

**The US Department of Energy Long-Term Stewardship Working Group-22583**

Tracy Atkins\*, Cliff Carpenter\*, Padraic Benson\*

\*US Department of Energy Office of Legacy Management

**ABSTRACT**

The US Department of Energy (DOE) Long-Term Stewardship Working Group (LTSWG) is a cross-program organization established by the DOE Office of Environmental Management (EM), the DOE Office of Legacy Management (LM), and the National Nuclear Security Administration (NNSA) to address national and cross-cutting site-level Long-Term Stewardship (LTS) activities and issues. LTSWG collaborates on high-priority LTS topics of interest, aligns strategies, shares lessons learned, leverages contacts, and makes recommendations to decision makers to resolve issues. LTSWG fosters communication across DOE offices and with other federal agencies, states, tribes, stakeholders, and communities.

The mission of LTSWG is to develop tools and provide recommendations to DOE leadership to foster a collaborative, consistent approach to LTS planning and execution across the DOE enterprise. This is accomplished through information sharing about key programmatic elements such as the status of LTS planning and implementation at individual DOE sites, best management practices, and lessons learned.

LTSWG has compiled resources such as lessons learned and documentation of best practices for site transfers. These documents have been evaluated to identify opportunities for improvement, including revisions to existing agreements and the development of tools to help LM site managers to effectively complete site transfers.

Upcoming activities include updating site transfer agreements including the Site Transition Framework, various Site Transition Terms and Conditions agreements, and other documents and agreements involving LM, EM, DOE Office of Science, and NNSA that are related to transition of sites from cleanup to long-term stewardship.

Other areas covered by LTSWG include data management. The group will develop and recommend common approaches to information management with an initial focus on geographic information system (GIS) data collection and platforms for sites transitioning to LTS, including best practices for sharing site-level cleanup information through GIS. GIS efforts completed include a survey of available information, platforms in use, and internal and public access to information across organizations and development of recommend actions to better align practices and improve system compatibility. This effort included an evaluation of lessons learned related to GIS for site transitions.

A communications plan for LTSWG is in development and will describe internal and external communications for LTSWG.

The longer-term objectives of LTSWG include the following:

- Share best practices and lessons learned related to LTS
- Identify and leverage innovative technologies for LTS

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- Identify and leverage knowledge, skills, and technology needed to address emerging issues in LTS and refinements in remedies
- Foster a working environment that encourages communication and collaboration across DOE related to LTS,
- Improve the information available for strategic decision-making through discussion of critical issues related to LTS
- Provide guidance on incorporating *Closure for the Seventh Generation* recommendations into LTS planning and implementation
- Coordinate communication, education, and outreach on DOE LTS status to enable productive exchanges of information with other federal agencies, states, tribes, stakeholders, and communities

### **INTRODUCTION**

In December 2020, the US Department of Energy (DOE) National Long-Term Stewardship Working Group (LTSWG) was established as a collaboration between the DOE Office of Environmental Management (EM), the DOE Office of Legacy Management (LM), and the National Nuclear Security Administration (NNSA) to address national and cross-cutting site-level Long-Term Stewardship (LTS) activities and issues. LTSWG collaborates on high-priority LTS topics of interest, aligns strategies, shares lessons learned, leverages contacts, and makes recommendations to decision makers to resolve issues.

### **DESCRIPTION**

LTSWG fosters communication across DOE offices and with other federal agencies, states, tribes, stakeholders, and communities. This is accomplished through information sharing about key programmatic elements such as the status of LTS planning and implementation at individual DOE sites, best management practices, and lessons learned. DOE sites remain the primary points of contact with local stakeholders. The DOE LTSWG develops tools and provides recommendations to DOE leadership to foster a collaborative, consistent approach to LTS planning and execution across the DOE enterprise. LTSWG members serve on committees with members from EM, LM, and NNSA. These committees are focused on areas LTSWG has determined are priority areas for the group, including (1) site transition guidance, (2) information management, and (3) communications.

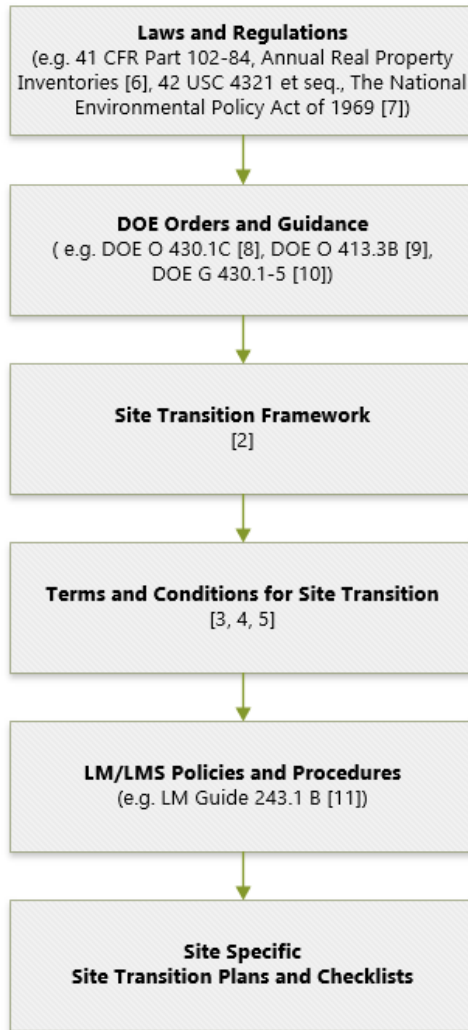
#### **Enhancing LTS Through Improvements to the Site Transition Process**

Short-term priorities for the first 2 years of the site transition guidance committee include developing a consistent approach for LTS site transfers and stewardship that addresses best practices and lessons learned. Year one activities included reviewing existing LTS documents and practices posted to the LTS Resource Center web page [1]. Following review of these resources, the committee identified opportunities for improvement, including revisions to existing policies and agreements and the development of tools to assist LM site managers in effectively completing site transfers. Review of these resources led to recommendations for updating the existing site transfer agreements including the Site Transition Framework (STF) [2] and Site Transition Terms and Conditions [3, 4, 5].

The STF developed by LM and EM in 2005 [2] is the framework that guides development of individual site transition plans. The STF includes a set of general, high-level requirements that must be met before there is a programmatic transfer of closed EM sites to LM. For the most part, it does not provide the specific requirements or tasks that must be accomplished during a transition.

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The Site Transition Terms and Conditions documents developed and approved by LM and EM [3], EM and NNSA [4], and EM and the DOE Office of Science (SC) [5] expand on the STF and provide additional detail, which is then further developed during each site transition and included in site-specific checklists and site transition plans. Figure 1 provides a simplified hierarchy of guidance, policies, and agreements affecting site transition and transfer.



*Figure 1. Site Transition Requirements Hierarchy*

A CD-4 package, which is prepared in accordance with DOE Order 413.1C, uses the STF structure to document the completion of the EM mission at the site and to validate the successful execution of the site transition plan. The CD-4 package represents agreement between EM and LM on the conditions of the site and associated activities at the time of transfer.

Table 1 shows the sites that are expected to be transferred to LM from EM and NNSA through 2050 [12]. Separately, in the next 5 years, 13 Uranium Mill Tailings Radiation Control Act Title II sites are scheduled to be transferred to LM for LTS under the provisions of general US Nuclear Regulatory Commission (NRC) licenses, after the current private licensees perform NRC-approved reclamation.

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In addition, six Formerly Utilized Sites Remedial Action Program sites are scheduled to be transferred to LM for LTS, after the US Army Corps of Engineers completes remediation within the framework of the Comprehensive Environmental Response, Compensation, and Liability Act and the National Contingency Plan. Although the STF was originally authored as an EM/LM document, the elements of the STF can be applied to other types of site transfers, and it is used by LM as the guiding document for all transfers.

*Table 1. Expected Site Transfers from EM and NNSA to LM Through 2050 [12]*

Site	Transferring Organization	Transfer Year
Kansas City Plant, MO, Site	NNSA	2026
East Tennessee Technology Park, TN, Site	EM	2028
Moab, UT, Disposal/Processing Site	EM	2035
Portsmouth, OH, Site	EM	2041
West Valley, NY, Site	EM	2041
Energy Technology Engineering Center, CA, Site	EM	2044

The STF will retain its current purpose as an overarching guidance document. Most of the STF is high-level enough that major content changes are not needed, but it will be updated to better reflect current practices and terminology and to consolidate and clarify overlapping content. LTSWG recommendations related to the STF, such as broadening the introduction to discuss phased transfers, will be considered during the STF update. Lastly, the STF currently references transfers only between EM and LM, and this may be broadened to include other Program Secretarial Offices (PSOs).

Existing Site Transition Terms and Conditions documents include those developed and approved by LM and EM [3], EM and NNSA [4], and EM and SC [5]. In the first year, LTSWG performed a comparison and gap analysis of these documents to determine whether they need to be updated to meet current DOE guidance and to determine if they can be replaced by a single agreement. LTSWG is currently using this gap analysis to prepare the draft agreements for PSO review.

In addition to updated agreements, LTSWG members have expressed the need for tools such as forms, templates, and guides to be used during site transfers to help ensure consistency and completeness in site transitions. Tools developed during the first year include a sample site transition plan outline, an STF checklist template, and a draft transition work breakdown structure. Other tools being developed include a project charter template, an annotated site transition plan template, and a “responsible, accountable, supportive, consulted, and informed” (also known as RASCI) matrix.

### Information Management and LTS

Geographic information system (GIS) data are integral to the long-term stewardship of sites and are necessary to ensure protection of human health and the environment. Such data are used in assessing environmental conditions, tracking federal assets, demonstrating regulatory compliance, and engaging with stakeholders. To mitigate risks, GIS data must be managed to ensure the data’s integrity, quality, and accessibility.

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Effective data management requires understanding the standards used in governing the data and the activities needed to curate the data over the long term. Managing GIS data is further complicated when it has numerous owners throughout its life cycle.

The LTSWG information management committee has prioritized developing and recommending common approaches to information management. Its initial focus is on GIS data collection and platforms for sites transitioning to LTS, including best practices for sharing site-level cleanup information through GIS.

To develop recommendations to better align practices and improve system compatibility, the information management committee surveyed available information, platforms in use, and internal and public access to information across organizations. This effort included identification and evaluation of lessons learned related to GIS for site transitions.

To ensure GIS data managed by LM could support LTS, the information management committee developed an Enterprise Geospatial Strategy Implementation Plan. The goal of this plan is to provide authoritative GIS data and effective technology and services to staff and leaders to support DOE's postclosure responsibilities and to ensure the protection of human health and the environment. A survey conducted by LTSWG showed that the EM and NNSA offices participating in LTSWG were unaware of comparable enterprise approaches to GIS data management within their organizations. However, they foresee a comparable approach as future products resulting from the DOE Geospatial Data Management Strategy. Activities planned for the information management committee in its second year include expanding the data survey to better understand the capabilities of the participating PSOs.

LM presented its Geospatial Data Governance Plan (GDGP)—which was developed to lay out a process for achieving GIS standards and consistency throughout LM—to LTSWG to further discussion on data management standards. The GDGP's overarching approach is to manage GIS data in a way that ensures the activities, processes, and tools result in a secure and trustworthy product. The plan was developed to provide instruction on how to implement comprehensive GIS governance within the LM Environmental and Spatial Data Management (ESDM) organizational structure.

During a site transition, the receiving organization receives GIS data not just from the predecessor organization but also from federal, state, and local sources. When receiving this data, ESDM is responsible for ensuring that the data is characterized appropriately and is as accurate as possible. These adopted data quality standards address how ESDM will improve GIS data development, integration, and management going forward. By following these developed standards, ESDM will be able to ensure that GIS data is trustworthy, reliable, and readily accessible.

### **Communications Committee**

During year one, the LTSWG communications committee focused on reviewing lessons learned as well as comments and previous communications with stakeholders. These were analyzed to identify where improvements could be made and what topics stakeholders were most interested in. Additionally, the communications committee gathered information from LTSWG members on what forms of communications would be most valuable to their organizations.

The communications committee developed a communications plan specific to LTSWG. It identifies communications priorities and strategies for the group.

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Future efforts of the communications group will be completing updates of the DOE LTS website and preparing materials such as fact sheets or newsletters. Target audiences for these will range from members of the public seeking information on LTS activities to members of DOE organizations planning for site transitions or enhancements to their LTS programs.

## CONCLUSIONS

The success of LTSWG in its first year of existence has convinced DOE and NNSA to continue supporting this collaborative group. The longer-term objectives of LTSWG are the following:

- Share best practices and lessons learned related to LTS
- Identify and leverage innovative technologies for LTS
- Identify and leverage the knowledge, skills, and technology needed to address emerging issues in LTS and refinements in remedies
- Foster a working environment that encourages communication and collaboration across DOE related to LTS
- Improve the information available for strategic decision-making through discussion of critical issues related to LTS
- Provide guidance on incorporating *Closure for the Seventh Generation* [13] recommendations into LTS planning and implementation
- Coordinate communication, education, and outreach on DOE LTS status to enable productive exchanges of information with other federal agencies, states, tribes, stakeholders, and communities

As the current LTSWG committees meet their goals and new priorities are identified, new committees may be established to meet the needs of LTSWG.

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