Savannah River Site

Land Use Plan

May, 2013

SRNS-RP-2013-00162

SRNS-RP-2013-00162

Table of Contents

Executive Summary

1.0 Purpose

Effective decision making, management and protection of Savannah River Site (SRS) land, facilities, and environment is necessary to ensure the continuing viability and availability of land to serve Department of Energy (DOE) missions and to ensure continuing SRS contribution to the economic health of the region. Together, the Savannah River Site Land Use Plan and Ten Year Site Plan integrate land use planning with real property acquisition, utilization, maintenance, recapitalization, disposition, and long term stewardship, and tie them to the budget planning process to meet lifecycle mission requirements and support future initiatives.

The specific purpose of this plan is to describe the current and future use of SRS land and how land is managed. This includes improvements, facilities, structures, and fixtures located on SRS land. This plan provides:

1) a description of the current state of SRS land use,
2) the sources of land use requirements for SRS,
3) a discussion of future SRS land use,
4) a description of the SRS land use planning and control process, and
5) a description of the key issues impacting SRS land use.

This document serves as a resource for internal use by SRS managers and planners. It is intended to serve as a tool for managing and improving integration of the overall system.

2.0 Executive Summary

The Savannah River Site (SRS) was built in the early 1950s to produce materials used in nuclear weapons, primarily tritium and plutonium-239. The Site originally included five reactors, two chemical separations plants, a heavy water extraction plant, a nuclear fuel and target fabrication facility, a tritium extraction facility, a research support laboratory (now Savannah River National Laboratory) and waste management facilities.

Today, SRS is in a key transition period in terms of missions and infrastructure. For another 30-40 years, SRS will be cleaning up the environment from the impacts of the heavy nuclear materials production activities of the 1950's - 1980's and completing and operating major facilities supporting disposition of liquid waste and surplus weapons plutonium. During that same time period but also stretching further in the future, the enduring SRS missions for nuclear materials management and tritium will continue, and site assets and capabilities will be leveraged to support key environmental stewardship, national security, and clean energy objectives.

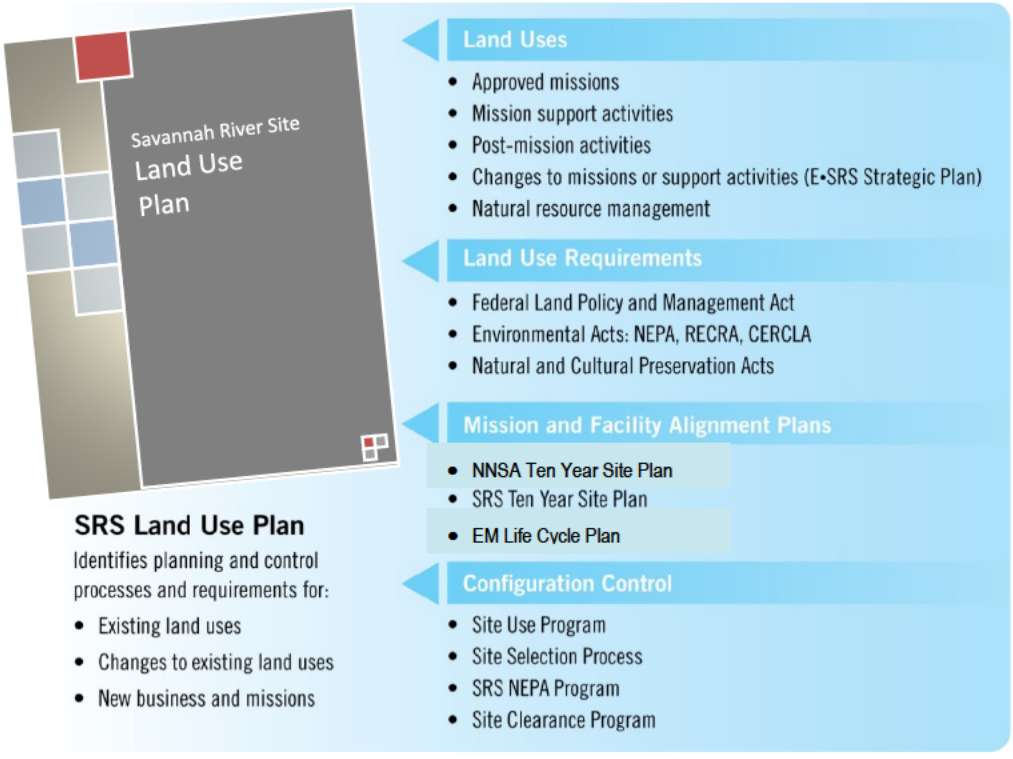
Key issues that impact SRS land use management are, 1) the need to strategically connect management of site assets and resources with the requirements of ongoing missions and with planning for future missions and new business/uses of site assets, 2) the need for substantial investment in site infrastructure, and 3) reinvestment in the Savannah River National Laboratory (SRNL) complex to ensure

its continued support of regional, national and international missions. These issues are discussed in Section 3.0.

All SRS land is owned and controlled by the US Department of Energy. Specific uses of SRS land are determined by the missions established for the DOE and other missions or uses established by Congress. SRS land use must comply with applicable congressional direction and is primarily guided by the Federal Land Policy and Management Act; the National Environmental Policy Act (NEPA); the Resource Conservation and Recovery Act (RCRA); the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); the Endangered Species Act; the Migratory Bird Treaty Act; the Bald and Golden Eagle Protection Act; the National Historic Preservation Act; and the Archaeological Resources Protection Act.

Departmental land and facilities are valuable national resources. DOE Order 430.1B, *Real Property Asset Management*, requires the SRS to establish and maintain a land use management process and plan as part of the integrated management of site assets. All uses of SRS land are documented and approved via the Site Use Program, the Site Selection Process, the SRS Environmental Evaluation Checklist, and the Site Clearance Program. Figure 2-1 summarizes the elements of SRS land use planning and control.

Figure 2-1, SRS Land Use Planning and Control



Executive Summary

The documents listed below describe various SRS-specific land use planning and control requirements. These documents provide detailed information about SRS missions, facilities and infrastructure, environmental protection actions, and other resource protection requirements. This plan acknowledges the roles but does not duplicate the details of:

EM Life Cycle Plan	Scope and schedule for Environmental Management cleanup
SRS Ten Year Site Plan	Integrated site alignment and management requirements for facility and infrastructure support of EM and NNSA missions
Environmental Evaluation Checklist	Evaluation of the environmental protection requirements and determination of actions for all site activities
Land Use Control Assurance Plan for the Savannah River Site	Required actions for restricting the land use of waste units regulated by RCRA and CERCLA
Cultural Resources Management Plan	Identifies historic properties for planning to avoid, minimize or mitigate adverse effects
Archaeological Resources Management Plan	Identifies areas with below-ground historic significance for planning to avoid, minimize or mitigate adverse effects
Natural Resources Management Plan	Plan for DOE's ongoing management of natural resources with the Forest Service, Ecology Lab, and other SRS organizations.

SRS utilizes an Integrated Planning Team (IPT) to oversee site wide planning activities. This team, which has broad-based DOE and Contractor membership, ensures that SRS planning functions work together so that essential infrastructure, facilities, land, and natural and cultural resources are effectively and efficiently maintained and preserved and support the needs of current and emerging missions.

Existing Missions and Uses

The primary SRS missions and associated land use are Environmental Management (EM) legacy cleanup, National Nuclear Security Administration (NNSA) tritium supply and nuclear nonproliferation, and the Savannah River National Laboratory. Table 2-1, SRS Land Use Summary, provides a broad categorization of site land use. It shows that 92% of the site is natural resource management only. Existing missions, mission support functions and other restricted areas occupy a minor portion of the site's total land area.

Table 2-1, SRS Land Use Summary

Federal Land Use	Approximate Area	
	Acres	Percent
Existing SRS Missions/ Mission Support	14,076	7%
Restricted (environmental and Natural resource protection)	640	< 1%
Natural Resource Management	183,628	92%
Site Total	198,344	100%

Current uses of SRS land are documented by NEPA evaluations and resultant action decisions and by DOE-approved Site Use Permits. Documentation of the environmental and site use evaluations is centrally maintained for all SRS land use. In addition, SRS land use is maintained in graphical form via the electronic SRS Geographic Information System (GIS) tool.

Executive Summary

Process for Land Use Changes

This plan provides detailed information regarding the processes used for decision making about use of the site's land and associated facilities and infrastructure to support changes to existing missions and new and expanded missions and mission support activities. Changes to SRS land use include but are not limited to the following: New facility or structure sites, enlargement of facility areas, utilities, right-of-ways, borrow pits, spoil piles, remediation sites, well sites, storage and parking areas, research areas, and timber silvicultural activity.

All changes to SRS land use must undergo an evaluation for NEPA compliance and adhere to the Site Use Process. Land use changes that meet prescribed land area, cost, or environmental criteria may also undergo a Site Selection evaluation. Appropriate evaluations of historical, cultural, and natural resource impacts are included. Based on the results of the evaluations, land use changes are documented and approved by DOE via a Site Use Permit. All construction, alteration, or demolition activities also require a NEPA evaluation and a Site Clearance permit. Public involvement is included when appropriate as directed by DOE.

The electronic SRS GIS tool assists with evaluation of land use changes. The GIS integrates multiple sets of geographically referenced data received from various sources to create customized maps within required contexts. Among the many uses of the GIS is the creation of maps that enable comparisons between current and future land uses. Also, GIS layering is used to analyze for potential conflicts based on existing uses and resource conditions.

3.0 SRS Land Use Overview

Assumptions

The foundational assumptions that guide all decisions regarding future development of SRS land and other physical assets are:

- SRS will maintain its current physical boundary under the ownership of the federal government in perpetuity, except where lease or transfer to the private/public sector in accordance with applicable laws/regulations aligns with DOE objectives and enhances economic development in the surrounding region.
- EM cleanup operations will be completed and transition to long-term stewardship activities
- NNSA Nuclear Nonproliferation missions will be completed, while NNSA Defense Programs will continue in perpetuity
- SRS has an enduring mission as a nuclear materials enterprise to solve some critical issues for national security, clean energy development, and environmental management.
- SRS's designation as a National Environmental Research Park will continue and the associated DOE Research Set Aside Areas will be maintained.
- Natural resources are valued assets that require active management. Unique ecological habitats, where practical, will be protected and enhanced.

Current Land Use

The Savannah River Site (SRS) covers 198,344 acres (310 square miles) in Aiken, Allendale and Barnwell counties of South Carolina. The Site boundary is approximately 12 miles south of Aiken, SC and 15 miles southeast of Augusta, Georgia. More than 90 percent of the Site is managed forest or natural vegetation. Production, production support, service, research and development, waste management, roads and utility uses account for the remaining portion of the Site.

The original facility layout of SRS located major radioactive operations away from the Site boundaries, creating a buffer zone that provides additional security and reduces the risk of accidental exposure to the general public.

SRS is bounded on its southwestern border by the Savannah River for about 35 river miles and is approximately 160 river miles from the Atlantic Ocean. The Savannah River is used as a drinking water supply source for some residents downriver of SRS. The river also is used for commercial and sport fishing, boating and other recreational activities. There is no known use of the river for irrigation by farming operations downriver of the Site.

The information below presents an overview of current SRS missions. The primary missions are EM, NNSA tritium and NNSA nonproliferation. Other key site activities are also included. Additional details are available in the *Savannah River Site Ten Year Site Plan*. Figure 3-1 shows a map of the location of the Site's missions. While SRS missions are well planned, the ability to be responsive to changes to National priorities is a baseline premise to SRS operations. In addition, the map in Figure 3-2 illustrates typical environmental/ecological management areas.

SRS Land Use Overview

Environmental Management (EM): The EM mission and goal is to complete SRS cleanup. Cleanup is currently projected to be complete by 2042. Specific elements of the EM work scope include:

- Radioactive Liquid Tank Waste Stabilization and Disposition
- Solid Waste Stabilization and Disposition
- Nuclear Materials Stabilization and Disposition
- Used (Spent) Nuclear Fuels Stabilization and Disposition
- Soil and Water Remediation and Facility Deactivation and Decommissioning
- Safeguards and Security
- Landlord Support Services

National Nuclear Security Administration (NNSA): In support of national defense missions, the NNSA Defense Program (NNSA-DP) at SRS has been designated to continue as DOE's center for the tritium supply for the enduring nuclear weapons stockpile. Also, the NNSA Nuclear Nonproliferation Program (NNSA-NN) is currently establishing the capability to disposition surplus plutonium at SRS via two projects: the Mixed Oxide Fuel Fabrication Facility and the Waste Solidification Building (WSB). The specific elements of the NNSA work scope are:

- Tritium Supply – extraction of tritium from irradiated target rods and management of the tritium inventory for the nuclear stockpile.
- Nuclear Stockpile Maintenance – loading of tritium and deuterium into reservoirs that are used in the gas transfer system of a nuclear weapon.
- Nuclear Stockpile Evaluation – surveillance of gas transfer systems to assure reliability in the absence of nuclear testing.
- Helium-3 Recovery – recovery of this byproduct of tritium's radioactive decay for use in neutron detectors and various commercial applications.
- Fissile Material Disposition (NN) – disposition of special nuclear materials including highly enriched uranium (HEU) and surplus weapons-usable plutonium fuel for commercial nuclear reactors and conversion of the material into a form that cannot be used in a nuclear weapon.

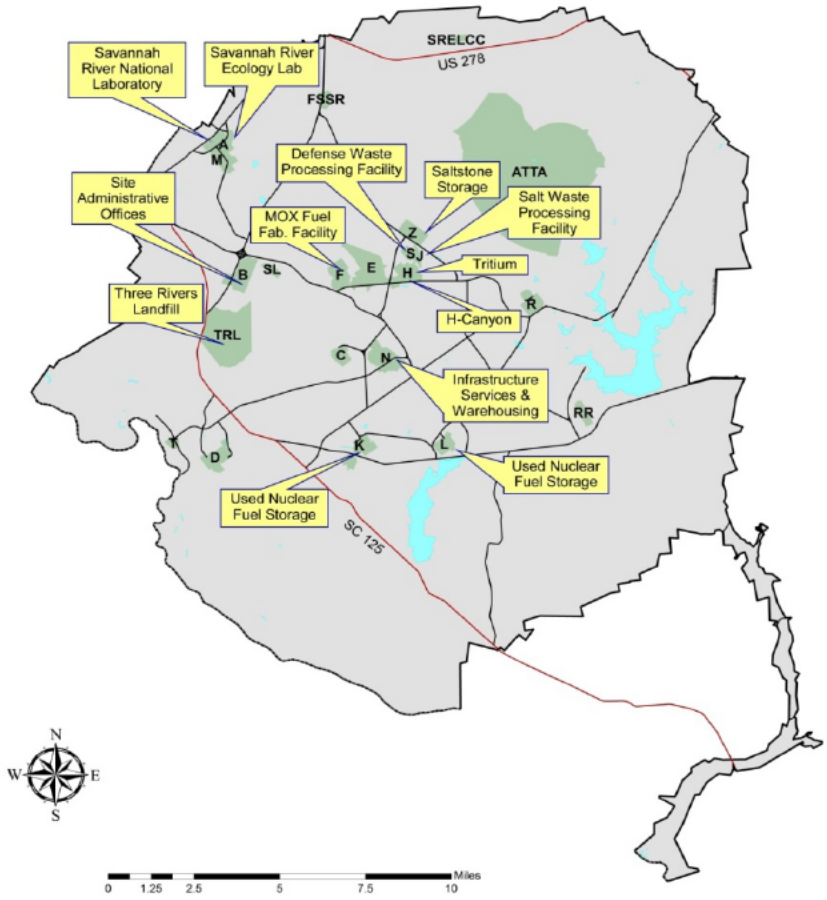
Savannah River National Laboratory (SRNL): The SRNL mission, as DOE-EM's multi-program applied science laboratory, is to provide technology based solutions for the challenges associated with cleaning up the environmental legacy from the weapons program and meeting the country's national and energy security objectives. To support these programs, SRNL applies technology through multidisciplinary programs of scientific research and engineering.

Other Key Site Activities:

- *SREL:* The University of Georgia operates the Savannah River Ecology Laboratory for DOE-SR. SREL provides DOE, stakeholders and the public an independent assessment of the impacts of SRS operations on the environment, delivered through research, education and public outreach programs.
- *USFS-SR:* The United States Department of Agriculture Forest Service – Savannah River conducts a comprehensive natural resource management program for the SRS under an interagency agreement with DOE-SR. This includes wildland fire suppression, threatened and endangered species restoration, invasive species control, habitat management, watershed management, boundary maintenance, management of secondary roads, and related research.
- *WSI-SRS:* WSI-SRS provides paramilitary security services for the physical protection of security interests. These services include Law Enforcement, Canine, Special Response Team, Material Transportation, Helicopter and Administrative Operations to support the SRS Mission.
- *United States Army:* SRS has an interagency agreement with the U.S. Army for the use of specific areas of the Site to conduct low intensity, non-live-fire tactical maneuver training activities in support of current and future National Defense mission requirements.

SRS Land Use Overview

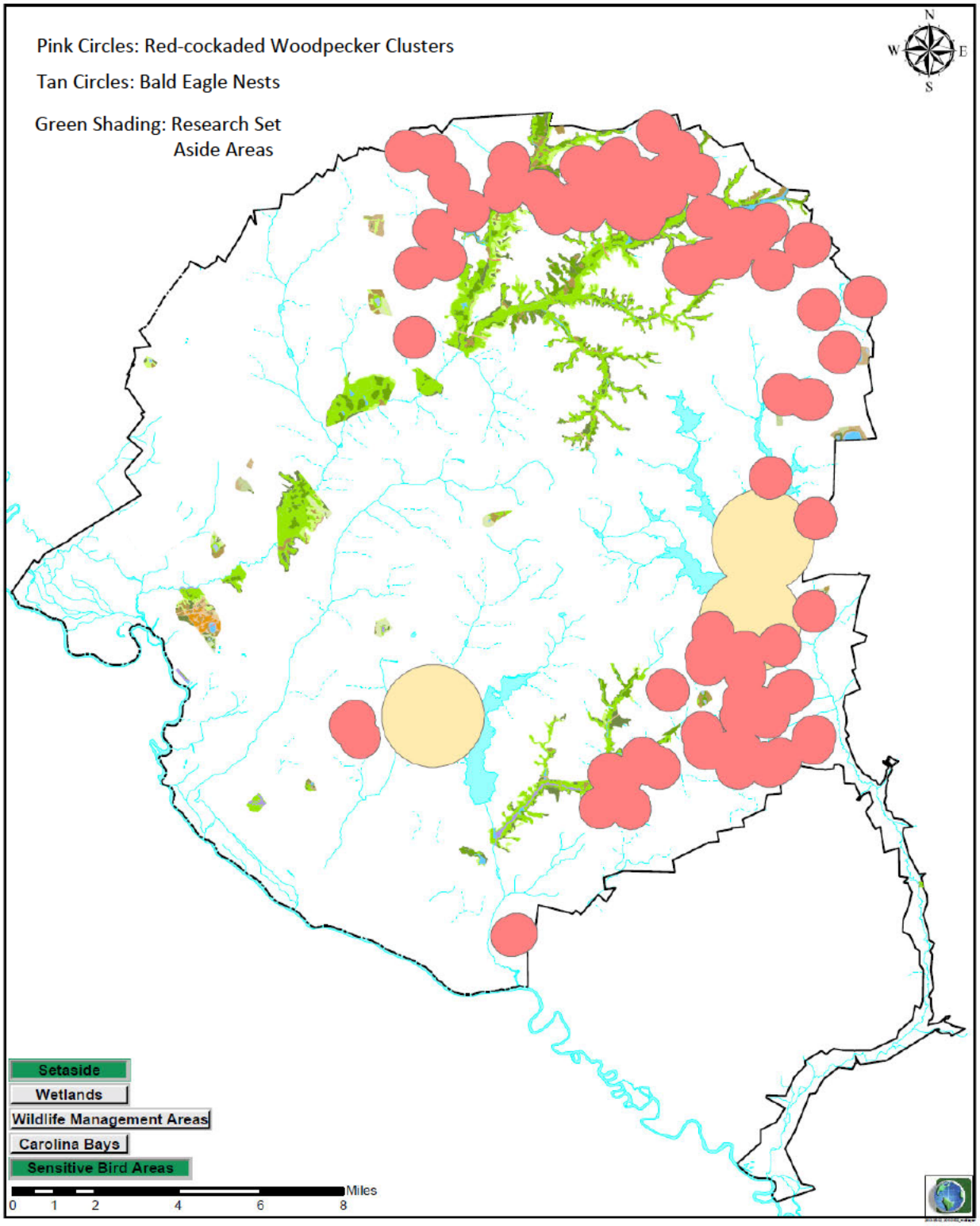
Figure 3-1, Current Savannah River Site Operations



The following listing of missions and mission support functions by Site Area supplements the site map shown in Figure 3-1 above:

A Area	SRNL, SREL, SRS Operations Center, administrative offices & infrastructure support
B Area	Administrative offices, laboratory facilities, and protective force operations
C Area	Administrative offices, infrastructure operations & heavy water storage
D Area	Deactivated
E Area	Management of solid wastes from legacy, current and new missions
F Area	Waste management operations, MFFF, WSB, analytical laboratories, and TRU waste processing
H Area	Nuclear chemical separations and waste management operations, Tritium, and training
K Area	Receipt and storage of Used Nuclear Fuel, heavy water storage
L Area	Used Nuclear Fuel management & operations, heavy water storage
N Area	Infrastructure services & facilities, including construction support, Stores and warehouses
P Area	Deactivated
R Area	Deactivated
S Area	Liquid radioactive waste immobilization and storage
Z Area	Treatment and disposal of low radioactivity salt solution from various sources
ATTA	Advanced Tactical Training Area for protective forces training
RR	SRS Rail Yard facilities and administrative offices

Figure 3-2, Illustration of Typical Environmental/Ecological Management Areas



Leases, Transfers and Other Land Use Actions

Land leases, transfers and other land use actions are governed by DOE Order 430.1B, Section 4.b, Requirements – Real Estate. These requirements include acquisition, planning and management, determination of excess, and disposal. Also, the Code of Federal Regulations, 10 CFR 770, addresses requirements for transfer of real property at defense nuclear facilities for economic development. 41 CFR, Chapters 101 and 102, Federal Property Management Regulations, (reference *d*), and the DOE *Real Estate Process—Desk Guide for Real Estate Personnel* (reference *f*) provide detailed guidance and procedures for completing real estate actions. Any property transfer at SRS must also comply with the *Federal Facility Agreement for the Savannah River Site* (FFA) and Section 120(h) of CERCLA, 42 U.S.C. § 9620(h).

To support its missions and regional economic development initiatives, SRS leases land and space from outside of the site boundary and provides land and space to others via lease, permit, transfer or other agreement from within the site boundary. SRS Land used by others is shown in Table 3-1. Land owned by other parties that SRS uses is shown in Table 3-2.

Table 3-1, SRS Land Assigned for Use by Others

Land Use	Party	Area (Approx.)	Type
SREL Lab Facilities and Offices	University of Georgia	65 Acres	Cooperative Agreement
Conference Center	University of Georgia	68 Acres	Permit
Three Rivers Landfill	Three Rivers Solid Waste Authority	1,380 Acres	Permit
Crackerneck Wildlife Management Area	South Carolina Dept. of Natural Resources	10,460 Acres	Cooperative Agreement
Cell Phone Towers	SBA Towers and Allied Wireless	8 Acres	Lease
Laboratory Space	Dept. of Justice FBI	6,700 Sq. Ft.	Lease
ATM Stations and Offices	SRP Federal Credit Union	793 Sq. Ft.	Lease
Total		11,982 Acres	

Note: In addition to the above, ownership of 2,487 acres has been permanently transferred to Barnwell County for use as an industrial park.

Table 3-2, Land Leased by SRS			
Land Use	Party	Area (Approx.)	Type
Laboratory Space (Waste Treatment and Biotechnology Research)	Aiken County, SC	20,800 Sq. Ft.	Lease
Laboratory Space (Hydrogen Research)	Aiken County, SC	25,632 Sq. Ft.	Lease
Office Space (Research Support)	Aiken County, SC	12, 148 Sq. Ft.	Lease
Groundwater Sampling	Various Individuals and Organizations in SC and GA	0.52 Acres	Lease
DOE Meeting Center	GSA Lease	1,815 Sq. Ft.	Lease
Total		60, 395 Sq. Ft.	

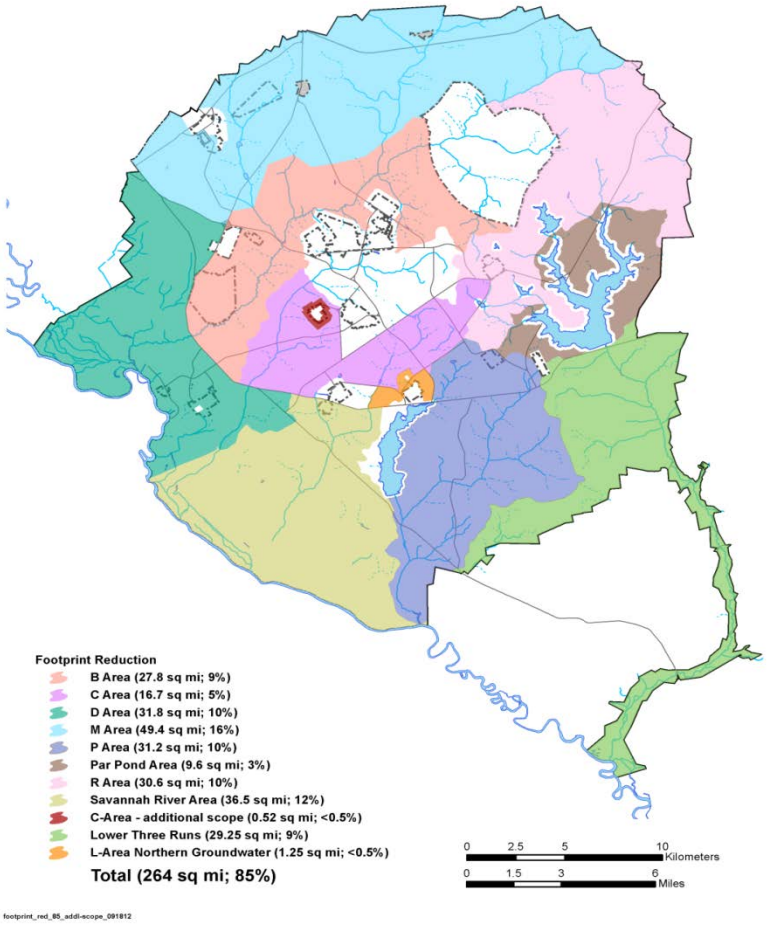
Future Land Use

It is assumed that SRS will maintain its current physical boundary under the ownership of the federal government in perpetuity, except where lease or transfer to the public/private sector aligns with DOE objectives and enhances economic development in the surrounding region. No land is to be used for residential use. The American Reinvestment and Recovery Act of 2009 has accelerated reduction of the site's contaminated footprint. This has made additional land available for re-use or development consistent with environmental, ecological, regulatory, archaeological and other constraints. There are currently no plans for purchasing additional land.

The Environmental Cleanup and Nuclear Nonproliferation missions at SRS are projected to continue and be completed within thirty to forty years, with long term environmental stewardship responsibilities continuing indefinitely. The EM Program Management Plan describes the End State Vision for completion of the cleanup mission. Research and Defense Programs missions at SRS are expected to continue indefinitely. The SRS strategic plan, titled *Enterprise•SRS (E•SRS)*, describes the strategies for support of these continuing DOE missions as well as planning for potential future missions in the areas of environmental stewardship, national security, and clean energy.

Environmental cleanup efforts at SRS have resulted in 264 square miles of the site being made available for potential re-use or development, as illustrated by the map in Figure 3-2. Evaluations of the scope and duration of current and projected missions, along with site areas set aside for long term environmental and natural resource protection requirements, show that there are significant SRS land areas that are suitable for potential future re-use or development (see Figure 5-3).

Figure 3-2, SRS Footprint Reduction



The broad categories of SRS land uses are expected to continue to be: Production/Industrial, Support, Environmental Protection, and Natural Resource Management. Incorporated in these uses is maintenance of a safety buffer zone between site mission activities and the site boundary.

This Land Use Plan describes the processes SRS uses for evaluation and integration of land use changes, including new business and missions, into the site's land use planning.

Fifty Year Land Use Outlook

EM missions will be completed with long term environmental stewardship responsibilities for remediated, restored, and protected contaminated areas remaining. Site landlord responsibilities may be transferred from EM to another federal agency.

Research and Defense Programs missions continue, as do SREL ecological and environmental research and US Forest Service land management responsibilities. New mission activities stemming from the site's core competencies in nuclear materials management are expected to have begun, supporting national initiatives in environmental stewardship, national security, and clean energy.
It is expected that SRS will maintain its current physical boundary except for additional, relatively small land transfers that may occur to further the accomplishment of DOE objectives and/or enhance regional economic development. Any additional land leases are likely to be within the current SRS boundary.

Land Use Beyond Fifty Years

Land use beyond fifty years is expected to be consistent with the fifty-year scenario. Research and Defense Programs missions, new missions, and ecological and environmental research and land management responsibilities continue. The decommissioned/controlled areas will be the primary focus of the SRS long term environmental stewardship functions.

Land Use Issues

Long Term Application of SRS Assets

The key issue facing SRS is the need to strengthen the strategic connection of management of site assets and resources with the requirements of ongoing missions and with planning for future missions and new business/uses of site assets.

While the tritium mission at SRS continues long term and nonproliferation missions continue for the next 30-40 years, progressive completion of the EM cleanup mission is making SRS assets and capabilities available for other uses. This creates the opportunity to leverage SRS assets and capabilities to play a needed role for DOE in the areas environmental stewardship, national security and clean energy. Strengthening of the strategic connection with the programmatic and organizational structure within DOE is needed to take fullest advantage of the opportunities offered by strategic utilization of SRS assets.

Also, the prospect of new missions, new business and new uses for SRS assets may create additional need for determinations regarding land leases and transfers depending on the nature of the initiatives, e.g., type of activity and partnering and funding arrangements.

Infrastructure Investment

A significant portion of the SRS infrastructure is sixty years old and repair parts are increasingly difficult to find. Investment in maintenance of the site's infrastructure has not kept pace with the need, as shown by the fact that a key indicator, Deferred Maintenance, is increasing rapidly. Some systems may soon require complete recapitalization. The site uses its Critical Infrastructure Integrated Priority List, whereby infrastructure projects are compiled, reviewed and prioritized, to direct available funding to the most critical needs. NNSA has established two line item projects that address infrastructure for the Tritium facilities. However, substantial additional investment in Capital Equipment and General Plant Projects is needed to return site infrastructure elements to an acceptable condition and minimize risk impacts to safety and health, regulatory compliance, mission support and cost.

SRNL Reinvestment

As DOE-EM's multi-program applied science laboratory, SRNL is vital to achieving Site, national and other EM missions. SRNL is a leader in providing technical support to a widely diverse array of regional, national and international missions of importance to the federal government. SRNL is also leading many of the *Enterprise•SRS* strategic initiatives. Substantial reinvestment within the SRNL complex is crucial to ensure these missions are supported. SRNL needs and priorities are included in the site's Critical Infrastructure Integrated Priority List and the Integrated Facilities & Infrastructure Crosscut Budget, both of which are included in the TYSP.

4.0 Land Use Planning and Control for Existing Missions

Cleanup, Production and Support Missions

DOE requirements for land to support the congressionally approved missions (Section 3.0) are described in the TYSP which incorporates requirements contained in the EM Program Management Plan and the NNSA-SRSO 25 Year Site Plan. The EM and NNSA documents describe the scope, duration, deactivation, decommissioning, remediation, and long term stewardship (LTS) requirements for each mission. The TYSP aligns facility and infrastructure support with EM and NNSA missions.

Specific environmental restoration or protection requirements that impact land use are provided by established NEPA reviews, the SRS Federal Facility Agreement, and the SRS Resource Conservation and Recovery Act permit for individual facilities or waste units. NEPA requires all Federal agencies to consider the impact(s) of their proposed actions on the "human environment" before the commitment of significant resources and project implementation. Site procedure 3Q 5.1 establishes responsibilities and requirements for the implementation of, and compliance with, the NEPA process as specified in 10 CFR 1021. This procedure also established the responsibilities and requirements for preparation and use of the Environmental Evaluation Checklist (EEC: Form OSR 14-347 LN). The EEC which initiates the EEC process, is used to identify potential environmental impacts and regulatory requirements (e.g., Federal and Stare required permits) associated with proposed SRS actions. Decisions reached during NEPA evaluations are documented in the site EEC database. This database documents NEPA determinations from 1982 to present.

Use of all lands and waters on the SRS are coordinated via the Site Use Program. Land use requires an approved Site Use Permit. Approved Site Use (SU) Permits are housed in the site Electronic Document Workflow System (EDWS) which is maintained by Records Management. In addition, a site wide coverage depicting all approved SU permit boundaries is available on a Computer Aided Design file. Each SU boundary is also linked to a Site Use System Administration (SUSA) database. This database provides SU permit number, description, responsible organization, approval date, and proposed termination date.

The TYSP also describes the processes used to meet requirements for real property inventories, asset management and funding requirements, and disposition and remediation/LTS status for facilities and infrastructure. This includes use of the Facilities Information Management System, the official DOE real property inventory database for all owned and leased lands, buildings, trailers, and other structures and facilities.

Natural and Cultural Resource Management

In cooperation with the USFS-SR, SREL and other SRS organizations, DOE actively manages natural resources at SRS. Major activities include wildland fire prevention and response, forest products and silviculture development, watershed management, invasive species control and the protection of threatened and endangered species. Detailed information on SRS natural resources can be found in DOE's *Natural Resources Management Plan*.

Designated as the first of seven National Environmental Research Parks (NERP) by the Atomic Energy Commission (now the Department of Energy), SRS is an important ecological component of the Southeastern Mixed Forest Ecoregion. Integral to the SRS NERP are the DOE Research Set-Aside Areas.

Land Use for Existing Missions

Scattered across the SRS, these thirty tracts of land have been reserved for ecological research and are protected from public access and most routine Site maintenance and forest management activities. Ranging in size from 8.5 acres to 7,364 acres, the thirty DOE Set-Aside Areas total 14,005 acres and comprise approximately 7% of the Site's total area. Many long-term ecological studies are conducted in these Set-Aside areas, which also serve as control areas in evaluations of the potential impacts of SRS operations on other regions of the Site. The SREL is custodian of these set-aside areas and oversees their management and protection. The SREL also serves as point of contact for off-site organizations and individuals interested in SRS NERP research opportunities.

DOE Policy 141.1, DOE Management of Cultural Resources, identifies 24 laws, regulations, Executive orders, and guidance that apply to cultural resource management. Cultural resources include archaeological sites/artifacts, and natural resources and sacred objects of importance to American Indians. Doe management responsibilities at SRS include identification, evaluation and protection of archaeological historic sites, including artifact curation and other mitigative measures. SRS cultural resource compliance is based on a programmatic memorandum of agreement among DOE-SR, the South Carolina State Historic Preservation Office (SHPO), and the Advisory Council on Historic Preservation (ACHP). Through a cooperative agreement between DOE-SR and the South Carolina Institute of Archaeology and Anthropology, the Savannah River Archaeological Research Program (SRARP) provides the technical expertise to help DOE meet cultural resources regulatory requirements for all SRS operations. The SRARP prepared, updates and helps implement the *Archaeological Resource Management Plan* through an integrated program of archaeological protection, compliance based research, and public education and outreach.

To comply with the requirements of Federal historic preservation laws and regulations involving DOE operations at SRS, DOE developed a programmatic assessment and a *Cold War Cultural Resources Management Plan* (CRMP). The CRMP describes the Site's Cold War built environment, identifies Cold War era historic properties, and serves as a management tool to avoid, minimize, or mitigate adverse effects to these properties. Under this plan, a structure may be preserved and maintained or it might be thoroughly photographed and documented then demolished. The CRMP was developed and is managed in consultation with the SHPO, the ACHP, the SRS Citizens Advisory Board, Citizens for Nuclear Technology Awareness, and local communities.

5.0 Process for Future Land Use Changes

Introduction

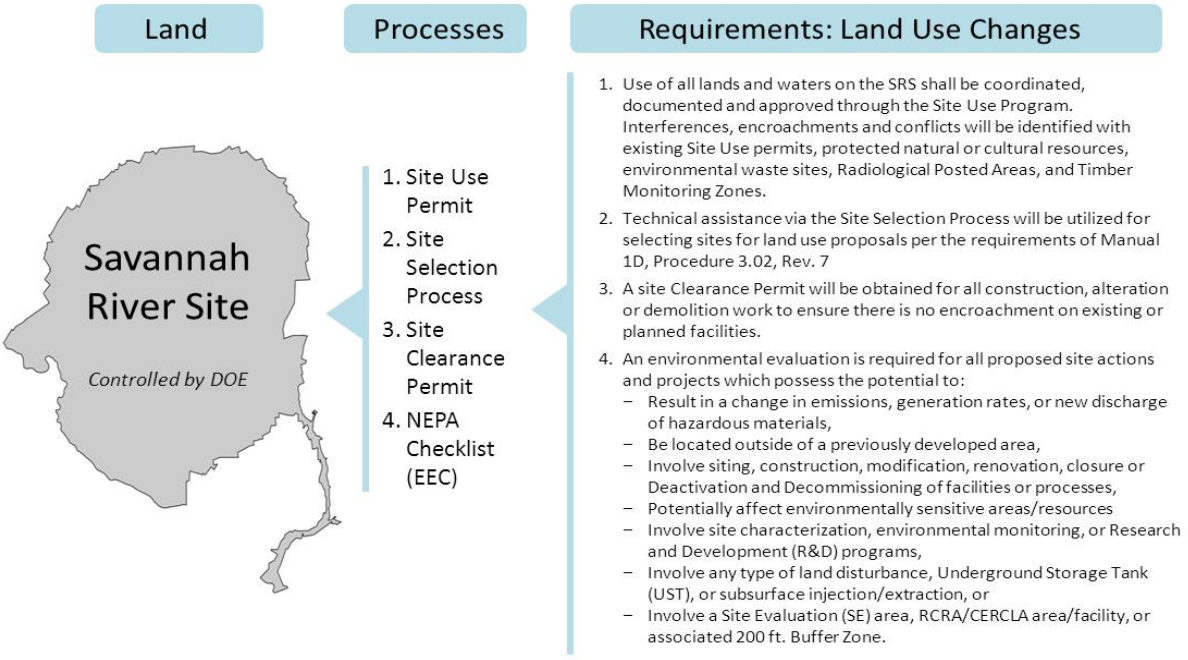
Proposed land uses must be compatible with SRS missions, research goals, natural and cultural resource management goals, local community goals and the land itself. The land and facility use planning process provides a structure to ensure site development and re-use are based on the shared long-terms goals and objectives of the DOE, the Site and its stakeholders.

The *SRS Land Use Plan* guides site land, facility, and infrastructure investment and use decisions to support all applicable requirements and implementation of the SRS Strategic Plan, *Enterprise•SRS*, which includes both support for current DOE missions and planning for strategic initiatives. The ability to anticipate the future uses of land and facilities with their current condition and constraints is essential in order to sustain the Site as a national asset.

Process Overview

Changes to land use at SRS are planned and controlled primarily via the four processes shown in Figure 5-1. These processes ensure timely communication of land use proposals and involvement of the proper managers and subject matter experts for DOE, tenant, subcontractor and other federal, state, and local entities in conducting evaluations and making final decisions. These processes are documented in SRS Manual 1D, Procedure 3.02, *Site Real Property Configuration Control*; and Manual 3Q, Procedure 5.1, *National Environmental Policy Act Implementation (NEPA) and the Environmental Evaluation Checklist.*

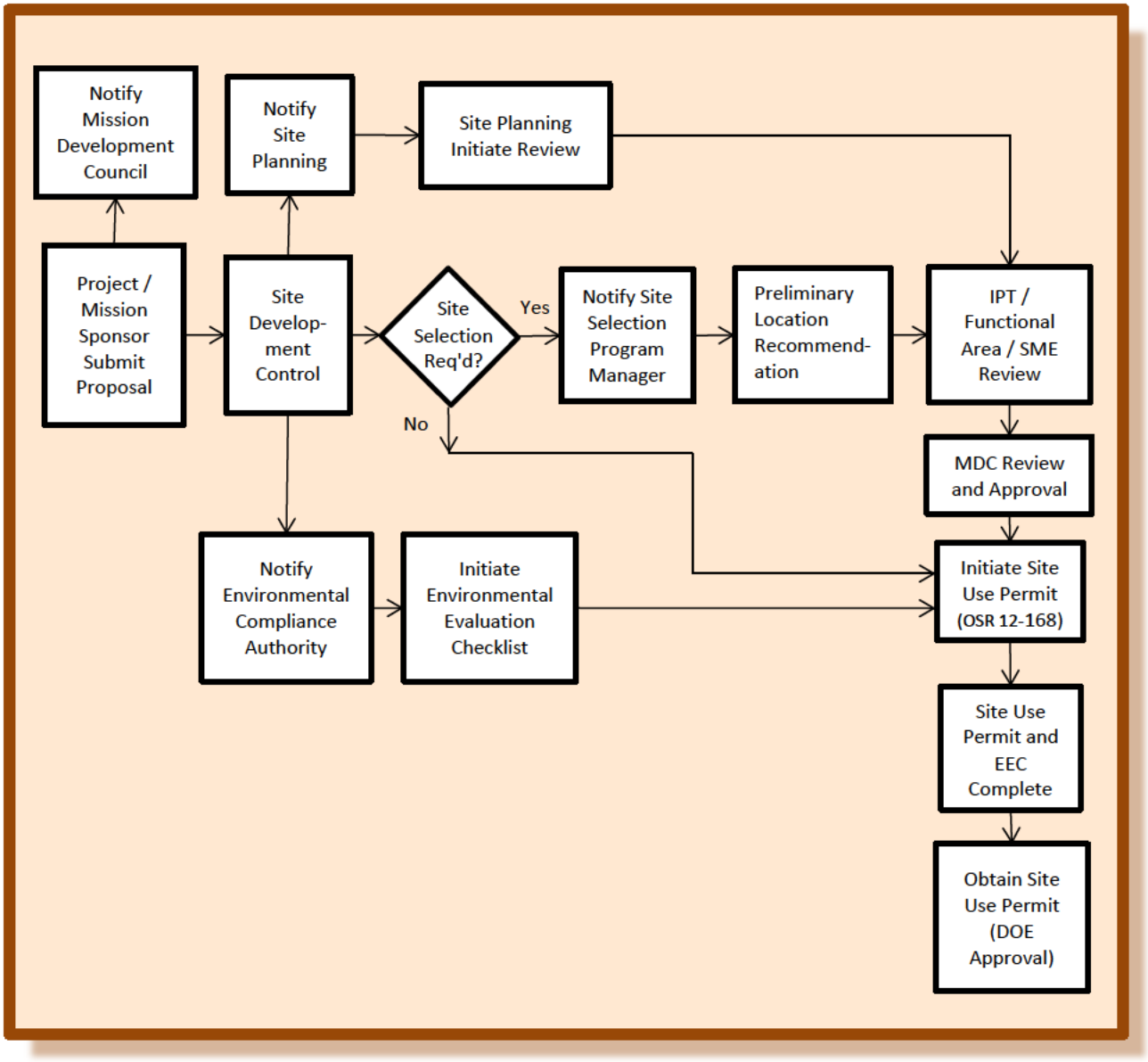
Figure 5-1, Processes for Land Use Changes



Changes to SRS land use include but are not limited to the following: New facility or structure sites, enlargement of facility areas, utilities, right-of-ways, borrow pits, spoil piles, well sites, storage and

parking areas, and research areas. All changes to SRS land use must undergo an evaluation for NEPA compliance and are documented and approved by DOE via a Site Use Permit. All construction, alteration, or demolition of facilities and utilities on SRS land must be documented and approved via a Site Clearance permit. Some land use changes that meet prescribed land area, cost, or environmental criteria may undergo a Site Selection evaluation. These processes incorporate appropriate evaluation of historical, cultural, and natural resource impacts and determination of required actions. When required, public involvement is included and is accomplished under DOE direction. The steps for obtaining approval for land use changes are shown in Figure 5-2.

Figure 5-2, Integrated Land Use Change Approval Process



Process Description

The central process for making changes to SRS land use is the Site Use Permit process. SRNS administers this process under direct authority and oversight of DOE-SR.

Land Use Changes

Requests for land use changes must be documented and submitted for evaluation and DOE approval by submitting a formal request for a Site Use Permit to the Site Use Coordinator (web site; *http://facilities-1.srs.gov/SDCPM.htm*). The SRS Integrated Planning Team, 1) ensures that prospective project/mission sponsors are informed about the requirements of the Integrated Land Use Change Approval Process, and 2) provides general oversight regarding the effectiveness of this process.

The Site Use Coordinator coordinates the participation of all key evaluators and decision makers and investigates specific parameters prescribed by the site use process. The Site Use Coordinator also ensures the involvement of the appropriate Environmental Compliance Authority, the Site Planning Group, and when required, the Site Selection Committee. In addition, the Site Use Coordinator either performs or ensures performance of studies to identify conflicts with existing Site Use Permits, known environmental waste sites, Radiological Posted Areas, and Timber Monitoring Zones.

Evaluation of impact(s) of proposed actions on the human environment before the commitment of significant resources and project implementation, in compliance with NEPA requirements, is accomplished through completion of an Environmental Evaluation Checklist. Proper completion of this process determines whether or not a more in-depth environmental evaluation is warranted. Determinations and decisions are provided for the Site Use Permit decision process.

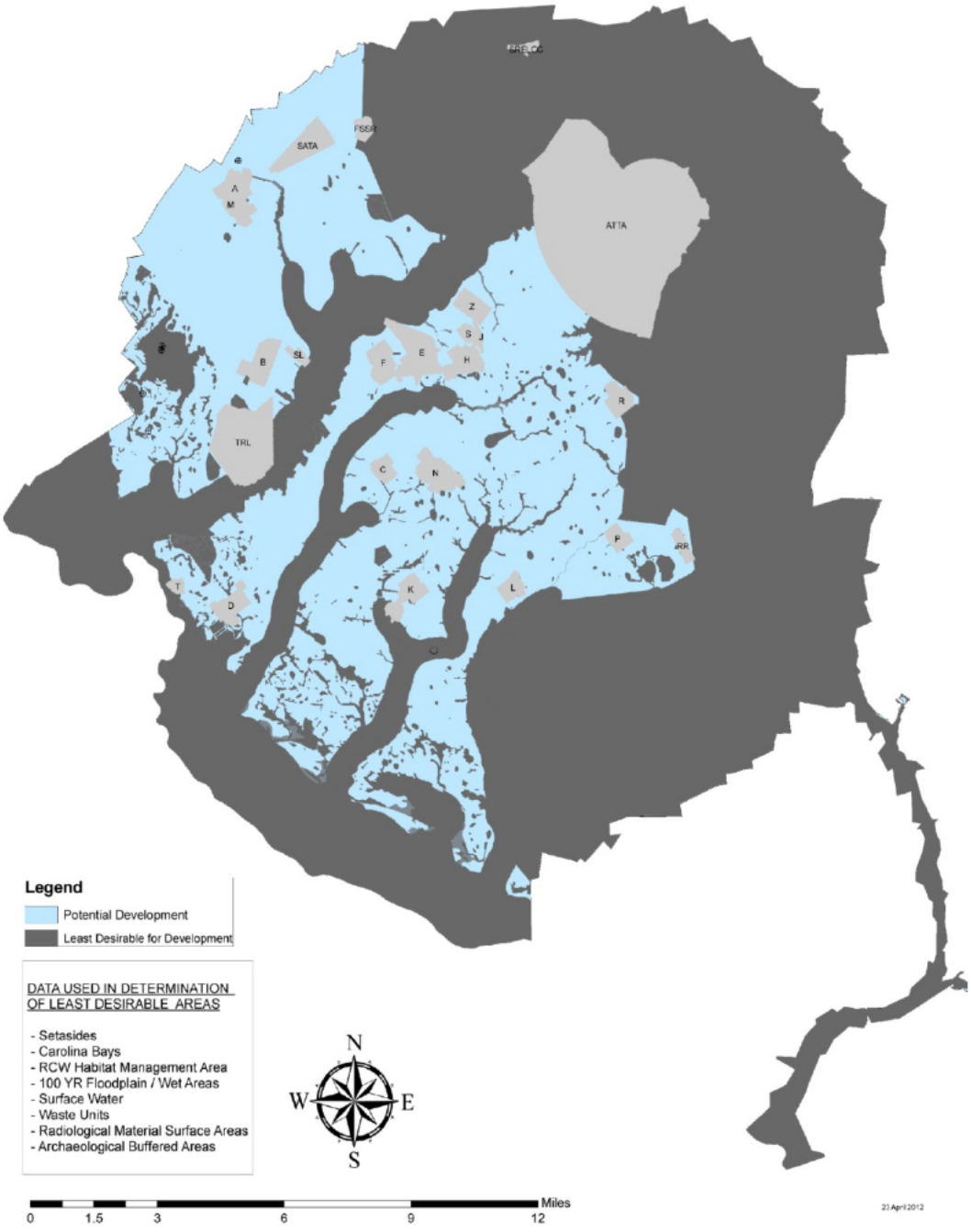
The Site Planning Group reviews land use requests that meet the Site Selection criteria to help ensure integration with key SRS planning processes. Input is sought from the SRS Integrated Planning Team network of mission and support planning managers and planners. This review includes compatibility with the long range strategic and nearer term operational goals and requirements of current and potential future missions and mission support functions. When appropriate, analyses of the most desirable areas for new business, missions or other land use opportunities are reviewed and updated in the GIS system (see Figure 5-3 map). Comments and recommendations are provided for the Site Use Permit decision process.

Land use changes that meet prescribed land area size, cost, or environmental criteria may undergo a Site Selection evaluation. Site Selection for SRS land use proposals are led by the SRNL Environmental Science and Biology Technology group and include evaluation of considerations for: ecology (terrestrial, aquatic and wetlands), geohydrology, geotechnical, human health (dosimetry), meteorology, engineering, construction, regulatory compliance, emergency preparedness/response, safeguards and security, and archaeology. When the specified criteria are met, the Site Use Coordinator ensures that a formal Site Selection evaluation is initiated. The GIS system is also used to facilitate the identification and analysis of vital information. Recommendations are reviewed with the Site Use Permit requester and are provided for the Site Use Permit decision process.

The Site Use Permit requester resolves all issues identified by the evaluation process and document the resolutions. The Site Use Coordinator submits a report and recommendation to DOE for final approval of the Site Use Permit.

The full Site Use Permit process is described in SRS Manual 1D, Procedure 3.02, *Site Real Property Configuration Control.* The EEC process is described in SRS Manual 3Q, Procedure 5.1, *National Environmental Policy Act Implementation and Environmental Evaluation Checklist*. The EEC form is OSR 14-347 LN. The Site Selection Process is described in SRS Engineering Guide No. 02110-G.

Figure 5-3
SRS Land Suitable for Potential Development



Chapter 6 – Summary

6.0 – Summary

SRS' mission and vision as a vital national asset dedicated to accomplishing the Department of Energy's mission includes key environmental stewardship, national security and clean energy strategies. Effective decision making, management and protection of SRS land, facilities, and environment is necessary to ensure the continuing viability and availability of land to serve DOE missions and to ensure continuing SRS contribution to the economic health of the region.

The *SRS Land Use Plan* along with the *SRS Ten Year Site Plan* integrates land use planning with real property acquisition, utilization, maintenance, recapitalization, disposition, and long term stewardship, and ties them to the budget planning process to meet lifecycle mission requirements and support future initiatives.

All SRS land is owned and controlled by the US Department of Energy which implements Congressional direction using DOE Order 430.1B, *Real Property Asset Management*, as uniform guidance. The primary descriptions of SRS land use are found in the mission and facility and infrastructure alignment descriptions included in the SRS Ten Year Site Plan, incorporates requirements contained in the *EM Lifecycle Plan* and the *NNSA-SRSO 25 Year Site Plan*.

Detailed SRS land use planning and control is accomplished via the Site Use Program, the Site Selection Process, the SRS Environmental Evaluation Checklist, and the Site Clearance Program. Land use evaluations and action decisions that result from these programs are documented in site Environmental Evaluation Checklist databases and in the site Electronic Document Workflow System. This land use plan describes the overall land use system and processes. The detailed inner workings of each part of the system are described by their respective plans and other documents. References are provided for additional information.

Evaluation of proposed changes to SRS land use is coordinated and integrated with other site planning processes using the Site Use Program and the Site Development Control organization as the central point for communication and management. All changes to SRS land use must undergo an evaluation for NEPA compliance and adhere to the Site Use Process. Land use changes that meet prescribed land area, cost, or environmental criteria may also undergo a Site Selection evaluation. Appropriate evaluations of historical, cultural, and natural resource impacts are included. Based on the results of the evaluations, land use changes are documented and approved by DOE via a new Site Use Permit. All construction, alteration, or demolition activities also require a Site Clearance permit. Public involvement is included when required as directed by DOE. Land use planning and control evaluations are supported by an electronic Geographic Information System that provides comprehensive maps and data.

Key issues that impact SRS land use are: 1) the need to strategically connect management of site assets and resources with the requirements of ongoing missions and with planning for future missions and new business/uses of site assets, 2) the need for substantial investment in general site infrastructure, and 3) the need for reinvestment to revitalize the SRNL complex.

The SRS Integrated Planning Team, a site-wide team of DOE and contractor managers and subject matter experts, provides oversight for and leads continuous improvement of the integration of SRS site land use planning and control processes and systems.

References

7.0 References

Archaeological Resource Management Plan of the Savannah River Archaeological Research Program, December 1989, last updated October 2012

DOE Order 430.1B, Rev. 2, *Real Property Asset Management*

DOE Policy 141.1, DOE Management of Cultural Resources

Land Use Baseline Report, Savannah River Site, June 1995

Land Use Control Assurance Plan for the Savannah River Site, WSRC-RP-98-4125, August, 1999, Updated February, 2011

National Environmental Policy Act Implementation (NEPA) and the Environmental Evaluation Checklist (EEC), SRS Manual 3Q, Procedure 5.1 (EEC: Form OSR 14-347 LN)

NNSA-SRSO Twenty-Five Year Site Plan, FY2013-FY2037, SRNS-T0000-2012-00175

Savannah River Site Ten Year Site Plan, Fiscal Year 2014-2023, SRNS-RP-2013-00005, May 2013

Savannah River Site's Cold War Built Environment Cultural Resources Management Plan, prepared for the Department of Energy under Cooperative Agreement No. DE-FC09-97SR18903, January 26, 2005

Engineering Guide No. 02110-G, *Site Selection Guidance*

SRS End State Vision, July 26, 2005

SRS Environmental Management Program Management Plan, August, 2012

Savannah River Site Future Use Project, Stakeholder Report for SRS Land and Facilities, January, 1996

SRS Integrated Planning Team (IPT) Charter, Draft December 12, 2012

SRS Real Property Configuration Control, SRS Manual 1D, Procedure 3.02

SRS Strategic Plan, September, 2011

United States Department of Energy Natural Resources Management Plan for the Savannah River Site, May ,2005 (prepared by United States Department of Agriculture Forest Service–Savannah River)

Acronyms

8.0 Acronyms

ATM	Automated Teller Machine
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CRMP	Cultural Resources Management Plan
DOE	Department of Energy
DOE-EM	Department of Energy – Environmental Management
DOE-HQ	Department of Energy – Headquarters
DOE-SR	Department of Energy – Savannah River Operations Office
EEC	Environmental Evaluation Checklist
EM	Environmental Management
FBI	Federal Bureau of Investigation
GIS	Geographic Information System
GSA	General Services Administration
HEU	Highly Enriched Uranium
IPT	Integrated Planning Team
LSPD	Land Suitable For Potential Development
LTS	Long Term Stewardship
MOX	Mixed Oxide Fuel Fabrication Facility
NEPA	National Environmental Policy Act
NERP	National Environmental Research Park
NN	Nuclear Nonproliferation
NNSA	National Nuclear Security Administration
R&D	Research and Development
RCRA	Resource Conservation and Recovery Act
SHPO	South Carolina State Historic Preservation Office
SME	Subject Matter Expert
SRARP	Savannah River Archaeological Research Program
SREL	Savannah River Ecology Laboratory
SRNL	Savannah River National Laboratory
SRS	Savannah River Site
SU	Site Use
TRU	Transuranic
TYSP	Ten Year Site Plan
USFS-SR	United States Forest Service – Savannah River
WSB	Waste Solidification Building