Approves Emergency Funding to Protect U.S. Livestock and Animals from New World Screwworm," press release, December 13, 2024, https://www.aphis.usda.gov/news/agency-announcements/usda-approves-emergency-funding-protect-us-livestock-animals-new-world.

[72] USDA, APHIS, "USDA Approves Emergency Funding to Protect U.S. Livestock and Animals from New World Screwworm," press release, December 13, 2024, https://www.aphis.usda.gov/news/agency-announcements/usda-approves-emergency-funding-protect-us-livestock-animals-new-world.

[73] USDA, "Update on USDA Efforts to Fight New World Screwworm in Mexico," press release, May 27, 2025, https://www.usda.gov/about-usda/news/press-releases/2025/05/27/update-usda-efforts-fight-new-world-screwworm-mexico.

As part of USDA's broader preparedness strategy, on January 21, 2026, Secretary Rollins announced up to $100 million in funding for a "New World Screwworm Grand Challenge."[74] According to USDA, the initiative will support projects intended to improve sterile fly production systems, develop novel traps and lures, develop therapeutics and treatment approaches, improve preparedness and surveillance tools, and support additional eradication technologies.[75] Secretary Rollins used the emergency transfer authority in the AHPA to fund this initiative.[76]

Although USDA leads animal health response activities, other federal agencies also contribute to NWS preparedness and response. The CDC provides technical guidance on diagnosis and treatment of human myiasis, while the Department of the Interior may assist with wildlife surveillance and management. DARPA has supported research on advanced genetic pest-control technologies, including gene drive approaches.[77]

Selected APHIS Obligations for NWS Response Using Funds from Secretary of Agriculture Under Emergency Transfers

Between FY2024 and May 2026, USDA obligated approximately $1 billion in emergency funding for NWS-related activities. USDA stated that these obligations supported a range of domestic and international response activities, including sterile fly production, construction and modification of dispersal infrastructure, surveillance and control activities in Mexico and Central America, and operational preparedness activities at U.S. border facilities. APHIS obligations for selected NWS-related projects are shown in **Table 1**.[78]

[74] USDA, "USDA Announces New World Screwworm Grand Challenge," press release, January 21, 2026, https://www.usda.gov/about-usda/news/press-releases/2026/01/21/usda-announces-new-world-screwworm-grand-challenge.

[75] USDA, "New World Screwworm Grand Challenge Funding Opportunity," updated April 19, 2026, https://www.aphis.usda.gov/funding/new-world-screwworm-grand-challenge-funding-opportunity.

[76] USDA, *New World Screwworm Grand Challenge Fiscal Year 2026 Cooperative/Interagency Agreements*, Fiscal Year 2026 Notice of Funding Opportunity, USDA-APHIS-10025-OA000000-26-0001, updated February 5, 2026, https://www.aphis.usda.gov/sites/default/files/nws-grand-challenge-notice-of-funding-opportunity.pdf.

[77] Gene drive technologies are genetic systems designed to increase the likelihood that specific traits are inherited by offspring, allowing engineered characteristics—such as sterility or female mortality—to spread through wild populations more rapidly than would occur under normal Mendelian inheritance.

[78] **Table 1** includes selected obligations provided through APHIS since FY2024 and should not be considered comprehensive. Federal agencies other than USDA have also provided obligations or taken actions toward NWS response activities. For example, in August 2025, FDA issued a declaration authorizing EUAs for animal drugs intended to prevent or treat NWS infestations. FDA subsequently issued multiple EUAs and conditional approvals for products intended for use in cattle, dogs, puppies, and other animals affected by NWS larvae. For more information, see FDA, "HHS Allows FDA Emergency Use of Animal Drugs to Combat New World Screwworm, Protect U.S. Food Supply," press release, August 19, 2025, https://www.fda.gov/news-events/press-announcements/hhs-allows-fda-emergency-use-animal-drugs-combat-new-world-screwworm-protect-us-food-supply.

Table 1. Animal and Plant Health Inspection Service (APHIS) Obligations of Emergency Funds for Selected New World Screwworm Response Activities

FY2024- May FY2026

Activity	FY2024	FY2025	FY2026 through May	Total
Moore Air Base Production Facility Construction	—	—	$726,405,969	$726,405,969
Sterile Insect Production and Release	$31,401,101	$63,998,396	$66,796,571	$162,196,068
Sterile Insect Facilities in Mexico	—	$24,873,475	$10,365,302	$35,238,777
International Outreach, Surveillance, and Control	$22,746,002	$10,067,271	$14,549,987	$47,363,260
Research at USDA's Agricultural Research Service	—	$5,620,000	—	$5,620,000
Grand Challenge	—	$1,436,290	$6,069	$1,442,359
Moore Air Base Dispersal Center Project	—	$7,382,330	$1,671,139	$9,053,469
APHIS Operational Costs	$196,819	$5,722,263	$5,994,853	$11,913,935
Total obligations	$54,343,922	$119,100,025	$825,789,890	$999,233,837

Source: APHIS budget and obligation data provided by U.S. Department of Agriculture to CRS in May 2026.

Notes: FY2026 figures reflect obligations reported through May 2026. Under the Animal Health Protection Act (7 U.S.C. §§8301 et seq.), as amended, the Secretary of Agriculture may transfer funds from other USDA accounts, including the Commodity Credit Corporation, to support emergency animal disease and pest response activities.

Annual Appropriations and USDA Funding Requests for NWS Activities

APHIS receives annual appropriations and funds from mandatory sources for animal health protection and pest and disease management activities, some of which may be used for NWS-related activities. According to USDA, APHIS has used approximately $20 million per fiscal year of appropriated funds since FY2012 for production of 20 million sterile insects per week and field activities in the barrier zone in Panama.[79] Prior to FY2012, APHIS used approximately $28 million per fiscal year of funds appropriated by Congress.[80] For a portion of that time, APHIS was funding two sterile fly insect production facilities: one in Mexico and another in Panama. The construction of the Panama facility was completed in 2006, and the Mexico facility was subsequently retired.[81] For FY2025, APHIS requested an increase in its appropriations of $3.6 million to address aging infrastructure and higher operational costs at its Panama fly-rearing facility and $103,000 for overseas operational costs related to NWS.[82] According to the FY2026 APHIS budget request, APHIS did not request an increase or decrease of annually appropriated funds for NWS activities. For FY2027, USDA requested an increase of $4.5 million in regular

[79] The annual appropriations discussed in this section differ from the funds shown in **Table 1** because the sources are different. The data shown in **Table 1** are limited in scope to obligations from funds made available by the Secretary of Agriculture authority to transfer funds from other USDA accounts, including the Commodity Credit Corporation. The values provided in this section are USDA obligations for NWS activities from funds provided in annual appropriations.

[80] Email from staff from APHIS Legislative Affairs Office at USDA to CRS, June 28, 2026.

[81] Email from staff from APHIS Legislative Affairs Office at USDA to CRS, June 28, 2026.

[82] USDA, "2025 USDA Explanatory Notes—Animal and Plant Health Inspection Service," https://www.usda.gov/sites/default/files/documents/22-APHIS-2025-ExNotes.pdf.

APHIS appropriations (to a total of approximately $24.6 million) for U.S. NWS operations, including project management support for facility planning and coordination for the whole-of-government response effort.[83]

Research and Technology Development

USDA research related to NWS involves multiple agencies and partners supporting both operational eradication programs and long-term preparedness.

APHIS conducts operational research and collaborates on surveillance, sterile fly production, and eradication activities. The Agricultural Research Service (ARS) conducts intramural research to improve NWS biology, control technologies, and sterile insect production, primarily through the Knipling-Bushland U.S. Livestock Insects Research Laboratory in Texas.[84] The National Institute of Food and Agriculture (NIFA) supports extramural research through competitive grant programs, including projects conducted by land-grant universities and other research institutions. USDA also collaborates with international partners, including COPEG in Panama, on sterile fly production, surveillance, and operational eradication activities in Central America and Mexico.[85]

Research Programs and Funding

USDA supports NWS research through both intramural and extramural funding mechanisms.[86] Intramural research is conducted primarily by ARS,[87] while extramural research and deployment is supported through programs such as the Agriculture and Food Research Initiative (7 U.S.C. §3157)[88] and the Biotechnology Risk Assessment Grants program (7 U.S.C. §§5921, 7901),[89] which supports research intended to inform regulatory decisionmaking related to genetically engineered organisms, including insects potentially used in pest suppression programs.[90] In addition, USDA's New World Screwworm Grand Challenge, announced in 2026, is intended to accelerate development of improved sterile fly production systems, diagnostics, surveillance tools, therapeutics, and other eradication technologies.[91]

Although USDA's operational eradication program currently relies on conventional radiation-based SIT, DARPA, USDA, academic researchers, and international collaborators are evaluating biotechnology-enhanced approaches as potential future supplements or alternatives. These

[83] USDA, "2027 USDA Explanatory Notes—Animal and Plant Health Inspection Service," https://www.usda.gov/sites/default/files/documents/FY-2027-Chapter-22-APHIS.pdf.

[84] 7 U.S.C. §§2204 et seq.

[85] USDA, APHIS, "Innovation and Research: New World Screwworm Grand Challenge."

[86] See, for example, Michaela Dunn, "Texas A&M Veterinary Emergency Team deploys to Hill Country for New World screwworm response," *Texas A&M Stories*, Texas A&M University, June 15, 2026, https://stories.tamu.edu/news/2026/06/15/texas-am-veterinary-emergency-team-deploys-to-hill-country-for-new-world-screwworm-response/.

[87] USDA, ARS, "Invasive Species and Livestock Pest Research Programs." See also FAO, "Biology and Ecology of the New World Screwworm Fly," accessed April 2026, http://www.fao.org.

[88] NIFA, "Agriculture and Food Research Initiative (AFRI)," https://www.nifa.usda.gov/grants/programs/agriculture-food-research-initiative/nifa-20-007-afri-program-area-funding-levels-award-durations.

[89] NIFA, "Biotechnology Risk Assessment Research Grants (BRAG) Program," https://www.nifa.usda.gov/grants/programs/biotechnology-risk-assessment-research-grants-program-brag.

[90] USDA, APHIS, *Eradicating New World Screwworm with Sterile Insect Technique*.

[91] USDA, "USDA Announces New World Screwworm Grand Challenge," https://www.usda.gov/about-usda/news/press-releases/2026/01/21/usda-announces-new-world-screwworm-grand-challenge.

technologies are currently experimental and have not been deployed as part of USDA's operational NWS eradication activities.

Conventional SIT Research

A major focus of USDA research has been improving the effectiveness and efficiency of conventional radiation-based SIT programs. ARS research includes improving mass-rearing efficiency, optimizing irradiation methods, evaluating fly strain competitiveness, studying reproductive biology and mating behavior, and improving sterile fly deployment systems. ARS and APHIS also collaborate operationally with COPEG to support large-scale sterile fly production and field release activities. USDA also supports research to improve diagnostics, surveillance, and outbreak response. Research efforts include development of molecular diagnostic methods capable of distinguishing NWS from related species, identifying the geographic origin of infestations, improving geographic modeling, and developing improved traps, attractants, and surveillance systems for early detection and monitoring.

Male-Only Strains

One area of active research involves the development of male-only strains, intended to improve the efficiency of conventional SIT programs.[92] Current operational SIT requires mass production and release of both sterile males and sterile females because production systems cannot efficiently separate the sexes at large scales. Male-only release systems could increase the number of sterile males available for release without increasing production capacity, eliminate competition between released sterile females and wild females for mating opportunities, and reduce radiation requirements because male flies require lower sterilization doses than females. Some experimental systems eliminate the need for irradiation altogether by producing sterile males through genetic approaches. Researchers have investigated several approaches, including RNA interference (RNAi), Cluster Regularly Interspaced Short Palindromic Repeats (CRISPR)-based gene editing, and precision guided sterile insect technique (pgSIT). For example, researchers from USDA's Agricultural Research Service and North Carolina State University have developed experimental female-lethal strains using RNAi designed to produce predominantly male offspring for release.[93]

Gene Drives

Gene drives are genetic systems designed to increase the likelihood that a particular genetic trait is inherited by offspring beyond the approximately 50% expected under Mendelian inheritance.[94] Depending on their design, gene drives may spread rapidly through wild populations and can include self-limiting features intended to reduce persistence over time or self-sustaining designs

[92] Davydova Serafima et al., "Genetic Engineering for SIT Application: a Fruit Fly-Focused Review," *Insect Science*, vol. 33, no. 2 (April 7, 2025), pp. 703-723.

[93] *Gene editing* or *genome editing* refers to a technique of genetic engineering that can be used to make a targeted change to the DNA of an organism. For more information, see Khara Grieger et al., *Let's Talk About Genetic Engineering: A Guide To Understanding Genetic Engineering And Its Applications In Food, Agriculture, and the Environment*, NC State Extension, 2024, https://content.ces.ncsu.edu/show_ep3_pdf/1781731564/25591/; Nick Loschin et al., "Environmental Assessment and Regulatory Oversight of Genetically Engineered Crops in the United States," *Environmental Science & Policy*, vol. 173 (November 2025); and CRS Report R47683, *Gene-Edited Plants: Regulation and Issues for Congress*.

[94] See, for example, ARS, "A New Approach to Controlling Invasive Rodent Populations with CRISPR," https://www.usda.gov/sites/default/files/documents/2025-2.28_145-315pm__Cotton%20Outlook-Matthew-Tancos_Gene%20Drive.pdf.

capable of continued spread across a population.[95] Researchers have proposed gene drives that bias offspring toward males or reduce female fertility, potentially causing population declines over multiple generations.[96] Similar approaches are being investigated for mosquitoes that transmit malaria, invasive rodents, and certain agricultural pests.[97] See section on "Biotechnology Oversight and Regulatory Uncertainty" for regulatory issues surrounding gene drive.

Vaccines, Therapeutics, and Other Technologies

Researchers are also investigating technologies that have been previously used in mosquitoes, fruit flies, and codling moths for their potential to improve NWS surveillance, diagnosis, treatment, and integrated pest management. These include next-generation attractants and trapping systems for early detection, molecular diagnostic methods capable of distinguishing NWS from related species, vaccines intended to reduce susceptibility to infestation, novel wound treatments and therapeutics, and repurposing existing veterinary pharmaceuticals. FDA has also announced emergency authorization of certain over-the-counter products for treatment of infested companion animals.[98] Researchers are additionally evaluating biological sterilization approaches involving Wolbachia, naturally occurring bacteria capable of inducing reproductive incompatibility. Similar approaches have been investigated in mosquitoes, fruit flies, and other insect species. Although these technologies remain experimental for NWS, some researchers suggest they could complement conventional SIT by improving surveillance, reducing reliance on irradiation, or increasing suppression efficiency.

Issues for Congress

Historically, Congress has supported NWS eradication efforts primarily through appropriations for USDA animal health and research activities and general emergency transfer authorities rather than through NWS-specific statutory authorities. Congress has also periodically conducted oversight of USDA preparedness, foreign animal disease response, and agricultural pest control programs. More recently, some Members have introduced legislation in the 119th Congress related to domestic sterile fly production capacity and NWS preparedness. The current NWS outbreak has raised questions regarding sterile fly production capacity, emergency response authorities, livestock industry impacts, long-term preparedness planning, and the potential role of emerging biotechnology-based suppression technologies.

Congress may consider whether existing federal programs, infrastructure, regulatory frameworks, and statutory authorities are sufficient to control and respond to NWS within the United States. Congressional responses could include maintaining existing authorities and programs, increasing oversight activities, providing additional appropriations or statutory authorities, supporting expanded operational or research activities, designating a coordinating entity for cross-agency response efforts, or taking no further legislative action. Different approaches may involve varying

[95] See, for example, Kubendran Naidoo and Shüné V. Oliver, "Gene Drives: An Alternative Approach to Malaria Control?" *Gene Therapy* 32, no. 1 (2025), pp. 25-37.

[96] Also, see DARPA GUARDIAN, "Genetic Utilization for Advanced Regulation and Defense of Indigenous and Native Species," https://www.darpa.mil/research/programs/guardian-genetic-utilization.

[97] See, for example, ARS, "Gene Drives for Invasive Plant Management," https://www.usda.gov/sites/default/files/documents/2025-2.28_145-315pm__Cotton%20Outlook-Matthew-Tancos_Gene%20Drive.pdf.

[98] See, for example, FDA, "FDA Issues Emergency Use Authorization for Generic Over-the-Counter Drug to Treat New World Screwworm in Dogs and Cats," press release, June 11, 2026, https://www.fda.gov/news-events/press-announcements/fda-issues-emergency-use-authorization-generic-over-counter-drug-treat-new-world-screwworm-dogs-and.

implications for federal expenditures, operational preparedness, international coordination, regulatory oversight, environmental assessment requirements, and livestock industry stakeholders.

Sterile Fly Production Capacity and Domestic Infrastructure

Prior to USDA's decision to construct a production facility at Moore Air Base, some Members in the 119th Congress introduced legislation, including the STOP Screwworms Act (H.R. 3392 and S. 1751), that would authorize USDA to establish a domestic sterile fly production facility in an area designated by the Secretary of Agriculture.[99] USDA subsequently announced construction of the production facility at Moore Air Base in Edinburg, TX, as part of its broader preparedness strategy.[100] Congressional oversight has also focused on long-term preparedness and domestic production capacity. In the explanatory statement accompanying the FY2026 Agriculture appropriations (H.Rept. 119-172), the House Appropriations Committee expressed concern regarding the spread of NWS in Mexico and Central America, emphasized the potential costs of domestic reestablishment, and directed USDA to prioritize consideration of a domestic sterile fly production facility while evaluating research and development needs, including diagnostic tools, improved sterile insect techniques, therapeutics, and other eradication technologies.

Congress may also consider proposals from USDA to amend the AHPA. One such example includes USDA's request for Congress to amend the AHPA to clarify that sterile New World screwworms are considered a veterinary countermeasure under the National Animal Vaccine and Veterinary Countermeasures Bank.[101] According to USDA, this would "allow funding to be used to support sterile new world screwworm production and release to prevent the spread of" NWS.[102] Congress may evaluate whether establishing additional domestic production capacity could improve response readiness and supply chain resilience. At the same time, construction and long-term operation of additional domestic facilities could require substantial federal appropriations, specialized workforce capacity, and ongoing maintenance costs even during periods without active outbreaks. This proposal was included in the discussion draft of the Agricultural Act of 2026 that the Senate Agriculture Committee chairman released on June 23, 2026.[103]

[99] USDA, APHIS, *Eradicating New World Screwworm with Sterile Insect Technique*; and USDA APHIS, "Secretary Rollins Announces Bold Plan to Combat New World Screwworm," press release, June 18, 2025, https://www.usda.gov/about-usda/news/press-releases/2025/06/18/secretary-rollins-announces-bold-plan-combat-new-world-screwworms-northward-spread.

[100] USDA, "USDA and U.S. Army Corps of Engineers Break Ground on New Texas Sterile Fly Production Facility," press release, April 17, 2026, https://www.usda.gov/about-usda/news/press-releases/2026/04/17/usda-and-us-army-corps-engineers-break-ground-new-texas-sterile-fly-production-facility.

[101] The National Animal Vaccine and Veterinary Countermeasures Bank (NAVVCB) allows USDA to stockpile animal vaccines and related products to use in the event of an outbreak of a high-impact animal disease. Congress directed the NAVVCB to prioritize foot-and-mouth disease.

[102] USDA, "2027 USDA Explanatory Notes—Animal and Plant Health Inspection Service."

[103] U.S. Senate Committee on Agriculture, Nutrition, and Forestry, "Farm Bill 2.0," https://www.agriculture.senate.gov/agricultural-act-of-2026-farm-bill-20. See the discussion draft of the Agricultural Act of 2026 at https://www.agriculture.senate.gov/imo/media/doc/agricultural_act_of_20261.pdf.

Emergency Funding and Appropriations Oversight

USDA has relied on emergency funding authorities and transfers from other USDA accounts to support surveillance, sterile fly production, infrastructure construction, and international eradication activities (for example, see **Table 1**).[104]

Some Members of Congress may view these authorities as providing USDA with flexibility to respond rapidly to animal health emergencies.[105] Other Members may consider whether additional congressional direction, oversight requirements, reporting provisions, or dedicated appropriations accounts are warranted for prolonged eradication campaigns. Congress may also examine appropriated funding levels for specific NWS-related activities. For example, the Agriculture, Rural Development, Food and Drug Administration, and Related Agency Appropriations Act, 2027 (H.R. 8646, as passed by the House), includes a provision to transfer $2 million from the USDA chief information officer account to APHIS for NWS port-of-entry inspections. In addition, the accompanying House report (H.Rept. 119-632) states that the committee provides $115.5 million for cattle health, including $10 million (available until expended) for NWS activities. Some Members of Congress have also proposed additional reporting requirements related to NWS preparedness. For example, the Stop the SWARM Act of 2025 (S. 2543) and STOP Screwworms Act (H.R. 3392) would require USDA to submit reports to Congress on the federal government's preparedness to prevent and respond to NWS.

Livestock Industry and Economic Considerations

Congress may also examine the economic implications of prolonged livestock import restrictions. Mexico accounted for more than 60% of U.S. imported cattle during 2023 and 2024 (representing approximately 1.25 million head annually), while the U.S. cattle inventory remained near historically low levels.[106] Livestock industry organizations expressed differing views on restricting the movement of livestock across the southern border.[107] Some cattle producer organizations supported maintaining import restrictions to reduce the risk of domestic establishment of NWS.[108] Some feedlot operators and meat processors expressed concern that prolonged restrictions could reduce cattle supplies and increase costs.[109]

Congress may additionally examine the potential economic losses to the livestock industry, such as animal deaths and treatment costs due to an NWS infestation. Under APHA, USDA is

[104] For example, see USDA, APHIS, "USDA Approves Emergency Funding to Protect U.S. Livestock and Animals from New World Screwworm," press release, December 13, 2024, https://www.aphis.usda.gov/news/agency-announcements/usda-approves-emergency-funding-protect-us-livestock-animals-new-world.

[105] U.S. Congress, House Committee on Appropriations, *Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Bill, 2027*, report to accompany H.R. 8646, 119th Cong., 2nd sess., H.Rept. 119-632, May 1, 2026.

[106] USDA, ERS, "Livestock and Meat International Trade Data," updated June 10, 2026, https://www.ers.usda.gov/data-products/livestock-and-meat-international-trade-data; and USDA, National Agricultural Statistics Service (NASS), "Cattle Inventory Report," January 2026 https://esmis.nal.usda.gov/sites/default/release-files/795748/catl0126.pdf.

[107] For example, NCBA, "NCBA Stands with USDA on Border Closure Decision."

[108] U.S. Cattlemen's Association, "US Cattlemen's Association Applauds USDA's Decisive Action to Close U.S.-Mexico Border in Response to New World Screwworm Threat," press release, May 12, 2025, https://uscattlemen.org/us-cattlemens-association-applauds-usdas-decisive-action-to-close-u-s-mexico-border-in-response-to-new-world-screwworm-threat/.

[109] Western Ag Network, "Feeder Imports from Mexico Down 60% as Border Closes Again," October 10, 2025, https://westernagnetwork.com/mexican-border-closure-burdens-texas-feedyards-and-mexican-cattle-producers; and Clint Peck, "A Call to Open the Border," *Beef Magazine*, March 9, 2026, https://www.beefmagazine.com/market-news/a-call-to-open-the-border.

authorized to compensate producers when USDA requires the destruction of certain assets, such as animals and facilities, to prevent the spread of disease. In addition, USDA is authorized to provide direct payments to livestock producers to aid in the reduction of losses due to disease or livestock deaths if the Secretary of Agriculture determines that the disease is caused or transmitted by a vector and is not susceptible to control by vaccination or acceptable management practices.[110] Congress may consider maintaining, increasing, or decreasing direct payments related to NWS-related losses for various reasons, including through supplemental appropriations. Any changes to USDA authorities for direct payments to livestock producers for NWS losses that result in increased spending would require an offset under current budgetary rules. In contrast, providing additional resources in the context of supplemental appropriations would be discretionary spending, subject to discretionary spending caps. Congress may designate discretionary funding as emergency spending, making this funding exempt from the caps and thus not requiring an offset.[111]

Biotechnology Oversight and Regulatory Uncertainty

Regulatory oversight responsibilities for biotechnology-enhanced screwworm suppression technologies could involve USDA, the Food and Drug Administration (FDA), and the Environmental Protection Agency (EPA) under the Coordinated Framework for the Regulation of Biotechnology,[112] depending on the characteristics and intended use of the technology. APHIS may regulate genetically engineered insects that pose potential plant pest risks under the Plant Protection Act (7 U.S.C. §§7701 et seq.); FDA may regulate genetically engineered animals under the Federal Food, Drug, and Cosmetic Act (21 U.S.C. §§301 et seq.); and EPA may exercise authority over pesticidal substances or related technologies under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA; 7 U.S.C. §§136 et seq.).[113]

Federal oversight of biotechnology-enhanced insect suppression technologies generally occurs through existing USDA, EPA, and FDA authorities. No single agency has primary responsibility for regulating gene drive organisms, and the applicable regulatory pathway may depend on the characteristics of a particular technology. Some stakeholders have noted that the absence of a clearly defined regulatory pathway may complicate research, commercialization, international coordination, and potential operational deployment of genetically engineered screwworm suppression technologies.[114]

USDA, academic researchers, and international partners are evaluating biotechnology-enhanced approaches to screwworm suppression, including transgenic fly strains, male-only release systems, CRISPR-based technologies, and experimental gene drive approaches. Some researchers

[110] 7 U.S.C. §§9081(b) and (d).

[111] Increases in a bill's total cost beyond the baseline may be subject to budget constraints, such as pay-as-you-go rules. Reductions from the baseline may be used to offset costs for other provisions that have a positive score or used to reduce the federal deficit. The annual budget resolution determines whether a farm bill is held budget neutral or can increase or must decrease spending. For more information, see CRS Report R41157, *The Statutory Pay-As-You-Go Act of 2010: Summary and Legislative History*. For more information about farm bill spending, see CRS In Focus IF12233, *Farm Bill Primer: Budget Dynamics*.

[112] Unified Website for Biotechnology Regulation, "About the Coordinated Framework," https://usbiotechnologyregulation.mrp.usda.gov/biotechnologygov/about.

[113] For more information on the regulation of biotechnology, see CRS Report R46737, *Agricultural Biotechnology: Overview, Regulation, and Selected Policy Issues*.

[114] National Academies of Sciences, Engineering, and Medicine (NASEM), *Gene Drives on the Horizon: Advancing Science, Navigating Uncertainty, and Aligning Research with Public Values* (National Academies Press, 2016); and Executive Office of the President, "Modernizing the Regulatory System for Biotechnology Products," 81 *Federal Register* 86692, December 7, 2016.

contend that these technologies could improve suppression efficiency or reduce production costs relative to conventional radiation-based SIT systems.[115] At the same time, these approaches may raise ecological, regulatory, trade, and public acceptance considerations associated with the environmental release of genetically engineered organisms.[116] Depending on the technology, federal agencies may conduct environmental assessments under the National Environmental Policy Act, plant pest risk assessments under the Plant Protection Act, or pesticidal risk evaluations under FIFRA. Such reviews may consider environmental exposure, impacts on nontarget organisms, biodiversity effects, agricultural impacts, threatened and endangered species considerations, and potential cumulative environmental effects. International deployment could also involve coordination with countries participating in regional eradication efforts throughout Central America and potentially South America, many of which are parties to the Convention on Biological Diversity and may apply additional biosafety and risk assessment frameworks when evaluating environmental releases.[117] APHIS may also be required to prepare environmental impact statements for certain proposed environmental releases involving genetically engineered organisms.[118]

To date, Congress has not enacted legislation establishing a biotechnology-specific regulatory framework for genetically engineered insect suppression systems or gene drive organisms. Current federal oversight and environmental assessment processes for genetically engineered organisms generally operate on a case-by-case basis and may involve multiple statutory and regulatory authorities.[119] Congress may consider whether changes to existing authorities, additional interagency guidance, or modified environmental review requirements are warranted for biotechnology-enhanced screwworm suppression technologies. Congress could also examine whether current regulatory pathways provide sufficient clarity regarding permitting, environmental review, interstate movement, international coordination, and operational deployment decisions. Additional congressional direction could include requirements for expanded ecological studies, long-term environmental monitoring, or development of biotechnology-specific risk assessment frameworks. Some stakeholders contend that greater regulatory clarity could facilitate research investment, improve permitting predictability, strengthen public transparency, and support international coordination.[120] Others contend that expanded regulatory requirements could increase development costs, lengthen deployment timelines, and potentially delay the availability of technologies that may improve outbreak response capabilities.[121]

[115] USDA, APHIS, "Innovation and Research: New World Screwworm Grand Challenge."

[116] Loschin et al., "Environmental Assessment and Regulatory Oversight of Genetically Engineered Crops in the United States."

[117] For more information, see Kent H. Redford et al., eds., *Genetic Frontiers for Conservation: An Assessment of Synthetic Biology and Biodiversity Conservation* (International Union for Conservation of Nature, 2019).

[118] Loschin et al., "Environmental Assessment and Regulatory Oversight of Genetically Engineered Crops in the United States."

[119] USDA, APHIS, Petition User Guide with Reference To 7 CFR Part 340—Introduction of Organisms and Products Altered or Produced Through Genetic Engineering Which are Plant Pests or Which There is Reason to Believe are Plant Pests, BRS-GD-2025-0003, February 19, 2025, https://www.aphis.usda.gov/sites/default/files/petition-user-guide.pdf.

[120] NASEM, *Gene Drives on the Horizon: Advancing Science, Navigating Uncertainty, and Aligning Research with Public Values*; and Jason Delborne et al., "Mapping Research and Governance Needs for Gene Drives," *Journal of Responsible Innovation*, vol. 5, sup. 1 (January 5, 2018).

[121] Lynn L. Bergeson, "Industrial biotechnology: Coordinated framework make-over and lots more," *Industrial Biotechnology*, vol. 11, no. 5 (September 23, 2015), pp. 237-245.

Wildlife Surveillance and Interagency Coordination

Although NWS is often discussed in the context of livestock production, the parasite may infest a variety of wildlife species in addition to livestock, pets, and humans. Wildlife populations may be more difficult to monitor, inspect, and treat than domesticated animals and could complicate eradication efforts if infestations become more widespread or wildlife reservoirs become established. In response to the June 2026 detections, USDA announced that 40 "breakthrough projects" would include surveillance and management strategies for wildlife populations.[122]

Congress may consider whether existing surveillance systems, diagnostic resources, and coordination mechanisms among USDA, the Department of the Interior, states, tribes, and other entities are sufficient to detect and respond to NWS in wildlife populations. Legislation introduced in the 119th Congress would address aspects of interagency coordination. For example, the SAFE CATTLE Act (H.R. 7466) would require USDA and the Department of the Interior to enter into a memorandum of understanding to coordinate efforts to prevent, control, and eradicate NWS in wildlife and livestock.

Some livestock and animal health stakeholders have argued that investments in prevention, surveillance, and early containment may reduce the likelihood of substantially greater costs associated with widespread domestic establishment, including livestock losses, trade disruptions, indemnity payments, and large-scale eradication campaigns. During the current outbreak, Mexican authorities have reportedly identified more than 20,000 NWS cases since late 2024, including more than 1,200 active cases during 2026, while U.S. restrictions on imports of cattle, bison, and equines from Mexico remained in effect. Congress may consider whether additional investments in wildlife surveillance and interagency coordination could improve long-term preparedness and support broader eradication efforts and are warranted.

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[122] USDA, APHIS, "USDA APHIS New World Screwworm (NWS) Grand Challenge Award Selections," June 2026, https://www.aphis.usda.gov/sites/default/files/nws-grand-challenge-recommended-spending-plan.pdf.

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