

Hazardous Waste e-Manifest Advisory Board September 2024 Meeting

Meeting the Needs of the User Community: e-Manifest Program Priorities and User Fees for FY 2026 and 2027

Background White Paper

Abstract

This document is intended to provide background information for the eighth meeting of the Hazardous Waste e-Manifest System Advisory Board, held in September 2024.

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1. Purpose

The Hazardous Waste Electronic Manifest Establishment Act (e-Manifest Act), signed into law on October 5, 2012, authorized the Environmental Protection Agency (EPA or Agency) to implement a national electronic manifest system. Commonly referred to as "e-Manifest," this national system, launched on June 30, 2018, is implemented by EPA in partnership with industry and states. Under the e-Manifest Act, EPA is required to collect user fees to offset the costs of developing and operating the e-Manifest system and other related work. The e-Manifest Act also requires that EPA consult with the e-Manifest Advisory Board to increase or decrease user fees.

In January 2018, EPA published regulations establishing the methodology the Agency uses to set and collect user fees for the e-Manifest system. These user fees include the costs of processing data from both electronic and paper manifests that are submitted to the national e-Manifest system. Under the rule promulgated in 2018, EPA must revise user fees at two-year intervals and publish those user fees by July 1 of every odd numbered year. The purpose of the September 2024 e-Manifest Advisory Board meeting is for the Agency to consult with the Board on its proposed e-Manifest program priorities and user fees for the 2026/2027 Fiscal Years (FY).

2. Executive Summary

For FY 2026/2027, EPA estimates receiving a total of 3,750,000 manifests over the two-year cycle. The below table lists the Agency's estimate of manifests it will receive by manifest type.

FY 2026/2027 Manifest Projections		
Electronic	2.5%	93,750
Data plus Image Upload	88.5%	3,318,750
Image Upload	9.0%	337,500
	100.0%	3,750,000

Table 1 Manifest Projections FY 2026/2027

EPA is proposing the following set of user fees for FY 2026/2027 for the Board's consideration.

Type	Fee	Revenue
Image Upload	\$22	\$7,425,000.00
Data plus Image Upload	\$10	\$33,187,500.00
Electronic	\$5	\$468,750.00
	Projected Revenue	\$41,100,000.00
	Actual Costs	\$39,341,765.72
	<i>Annual +/-</i>	\$879,117.14

Table 2 Proposed FY 2026/2027 User Fees

3. Problem Statement

Setting user fees for a two-year period requires the Agency to project both its program costs and manifest usage rates for that period. The Agency has developed its projections based on past data as well as anticipated changes for the upcoming FY 2026/2027 cycle. The Agency seeks the Advisory Board's consult on its projections, for example, with respect to its estimated program costs, as well as manifest usage rates by type of manifest.

EPA continues to focus all aspects of the program to advance electronic manifest usage in this upcoming cycle, building on progress implemented thus far. EPA is committed to enabling all users to realize burden reductions through use of e-Manifest, including providing high-quality data and ease of use. The Agency has incorporated extensive feedback so that as this new period begins, the program is equipped to make substantial progress towards realizing the full benefits of widespread electronic manifests.

4. Background

This section presents current program status through June 2024 and ongoing program activities.

4.1. Status of e-Manifest as of June 2024

Below is information regarding the status as of June 30, 2024, of manifest submissions, system development, and policy, communication, and implementation.

4.1.1. Manifest Submission Breakdown

Since launching e-Manifest on June 30, 2018, EPA has received over 10,800,000 billed manifest submissions through June 30, 2024. EPA categorizes manifests based on how the manifests were submitted to the Agency:

- 1) **Electronic manifests.** These are manifests that originate in EPA's e-Manifest system and include manifests signed electronically by all handlers (fully electronic manifest) and manifests signed electronically by the initial transporter and all subsequent handlers (hybrid manifest).
- 2) **Data plus Image Upload.** These are paper manifests that receiving facilities submit to the Agency by uploading a data file plus the scanned image of the final, signed manifest.
- 3) **Image Upload.** These are paper manifests that receiving facilities submit to the Agency by uploading a scanned image of the final, signed manifest.¹

¹ Data from the image file is entered into the e-Manifest system by the Paper Processing Center.

The breakdown per manifest submission type is as follows:

	FY18/FY19	FY20/FY21	FY22/FY23	FY24/FY25²	All-Time
<u>Electronic³</u>	6,149 (0.27%)	12,453 (0.35%)	16,006 (0.45%)	7,183 (0.51%)	41,791 (0.39%)
<u>Data plus Image Upload</u>	1,784,836 (77.08%)	2,97,730 (84.59%)	3,116,016 (87.31%)	1,261,862 (89.13%)	9,140,444 (84.47%)
<u>Image Upload</u>	397,552 (17.17%)	429,896 (12.21%)	436,587 (12.23%)	146,723 (10.36%)	1,410,758 (13.04%)
<u>Mailed Paper⁴</u>	126,958 (5.48%)	100,111 (2.84%)	497 ⁵ (0.01%)	59 ⁶ (0.01%)	227,625 (2.10%)

Table 3: Manifest Submission Breakdown June 30, 2018 – June 30, 2024 – By Fee Period

4.1.2. System Development

EPA continues to use Agile software development practices to build and enhance the e-Manifest system. The Agile software development methodology embodies continuous improvement through iterative development and delivers software in two-week intervals. EPA communicates the status of its system development through monthly webinars, our public [Github repository](#), and regular calls with its developer community,⁷ consisting of industry and state technical contacts.

Major Functionality Released

The following is a list of many of the e-Manifest enhancements that EPA has released to the user community since the Advisory Board meeting held in February/March 2023.

- Added new Overview landing page for industry users showing outstanding actions across e-Manifest and other RCRAInfo modules, system announcements, and a link to quickly subscribe to e-Manifest newsletter.

² October 1, 2023 – June 30, 2024

³ “Electronic manifests” include both fully electronic manifests and hybrid manifests

⁴ As of June 30, 2021, EPA no longer accepted mailed paper manifests for processing. Receiving facilities must submit paper manifests either via image upload or Data plus Image upload to EPA's e-Manifest system.

⁵ Mailed manifests were processed as a result of successful outreach to previously unregistered facilities.

⁶ Mailed manifests were processed as a result of successful outreach to previously unregistered facilities.

⁷ Webinar and user support call meeting recordings are made available to the public.

- Released functionality to execute electronic signatures by remote personnel and industry systems, providing user registration and connectivity flexibility to participate in electronic manifests.

	Pre Remote Sign	Post Remote Sign⁸	Increase %
Electronic Per Day	17/day	26/day	53%

Table 4 Electronic Signatures Per Day

- Completed Java version upgrade to keep system technology and infrastructure current.
- Released functionality to support rejections scenarios for electronic manifests.
- Released updates to User Interface (UI) and Application Programming Interface (API) to implement changes in the *Alternate PCB Extraction Methods and Amendments to PCB Cleanup and Disposal Regulations* that impact e-Manifest.⁹
- Developed Patch update and correction APIs allowing industry systems to target specific sections/fields rather than submitting entire manifest data.
- Added ability for Paper Processing Center (PPC) to send correction requests to industry users for image submissions with incomplete or invalid information, allowing industry to complete the manifest data entry.
 - Since release in January 2024, the PPC has sent over 5,000 correction requests for image submissions.
- Implemented multi-factor authentication utilizing Login.gov for industry users.
- Added functionality to allow users to see changes between manifest versions.
- Expanded bulk corrections functionality to allow EPA HQ users to perform a batch correction of changes to multiple manifests, e.g. correcting generator EPA IDs and/or address.
- Released API updates to support electronic adoption, including new parameters added to the search service, expanding the UI link service, and implementing a new “available to sign” service.
- Released version 4.0 of open-source Python package to reduce complexity of industry system integration with e-Manifest.¹⁰
 - Since release, the package has been downloaded over 50,000 times.

⁸ Guidance released May 5, 2023

⁹ More information on the PCB rule is available at <https://www.epa.gov/pcbs/alternate-pcb-extraction-methods-and-amendments-pcb-cleanup-and-disposal-regulations>. System changes focus primarily on new load types and containers.

¹⁰ <https://pypi.org/project/emanifest/>

- Released updates for the UI such as copying manifests from the industry dashboard, editing transporter information, and changes to support automated regression testing.

4.1.3. Policy, Communication, and Implementation

EPA pursues key policy, public engagement, communication, and implementation activities. These accomplishments and ongoing efforts include:

- Published guidance related to remote signer clarifying timeframe for updating the system.¹¹ Remote signers have until the earlier of either:
 - 24 hours from the time that their field personnel receives the waste from the preceding waste handler (i.e., generator or transporter) or
 - before transferring the waste to another handler (i.e., another transporter or receiving facility), to execute an electronic signature to the hazardous waste manifest.
- Continue to coordinate with our partners at U.S. Department of Transportation (DOT) to ensure that our programs are sharing information and building toward a more streamlined future.
- Development of a final rulemaking to address, among other things, hazardous waste export manifests and how to integrate hazardous waste manifest-related reporting requirements under the RCRA and PCB regulations into the e-Manifest system. EPA published the final rule in the *Federal Register* on July 26, 2024.¹² This rule is effective on January 22, 2025.
- Directly engaged generators, specifically Large Quantity Generators (LQGs), and transporters who have been listed on a manifest but did not have a registered Site Manager or e-Manifest certifier. In FY 2024, EPA and states have registered over 15,000 sites, who are associated with over 900,000 manifests.

¹¹ <https://rcrapublic.epa.gov/files/14956.pdf>

¹² 89 FR 60692 <https://www.federalregister.gov/documents/2024/07/26/2024-14694/integrating-e-manifest-with-hazardous-waste-exports-and-other-manifest-related-reports-pcb-manifest>

	FY 2024 Sites Registered	Associated Manifests
Generators	14,786	344,758
LQGs	1,925	192,004
Transporters	297	392,722

Table 5 FY 2024 Registered Sites and Manifest Counts

EPA has successfully registered a majority of the currently notified LQGs who manifest hazardous waste and a large contingent of all generators and transporters.

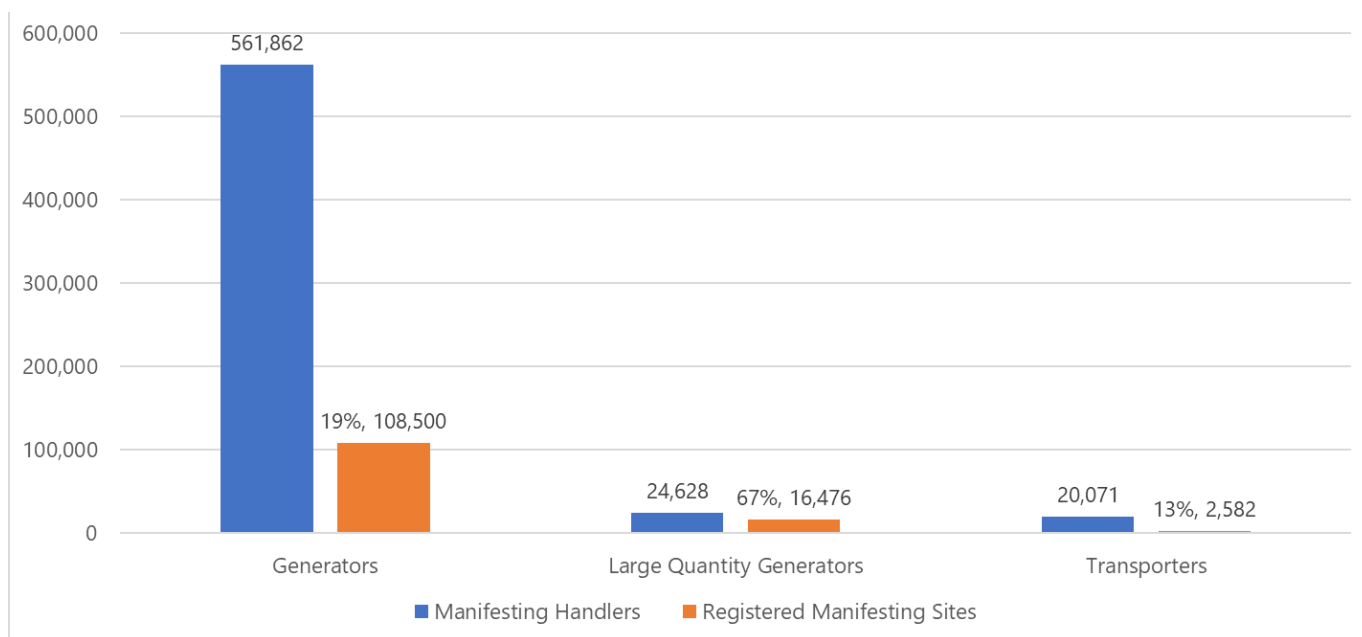


Figure 1 All Time Unique Manifesting Handlers and Registered Manifesting Sites

- Spearheaded the “Requirement to Use Electronic Manifest for EPA-led Cleanups” memorandum,¹³ which communicates the OLEM’s policy that EPA personnel and EPA contractors must use electronic manifests to meet hazardous waste manifesting requirements, as applicable, by the start of Fiscal Year 2025 unless there is a documented impediment to securing an e-Manifest compliant contractor.

¹³ <https://rcrapublic.epa.gov/files/14961.pdf>

- Continued user engagement and outreach activities for industry, states, and the public, including monthly public webinars and user support calls to communicate updates, answer questions, and resolve issues encountered with the system. In addition, the e-Manifest program maintains a listserv for sending information to stakeholders, provides a helpdesk for industry users, and hosts a website dedicated to e-Manifest at www.epa.gov/e-Manifest.

4.2. Ongoing Activities

- Held multiple electronic adoption training sessions with industry and government entities representing hazardous waste transporters (including rail), generators and waste receiving facilities. This also involved coordination with other EPA offices and federal agencies in support of requirement to use electronic manifest for EPA cleanups memorandum.
- Directed EPA's contractor to expand data quality efforts and request corrections from industry. This includes record keeping and analysis of issue rates to inform EPA priorities.
- Conducted targeted training for EPA and state regulators to enhance skills and provide additional tools for identifying and remediating data quality issues.
- Presented on causes and resolutions of major data quality issues during monthly e-Manifest users call.¹⁴
- Met with key industry groups to align manifest data submission expectations, highlight data quality improvement tools, and understand practical considerations of industry manifest records management.
- Released additional API services to allow for expanded pre-submission data validation.
- Expanded national missing manifest effort, and provided guidance to industry, state, and enforcement personnel on manifest upload requirements.
- Grew partnership with EPA and state enforcement and compliance personnel, including providing training on manifest data and material support for enforcement action where appropriate.
- Developed numerous data quality validations to enhance manifest-related data quality in 2024 Biennial Report (BR) cycle, including:
 - Comparison of quantity discrepancies between BR submission and manifest receipts
 - Comparison of waste activity between e-Manifest and the BR, identifying potential manifests missing from e-Manifest

¹⁴ <https://www.epa.gov/e-manifest/monthly-user-calls-hazardous-waste-electronic-manifest-e-manifest>

- Ability for industry users to provide explanations for potential issues, reducing time burden on state reviewers and expediting industry corrections where appropriate

5. Proposed Program Priorities for FY 2026/2027

Including this meeting, EPA has convened the Advisory Board eight times, three with the express purpose of simplifying the electronic manifest workflow. The seventh meeting, entitled “Meeting the Needs of the User Community: e-Manifest Program Priorities and User Fees for FY2024/FY2025,” was for the Board to advise the Agency on its proposed program priorities and user fees for the FY2024/FY2025 cycle.

Following the February/March 2023 virtual public meeting, the Advisory Board delivered its final recommendations to the Agency on June 5, 2023.¹⁵

In addition to the to providing a formal response,¹⁶ the Agency plans to incorporate the following into its program for FY 2026/2027:

- Increase electronic adoption and broaden discussion on Biennial Report integration
- Expand help desk services and training for Industry and State users
- Engage with Industry and State users to improve data quality
- Implement 3rd rulemaking

e-Manifest is a multi-faceted program with multiple user communities across the regulated industry, federal and state regulators and the general public. Within that diverse community, there is a unifying need for ready access to electronic manifest data. As such, the Agency’s e-Manifest program priorities for the FY 2026/2027 period remain focused on implementing the full electronic workflow to the greatest extent possible.

5.1. Increase Electronic Adoption and Biennial Report (BR) Integration

Overall, the priority for the e-Manifest program in FY 2026/2027 is to increase electronic adoption and ultimately achieve full electronic adoption by industry. Only by doing so, will the system achieve anticipated cost savings and burden reduction. All facets of the program from system development and enhancements to stakeholder outreach and engagement will focus on realizing this goal.

EPA will emphasize direct outreach, training, and simplified messaging to industry users and companies to gather input on system enhancements, as well as assist in transitioning their systems and workflows from paper to electronic manifests. As observed in the most recent BR cycle, there is more interest and activity among regulated and regulatory entities as manifest data informs and sometimes overlaps with BR data. In the

¹⁵ A comprehensive discussion of the Board’s recommendation is available at: <https://www.regulations.gov/docket/EPA-HQ-OLEM-2022-0973>

¹⁶ <https://www.regulations.gov/document/EPA-HQ-OLEM-2022-0973-0016>

upcoming period the Agency aims to communicate and train industry users on adding BR fields to their manifests, as well as begin working among the entire user community to discuss what integration could be.

A primary driver of e-Manifest's success in the coming years will be the exchange of information between industry systems, which contain the shipment's waste information, and e-Manifest, which, through its relationship with RCRAInfo, has the most accurate site information.

More than 87% of all manifests submitted were Data plus Image upload. Of those manifests, 92% were submitted via APIs (i.e., web services). IT development will focus on implementing the electronic workflow and Remote Signer with industry systems by building on EPA's web services with industry users to send and receive quality data through our API.

5.2. Expand End User Support

EPA recognizes that even though e-Manifest does collect, process, and host a large amount of data that would have been untenable for states to do individually, the day-to-day operation of the program has drawn on state regulators to aid with user registration and application support, as well as responding to specific waste-related questions. To better serve both the regulators and regulated entities, EPA is working to expand the current e-Manifest help desk role. The intended user support approach will be to resolve current issues and proactively reach out to users to inform and educate to promote understanding and compliance. Additionally, this program area will aid in registering generators in support of the 3rd rulemaking.

5.3. Coordinate With US Department of Transportation (DOT)

Based on input from the Board and the public, the Agency will continue to coordinate with our partners at DOT to ensure that our programs are sharing information and building toward a more streamlined future. EPA has been engaged in conversations, industry conferences, and workgroups with DOT on electronic hazard communication, and has continued to advocate for alternatives to the requirement for a physical shipping paper on trucks that meet the safety needs of emergency responders and can better integrate with electronic manifesting systems.

5.4. Implement 3rd Rulemaking

The 3rd rulemaking for e-Manifest was published in the *Federal Register* on July 26, 2024. The final rule is effective on January 22, 2025, but implementation of certain aspects of the hazardous waste export manifest and manifest related report requirements will have a compliance date that begins on December 1, 2025. Key final rule changes are as follows:

Changes effective January 22, 2025

- Large and small quantity generators must register for e-Manifest.
- Post-receipt manifest corrections must be completed within 30 days of regulator request.
- Receiving facilities no longer need to provide final manifests to LQGs and SQGs outside e-Manifest.
- The timeframes for submission of manifest-related reports are adjusted.

- The manifest form is now four copies and includes changes to the International Shipment section.
- Conforming changes to TSCA/PCB manifest requirements are implemented.

Changes effective December 1, 2025

- Exception, Discrepancy, and Unmanifested Waste Reports must be submitted through the e-Manifest system.
- Export Manifests must be submitted to e-Manifest.
 - Exporters are responsible for submission and payment of the user fee.

5.5. Improve Data Quality

Data quality will remain a top Agency priority during this fee cycle. In concert with the requirement to correct manifest data set forth in the 3rd rulemaking, EPA will continue to develop functionality to expedite identification and correction of data errors. The program also intends to expand the scope of work assigned to its contractor to audit submissions and request corrections, as well as increase coordination with state partners and enforcement officials.

6. O&M Costs

Per the regulations, O&M refers to system-related costs and EPA program costs incurred by EPA or its contractors after launch of the e-Manifest system. This includes the costs of operating the e-Manifest system such as operation of RCRAInfo (the IT system that provides the underlying infrastructure for the e-Manifest system), help desk, paper processing center, and costs related to the Agency's Cross-media Electronic Reporting Rule (CROMERR). It also includes costs such as salary, support for the Advisory Board, travel, and costs related to manifest rulemakings and information collection requests.

RCRAInfo

RCRAInfo is EPA's comprehensive information system providing access to data supporting RCRA and is the IT system that provides the underlying infrastructure for the e-Manifest system. The RCRAInfo system is used to track information provided by the regulated community concerning the generation, shipment, treatment, and disposal of hazardous wastes, as well as significant milestones of State/EPA activity supporting program planning, implementation, and accomplishment reporting. The e-Manifest system was first designed as a module in RCRAInfo. As the e-Manifest system has developed, additional integration with RCRAInfo has provided improvements for users and is critical to future BR integration efforts. This has also required additional development and maintenance of RCRAInfo, and these systems are now successfully integrated to fully support e-Manifest. To support the stability and security of the e-Manifest system, improve efficiency and effectiveness of system development, oversight, operation and maintenance, maximize the productivity of EPA IT personnel and contractor support, advance BR integration, and ensure full cost recovery, beginning in FY25, EPA is including the funding for RCRAInfo development and support related to e-Manifest and BR integration in the IT O&M costs and the EPA Program Costs.

The following breakdown of the total \$24,857,763 O&M cost illustrates the estimated expenses for the FY 2026/2027 user fee period.

	FY 2026	FY 2027	Total
O&M	\$12,374,452	\$12,483,311	\$24,857,763

Table 6 Estimated O&M Costs FY 2026/2027

O&M costs can be further divided into IT O&M costs and non-IT O&M costs. IT O&M costs are roughly 60% of total O&M costs, with non-IT O&M costs accounting for 40%.

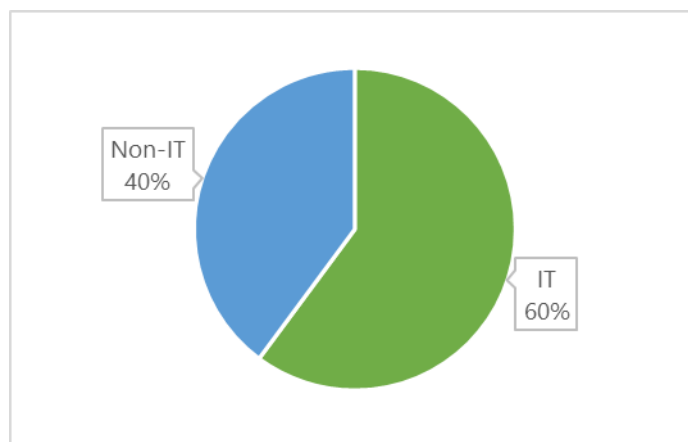


Figure 2 IT/Non-IT O&M Spending FY 2026/2027

The following tables describe the different O&M cost areas, organized by IT O&M costs and non-IT O&M costs, and include the relative proportion to the total O&M costs for the upcoming fee period.

IT O&M Cost Summary	Total	% IT O&M	% Total O&M
System Development	\$9,000,000	60%	36%
Electronic System O&M	\$1,590,000	11%	6%
Salary – IT	\$3,240,000	22%	13%
Help Desk	\$500,000	3%	2%
CROMERR Costs	\$325,000	2%	1%
Gen. Expenses and Working Capital	\$300,000	2%	1%
Total	\$14,955,000	100%	60%

Table 7 O&M Cost Areas – FY 2026/2027 Total IT Expenses

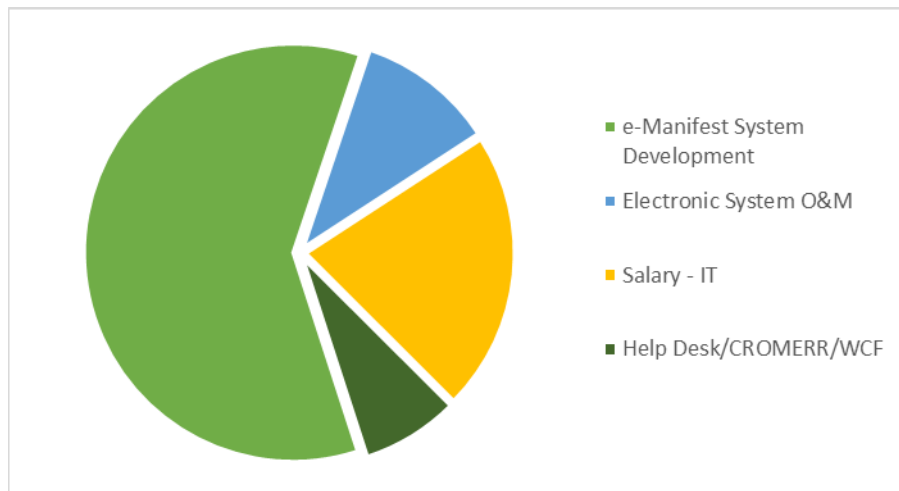


Figure 3 O&M Cost Areas – FY 2026/2027 IT Cost Breakout

Non-IT O&M Cost Summary	Total	% Non-IT O&M	% Total O&M
Paper Center O&M Cost	\$6,121,763	62%	25%
Salary - FTE and SGE¹⁷	\$3,600,000	36%	14%
Advisory Board Contracts	\$46,000	< 1%	< 1%
Rulemaking/ICR Contracts	\$30,000	< 1%	< 1%
EPA and FACA Travel	\$105,000	1%	< 1%
Total	\$9,902,763	100%	40%

Table 8 O&M Cost Areas – FY 2026/2027 Total Non-IT Expenses

¹⁷ EPA Full Time Equivalent (FTE) and Advisory Board Special Government Employee (SGE).

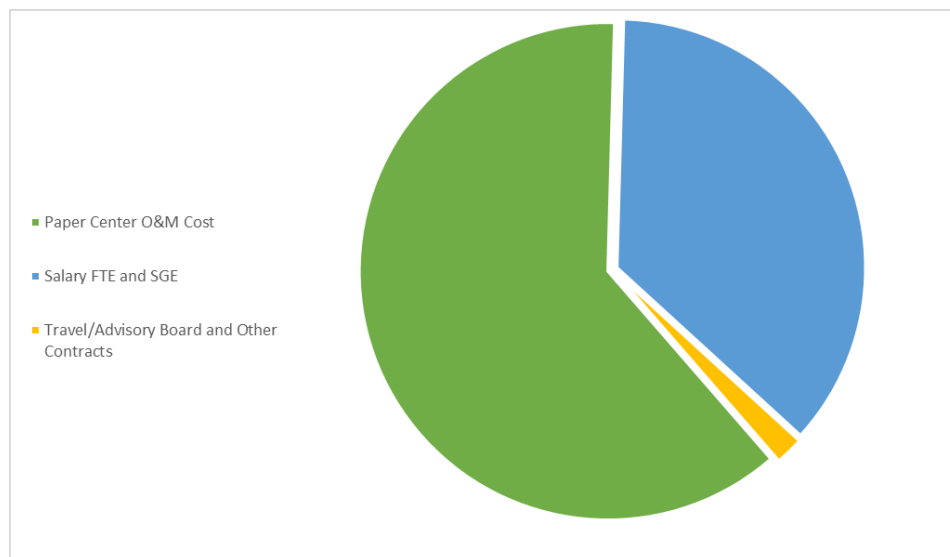


Figure 4 O&M Cost Areas – FY 2026/2027 Non-IT Cost Breakout

6.1. Electronic System O&M Costs

These are costs associated with maintaining an electronic system. This includes costs for the e-Manifest cloud hosting environment, which provides access to the electronic system, as well as costs associated with maintaining the system’s Authority to Operate (ATO) and user account management.

Cloud Hosting

e-Manifest uses an “Infrastructure as a Service” (IaaS) cloud solution, i.e., a configurable system in a cloud hosted environment. EPA is responsible for the software and the servers that operate on the IaaS. The cloud environment is scalable both by number of instances of use of the application and number of users, accommodating up to one hundred thousand users at a time. It also provides the ability for controlled, real-time, on-demand and automated provisioning of computing resources (such as virtual machines, storage, bandwidth capacity, etc.) without requiring human interaction with each service’s provider. Although there is contract support for the cloud hosting of the application, all infrastructure work to keep e-Manifest operational is supported and directed by direct government employees, which allows operational agility, resiliency and cost savings.

Authority to Operate

An ATO is necessary for any federal IT system to operate and is the result of evaluating system security controls through a system security assessment.¹⁸ A signed ATO means that the Agency accepts the risk associated with

¹⁸ The National Institute of Standards and Technology (NIST) defines the ATO as the official management decision given by a senior organizational official to authorize operation of an information system and to explicitly accept the risk to organizational operations (including mission, functions, image, or reputation), organizational assets, individuals, other organizations, and the Nation based on the implementation of an agreed-upon set of controls.

the use of the system based on implementation of security controls. An ATO is granted prior to initial system launch and is valid for a set period of time, usually in intervals of one to three years. Annual system security assessments are performed throughout the system lifecycle to reevaluate risk posture, address significant system changes, and to ensure compliance with applicable regulations.¹⁹

User Account Migration to Login.gov

In response to the Executive Order on Improving the Nation’s Cybersecurity,²⁰ EPA applications have implemented Multi-Factor Authentication (MFA) via Login.gov. Login.gov is a government-wide shared solution that offers the public secure and private online access to participating government programs. Users can securely sign into multiple government agency systems with one ID and password.

O&M Costs	FY 2026	FY 2027	Total
Cloud hosting	\$500,000	\$550,000	\$1,050,000
IT Security/Assessments	\$20,000	\$20,000	\$40,000
Login.gov ²¹	\$250,000	\$250,000	\$500,000
Total	\$770,000	\$820,000	\$1,590,000

Table 9 Electronic System O&M FY 2026/2027

6.2. System Development

Contract costs associated with IT development of the system to include enhancements for EPA system management, industry, state/regulatory users and general public data access. Specific activities include development, testing, user feedback and other support activities.

O&M Costs	FY 2026	FY 2027	Total
System Development	\$4,500,000	\$4,500,000	\$9,000,000
Total	\$4,500,000	\$4,500,000	\$9,000,000

Table 10 System Development FY 2026/2027

Upcoming Functionality

The following is a high-level overview of the planned system development and enhancements in the coming fee cycle. All functionality is tested and updated based on user feedback and requirements.

¹⁹ For more information on the ATO process, visit https://csrc.nist.gov/glossary/term/security_authorization_to_operate

²⁰ <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/05/12/executive-order-on-improving-the-nations-cybersecurity/>

²¹ These cost estimates were based on information from EPA Office of Mission Support (OMS).

Electronic Adoption

Software focused directly on the electronic manifest workflow.

- Continued enhancements to Quicker/Remote Sign based on user feedback.
- Electronic Manifest Rejections – improving logic for when manifest is rejected and returned to the generator.
- Bulk and/or batch manifest creation
- Streamline electronic workflow for rail shipments.
- Updates to RCRAInfo UI for easier navigation for Industry application based on user feedback.
 - Functionality for users to quickly perform frequent actions by reducing clicks.
 - Additional filtering/search capability to find specific manifests and highlighting manifests that require action.

Billing/Invoice Management

Software that enhances user ability to manage e-Manifest invoices.

- Working with CDX to enhance payment widget for multiple invoice payment – allowing user to pay for multiple sites with one transaction.
- Automating deletion credits – when a manifest is incorrectly uploaded to a site and needs to be deleted, the system will automatically credit the invoice to avoid duplicate charges.
- New industry role for billing – currently, only receiving facility site managers can pay invoices. As requested by industry users, this new role would be for billing-related tasks and would not have the traditional site manager functionality.²²

Data Quality

Software that focuses on ensuring quality manifest data for all users.

- Correction enhancements:
 - Correction requests on all manifest from PPC/Helpdesk.
- Waste reporting enhancements:
 - Improvement to density reporting for BR submissions.
 - Aligning waste data with permitted facility Management Method Codes.

²² User management, signing manifest, storing Electronic Signature Agreements (ESA).

Infrastructure

Operate and maintain software and support a wide range of data processing (loading, analysis, quality assurance, etc.) within RCRAInfo's cloud environment.

- Ongoing development and maintenance support of the application infrastructure, database and related data conversion based on incoming and outgoing transactions.
- Producing user documentation such as:
 - Technical documentation
 - User documentation
 - Translator Guides for states
 - File specifications for data uploads
- Design and develop national reports for Industry, State and general public.
- Independently test and debug all software throughout the application.

Implementation and Policy

Software aimed to meet program implementation goals and achieve policy objectives.

- Changes based on 3rd rulemaking to include
 - Updates to Hazardous Waste Manifest Form per updates to the international section.
 - Accepting Export manifests and related billing work
 - Functionality for electronic submission of Discrepancy, Exception, and Unmanifested Waste Reports to the EPA e-Manifest system as well as functionality for transmission of these reports to state regulating agencies.

6.3. Cross-Media Electronic Reporting Rule Costs

The following are EPA costs associated with implementing electronic signature, user registration, identity proofing, and copy of record solutions that meet EPA's electronic reporting regulations as set forth in CROMERR,²³ which are incurred as part of the Central Data Exchange (CDX) O&M cost share. The primary cost drivers are the transactional costs associated with data throughput and record storage associated with a CROMERR-signed manifest.

²³ As codified in 40 CFR part 3

O&M Costs	FY 2026	FY 2027	Total
CROMERR Cost	\$150,000	\$175,000	\$325,000
Total	\$150,000	\$175,000	\$325,000

Table 11 CROMERR Cost FY 2026/2027

6.4. Help Desk Costs

These are costs associated with the e-Manifest Help Desk. The help desk will provide both phone and e-mail assistance to industry and state users. As recommended by the Board in their response to the October 2022 meeting on increasing electronic adoption, the program is working to expand the help desk services for industry and state users; this service is intended to include:

- Access to documentation such as a detailed knowledgebase based on EPA-approved guidance,²⁴ regulations,²⁵ policies, standard operating procedures (SOPs), frequently asked questions (FAQs)²⁶ and other publicly available information²⁷ on complying with system rules, regulations, laws, and guidelines, which is crucial to the advancement of these services as well as advancing the program’s responsibility to protect human health and the environment.
- Offer support such as
 - Accept, process, and send outgoing electronic correspondence.
 - Track questions received via telephone including the creation of tickets from voicemails and providing a voicemail to text copy of the voicemails in the ticket.
 - Track tickets received electronically and chat sessions.
 - Support workflow processes for tickets requiring escalation.
 - Integrate/coordinate with other help desks.
 - Provide training materials and prerecorded materials.
- Support system testing and development to identify potential problems or questions and the appropriate means for resolution. This includes functions in the EPA RCRAInfo development, preproduction, and production environments.

²⁴ <https://rcrapublic.epa.gov/rcraonline/>

²⁵ https://www.ecfr.gov/cgi-bin/text-idx?SID=c94567294dff611654af7a3944a91d69&mc=true&tpl=/ecfrbrowse/Title40/40tab_02.tpl

²⁶ <https://www.epa.gov/e-manifest/frequent-questions-about-e-manifest>

²⁷ <https://rcrapublic.epa.gov/rcrainfoweb/action/main-menu/view>

6.4.1. Industry-Related Help Desk Services

Help desk services for industry users will include the following:

- User registration.
- Resolving issues with user access, user registration and outreach, account maintenance and UI application support.
- Information and guidance regarding the industry modules within the RCRAInfo system.
- Information regarding upcoming deployments, software releases and other news provided by EPA.
- Data access and reporting assistance.
- BR questions and instruction clarifications.
- Basic API support (general save, update, search and post functions).
- Lost manifests and incorrect manifest tracking number resolution.
- Rejected manifest scenarios.
- Implementing/troubleshooting Quicker Sign/Remote Signer as well as API submissions.
- System technical issues.
- User training for electronic workflow.
- User training for sites with frequent data submission issues.

6.4.2. State-Related Help Desk Services

Based on requests from industry and state users, EPA is working to expand the help desk to include functions that currently are being performed by state regulators. The help desk will include the following:

- User Support
 - Registration.
 - Password resets.
 - Maintenance permissions requests.
 - Industry permission management.
 - User access and site management.
 - API ID/key management.
- Data Quality

- Data quality reporting and metrics for nationwide implementation best practices.
- Metrics on manifest submission data quality.
- Custom data pulls regarding specific sites.
- State lookup maintenance for generators, transporters, receiving facilities, state-regulated waste.
- Translation from state data system.
- Information regarding upcoming deployments, software releases and other news provided by EPA.
- General information and guidance regarding the modules within the RCRAInfo system.

O&M Costs	FY 2026	FY 2027	Total
Help Desk	\$250,000	\$250,000	\$500,000
Total	\$250,000	\$250,000	\$500,000

Table 12 Help Desk Costs FY 2026/2027

6.5. EPA Program Costs

EPA program costs are costs incurred by EPA after system activation. These EPA Program Costs are in the following areas:

O&M Costs	FY 2026	FY 2027	Total
Salary (Non-IT)	\$1,800,000	\$1,800,000	\$3,600,000
Salary (IT)	\$1,620,000	\$1,620,000	\$3,240,000
Travel	\$23,000	\$23,000	\$46,000
General Expenses/Working Capital	\$150,000	\$150,000	\$300,000
FACA Contracts	\$15,000	\$15,000	\$30,000
Other Contracts ²⁸	\$70,000	\$35,000	\$105,000
Total	\$3,678,000	\$3,643,000	\$7,321,000

Table 13 EPA Program Costs FY 2026/2027

²⁸ This includes non-IT contracts to assist with regulation and policy/program development.

Salary

Salary is directly related to duties performed for the government by federal civilian employees, military personnel, and non-federal personnel. It includes EPA Full Time Equivalents (FTE)²⁹ and Advisory Board Special Government Employee (SGE) or Regular Government Employee (RGE) members. The salary charges from EPA to support e-Manifest are inherently governmental.

For the coming user fee period, the program estimates 19 FTE to support the program. Two EPA offices charge FTE to the e-Manifest program:

- Office of the Chief Financial Officer (OCFO) provides policy, reports, and oversight essential for the financial operations of e-Manifest; and
- Office of Land and Emergency Management (OLEM) provides policy, guidance and direction for the Agency's emergency response and waste programs. The e-Manifest program is a key part of OLEM's waste program portfolio and is directly managed by OLEM ORCR.

OCFO Financial Management

EPA estimates OCFO will utilize 1 FTE during the upcoming cycle, with an estimated cost of \$360,000 – roughly 6% of the program's overall FTE costs.

The financial services provided by OCFO financial management deliver specialized accounting, payroll, auditing, financial and other customer services for e-Manifest; specifically, payment confirmation and resolution for users paying through the CDX Pay.Gov widget and out-of-band payments made directly to the EPA or through the Intra-Governmental Payment and Collection (IPAC) system.

OLEM e-Manifest IT

EPA estimates OLEM will utilize 9 IT FTE during the upcoming cycle with an estimated cost of \$3,240,000 – roughly 47% of the program's overall FTE costs.

e-Manifest IT FTE costs are services provided by OLEM ORCR to design, develop, test, and implement the e-Manifest and RCRAInfo IT system. The primary charges in this area involve overall program management, IT security oversight, IT system oversight and data analysis, and report development. Direct IT FTE ensure that all work, whether produced by EPA or contractor staff, meets the program's stated electronic, financial, policy, and IT system objectives.

The IT FTE provide direct service to the user community. The team resolves thousands of user support tickets, holds hundreds of direct calls/meetings, develops educational materials, engages with government oversight bodies, delivers new software and enhancements twice a month and is ready to troubleshoot and resolve any and all issues related to the operation of e-Manifest and RCRAInfo applications.

²⁹ For purposes of this meeting an FTE represents one person working full-time (40 hours per week) to support e-Manifest and is estimated as \$180,000 per year.

OLEM e-Manifest Non-IT

EPA estimates OLEM will utilize 9 Non-IT FTE during the upcoming cycle, with an estimated cost of \$3,240,000 – roughly 47% of the program’s overall FTE costs.

e-Manifest non-IT charges are for services that support and implement the e-Manifest program but do not directly build/support the IT system.

Direct non-IT FTE support the programs’ policy and regulatory development, communication, outreach and implementation, Advisory Board, work towards BR integration, and financial and contracts management. This work, whether performed directly by EPA FTE or in the manner of directing contracts, supports the program’s stated electronic, financial, policy and system objectives.

As with the IT FTE, the non-IT FTE provide direct support to e-Manifest users and are in the following categories:

- Financial Management and Reporting – ensures proper financial oversight of the program, manages contracts and interagency agreements, engages with auditors and other governmental reporting entities, engages with users to resolve billing issues
- Policy and Implementation – working directly to ensure the program has proper policy foundation with respect to RCRA, the e-Manifest Act, corresponding regulations and other applicable policy frameworks and Agency priorities. Direct communication to the regulated community, states and general public regarding program operation, metrics, policy and other areas through multiple avenues.
- e-Manifest Advisory Board - in accordance with the e-Manifest Act, the e-Manifest Advisory Board is comprised of nine total members. This includes EPA board administration, six representative members, including three industry users and three state users. These members are not compensated. The Advisory Board also includes two IT expert members who are appointed as either SGE or RGE³⁰ members; SGE members may be compensated for time spent on the Advisory Board. The ninth member of the board is the EPA Administrator (or their designee), which serves as the board chair. The direct charges are the Board’s Designated Federal Officer and 1 SGE and are included in the OLEM Non-IT e-Manifest FTE charges.
- BR Integration – building on the work in the most recent BR cycle, EPA is identifying and characterizing how manifest data informs and overlaps with BR data and how users interact with the e-Manifest and RCRAInfo system in preparing, submitting, reviewing, and correcting BR data. In the upcoming period the Agency will communicate and train industry users on adding BR fields to their manifests and begin working among the entire user community to discuss what integration could be.

³⁰ RGE members are not eligible for salary compensation.

Summary EPA FTE Cost

Role	% of FTE Total	Est. FTE	Fee Period Total
OCFO	5.26%	1	\$360,000
OLEM e-Manifest IT	47.37%	9	\$3,240,000
OLEM e-Manifest Non-IT	47.37%	9	\$3,240,000
Total	100.00%	19	\$6,840,000

Table 14 e-Manifest FTE Distribution

Travel

Travel costs are the travel/transportation costs of government employees and other persons, while in an authorized travel status, that are to be paid by the government either directly or by reimbursing the traveler. This consists of travel away from official stations, subject to regulations governing civilian and military travel, and local travel and transportation of persons in and around the official station of an employee.

This includes EPA FTE travel, which is focused on conferences/presentations to users and interested parties, as well as travel costs for Advisory Board members to attend Advisory Board public meetings.

O&M Costs	FY 2026	FY 2027	Total
EPA and FACA Travel	\$23,000	\$23,000	\$46,000
Total	\$23,000	\$23,000	\$46,000

Table 15 EPA Travel FY 2026/2027

General Expenses and Working Capital Fund

These expenses consist of communications, utilities, and miscellaneous charges related to mailings, federal register notices, and project management subscription services, as well as goods and services procured through the agency's Working Capital Fund (WCF) such as IT software, audio conferencing, and telecommunications.

O&M Costs	FY 2026	FY 2027	Total
General Expenses & WCF	\$150,000	\$150,000	\$300,000
Total	\$150,000	\$150,000	\$300,000

Table 16 General Expenses & WCF FY 2026/2027

Advisory Board Contracts

Advisory Board contract costs are those associated with administrative, logistical, and technical support for planning and hosting e-Manifest Advisory Board public meetings. The estimated costs are based on hosting one in-person meeting per year.

O&M Costs	FY 2026	FY 2027	Total
Advisory Board Contracts	\$15,000	\$15,000	\$30,000
Total	\$15,000	\$15,000	\$30,000

Table 17 Advisory Board Contracts FY 2026/2027

Rulemaking and Information Collection Request Contracts

These are contract costs associated with conducting economic analysis for e-Manifest rulemakings and e-Manifest information collection requests (ICRs).³¹ This work includes support to modify EPA Forms 8700-22 and 8700-22A, the e-Manifest ICR document, and other supporting rulemaking documents, such as those associated with the recently finalized rulemaking related to exports and other manifest-related reports.

O&M Costs	FY 2026	FY 2027	Total
Rulemaking and ICR Contracts	\$70,000	\$35,000	\$105,000
Total	\$70,000	\$35,000	\$105,000

Table 18 Rulemaking and ICR Contracts FY 2026/2027

6.6. Paper Processing Center O&M Costs

These costs are associated with operating the paper manifest processing center, other than the paper processing center’s marginal labor costs, which are discussed in the next section. This includes management and overhead associated with operating the paper processing center, including non-direct labor; vendor IT costs; and facilities, materials, equipment, and supplies in support of operations. The cost for two years of O&M to maintain the paper processing center is \$6,121,763.

O&M Costs	FY 2026	FY 2027	Total
Paper Processing Center O&M	\$3,026,452	\$3,095,311	\$6,121,763
Total	\$3,026,452	\$3,095,311	\$6,121,763

Table 19 Paper Center O&M FY 2026/2027

³¹ For more information on EPA ICR, visit: <https://www.epa.gov/icr/icr-basics>

7. Paper Processing Center Marginal Labor Costs

Marginal labor costs mean the human labor costs incurred by staff operating the paper processing center to conduct data key entry, quality assurance (QA), scanning, copying, and other manual or clerical functions necessary to process the data from paper manifest submissions into e-Manifest.

PPC Marginal Labor Category	Est Cost
Image Upload	\$9.96
Data plus Image Upload	\$1.39
Electronic	\$0.35

Table 20 PPC Marginal Labor FY 2026/2027

7.1. Data Quality Issues with Paper Manifests

EPA has observed numerous and persistent errors associated with all types of paper manifests. These errors were discussed during the 2020 Advisory board meeting and have since been corroborated by users (both regulatory and industry). This section provides a brief list of common data quality issues with paper manifests. These issues are inherent to paper and are rendered moot with electronic manifests. The primary driver of cost for this program, both internal and external, measured in both capital and labor costs, is the paper manifest.

EPA is developing data corrections standards as part of the implementation of the 3rd e-Manifest rule. These standards will delineate responsibility for each field of manifest data and define accuracy for those fields. EPA intends to publish these standards ahead of the effective date for the manifest correction requirement so that industry is aware before any regulated corrections requests are made.

Missing Manifests

Receiving facilities are obligated to submit any manifest to EPA that was required by federal or state law. EPA and state regulators have identified thousands of examples of manifests that were not submitted to e-Manifest for a variety of reasons, including 1) misapplication of VSQG manifest regulations and inaccurate generator category determination, 2) misunderstanding of federal requirement to submit PCB and state waste-only manifests, 3) technological shortcomings, 4) user error, and 5) general unfamiliarity with the e-Manifest system. Recent enhancements to the biennial report validation process have highlighted the scale of this problem, which EPA estimates to represent more than 50,000 manifests from system launch to the present. EPA and state regulators must spend significant time resolving missing manifest issues. Electronic manifests have an initial record in e-Manifest that cannot be lost once created.

Invalid/Incorrect Manifest Tracking Numbers

When submitting a paper manifest via image upload, the receiving facility must enter the manifest tracking number (MTN) along with the PDF of the paper manifest. Often, the MTN entered into the system does not

match the number printed on the scanned PDF. In other instances, users are uploading a paper manifest that was not printed by an EPA registered printer, and thus has an invalid MTN.

Invalid or incorrect MTNs lead to a cascading series of errors wherein multiple users for multiple sites cannot upload their manifest using their proper MTN.³² Correcting this issue requires EPA Headquarters intervention to correct the MTN as well corresponding debits/credits to ensure proper cost accounting. This also impacts generators and transporters who use the system but cannot find their final manifest if the MTN is entered incorrectly.

EPA estimates that about 10% of image upload manifests present errors that require corrections before the manifest can be properly submitted to e-Manifest.

Incorrect/Missing Transporter Information

Data submissions that are missing the full list of transporters from the paper document reduce the effectiveness of the manifest as a chain-of-custody record. Without the full and correct transporter list, parties may appear to have been responsible for the waste over a period that they were not, complicating the determination of RCRA liability and placing unnecessary burden on transporters to review final manifests. EPA estimates 10% of all manifests have erroneous transporter data, which has been corroborated by research by state regulators. Use of the electronic manifest eliminates this issue.

Invalid generator ID

Invalid generator IDs include manifests where the generator had a valid EPA ID but did not use it on the manifest and, instead, left the generator ID field blank. Another example is a generator that generated sufficient volumes of RCRA hazardous waste to trigger status as a large or small quantity generator but does not have/use a valid EPA ID on the manifest. This issue is applicable to all manifest submission types except the fully electronic manifest, which requires the generator to register in order to sign electronically. EPA estimates 5% of Data plus Image uploads currently in the e-Manifest system use an invalid generator ID.³³ This is based on raw data extracts of Item 5 information and has been corroborated by state regulators.

Incomplete Boxes 10, 11, 12 (Waste Volume)

Boxes 10, 11, and 12 include container information, total quantity, and unit weight/volume, respectively. The weight/volume units as well as the net or gross weight vary by handler and, when left blank, incomplete, or inconsistent, present major problems when determining generator status, verifying shipment information as well as aggregating site totals for verifying Biennial Report submissions.

Typographical and clerical errors

Typographical and clerical errors occur when manifest data is entered by the PPC and receiving facilities. Due to the high volume of paper manifests coupled with the occasional illegible handwriting on paper manifests, a certain error rate is expected. To minimize such errors for image upload manifests, EPA requires the PPC to use

³² For example, if a user finds that "123MTN" is taken, they will upload "124MTN."

³³ Based on that error rate, EPA estimates roughly ~500,000 data plus image manifests have invalid generator IDs

standard operating procedures that include numerous quality checks (see next section). EPA notes that use of electronic manifests would greatly reduce the need for transcription, which is the primary source of typographical errors.

7.2. Marginal Costs for Image Upload Manifests

Data entry on image upload manifests is performed by the PPC. To upload an image manifest, the submitting facility must first:

- Enter the manifest tracking number of the manifest.
- List their submitting facility role.³⁴
- Attach a PDF file of the paper manifest.

As an option, the submitting facility may enter the generator's EPA ID number and certification information to allow the manifest information to be visible on the generator's site page in RCRAInfo.

Once uploaded, the image upload is made available for the PPC to perform data entry. Prior to data entry, the PDF image of the manifest is available for view by handlers and state/EPA users of RCRAInfo, however, the data is not available until keyed in by the PPC. The PPC uses a three-step process for image uploads:

1. Data entry

The PPC user opens the PDF of the manifest and keys in the data from the scanned image into the e-Manifest user interface.

2. Quality control

Another PPC user compares the data that has been entered into the system to the data on the PDF. Any issues are flagged for resolution with the submitting facility.

3. Quality assurance

This is the final stage of the review process. Any outstanding issues are resolved, and the manifest and data become available to the handlers listed on the manifest and state and EPA users.

In FY 2026/2027, EPA estimates that the marginal cost per image upload manifest will be: \$9.96

7.3. Marginal Costs for Data Plus Image Upload Manifests

Based on internal sampling and work with EPA enforcement, state regulators, and industry users, EPA believes there are widespread quality issues with the Data plus Image manifests. These errors include instances where the data does not match the image of the paper manifest, or the wrong image file is attached.

³⁴ Submitting facility roles can include: (1) Designated Facility, i.e., facility listed in section 8 of the manifest; (2) Alternate Facility, i.e., facility listed in section 18b (in cases where the waste was rejected by the original designated facility and sent to the alternate facility); or (3) Generator, i.e., the facility listed in sections 1-5 (in cases where a new manifest is created as a result of a residue or rejection returned to the original generator).

To perform QA/QC on those manifests, the PPC, as directed by the EPA, have access to a tranche of Data plus Image manifests that have been identified as having potential data quality issues and use the following workflow:

1. Quality control

PPC user compares the data that has been entered into the system to the data on the PDF issues are flagged for resolution with the submitting facility.

2. Quality assurance

This is the last stage of the review process. Any outstanding issues are resolved, and the QA manifest data become available to the handlers listed on the manifest and state and EPA users.

EPA has initiated pilot projects with the PPC to perform QA/QC on selected Data plus Image manifest profiles having substantial errors. These projects have resulted in improvements to data quality but require significant human effort to complete. Based on positive feedback on this work, EPA plans to expand this project significantly – addressing more than a million Data plus Image manifests that may require data quality intervention.

In FY 2026/2027, EPA estimates that the marginal cost per Data plus Image manifest will be: \$1.39.

[7.4. Marginal Costs for Electronic Manifests](#)

The marginal costs for electronic manifests are related to registering users for the e-Manifest system as well as for performing data entry on electronic manifests that cannot be completed due to system outages.³⁵

In the FY 2026/2027 fee period the estimated marginal cost for electronic type manifests will be \$0.35.

[8. Indirect Costs](#)

Indirect costs are costs not captured as marginal costs, system setup costs, or operations and maintenance costs, but that are necessary to include because of their enabling and supporting nature, and to ensure full cost recovery. Indirect costs include, but are not limited to, such cost items as physical overhead, maintenance, utilities, and rents on land, buildings, or equipment. Indirect costs also include EPA costs incurred from the participation of EPA offices and upper management personnel outside of the lead program office responsible for implementing the e-Manifest program. The indirect rate is determined by the Office of the Controller (OC), within EPA's OCFO.

In FY 2024, OCFO updated their user fee indirect cost formula, and rates are calculated only at the OLEM immediate office level.

³⁵ Per the user fee rule, § 262.24 (e), if a transporter is unable to electronically sign a generator-prepared electronic manifest due to a system outage, the generator must use a paper manifest and submit that paper copy to the EPA. Using the fee dispute process, EPA will determine if that manifest should be charged the paper or electronic rate, and depending on the upload type, the EPA PPC will perform data entry or QA on the manifest. To date, this scenario has not occurred.

The indirect cost rate for e-Manifest is 18.63% and is applied to O&M and marginal labor costs.

	Total
Total O&M	\$24,857,763
Paper Center Marginal Labor Cost	\$8,305,658
Indirect Cost	\$6,178,345

Table 21 Indirect Cost FY 2026/2027

9. User Fees for FY 2026/2027

9.1. Manifest Usage Projections for FY 2026/2027

EPA developed manifest usage projections based on manifests received during FY 2023 and FY 2024. The Agency also assumes that use of Data plus Image Uploads will continue to increase as compared to Image Upload manifests. Final submission figures for FY 2024 were estimated based on current rates.

FY 2023/2024 Manifest Submissions			
	Percentage (%)	Per Year	Per Cycle
Electronic	0.5%	9,000	18,000
Data plus Image Upload	88.3%	1,650,000	3,300,000
Image Upload	11.2%	210,000	420,000
Total	100.0%	1,869,000	3,738,000

Table 22 FY 2023/2024 Manifest Submissions

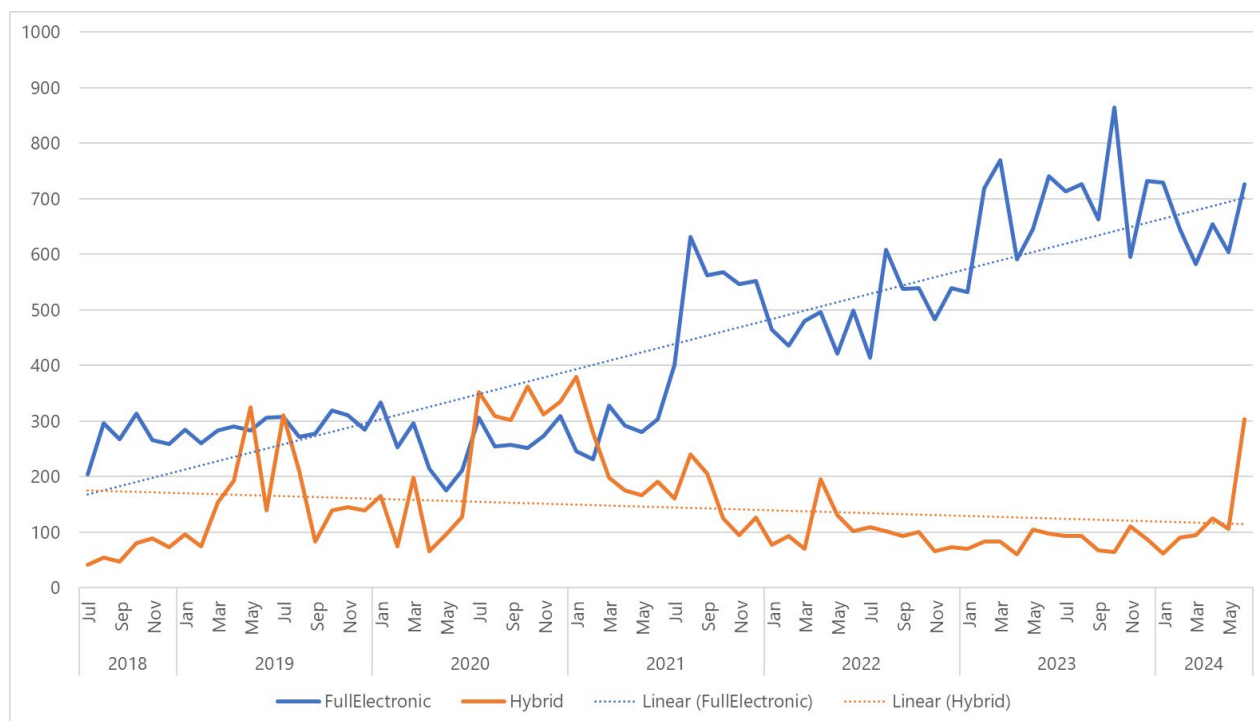


Figure 5: Electronic Submission Rate Trend

Further, given current information from external users and from the Advisory Board recommendations, the Agency is not anticipating there will be a mass shift to electronic manifests during this period. The Agency is assuming that electronic adoption will come from EPA-led cleanups, corporate pilots, and the growth of electronic-capable transporters due to the Remote Signer policy.

For FY 2026/2027, EPA estimates receiving a total of 3,750,000 manifests over the two-year cycle. The below table lists the Agency’s estimate of manifests it will receive by manifest type.

FY 2026/2027 Manifest Projections		
Electronic	2.5%	93,750
Data plus Image Upload	88.5%	3,318,750
Image Upload	9.0%	337,500
	100.0%	3,750,000

Table 23 Manifest Projections FY 2026/2027

To develop more accurate projections of future e-Manifest utilization, EPA reached out to state regulatory agencies to gauge pending amendments to state regulated hazardous waste. Most state agencies reported no pending deregulations or adoptions. Ten states reported that they were considering adoption of the new management standards for hazardous waste pharmaceuticals (“Pharms” Rule) within the next two to three years but expected the decrease in manifest usage would be minimal. Additional states reported that they are

developing regulatory amendments to support various hazardous waste code additions such as photovoltaic cells and demilitarization projects.

EPA has also expanded its initiatives to reduce the share of manifests that are incorrectly excluded from submission to the e-Manifest system. In addition to program implementation work by the e-Manifest team and state regulators, EPA’s Office of Enforcement and Compliance Assurance has engaged facilities to ensure the timely and accurate submission of manifests to the system. These efforts have increased the total number of manifests received by EPA.

EPA estimates the cumulative pending amendments to state regulated hazardous waste will not constitute a significant change to the volume of uniform hazardous waste manifests used within the FY 2026/2027 fee cycle. In addition, any changes from the final 3rd rulemaking will not significantly add to the manifest universe for the upcoming period.

	FY 2023	FY 2024	FY 2026/2027 Est.
Federal hazardous waste manifest	54.3%	53.4%	54%
State-only hazardous waste manifest	45.7%	46.6%	46%

Table 24 Federal / State Hazardous Waste Manifests

9.2. Cost Summary

Costs	Total
Electronic System O&M Cost	\$1,590,000
System Development	\$9,000,000
CROMERR Cost	\$325,000
Help Desk	\$500,000
EPA Program Costs	\$7,321,000
Paper Center O&M Cost	\$6,121,763
<i>Subtotal</i>	<i>\$24,857,763.00</i>
Paper Center Marginal Labor Cost	\$8,305,658
<i>Subtotal</i>	<i>\$33,163,421.00</i>
Indirect Costs	\$6,178,345
Total Costs	\$39,341,766

Table 25 Total Cost Summary

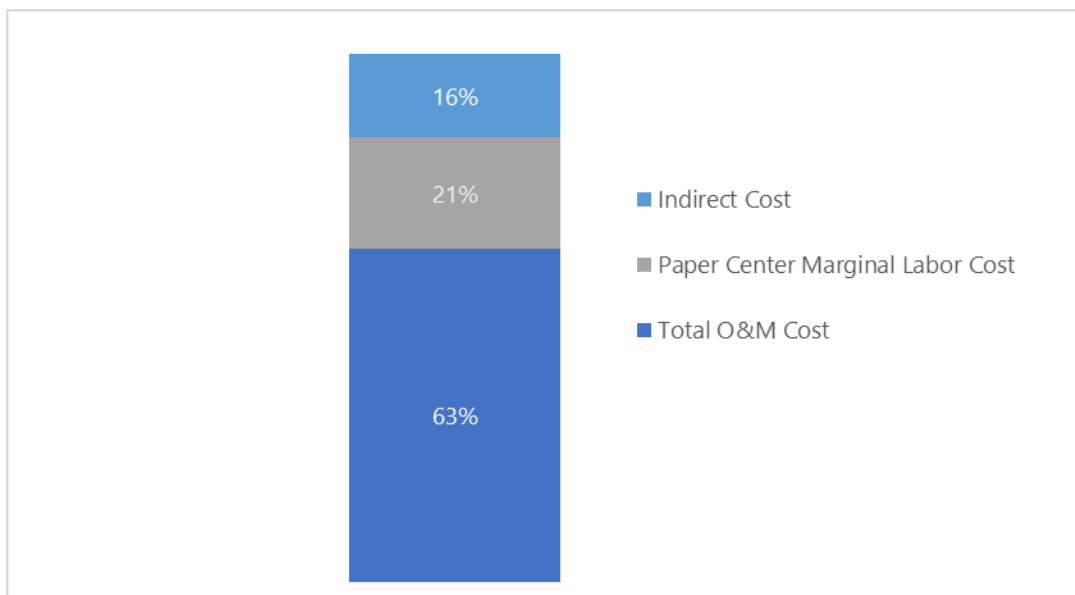


Figure 6 Total Cost Areas by Percentage

9.3. User Fee Model Results

The above costs and manifest submission estimates were placed into the e-Manifest User Fee Workbook and produced the following output:

9.3.1. Fee Model Results

Type	Current Fee	Revenue
Image Upload	\$19.73	\$6,700,000
Data plus Image Upload	\$9.57	\$31,800,000
Electronic	\$6.34	\$600,000
	Projected Revenue	\$39,100,000
	Actual Costs	\$39,341,766
	Annual +/-	-\$120,883

Table 26 Fee Model Output

The projected revenue and costs would leave the program with an annual negative balance of -\$120,883.

9.4. Proposed User Fees

EPA is proposing the following set of user fees for FY 2026/2027 for the Board’s consideration. The fees have been adjusted from the user fee formula output for two primary reasons:

1. Maintain whole-dollar amounts.
2. Provide for a greater annual surplus, which allows the program to account for cost contingencies during the user fee cycle.³⁶ Major contingencies may include an unanticipated reduction in the total number of manifests, a major shift to electronic type manifests, or needed EPA program activities/software functionality.

Type	Fee	Revenue
Image Upload	\$22	\$7,425,000.00
Data plus Image Upload	\$10	\$33,187,500.00
Electronic	\$5	\$468,750.00
	Projected Revenue	\$41,100,000.00
	Actual Costs	\$39,341,765.72
	<i>Annual +/-</i>	\$879,117.14

Table 27 Proposed FY 2026/2027 User Fees

9.5. Comparison to Previous Fee Cycle

The following table illustrates the delta between the current cycle and the EPA proposed fees for FY 2026/2027.

Type	FY 2024/2025	Proposed Fees	% Difference
Image Upload	\$22	\$22	0%
Data plus Image Upload	\$10	\$10	0%
Electronic	\$6	\$5	-17%

Table 28 User Fee Comparison

³⁶ In the e-Manifest Act, Sec. 3024, (c) (3) (B)