FINAL

Jo Carroll Depot Local Redevelopment Authority

Reuse Plan – Savanna Depot

September 2018

Prepared for

Jo-Carrol Local Redevelopment Authority
18901 B Street
Savanna, IL 61074

Prepared by

RKG Associates, Inc.
(subconsultant to Weston Solutions, Inc.)
In conjunction with
Jeffrey Donohoe Associates LLC

This study was prepared under contract with the Jo Carroll Local Redevelopment Authority, with financial support from the Office of Economic Adjustment, Department of Defense. The content reflects the views of the LRA and does not necessarily reflect the views of the Office of Economic Adjustment.

RKG ASSOCIATES INC

TABLE OF CONTENTS

Executive Summary

The Jo Carroll Depot Local Redevelopment Authority has been actively engaged in redeveloping the former Savanna Army Depot for nearly 20 years. Since being designated by the US Army, the LRA has worked to create jobs and expand the tax base within Carroll and Jo Daviess counties by attracting users to the extensive facilities located on the more than 3,000 acres available for civilian reuse. Over the years, the LRA has succeeded in selling off or leasing much of the property, including the nearly 70 miles of railroad track that serve the Depot, as well as many of the former Army buildings. The site currently has approximately 18 owners/tenants employing more than 100 people across a wide variety of businesses.

Because of the environmental condition of the property, the Army has not transfered title to the LRA for approximately two-thirds of the 3,000+ acres. The LRA currently retains approximately 403 acres including 255 acres that have transferred (from the Army) and 148 that have not yet been transferred. The LRA has sold or leased 1,702 acres to others, land that has not yet transferred. It is anticipated that the Army will complete its cleanup program and release the remaining land over the next few years.

This Reuse Plan was developed to guide the LRA over the next few years as it transfers the remaining property to other entities, and to eventually sunset as an economic development organization. The report that follows includes a detailed update on the existing conditions including socioeconomic indicators for the region and the Depot's infrastructure that supports development. An extensive Environmental chapter provides an in-depth analysis of the existing conditions and the future steps necessary for the Army to transfer, and the LRA and subsequent users to redevelop. A discussion of the opportunities for growth and the constraints facing the Depot follows.

The Reuse Plan concludes with a series of Implementation Strategies and Recommendations for short and longer-term actions on behalf of the LRA to complete its mission. Foremost among these are the following:

- Undertake an evaluation of the Fish 5 parcel to determine whether the LRA should seek to acquire the property from the Army. Evaluate necessary capital investments, and how access to the property will be developed, as well as what key regulatory and environmental hurdles may need to be overcome to utilize the property. Do not sell or transfer (other than by short term lease) any additional LRA property until disposition of USFWS parcel 5 has been finalized. Identify, negotiate with, and transfer Fish 5 property to a port developer or the Port Authority, if the decision is made for the LRA to acquire the Fish 5 parcel.
- Begin a dialogue with the two major property owners, Riverport Railroad and Midwest 3PL, regarding planning for the future and alternative development

scenarios. Attempt to set up a meeting with the Riverport Railroad owners regarding their long-term goals and aspirations for the property.

- Aggressively market the property to BNSF as a logistics, operation and/or maintenance location. Working through the Regional BNSF Economic Development Manager, meet with BNSF real estate, economic development and system planning staff to promote the property and determine whether BNSF is interested in the property and under what terms and conditions.
- Determine whether a Request for Proposals (RFP) for a Master Developer to take over marketing and development of the LRA's remaining property is desirable for the LRA, and if so, develop an RFP for distribution to interested parties. Conduct an "Industry Day" to familiarize potential bidders with the property and the opportunities available at Savanna Depot Park.
- Look into consolidating the existing Port Authority and Jo-Carroll LRA leadership to streamline management of redevelopment efforts, and to bring the Port Authority's additional governmental powers to the Savanna Depot Park. Identify additional grant sources to support barge development.
- Continue to work with the State of Illinois and the Treasury Department to have the Depot nominated as an Opportunity Zone.
- Enter into Early Transfer discussions with the Army to expedite property transfer of remaining property and USFWS parcel 5, as applicable.

Longer term recommendations are for the LRA to dispose of the remaining property through direct sale or auction and to sunset the organization.

Implementing these recommendations will take a great deal of effort on the part of the LRA, its staff, the Counties and all of the many property owners, tenants, and other stakeholders who share in the potential for, and the inherent risks, associated with the future of Savanna Army Depot.

1 Introduction

1.1 Purpose

The purpose of this analysis and report is to develop an updated Reuse Plan and business strategy for the acquisition and disposition of the remaining property at the former Savanna Army Depot by the Jo-Carroll Depot Local Redevelopment Authority (LRA) that will further the LRA's long-term goal of economic development. In addition to this introduction, which includes a brief history of the site, a description of the current LRA situation and development progress, the updated plan includes the following key elements:

- Existing Conditions Analysis;
- Environmental Baseline Analysis;
- Market Analysis;
- Land Development Plan;
- Implementation Strategy; and
- LRA Sunset Analysis.

This plan was developed for the LRA by a team of consultants led by Weston Solutions, Inc. with assistance from RKG Associates, Inc.; Jeffrey Donohoe Associates, LLC; Martin Associates; and the Tri-County Economic Development Alliance of Northwest Illinois (now known as NW Illinois Economic Development).

1.2 History of the Site

The Savanna Army Depot Activity was declared surplus property by the United States Army as a result of the 1995 Base Realignment and Closure Act, and was scheduled for closure in 2000. Initial reuse planning began immediately with the creation of a Local Redevelopment Authority (LRA), culminating in an initial Reuse Plan and Implementation Strategy completed in January 1997. The initial plan focused on approximately 3,248 acres of the 13,062-acre facility which were earmarked for transfer to the LRA for redevelopment under a no-cost Economic Development Conveyance. The remainder of the property was retained under Federal ownership through transfer from the Department of the Army to the U.S. Fish and Wildlife Service (9,445 acres) and the Army Corps of Engineers (460 acres). As of today, more than half of the land has yet to transfer from the Army pending ongoing environmental cleanup activities. The LRA and other government agencies lease the land until clean-up is

completed and title is conveyed. The Army's clean-up schedule, which is driven by the availability of federal funding, has been continually delayed over the past several years.

The initial reuse plan identified a variety of potential uses for the LRA's portion of the facility including:

- Housing (recreational & retirement) 1,100 acres
- Distribution 720 acres
- Industrial 640 acres
- Recreational/Cultural 85 acres
- Mixed Use 400 acres
- Open Space 302 acres

The plan incorporated information on the condition of the facilities and infrastructure, market conditions, and environmental issues related to reuse of the property, and led to a Business Plan that forecast the potential revenues and costs associated with redevelopment, along with a strategy for reorganizing the LRA and beginning implementation of the redevelopment under a newly formed *Implementation* LRA (the current Jo-Carroll Depot LRA).

The following year (1998), the LRA submitted an application to the Army for an Economic Development Conveyance (EDC) for their portion of the property, seeking all real and personal property at no cost for economic development purposes. During this period, the prospect of the state constructing a large prison facility on the site was incorporated into the LRA's planning, which was expected to serve as a major anchor tenant and contribute significantly to funding the infrastructure needs for the site. However, the state decided to build the prison in another community to the south. The EDC business plan looked at a multi-year build out of the site (10+ years) for the uses identified in the initial reuse plan, starting with transfer of the lower post areas in 2000, with the LRA serving as the master developer responsible for providing utilities and all capital expenditures, and supported with revenues from the sale and leasing of land and buildings as well as caretaker payments from the Army for property not yet transferred.

Subsequent market shifts, loss of the prison as a major anchor tenant, and the Army's refusal to support the original EDC and fund operations by way of a cooperative agreement resulted in the LRA developing a Supplemental EDC Application in 1999 that focused on Industrial, Distribution and Mixed-Use activities only in the LRA's area, taking control of the land under an Interim Master Lease from the Army and taking title to individual parcels as clean-up was completed. Several tenants were then secured by the LRA for various properties including the rail network, with property either sold or leased over the next several years. This served as the major source of income through leases.

The Army approved the Supplemental EDC and leased the property to the LRA in 1999, which then entered into several subsequent title transfers and sub-leases over the next 17 years. To-date (2017), a total of 1,038 acres have been transferred from the Army to the LRA,

which has then sold a total of 783 acres. The LRA currently retains approximately 403 acres including 255 acres that have transferred (from the Army) and 148 that have not yet been transferred. The LRA has sold or leased 1,702 acres of land to others, land that has not yet transferred. In this interim period, a variety of tenants (and subsequent property owners) have moved to or started businesses at the Depot, including a handful of residential uses utilizing some of the former Army housing units.

Included among the transferred and sold parcels is much of the southern end of the Depot including a Planned Unit Development zone (PUD) that was created to allow for a wide variety of uses, including residential. The PUD area included 29 facilities containing approximately 173,000 square feet of space. All of this property has been transferred to others by the LRA with the exception of the former parade ground (approximately 15 acres).

A portion of the southern end of the property previously earmarked for transfer to USFWS under a federal-to-federal conveyance was rejected by USFWS due the presence of environmental issues. This parcel, identified as USFWS parcel 5 (aka "Fish5"), has been officially excessed by the Army for potential reuse by the LRA. Currently, the LRA is going through the Notice of Interest process for the parcel and will be submitting a proposed reuse plan for this parcel by the end of 2018. There is potential interest in pursuing a port development on the property based upon the findings of the Barge Feasibility Market analysis as well as interest from the Upper Mississippi International Port District, with support from the Maritime Administration (MARAD) for the development of a barge port. This is discussed in more detail in a later chapter.

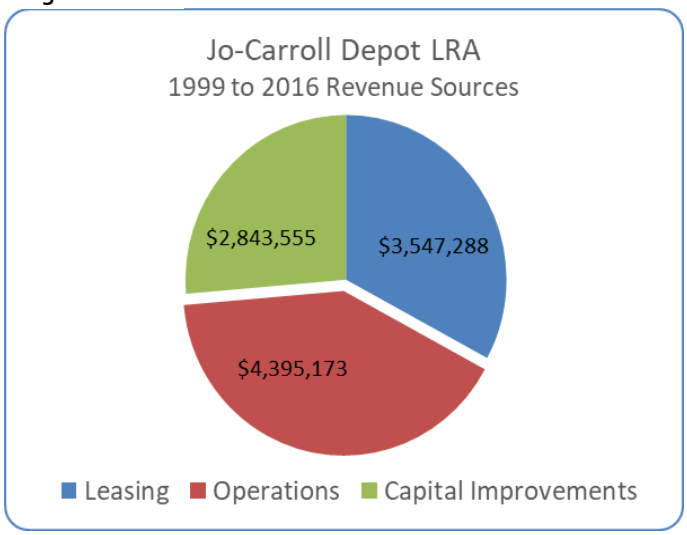
1.3 Current Situation

Since 1999/2000 the Jo-Carroll LRA has operated and managed the redevelopment of the Savanna Depot property, leasing property and buildings to a variety of tenants and users, as well as securing grant funding for operational support and capital improvements. The LRA has operated with a small professional administrative staff augmented by outside contractors, consultants and legal counsel.

Between 1999 and 2016, the LRA took in total revenues of approximately $10.8 million, distributed between Lease and Rent Revenues, Operations Revenues (which included $2.9 million in property sales and $717,000 in grants) and Capital Improvement Revenues, mostly from grant sources.

The majority of lease revenues were received prior to 2008/2009, when parcels were environmentally mitigated by the Army and transferred to the LRA beginning in 2004, which then sold land and buildings to private buyers – either existing tenants who had entered into lease-purchase agreements or directly to new users.

Figure 1

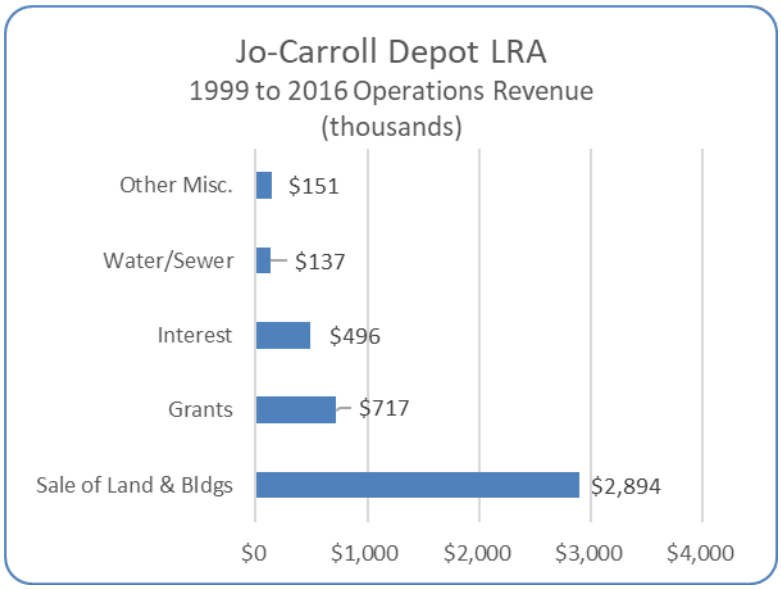


There have been more than 40 tenants at the Depot over the years, ranging from two very large users (Riverport Railroad and Midwest 3PL)[1] to some very small short-term leases for individual buildings or land parcels. Many of the leases have been converted to purchases, and represent a wide array of activities including rail operations, warehousing and storage, manufacturing, professional services and residential (there are currently approximately eight housing units on the Depot, though not all are currently occupied). As of January 2016, approximately 110 people worked on site, an increase from 57 in January 2012.

Grant revenues were received early in the redevelopment program and included $75,000 from the State of Illinois and $611,000 from the Department of Defense's Office of Economic Adjustment (OEA). The graph below shows the breakout of Revenues from Operations over the 1999 to 2016 time frame.

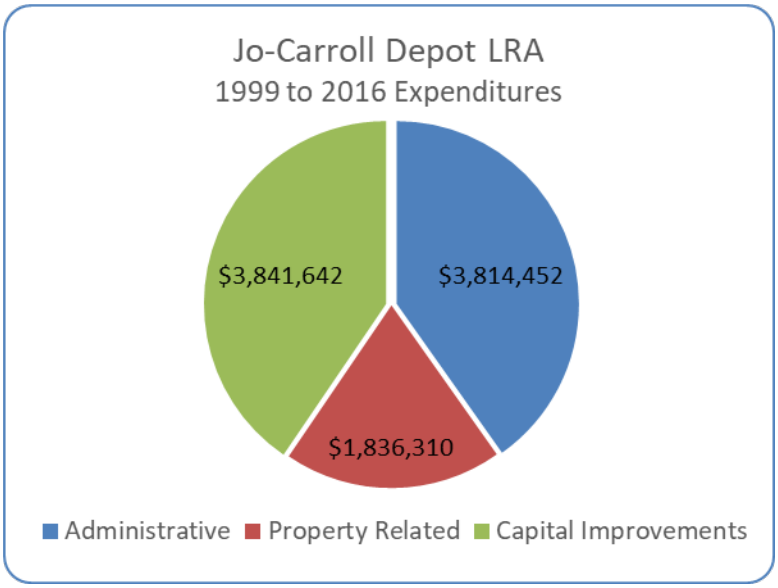
[1] Riverport Railroad is also shown as ATG Trust on certain maps and documents, while Midwest 3PL is also known as Eagles Landing or R. Stickle.

Figure 2



Over the same time period, the LRA expended a total of approximately $9.5 million on administrative, property related and capital improvement costs, as shown in the following graphic.

Figure 3



Within Administrative costs, approximately $2.8 million was for payroll and office-support costs while $1 million was spent on consultants and legal services. Property related costs included building and grounds maintenance, utilities, insurances and the costs to operate the water/sewer plants (the costs of which were partially offset by user revenues). Capital improvements (reinvestment) costs were focused on converting individual buildings from

the former central heating plant to individual systems, the water/sewer plant and public roads.

The charts below show the magnitude and shift in revenues and expenditures over the 17-year history of the Depot redevelopment.

Figure 4

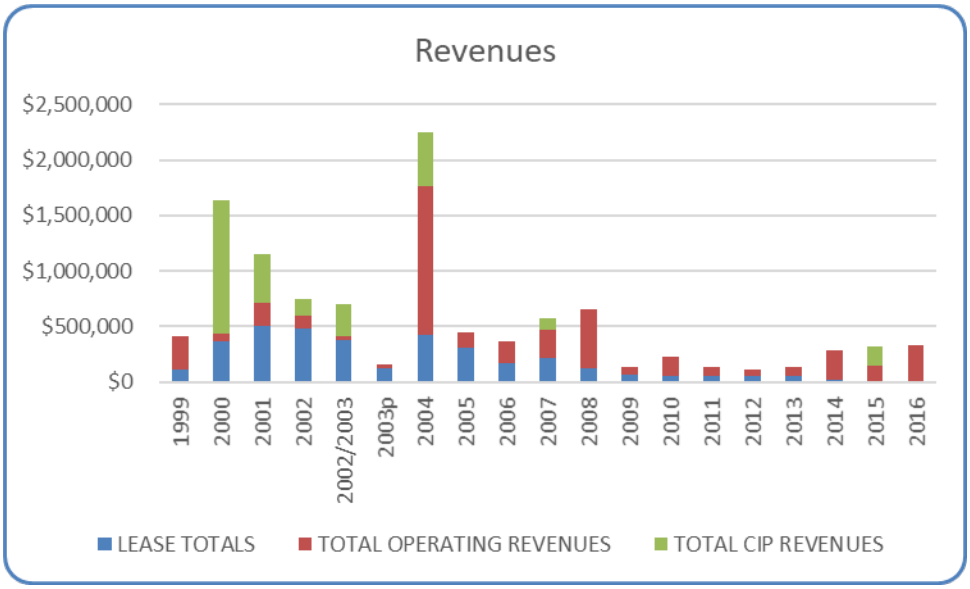
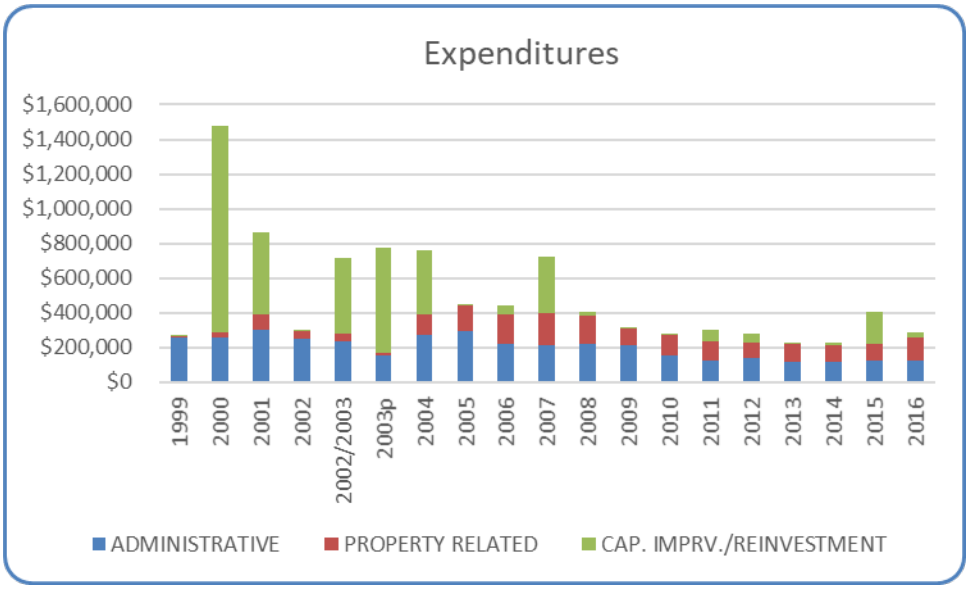


Figure 5



In total, over the 17-year period, revenues exceeded costs by nearly $1.3 million.

Key issues facing the LRA remain, many of which are discussed in more detail in the Opportunities and Constraints section of this report, include:

- *Continued operation of the water and sewer systems.* These infrastructure systems cost more to run than can be covered by user fees (approximately $80,000 in annual costs versus approximately $20,000 in revenues). This operating deficit is one of the most critical financial issues for the future development of the Savanna Depot Park site.
- *Utilities.* Extending other modern utilities to and through the site to serve new users will be costly, potentially adding a further financial burden to the LRA. This includes the feasibility of bringing in natural gas as a prerequisite for attracting large scale industrial users.
- *The slow and uncertain pace of the Army's cleanup and release of property for reuse*. As is discussed in more detail in the Environmental section of this report, the uncertainty surrounding the cleanup and transfer schedule makes marketing the property difficult.
- *Limits to the amount of remaining land available to lease or sell.* The LRA has only about 400 acres (+/-) under its control that have not sold or been committed. Thus, there is limited potential future revenue to fund improvements, marketing or operations going forward.
- *The sunset provisions for the LRA and the need for a successor organization or other means of administrating the properties.* If the Jo-Carroll Depot LRA is sunset without a successor organization, responsibility for providing services would fall to Carroll and Jo Daviess counties separately, consistent with services that these counties provide to other property owners in their jurisdictions, with the exception of the water and sewer services. The management of the water and sewer system would become the responsibility of one of the existing tenants or a third party.
- *The physical location of the property is impacted by distance from markets, an aging population and a limited labor market.* These issues detract from the marketability of remaining property at the site.

There are also several potential opportunities for continuing the redevelopment of the site, also discussed in the Opportunities and Constraints section of this report, including:

- *The availability of large tracts of land remaining to be sold or leased, much of which can be served by rail.* The locational constraints of the site could be a benefit to some industries that may be incompatible in other, more populated areas.
- *The potential to develop an inland port with barge service could attract several types of new users and/or provide the support to expand existing uses.* A parcel of land adjacent to the main Depot campus on the southern edge of the property and along the Apple River Slough, with potential access to the Mississippi River, was to be transferred to the U.S. Fish and Wildlife Service, by the Army, but now will not

be, and may potentially be available for future development, pending reuse planning and analysis, as a barge port.

- *The existence of a fiber optic backbone system to and through portions of the site*. This privately-owned infrastructure may prove attractive for data-intense industries, perhaps in concert with the site's other advantages.
- *The site is adjacent to one of the largest natural wildlife areas in the Midwest; however, due to ongoing land restrictions based upon the historical use for the storage and testing of munitions and explosives, the area is mostly inaccessible by the public.* This includes unique sand prairie habitat areas in the center of the site that are still under the control of the LRA.

In addition to the original land transferred or leased to the LRA, the remainder of the Savanna Army Depot property – totaling nearly 9,000 acres - is to be transferred to the U.S. Department of Fish and Wildlife under a federal property transfer conveyance. USFWS has incorporated the land into the Upper Mississippi River National Wildlife and Fish Refuge and is managing it as a wildlife refuge with limited public access.

One parcel located adjacent to the Depot's southern end and the Apple River, originally earmarked for USFWS, will not transfer as planned. This parcel, known as "Fish 5", has been declared officially excessed by the Army and the LRA is currently going through the notices of interest (NOI) process. A reuse plan to assess the interest in ports development is anticipated to be completed within the next year.

1.4 Development Progress

The redevelopment of the Savanna Depot Park has proceeded slowly over the past nearly two decades. There is no single reason for this; however, it reflects not only the relatively weak market demand for land and facilities due to the site's location and regional economic conditions, but also the age and condition of the base's infrastructure and the Army's slow environmental clean-up (and transfer) process.

Since the LRA began overseeing the redevelopment, there have been numerous transactions between the LRA and various private entities involving land parcels and buildings. In total, approximately 3,248 acres were identified for transfer to the LRA under the terms of the EDC. Based on the LRA's land records and mapping available to the Weston team, the property has been divided into several parcels, many of which have been further subdivided into subparcels that have been sold or leased. This parcelization (for redevelopment purposes) differs from the Army environmental analysis of the property which uses a different nomenclature and geographic parcelization scheme. A third parcelization mapping and naming scheme also overlays the property based on each county's property assessment records, which are based on transfers of property to taxable entities (non-federal or LRA). This results in minor differences in parcel sizes and total reported acreages. These parcelization layers differ based upon the intent, but the LRA parcelization is the primary one for the reuse plan since they are controlling entity for parcel sales and leases.

Based on the LRA's maps and land transfer records, approximately 2,889 acres have been identified as having transferred or still within the LRA's control (excluding roadways). Of this total, approximately 1,038 acres (36%) have been acquired by the LRA while 1,851 acres (64%) are still owned by the Army and leased to the LRA, with fee transfer pending completion of environmental cleanup.

Table 1

Land Ownership – Savanna Depot (acres)

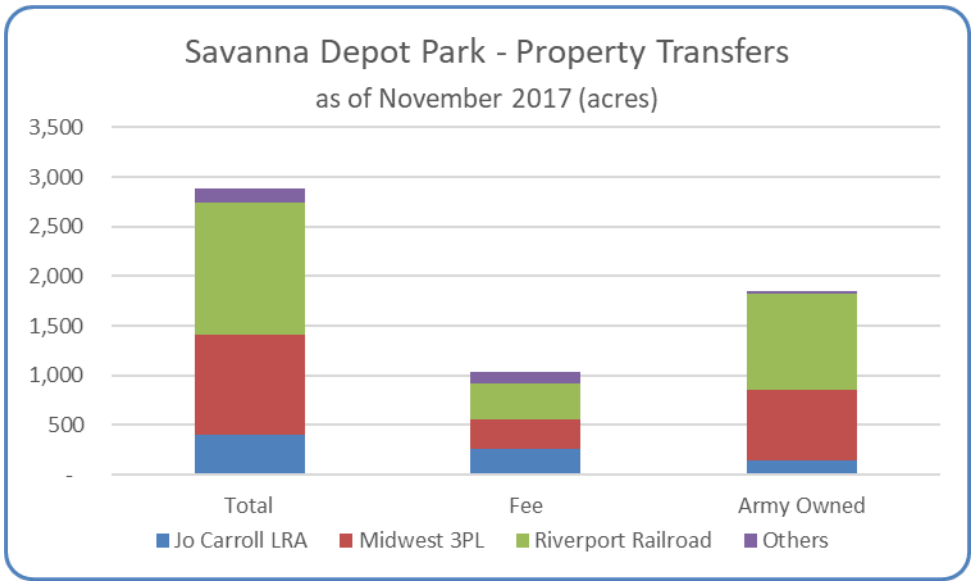
	Total	Fee	Army Owned
Jo Carroll LRA	403	255	148
Midwest 3PL	1,012	306	706
Riverport Railroad	1,328	357	970
Others	145	119	27
TOTAL	**2,889**	**1,038**	**1,851**

Source: LRA Land Records

Approximately 2,340 acres (81%) have been sold or leased to two major users – Riverport Railroad (aka ATG Trust) and Midwest 3PL (R. Stickle, aka Eagles Landing) -while 145 (5%)

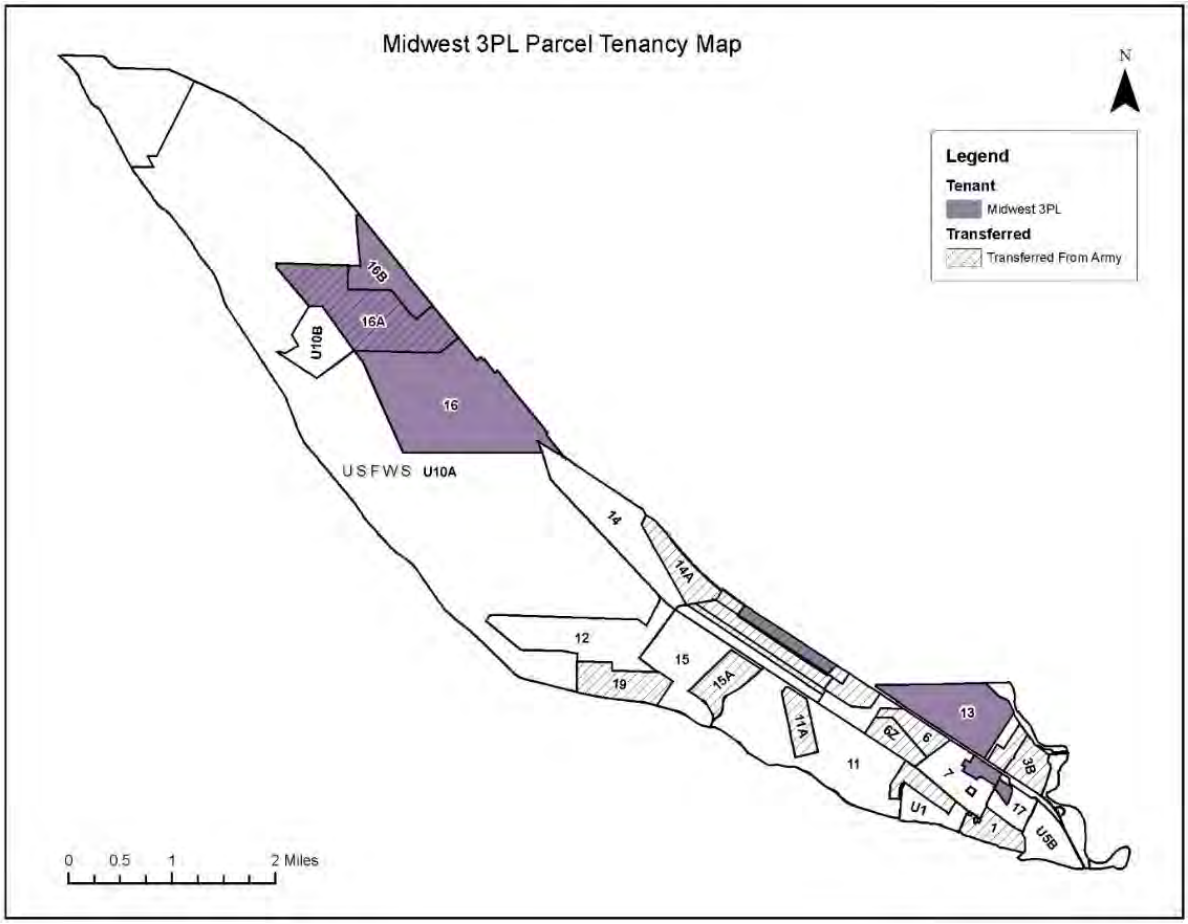
acres were sold by the LRA to about a dozen users. The LRA retains about 403 of the remaining acres (14%). Some individual owners have subsequently sold or leased parcels to other public or private entities.

Figure 6



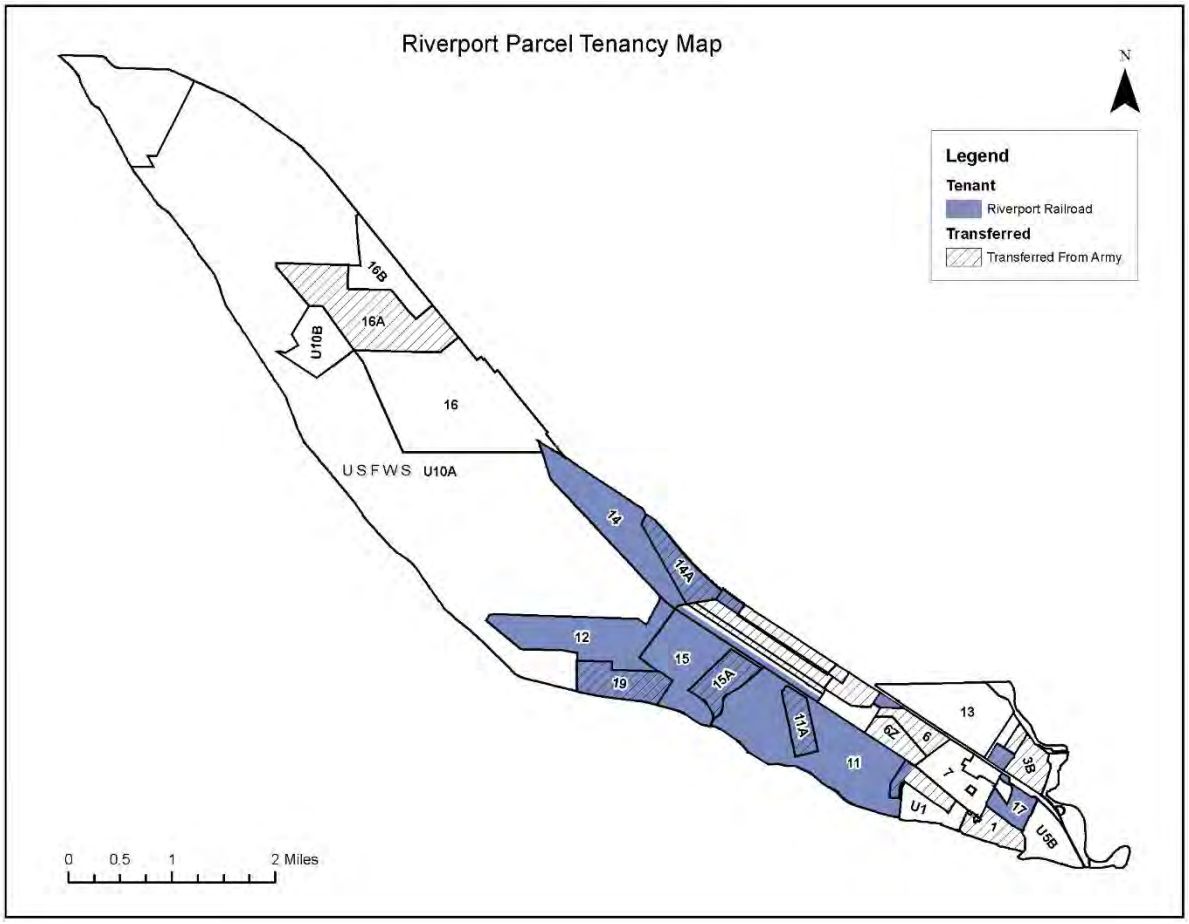
The properties owned or leased by Midwest 3PL are shown in Figure 7 below, and include approximately 1,012 acres. The parcels include many of the former storage warehouses and have been used for a variety of logistics purposes, which is the firm's primary line of business. These properties were purchased under a lease-to-purchase agreement where the owner took possession and paid the LRA a lease against a total purchase price of $3.2 million, less $773,616 in credits for damage or the installation of electric utilities. As parcels were released for fee transfer by the Army, additional payments were made to the LRA over the course of several years with the total paid off as of February 2014. Not all of the parcels that have been acquired in this manner have been transferred from the Army to the LRA, and therefore these parcels have not yet transferred to Midwest 3PL. Midwest 3PL has subsequently sold or leased sub-parcels within their holdings to others.

Figure 7



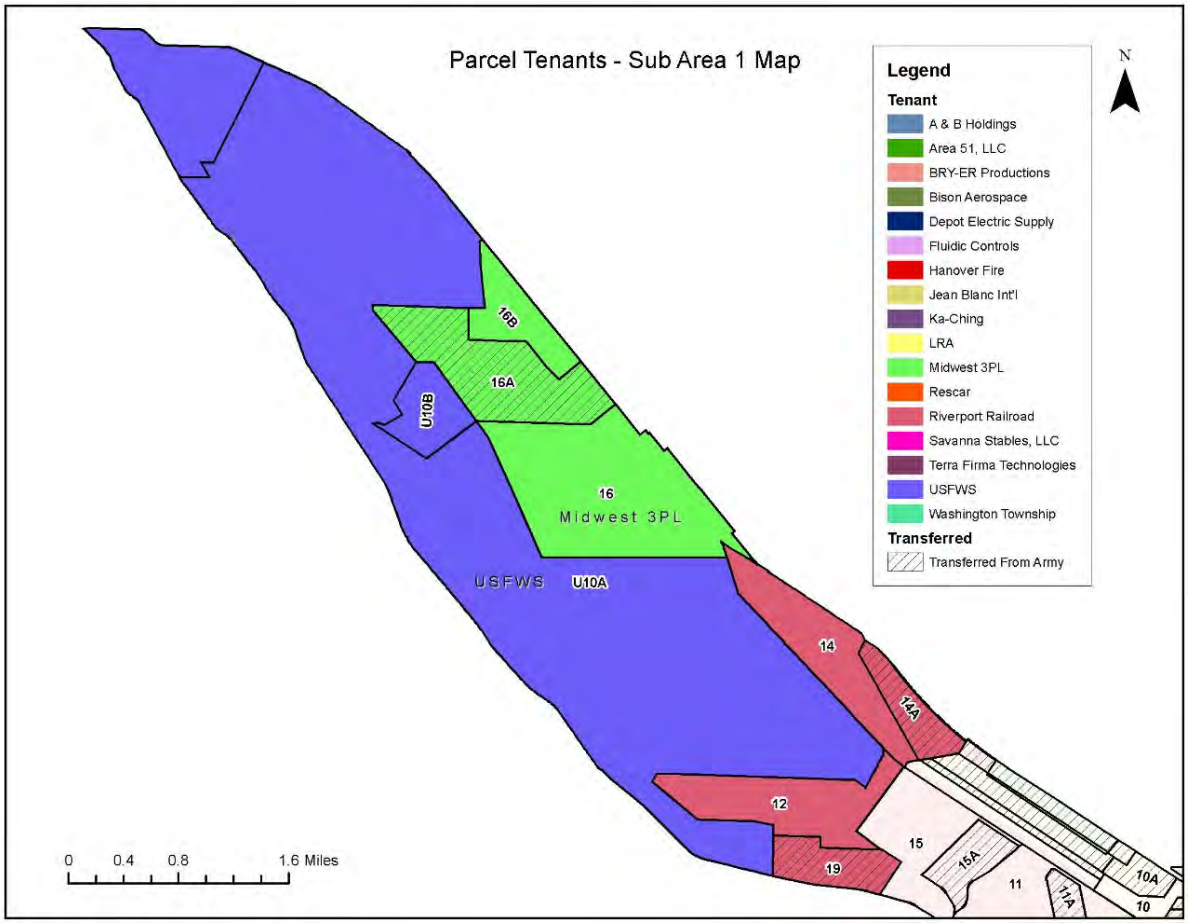
The Riverport Railroad parcels are shown in Figure 8 below, and similar to Midwest 3PL are subject to lease-purchase agreements with a total original contract value of $1.5 million. Riverport Railroad owns or leases a total of approximately 1,328 acres. 1,110 acres of this total were obtained by Riverport Railroad in a land swap with R. Stickle, owner of 3PL. In addition, the railroad also acquired easement rights to most of the railroad track in the EDC area and has utilized it continuously for the storage of empty crude oil and other tank cars. The railroad has subsequently leased portions of their holdings to other entities.

Figure 8



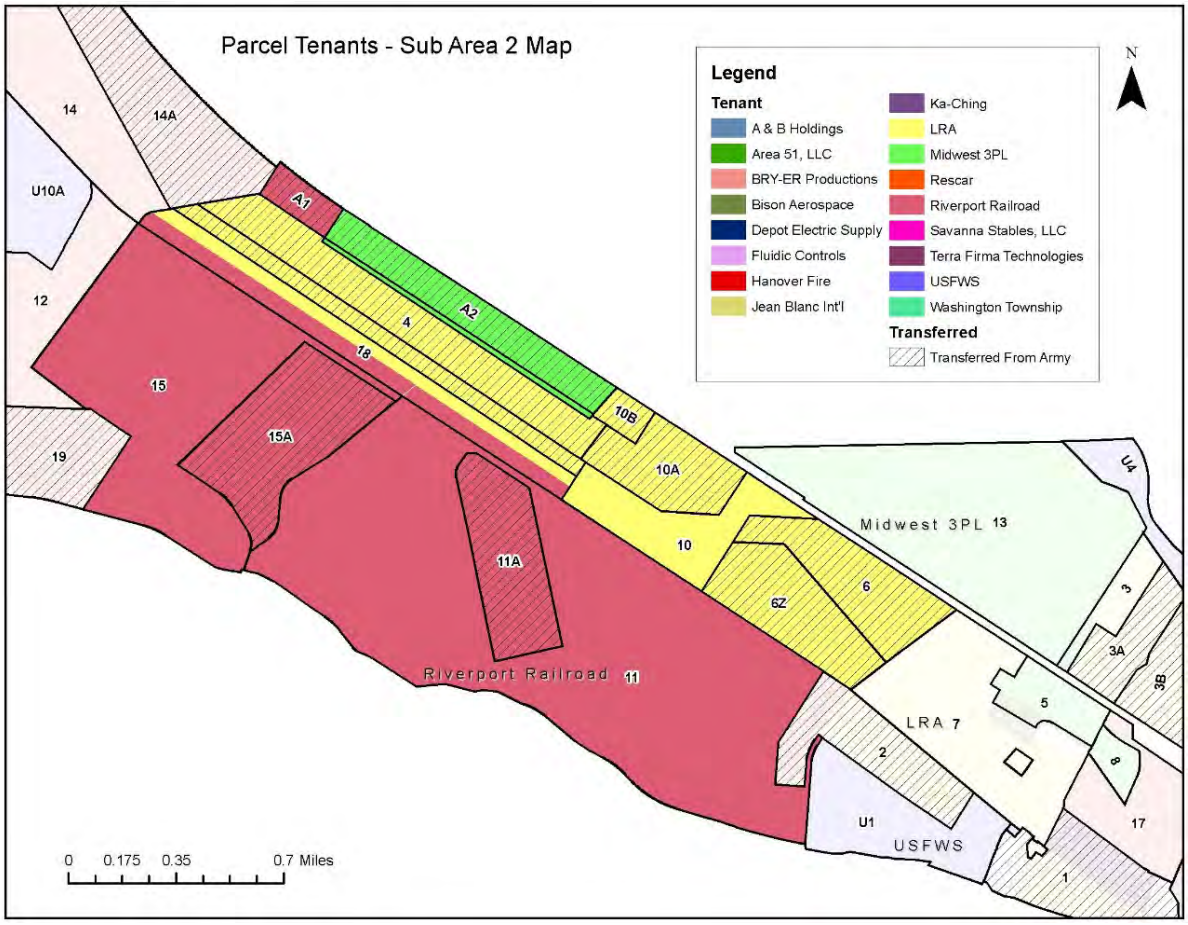
Because of the sheer size of the overall property, it is difficult to show in detail all of the property transfers that have occurred to-date. To facilitate the reader's understanding, RKG has divided the property into three sub areas, shown on the following maps along with a color-coded index of ownership.

Figure 9



Sub Area Map 1 shows the northern portion of the property, and all of the property in this sub area has been sold or leased by the LRA to Midwest 3PL and Riverport Railroad. The parcels shown with a cross-hatch shading indicate that they have been conveyed under the terms of the EDC from the Army to the LRA, which has subsequently re-conveyed them. Midwest 3PL has subsequently sold or leased sub-parcels within their holdings (primarily in Parcel 16A) to other entities, including a firm that specializes in advanced environmental technologies for the oil industry, the Illinois Department of Natural Resources and an individual (reportedly for hunting). This area contains mostly open space with ammunition storage bunkers and a series of warehouses interspersed with rail lines.

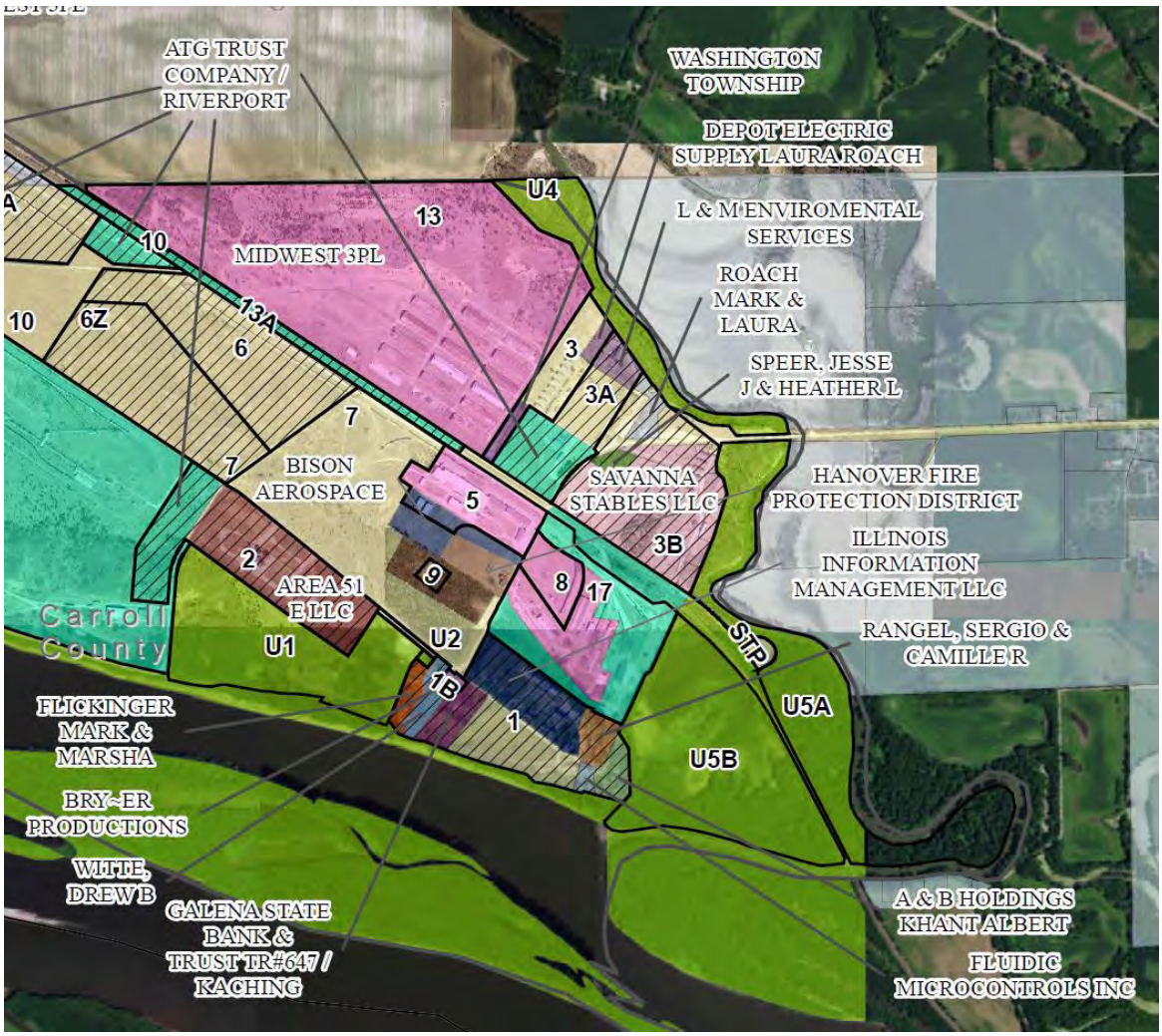
Figure 10



Sub Area Map 2 above shows the central portion of the Depot property with transfers to Riverport Railroad and to Midwest 3PL. The LRA retains approximately 350 acres in this area, much of which has been transferred by the Army, and refers to this area as the "Industrial Park". Parcel A2, owned by Midwest 3PL, includes the so-called G-Area warehouses.

The remaining property, located in Sub Area 3 and shown in Figure 11 below, has been acquired by a variety of entities with the LRA retaining several sub-parcels.

Figure 11



The remaining non-federal property (totaling 145 acres) is now owned (or leased from one of the above owners) by a variety of users (tenants) including individuals and small businesses. These parcels have been proposed for or are being used for a wide variety of activities ranging from distribution of agricultural products to research and development. Some of the former Depot living quarters have remained as residential units with a handful of owners or subtenants occupying units. A partial list of the current (or recent) tenants at the Depot is shown in the legend of the map above, and Table 2 below lists the 16 owners of record or lease-to-purchase tenants from the LRA's files.

Table 2

Other Depot Owners	Acres
Rangel	4.06
A&B Holding	3.98
Fluidic Microcontrols Inc	1.29
Galena St. Bank & Trust	5.84
Witte, Drew	3.64
Bryer	0.84
Flickinger	3.40
Ill. Information & Management	15.50
Area51 LLC	31.15
Washington Township	2.13
L&M	5.14
Savanna Stables	37.11
Speer	1.86
Depot Electric Supply	2.99
Bison Aerospace	8.00
Hanover Fire Protection District	18.50
Total	**145.43**

Data as of Fall 2017
Source: LRA Land records & RKG Associates

2 Existing Conditions

2.1 Socioeconomics

The following sections presents an overview of selected socioeconomic trends, projections and comparisons for Savanna; Carroll and Jo Daviess counties; and the Davenport-Moline-Rock Island (Quad Cities) MSA (metropolitan statistical area).

The City of Savanna is situated in Carroll County, along the banks of the Mississippi River near the mouth of the Plum River in northwestern Illinois. Savanna is not served directly by the interstate system. Interstate 39 runs north and south approximately 60± miles east of Savanna, and Interstate 88 (east-west) is to the south approximately 60± miles. US Route 52 and Illinois Route 64 run east and west through the City and Illinois Route 84 is the primary north south arterial on the east side of the Mississippi River. The City of Savanna is served by two separate railroad lines, Burlington Northern Santa Fe (BNSF) which runs north and south along the east bank of the Mississippi River (and adjacent to the Savanna Depot Park), and Canadian Pacific which runs east and west crossing the river just south of Savanna to Sabula, Iowa. From a locational perspective. Savanna is a rural community situated in a relatively rural portion of Illinois and Iowa. The Quad Cities MSA (metropolitan statistical area) is approximately 60± miles to the south.

Population

The population of Savanna has declined continuously since the 2000 Census and is currently (as of 2016) estimated to be less than 3,000 persons, according to the U.S. Census, as detailed in Table 3. More importantly, the population cohort aged 25 to 44, typically those in their family/household formation years, declined between 2000 and 2010, and is projected to continue to do so. As importantly, the cohort aged under 20 years, those typically forming the next generation for Savanna, has also declined and is projected to further decline.

While the population aged 65 and older declined during the last census decade, moderate growth is projected for the 2016 to 2021 time-period. Similar dynamics are reflected in population changes in Carroll County, although there was some modest growth in the elderly population during the last census decade. This is a similar observation for the population of Jo Daviess County, although a marginal growth in the 25 to 44 age cohort is projected for the 2016 to 2021 time-period. By 2021, the median age of the population for the two counties will be at or very close to 50 years of age. Combined, these two counties are projected to have a

population of less than 40,000 in 2021, a nominal change from 2000. The Quad Cities MSA[2] also experienced a decline in the 25 to 44 age cohort over the last census decade, but modest growth is projected. The Quad Cities continue to realize a population increase among those 65 and older.

These population changes impact housing needs and the residential market throughout Savanna, as fewer young people may equate to a reduced demand for rental housing; fewer 25 to 44 years-old persons diminishes the demand for first-time and starter homes; and, an increase in the elderly population could result in an increased demand for downsizing of housing and/or assisted care housing. These population trends also impact the labor market, which is discussed in the section that follows.

Table 3

Selected Summary Demographics - Population	Census 2000	Census 2010	Change #	Change %	Estimated 2016	Projected 2021	% Δ 2016 to 2021
Savanna, IL							
Total Population	3,525	3,062	(463)	-13.1%	2,893	2,767	-4.4%
Population > 65 years	770	642	(128)	-16.6%	655	683	4.3%
Population 25 to 44 years	871	697	(174)	-20.0%	664	623	-6.1%
Population < 20 years	917	729	(188)	-20.5%	656	631	-3.8%
Median Age	40.0	43.5	3.5	8.9%	43.9	44.1	0.5%
Carroll County, IL							
Total Population	16,670	15,388	(1,282)	-7.7%	14,718	14,627	-0.6%
Population > 65 years	3,203	3,262	59	1.8%	3,470	3,945	13.7%
Population 25 to 44 years	4,227	3,163	(1,064)	-25.2%	3,021	2,918	-3.4%
Population < 20 years	4,420	3,514	(906)	-20.5%	3,099	2,991	-3.5%
Median Age	40.8	46.5	5.7	13.9%	47.7	48.9	2.5%
Jo Daviess County, IL							
Total Population	22,291	22,679	388	1.7%	22,353	23,009	2.9%
Population > 65 years	4,009	4,832	823	20.5%	5,489	6,444	17.4%
Population 25 to 44 years	5,641	4,557	(1,084)	-19.2%	4,398	4,422	0.5%
Population < 20 years	5,649	5,149	(500)	-8.9%	4,743	4,724	-0.4%
Median Age	41.6	47.1	5.5	13.2%	48.8	50.2	2.8%
QUAD Cities MSA (1)							
Total Population	376,015	379,691	3,676	1.0%	384,903	390,723	1.5%
Population > 65 years	52,354	57,111	4,757	9.1%	63,139	73,946	17.1%
Population 25 to 44 years	105,730	94,159	(11,571)	-10.9%	95,609	97,414	1.9%
Population < 20 years	105,018	99,588	(5,430)	-5.2%	98,168	97,060	-1.1%
Median Age	37.1	39.3	2.2	6.0%	39.6	40.3	1.7%

Source: US Census; Alteryx & RKG Associates, Inc. (2017)

(1) Includes Davenport and Bettendorf, IA with Moline and Rock Island, IL

[2] Neither Carroll or Jo Daviess counties are part of the MSA definition.

The eight-county BHH & ECIA Region[3] including Clinton, Delaware, Dubuque and Jackson Counties in Iowa; and Carroll, Jo Daviess, Stephenson and Whiteside Counties in Illinois, has cumulatively realized an eight percent decline in population since 1970 to 2015, from around 340,000± persons to 313,600± persons, as noted in a recent CPCS Report.[4] The population for 2015 is estimated to be less than for 2000 for the eight-county region. Carroll and Jo Daviess counties in Illinois, also experienced a decline since 2000, although modest growth is projected for Jo Daviess County through 2021.

Housing and Households

Over the 2000 to 2010 time-period, the number of housing units declined in Savanna, as did the number of households (occupied housing units), with a loss of more than 100 units for the former and 165 units for the latter. The greater loss in households resulted in an increase in the number of vacant housing units in Savanna. Despite these declines, Savanna has remained a community of owners (67 percent) as compared to renters (33 percent). Projections for 2021 reflect a continued loss of housing and households in Savanna, albeit at a slightly diminished pace. Overall, the number of Savanna households was approximately 1,390 in 2010 and is projected to be 1,260 in 2021, for a loss of 130 units. In part reflecting the population dynamics previously discussed, the average household size in Savanna is projected to decline from 2.2 persons in 2000 to 2.16 persons in 2021.

Carroll County has also experienced a decline in households over the 2000 to 2010 time-period, but an increase in housing units resulting in an increase in vacancies, up by more than 660 units over the ten years. The number of vacant housing units is projected to continue to increase (2016 to 2021) as there is a negligible increase projected in household formations. By comparison, the number of households has grown in Jo Daviess County and is projected to continue to grow. There was a marginal decline among renter households during the last census decade for Jo Daviess, but modest growth is projected for 2016 to 2021. Despite the growth in households, the number of vacant units in Jo Daviess continues to increase, from nearly 2,780 units in 2000 to nearly 4,400 units by 2021. RKG notes that the 2000 Census and 2010 Census both indicate that a large percentage of the vacant housing, in each county, is classified as seasonal or recreational. Much of this represents recreational housing units, many of which were developed in the 1970s and 1980s and sold to urban dwellers from the Chicago area for weekend or seasonal usage. In Jo Daviess County, Galena Territories, Apple Canyon Lake and Eagle Ridge are three large such developments that include golf, lake, skiing and other recreational amenities.

Counter to the trend for Savanna and the two counties, the total number of housing units and households, both owner and renter, have increased in the Quad Cities and are projected to

---

[3] Blackhawk Hills Regional Council (BHH) and East Central Intergovernmental Association (ECIA).

[4] Eight County Freight Plan, report by the CPCS Team, dated March 27, 2017.

continue to grow. Although the number of vacant housing units projected for 2021 in the Quad Cities is greater than the estimate for 2016, it still represents a decline of about 300-units from the 2010 census.

Table 4

Demographics - Housing/Households	Census 2000	Census 2010	Change #	Change %	% of Total Units 2000	% of Total Units 2010	Estimated 2016	Projected 2021	% Δ 2016 to 2021
Savanna, IL									
Total Housing Units	1,784	1,673	(111)	-6.2%	100.0%	100.0%	1,639	1,592	-2.9%
Occupied Units	1,554	1,389	(165)	-10.6%	87.1%	83.0%	1,309	1,259	-3.9%
Owner Households *(% of Occ)*	1,054	933	(121)	-11.5%	*67.8%*	*67.2%*	855	820	-4.1%
Renter Households *(% of Occ)*	500	456	(44)	-8.8%	*32.2%*	*32.8%*	454	439	-3.4%
Vacant Units	230	283	53	23.0%	12.9%	16.9%	330	333	0.9%
Average HH Size	2.20	2.17	(0.03)	-1.4%			2.17	2.16	-0.5%
Carroll County, IL									
Total Housing Units	7,943	8,437	494	6.2%	100.0%	100.0%	8,391	8,623	2.8%
Occupied Units	6,792	6,622	(170)	-2.5%	85.5%	78.5%	6,316	6,339	0.4%
Owner Households *(% of Occ)*	5,204	5,163	(41)	-0.8%	*76.6%*	*78.0%*	4,916	4,949	0.7%
Renter Household *(% of Occ)*	1,588	1,459	(129)	-8.1%	*23.4%*	*22.0%*	1,400	1,390	-0.7%
Vacant Units	1,151	1,815	664	57.7%	14.5%	21.5%	2,075	2,284	10.1%
Average HH Size	2.42	2.29	(0.13)	-5.4%			2.30	2.28	-0.9%
Jo Daviess County, IL									
Total Housing Units	12,001	13,574	1,573	13.1%	100.0%	100.0%	13,579	14,300	5.3%
Occupied Units	9,219	9,753	534	5.8%	76.8%	71.9%	9,571	9,906	3.5%
Owner Households *(% of Occ)*	7,140	7,740	600	8.4%	*77.4%*	*79.4%*	7,589	7,887	3.9%
Renter Household *(% of Occ)*	2,079	2,013	(66)	-3.2%	*22.6%*	*20.6%*	1,982	2,019	1.9%
Vacant Units	2,782	3,821	1,039	37.3%	23.2%	28.1%	4,008	4,394	9.6%
Average HH Size	2.40	2.31	(0.09)	-3.7%			2.32	2.31	-0.4%
QUAD Cities MSA (1)									
Total Housing Units	158,512	167,110	8,598	5.4%	100.0%	100.0%	168,636	172,934	2.5%
Occupied Units	149,725	155,175	5,450	3.6%	94.5%	100.0%	157,432	161,265	2.4%
Owner Households *(% of Occ)*	107,411	110,477	3,066	2.9%	*71.7%*	*71.2%*	111,863	114,817	2.6%
Renter Household *(% of Occ)*	42,314	44,698	2,384	5.6%	*28.3%*	*28.8%*	45,569	46,448	1.9%
Vacant Units	8,787	11,935	3,148	35.8%	5.5%	7.1%	11,204	11,669	4.2%
Average HH Size	2.45	2.39	(0.06)	-2.4%			2.39	2.38	-0.4%

Source: US Census; Alteryx & RKG Associates, Inc. (2017)

(1) Includes Davenport and Bettendorf, IA with Moline and Rock Island, IL

The number of households in Savanna continued to decline from a "high" of 1,550-units in 2000, while vacant housing units are projected to increase by 100 from 2000 to 2021. While a modest uptick in households is projected for Carroll County, the total number of households projected for 2021 represents a loss of 450-units since 2000 and the number of vacant housing units (which include seasonal units) accounts for an increase of more than 1,130. In contrast, the number of households in Jo Daviess represents a growth of 690-units from 2000 to 2021, while vacancies represent a growth of 1,610-units.

Income Characteristics

All four geographic areas experienced a decrease in the number of households earning less than $50,000 during the last census decade and are projected to continue to do so in the near term. Similarly, all areas have realized and are projected to continue to realize growth in the number of households earning more than $50,000. Despite this growth in Savanna, the median household income in 2010 was approximately $33,200, representing an increase of 19 percent since 2000. This rate of change is well below the estimated inflation for the time-

period at 26.6 percent. In 2010 the median household income for Savanna lagged Carroll County and Jo Daviess County by around $10,000 and $16,000 respectively. Both counties realized growth in median household incomes at rates that were less than inflation. Overall, the growth in median household income did not reflect real growth except for in the Quad Cities. Median household incomes are projected to continue to grow, but even still, the 2021 median household income for Savanna is projected to lag the counties and the Quad Cities by nearly $20,000. The income changes, along with a diminishing population and household base indicate a decline in local consumer spending demand and a reduced capacity to attract any significant retail development.

Table 5

Demographics - Selected Income	Census 2000	Census 2010	Change #	Change %	% of Total Units 2000	% of Total Units 2010	Estimated 2016	Projected 2021	% Δ 2016 to 2021
Savanna, IL									
Households by Income					% of Occupied Units				
earning less than $50,000	1,246	966	(281)	-22.5%	80.2%	69.5%	825	695	-15.7%
earning $50,000 - $100,000	261	341	80	30.5%	16.8%	24.5%	378	406	7.6%
earning more than $100,000	43	83	40	94.4%	2.8%	6.0%	107	157	46.8%
Median Household Income	$27,891	$33,236	$5,345	19.2%	***(inflation 26.6%)***		$36,373	$43,025	18.3%
Carroll County, IL									
Households by Income					% of Occupied Units				
earning less than $50,000	4,627	3,719	(908)	-19.6%	68.1%	56.2%	3,103	2,606	-16.0%
earning $50,000 - $100,000	1,792	2,193	401	22.4%	26.4%	33.1%	2,300	2,428	5.6%
earning more than $100,000	357	710	353	98.9%	5.3%	10.7%	913	1,305	42.9%
Median Household Income	$37,085	$43,903	$6,818	18.4%	***(inflation 26.6%)***		$50,941	$61,436	20.6%
Jo Daviess County, IL									
Households by Income					% of Occupied Units				
earning less than $50,000	5,768	4,907	(861)	-14.9%	62.6%	50.3%	4,547	3,940	-13.3%
earning $50,000 - $100,000	2,765	3,543	778	28.1%	30.0%	36.3%	3,491	3,742	7.2%
earning more than $100,000	672	1,303	631	93.9%	7.3%	13.4%	1,533	2,224	45.1%
Median Household Income	$40,517	$49,700	$9,183	22.7%	***(inflation 26.6%)***		$52,491	$62,944	19.9%
QUAD Cities MSA (1)									
Households by Income					% of Occupied Units				
earning less than $50,000	90,578	72,962	(17,616)	-19.4%	60.5%	47.0%	75,831	67,005	-11.6%
earning $50,000 - $100,000	46,880	56,055	9,175	19.6%	31.3%	36.1%	51,651	53,965	4.5%
earning more than $100,000	12,251	26,158	13,907	113.5%	8.2%	16.9%	29,950	40,295	34.5%
Median Household Income	$40,696	$53,212	$12,516	30.8%	***(inflation 26.6%)***		$52,200	$62,154	19.1%

Source: US Census; Alteryx & RKG Associates, Inc. (2017)

(1) Includes Davenport and Bettendorf, IA with Moline and Rock Island, IL

Commuting Patterns (2010)

Data provided by the US Census and the American Community Survey (ACS) indicates that for 2010 there were approximately 7,480 workers residing in Carrol County and that nearly 57 percent, or 4,290 workers, also worked in Carroll County. Approximately 32 percent worked in neighboring counties and the remaining 11 percent worked elsewhere. Approximately nine percent (680) resident workers commuted to Iowa as a place of employment. In 2010, there were approximately 5,380 jobs in Carroll County and nearly 80 percent of these were held by county residents. Another 17 percent commuted to Carroll County from neighboring counties and less than four percent from elsewhere. Approximately six percent (300 workers) commuted from Iowa counties.

In Jo Daviess County, there were 11,470 workers with 62 percent, or 7,130 workers, also working in Jo Daviess County. Another one-third commuted to neighboring counties and

five percent elsewhere. About 19 percent of the resident workforce commuted to Iowa counties for employment and another 5.6 percent to Wisconsin counties. In 2010 there were 9,470 jobs in Jo Daviess County and resident workers held 75 percent (7,130) of these jobs. Approximately 22 percent of the Jo Daviess County jobs were held by workers from neighboring counties and another three percent from elsewhere. Approximately ten percent of Jo Daviess County employment was filled by residents from Iowa and another 7.4 percent by residents from Wisconsin.

Table 6

WORKERS IN RESIDENCE & PLACE WHERE THEY WORK					JOBS IN PLACE & PLACE WHERE WORKERS RESIDE				
Workers in Residence	#	Workplace of Carroll County, IL - Working Residents	#	% of Residents	Local Jobs	#	Jobs in Carroll County, IL - Held by Workers from	#	% of Jobs
Carroll County, IL	7,483	Carroll County, IL	4,291	57.3%	Carroll County, IL	5,380	Carroll County, IL	4,291	79.8%
		Top Tier	2,373	31.7%			Top Tier	905	16.8%
		Stephenson Co. IL	603	8.1%			Whiteside Co. IL	260	4.8%
		Clinton Co. IA	594	7.9%			Clinton Co. IA	172	3.2%
		Whiteside Co. IL	562	7.5%			Stephenson Co. IL	141	2.6%
		Ogle Co. IL	251	3.4%			Jo Daviess Co. IL	140	2.6%
		Jo Daviess Co. IL	207	2.8%			Jackson Co. IA	117	2.2%
		Winnebago Co. IL	156	2.1%			Ogle Co. IL	75	1.4%
		Remainder	819	10.9%			Remainder	184	3.4%
WORKERS IN RESIDENCE & PLACE WHERE THEY WORK					JOBS IN PLACE & PLACE WHERE WORKERS RESIDE				
Workers in Residence	#	Workplace of Jo Daviess County, IL - Working Residents	#	% of Residents	Local Jobs	#	Jobs in Jo Daviess County, IL - Held by Workers from	#	% of Jobs
Jo Daviess County,	11,474	Jo Daviess County, IL	7,127	62.1%	Jo Daviess County	9,470	Jo Daviess County, IL	7,127	75.3%
		Top Tier	3,777	32.9%			Top Tier	2,068	21.8%
		Dubuque Co. IA	2,137	18.6%			Dubuque Co. IA	859	9.1%
		Stephenson Co. IL	903	7.9%			Grant Co. WI	400	4.2%
		Green Co. WI	209	1.8%			Stephenson Co. IL	276	2.9%
		Grant Co. WI	198	1.7%			Lafayette Co. WI	263	2.8%
		Lafayette Co. WI	180	1.6%			Carroll Co. IL	207	2.2%
		Winnebago Co. IL	150	1.3%			Jackson Co. IA	63	0.7%
		Remainder	570	5.0%			Remainder	275	2.9%

Source: American Community Survey (2006-2010); & RKG Associates, Inc. (2017)

Preliminary estimates from the ACS for 2013 indicate that the Carroll County workforce has declined from 7,480 to 6,925, with 59 percent working in Carroll County; 30 percent elsewhere in Illinois; and, nearly ten percent working in Iowa counties. The resident workforce in Jo Davies County has declined from 11,470 to 11,000 with 58 percent of the jobs held by Jo Daviess County residents; another 12 percent of the jobs were held by residents of other Illinois counties; and 23 percent from residents of Iowa counties. Between 2010 and 2013, the Carroll County workforce has declined by a little more than seven percent (560 workers) although most of the resident workforce is still employed in Carroll County, indicating that jobs that were lost were out-of-county or a shift in employment by industry. During the same time-period, the resident workforce of Jo Daviess County declined by a little more than four percent (480 workers). More importantly, there was a loss of 775 Jo Daviess residents who also worked in Jo Daviess County, indicating a loss of local workers and/or more out-of-county commuting. Between 2010 and 2013 there was an estimated gain of 66 jobs in Carroll County and an estimated loss of 710 jobs in Jo Daviess County. In summary, job growth in Carroll County has been nominal but is still predominately held by Carroll County residents. At the same time, employment in Jo Daviess County has declined and is mostly represented by a loss of employment by Jo Daviess County residents.

Employment

Overall, employment in Carroll County declined by 300 positions, or 6.7 percent, over the 1995 to 2015 time-period. Over the 20-year period, all industry sectors except for retail trade and other, have experienced some employment decline. Some sectors have recovered and others have not. Hardest hit was manufacturing, information services and the health sector. Over the 1995 to 2015 time-period the loss of employment in Jo Daviess County was 1,100 jobs, with the manufacturing sector, wholesale trade and the finance sector realizing declines over the entire 20-year period. Dissimilar to Carroll County, there was a loss of retail trade employment in Jo Daviess County. In total, employment declined by nearly 13 percent in Jo Daviess County from 1995 to 2015. By contrast, the State of Illinois experienced an eight percent growth in all employment sectors, despite losses in information and manufacturing. The greatest decline in Jo Daviess, in absolute terms, was the loss of over 1,000 manufacturing jobs, typically those with better wages and employee benefits. Overall employment change in Carroll County is represented by growth in jobs typically with lower wages such as accommodations/food and retailing, offset by losses in higher wage industry sectors. In addition, the significant loss of health care related jobs, despite the county's rapidly aging population, is also alarming and perhaps indicative of the further 'ruralization' of Carroll County.

Table 7

INDUSTRY	Carroll County, IL					
SECTOR	1995	2005	2015	Δ 95 - 05	Δ 05 - 15	Δ 95 - 15
Construction	195	247	187	26.7%	-24.3%	-4.1%
Wholesale Trade	237	287	397	21.1%	38.3%	67.5%
Information	68	42	43	-38.2%	2.4%	-36.8%
Finance	233	216	200	-7.3%	-7.4%	-14.2%
Real Estate	6	28	15	366.7%	-46.4%	150.0%
Professional	61	57	72	-6.6%	26.3%	18.0%
Administrative	84	68	124	-19.0%	82.4%	47.6%
Education	340	274	332	-19.4%	21.2%	-2.4%
Health	700	558	295	-20.3%	-47.1%	-57.9%
Accommodations/Food	313	397	395	26.8%	-0.5%	26.2%
Manufacturing	1,200	888	818	-26.0%	-7.9%	-31.8%
Retail	422	499	539	18.2%	8.0%	27.7%
Transportation	104	110	89	5.8%	-19.1%	-14.4%
Agriculture	19	55	83	189.5%	50.9%	336.8%
TOTAL	**4,492**	**4,329**	**4,193**	**-3.6%**	**-3.1%**	**-6.7%**
INDUSTRY	**Jo Daviess County, IL**					
SECTOR	**1995**	**2005**	**2015**	**Δ 95 - 05**	**Δ 05 - 15**	**Δ 95 - 15**
Construction	519	579	584	11.6%	0.9%	12.5%
Wholesale Trade	144	110	42	-23.6%	-61.8%	-70.8%
Information	59	72	59	22.0%	-18.1%	0.0%
Finance	301	256	238	-15.0%	-7.0%	-20.9%
Real Estate	23	44	64	91.3%	45.5%	178.3%
Professional	174	184	201	5.7%	9.2%	15.5%
Administrative	212	342	194	61.3%	-43.3%	-8.5%
Education	390	527	432	35.1%	-18.0%	10.8%
Health	447	539	587	20.6%	8.9%	31.3%
Accommodations/Food	1,630	1,701	1,503	4.4%	-11.6%	-7.8%
Manufacturing	1,964	1,042	942	-46.9%	-9.6%	-52.0%
Retail	924	931	872	0.8%	-6.3%	-5.6%
Transportation	245	276	360	12.7%	30.4%	46.9%
Agriculture	80	88	73	10.0%	-17.0%	-8.8%
TOTAL	**8,739**	**7,976**	**7,612**	**-8.7%**	**-4.6%**	**-12.9%**
INDUSTRY	**State of Illinois**					
SECTOR	**1995**	**2005**	**2015**	**Δ 95 - 05**	**Δ 05 - 15**	**Δ 95 - 15**
Construction	237,689	282,373	230,461	18.8%	-18.4%	-3.0%
Wholesale Trade	304,983	304,765	305,152	-0.1%	0.1%	0.1%
Information	147,205	129,890	115,330	-11.8%	-11.2%	-21.7%
Finance	290,374	322,059	298,355	10.9%	-7.4%	2.7%
Real Estate	77,368	85,539	78,287	10.6%	-8.5%	1.2%
Professional	288,668	345,738	405,385	19.8%	17.3%	40.4%
Administrative	304,935	397,503	433,914	30.4%	9.2%	42.3%
Education	344,668	382,823	468,619	11.1%	22.4%	36.0%
Health	573,488	666,785	767,849	16.3%	15.2%	33.9%
Accommodations/Food	378,056	436,851	500,671	15.6%	14.6%	32.4%
Manufacturing	900,847	692,729	590,857	-23.1%	-14.7%	-34.4%
Retail	608,778	638,551	626,894	4.9%	-1.8%	3.0%
Transportation	209,369	224,475	247,529	7.2%	10.3%	18.2%
Agriculture	16,603	17,118	19,182	3.1%	12.1%	15.5%
TOTAL	**5,370,000**	**5,609,222**	**5,803,763**	**4.5%**	**3.5%**	**8.1%**

Source : US Census, Alteryx and RKG Associates, Inc. (2017)

Location Quotients

One measure of the relative health of a local economy is measured through the employment location quotient. This takes stock of the employment in any one sector of the local economy as a percent of the total local economy. This is then expressed as a ratio to a much larger area, such as a county to a state. A location quotient of 0.8 to 1.2 generally indicates a balance in the local and larger economies for that industry sector. A ratio of less than 0.8 indicates under performance and a ratio of more than 1.2 indicates an over performance in that industry sector. In 2015 there were three industry sectors in Carroll County that out-performed the state, notably including the manufacturing sector which has consistently out-performed the state since 1995. Several other sectors have continuously under-performed the state. For Jo Daviess County, the local economy has out-performed the state in the construction sector and for the accommodations/food sector, while most sectors have continuously under-performed the state economy. In both counties, the agricultural sector is notably strong compared with the state, but also reflect relatively small employment bases. Those sectors where the counties out-perform the state reflect strengths of the local economy and should be monitored to guard against slippage. On the other hand, those sectors that under-perform the state may present opportunities for new development and economic activity within the counties, provided the baseline socioeconomic metrics and market trends dictate. The findings of this analysis indicate that this is generally not the case for either county.

Table 8

INDUSTRY SECTOR EMPLOYMENT	Carroll Co., IL - LQ's			Jo Daviess Co., IL - LQ's		
	1995	2005	2015	1995	2005	2015
Construction	0.98	1.13	1.12	1.34	1.44	1.93
Wholesale Trade	0.93	1.22	1.80	0.29	0.25	0.10
Information	0.55	0.42	0.52	0.25	0.39	0.39
Finance	0.96	0.87	0.93	0.64	0.56	0.61
Real Estate	0.09	0.42	0.27	0.18	0.36	0.62
Professional	0.25	0.21	0.25	0.37	0.37	0.38
Administrative	0.33	0.22	0.40	0.43	0.61	0.34
Education	1.18	0.93	0.98	0.70	0.97	0.70
Health	1.46	1.08	0.53	0.48	0.57	0.58
Accommodations/Food	0.99	1.18	1.09	2.65	2.74	2.29
Manufacturing	1.59	1.66	1.92	1.34	1.06	1.22
Retail	0.83	1.01	1.19	0.93	1.03	1.06
Transportation	0.59	0.63	0.50	0.72	0.86	1.11
Agriculture	1.37	4.16	5.99	2.96	3.62	2.90
TOTAL						

Source : US Census, Alteryx and RKG Associates, Inc. (2017)

under-performs ***over-performs***

Comparative Location Quotients

RKG developed a comparative location quotient analysis for the eight-county BHH & ECIA Region. Trend data was compiled for 2005 and 2015 (1995 data was unavailable for Iowa counties) to measure any comparative trends, weaknesses or strengths, by industry sector, for the counties in the region.

Across most industry sectors, for 2005 and for 2015, the local county economies under-performed relative to their respective state. The lone standout is Dubuque County, Iowa where the City of Dubuque is approximately 60,000 persons. Across most counties the construction sector is strong, as is the manufacturing sector. In general, the eight-county region exhibits strength in the manufacturing sector and "spotty" by county for other industry sectors. While weak sectors are common to all counties only Dubuque County, Iowa exhibits a mix of industry sectors that are performing on par with the state.

Table 9

INDUSTRY SECTOR	Stephenson Co., IL		Whiteside Co., IL		Dubuque Co., IA	
LOCATION QUOTIENTS	2005	2015	2005	2015	2005	2015
Construction	1.44	1.86	0.90	1.06	0.94	0.91
Wholesale Trade	0.69	0.69	0.56	0.75	1.10	1.13
Information	0.62	0.31	0.64	0.57	1.52	0.94
Finance	1.07	0.93	0.54	0.56	0.89	1.18
Real Estate	0.45	0.76	0.56	0.28	0.93	0.77
Professional	0.35	0.37	0.38	0.39	0.91	1.30
Administrative	0.40	0.64	0.78	0.85	0.61	0.88
Education	1.04	0.97	0.99	0.97	0.94	0.90
Health	1.21	1.27	1.36	1.22	1.06	1.01
Accommodations/Food	0.89	0.80	1.05	0.96	1.07	1.00
Manufacturing	2.14	1.97	1.74	1.81	1.12	1.10
Retail	0.78	0.88	1.21	1.08	1.01	0.94
Transportation	0.34	0.38	0.62	1.26	0.79	0.95
Agriculture	4.06	6.91	1.28	2.03	0.37	0.27
	Clinton Co., IA		Delaware Co., IA		Jackson Co., IA	
	2005	2015	2005	2015	2005	2015
Construction	1.18	0.99	1.22	1.17	1.11	1.05
Wholesale Trade	0.58	0.50	1.57	1.89	0.88	1.27
Information	0.95	1.23	0.40	0.28	0.89	1.24
Finance	0.56	0.56	0.76	0.66	0.66	0.73
Real Estate	0.55	0.61	0.28	0.08	0.45	0.25
Professional	0.64	0.54	0.62	0.56	0.49	0.42
Administrative	1.40	1.51	1.00	0.34	0.11	0.14
Education	0.74	0.88	0.83	0.64	1.15	1.00
Health	1.27	1.09	0.90	1.18	1.06	1.04
Accommodations/Food	0.88	0.98	0.86	0.58	1.29	1.43
Manufacturing	1.33	1.54	1.37	1.81	0.87	0.94
Retail	0.85	0.86	0.93	0.82	1.17	1.25
Transportation	0.96	1.08	0.62	0.64	2.14	1.32
Agriculture	0.55	0.40	1.00	0.81	1.78	1.30

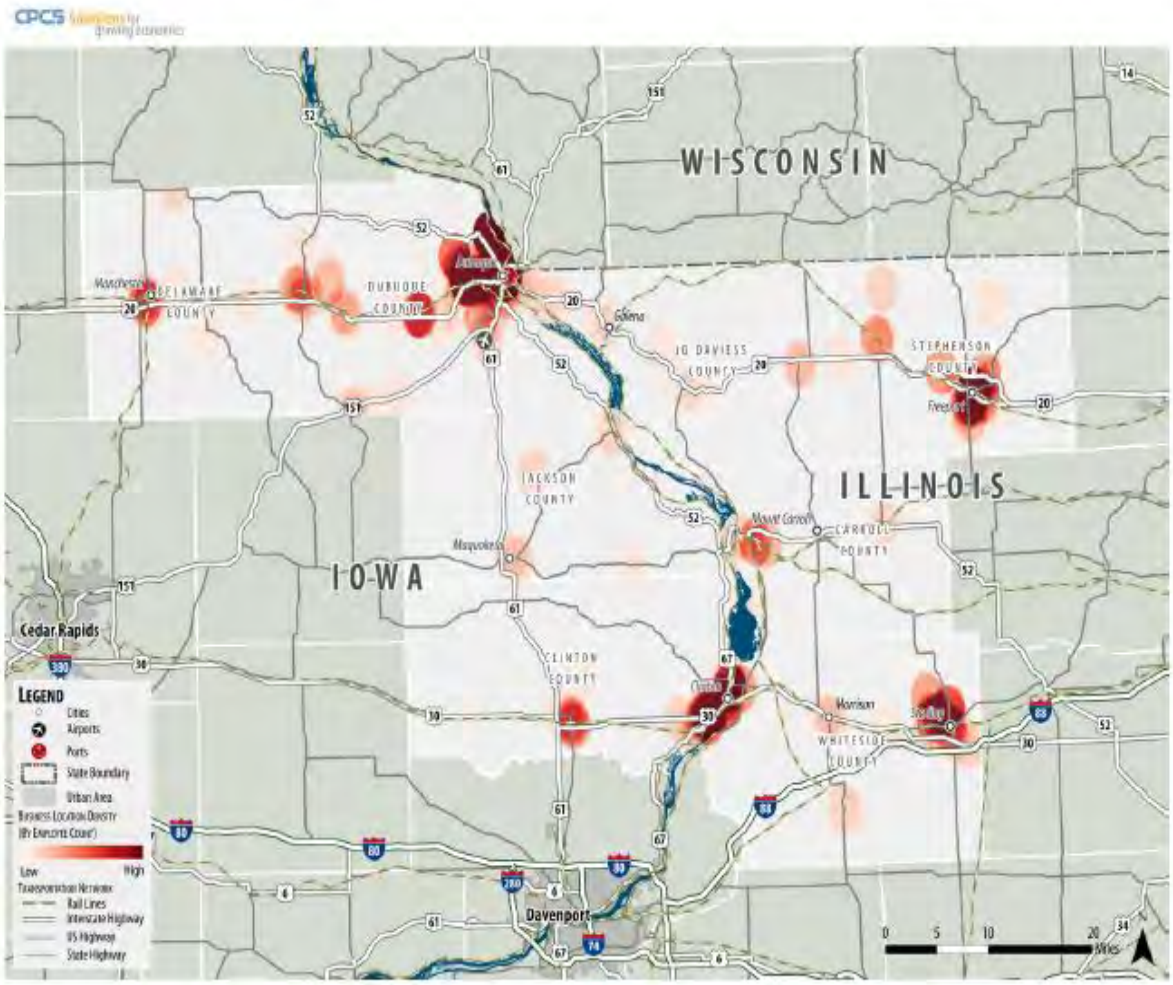
Source : US Census, Alteryx and RKG Associates, Inc. (2017)

Key: over performs | under performs

- These findings are generally consistent with those presented by the Blackhawk Hills Community Economic Development memorandum,[5] which presented a similar analysis (change in LQ's over the 2005 to 2014 time-period) regarding the relative strength of a variety of local economic clusters. In that analysis, the industry clusters that were strong and growing included forestry, agriculture and other farming. These clusters represent opportunities for increased penetration (development) and nurturing to maintain employment levels and economic activity within the region. RKG's review also found this to be the case and noted that despite their strengths they reflect a relatively small base of employment.
- Those industry clusters that are strong, but may be declining or otherwise "threatened", include the manufacturing sector. RKG's analysis also noted the very strong LQ's across most counties in the region in the manufacturing sector.

[5] Prepared by the Department of Agricultural and Applied Economics – University of Wisconsin – Madison Extension (2015-BHRC-RDS).

Figure 12 – Freight-Related Employment Centers



Source: CPCS Analysis of ReferenceUSA, 2016

The CPCS Report indicates that manufacturing, retail/wholesale trade, construction and agriculture are identified as freight-related industries (bold italics in preceding table). In the eight-county region, the county level construction sector is generally on par or above the state, as is manufacturing and retail trade for the most part. Wholesale trade and agriculture are a bit more diversified at the county level when compared with the state. These location quotients are also reflected in the CPCS Report. The strength of the eight-county region across the freight industry sectors reflects the region being served by two rail lines and may present strengths for expansion or relocation opportunities for those industries that need freight access. The freight-related employment centers are more clustered to Clinton and Dubuque counties in Iowa as compared to Carroll and Jo Daviess counties in Illinois, possibly reflecting the better transportation linkages in these locations (see Figure 12).

Employment Projections and Space Needs

Carroll County and Jo Daviess County are part of the Local Workforce Investment Area (LWIA) #4, as defined by the Illinois Department of Employment Security (IL DES).[6] RKG applied the ten-tier projected growth, by industry sector, for the LWIA #4, as developed by IL DES to the Carroll and Jo Daviess County employment levels in 2015. For the selected industry sectors employment is projected to increase from around 9,980 in 2015 to nearly 10,580 in 2025. RKG then converted these changes in employment into annual estimate of space (SF) needs based on industry standard estimates of SF per type of employment, as developed by the Urban Land Institute (ULI) and others.

The combined counties are projected to have an annual increase in employment 590 workers across the selected industry sectors over the 2015 to 2025 time-period. This projected employment growth results in an estimated annual demand for an additional 21,250 SF for both counties. This projected demand reflects employment declines in some industry sectors and only nominal annual growth in others. Projected annual employment and space needs are greatest in the accommodations/food sector and wholesale trade. Not all of this projected annual growth in space needs necessarily equates to a demand for newly built space as RKG assumes that some of the demand may be realized by a better utilization of existing space or by vacancies and/or available properties. In summary, the projected employment growth and space needs are negligible within the confines of the existing market indicators and significant demand for newly built space would likely result only from the expansion of existing industries (beyond the market indicators) or entry into the counties of new industries.

[6] LWIA # 4 includes the following counties: Bureau, Carroll, Jo Daviess, LaSalle, Lee, Ogle, Putnam and Whiteside.

Table 10

Estimated Employment and SF Needs by Selected Industry Sector Annual 2015 - 2025	Carroll and Jo Daviess Counties, IL			
	Avg/SF per Emp	2025 Employ	Change from 2015	Est. Gross Annual Demand - SF
OFFICE/FLEX				
Information	175	96	(6)	(105)
Finance/Insurance	200	433	(5)	(103)
Real Estate	200	85	6	120
Professional/Technical	175	307	34	592
Administration/Waste Services	200	368	50	991
Subtotal		**1,288**	**78**	**1,494**
INSTITUTIONAL				
Health Care/Social Assistance	150	927	45	672
Subtotal		**927**	**45**	**672**
COMMERCIAL				
Arts and Entertainment	150	271	(14)	(217)
Retail Trade	175	1,430	19	337
Accommodations/Food Services	175	2,036	138	2,406
Other exc. Public Administration	150	726	70	1,046
Subtotal		**4,462**	**212**	**3,573**
INDUSTRIAL				
Construction	150	852	81	1,218
Manufacturing	1,000	1,781	21	2,088
Wholesale Trade	750	796	135	10,155
Transportation/Warehousing	1,000	470	21	2,050
Subtotal		**3,899**	**258**	**15,511**
TOTAL		**10,576**	**593**	**21,251**

Source : US Census Bureau, IL Department of Employment Security and RKG Associates, Inc. (2017)

Summary

In summary, a declining and aging population reflects the stable regional economy and the rural setting of Savanna Depot Park. These findings reflect larger, regional (Midwest) and national economic trends, which are seeing stronger growth in the southern states and in urban areas, as well as continued declines in much of the Midwest and Northeast. The reasons for this are many and debatable, but it is generally believed that many young people entering the workforce or establishing careers are moving to the cities and/or to the south (and west). Similarly, companies are following this future workforce and locating in places with good or very good transportation access for raw materials, supplies and finished goods as well as labor. Increasing productivity and technology advances in agricultural have also reduced the employment in this large regional industry sector. Savanna Depot Park, as well as Carroll and Jo Daviess counties, are simply not as competitive as other parts of the region and country from a demographic perspective.

While there are relatively strong economic sectors in the region, most notably agriculture and manufacturing, these do not necessarily benefit Savanna Depot Park, since they are depending on key transportation linkages and a skilled workforce.

2.2 Infrastructure

The objective of the infrastructure evaluation is to assess the ability of current infrastructure at Savanna Depot Park to support economic development. Over 20 years have passed since the Savanna Army Depot was identified for closure. Since that time, approximately one-third of the existing acreage has transferred to the Jo-Carroll LRA to support economic development. This assessment was performed to understand the current infrastructure conditions, provide rough order-of-magnitude costs for those areas where additional investment can be made to support business attraction and provide recommendations on key infrastructure issues for the Jo-Carroll LRA to consider for prioritization to support and attract economic development.

Operations at Savanna Depot Park are supported by a network of utilities and infrastructure. WESTON reviewed the current capacity and conditions of existing infrastructure and assessed its useful life and potential for future reuse. Recommendations for long-term capital improvement have been made and include an order-of-magnitude estimate of capital cost. Due to the existing tenant operations, condition, and distribution coverage of the existing systems, it is anticipated that a majority of the infrastructure will continue to be used in its current capacity and/or expanded in the future as the LRA parcels are sold and developed.

Electronic maps of the existing infrastructure and relevant Depot data were provided by the LRA and/or its contractors in a Geographic Information System (GIS) format. The GIS data was used to create the following six figures, which are referred to throughout this section and which can be found in Appendix A:

Figure A1 – Site Parcels/Ownership Map;
Figure A2 - LRA Buildings Map;
Figure A3 - LRA Utilities Map – Electricity Distribution System;
Figure A4 - LRA Utilities Map – Water and Sewer Distribution System;
Figure A5 - LRA Utilities Map – Fiber Optic Telecommunications Distribution System; and
Figure A6 – LRA Rail System Map.

A site visit was conducted in September 2017 and included interviews with LRA personnel, tenants, and the wastewater treatment system operator.

The remainder of this section presents an evaluation of the existing infrastructure. Where available, information is presented from prior reports, which has been updated to reflect the current conditions. Prior reports used in this evaluation include:

Savanna Army Depot Reuse Plan and Implementation Strategy. January 1997. Prepared for Savana Army Depot LRA, prepared by Economics Research Associates with Mid States Associates, Inc., Sasaki Associates, Inc., and EDS (William Lauberands); and Riverport Railroad Water and Sewer Infrastructure Evaluation and Recommendation Report (Draft), Savanna Depot, Savanna, Illinois. September 2012. Prepared by Hanson Professional Services, Inc.

2.2.1 LRA Owned Parcels

As discussed in Section 1.4 above, the various parcels at the former Savanna Army Depot are owned by approximately 16 private companies and government agencies, including the LRA. The LRA owns approximately 403 acres of land, which can be broken down into 3 separate contiguous areas, comprised of several different numbered parcels, all of which are located on the southern half of the former Army Depot property. Two parcels nearest the Army Depot Road entrance combine for 19 acres and have easy access on and off the Park. The largest of the LRA parcels, located to the north of the main depot area and known on-site as "The Industrial Park", is approximately 300 acres and has easy access to railroad tracks to the east. The third area is located near the southern tip of the former Depot property and is separated from the Mississippi River only by a narrow strip of US Fish and Wildlife Service property.

2.2.2 LRA Owned Structures

This infrastructure evaluation included a review of the buildings currently owned by the LRA. Figure A2 in Appendix A identifies the four buildings located on LRA property. Historically, many other buildings were located on these parcels. However, as these buildings were not in use and were not maintained, they were demolished. Demolition efforts were last completed in 2017.

Buildings 246 and 247 are located near the site entrance, just north of Crim Drive/Army Depot Road. Both buildings are occupied and are currently used as office space. These one-story buildings are in good condition and had their roofs replaced in 2016. Both have air conditioning systems and propane storage tanks for heat.

Building 249 is also located near the site entrance, just southwest of building 247. The building is currently being used as a canine officer training facility as well as a storage area for Depot artifacts. It has not had any recent major renovations and does not have a heating system. Due to the lack of use of this building, repairs are likely to be needed, and include the need to install a heating system and the purchase of a new propane storage tank.

Building 9 is located near the southern tip of the site and is currently vacant and abandoned. There is substantial water damage to this building leading to a large amount of mold and moss within the building and substantial structural damage. The LRA is considering demolition of Building 9. The demolition cost, including asbestos abatement, is estimated to be between $200,000 and $300,000.

2.2.3 Roadway Network

The Park has access from Illinois Route 84, approximately nine miles south of U.S. Route 20 and 50 miles north of Interstate 80. The nearest major airports are located in Dubuque, IA and Moline, IL, which are 55 and 60 miles away respectively. The Savanna Depot Park

property is traversed by a complex network of roads and parking areas serving the various building areas. The roads are rural in nature with little or no shouldering. The sandy nature of the soils on the Depot provides for a solid foundation for the roads and facilitates drainage by rapid infiltration of the runoff.

The main roads are owned by the Counties and are classified as highways. These include Army Depot Road, Crim Drive, Shinske Road, McIntyre Road, CN Road, Main Avenue, and a portion of Lederman Drive. In Carroll County, these highways are privately owned with a 60-foot easement for Carroll County. In Jo Daviess County, the roads are owned by the county, within an 80-foot wide right-of-way. There are also several smaller roads leading or adjacent to LRA property that are being turned over to Washington Township, including B Street and C Street. The remaining roads are considered privately owned.

The main roads, in general, have two names. These include the official name as it appears on all Master Planning Documents, and its most common name as used by on-site personnel. The main roads, each identified first by its official name and second by its common name, are described as follows:

Crim Drive and Army Depot Road

This is the main entrance road from Illinois Route 84 to the Lower Post Area. Army Depot Road extends from Illinois Route 84 to the bridge spanning the Apple River. West of the bridge this same road changes names to Crim Drive. Approximately two miles in length, it consists of a combination of Portland cement and asphaltic concrete. The road is in good condition and is one of few roads serving the property that has 8-foot-wide shoulders. The bridge spanning the Apple River is a three-span structure constructed in 1990. At the time of the site assessment, it was in good condition.

Shinske Road (Q Road)

This road runs along the northeasterly perimeter of the site from the Lower Post to the Whitton Gate which is the northernmost extent of LRA property. The road consists of asphaltic concrete which was in good condition at the time of the site assessment.

McIntyre Road (K Road)

This road runs approximately through the center of the Savanna Depot Park property, from the Lower Post out to the ammunition storage areas. This main artery is public through the intersection of McIntyre and CN Roads, and private thereafter to the northwest. It is constructed of asphaltic concrete and is in generally good condition.

CN Road

CN Road runs across the Savanna Depot Park, from Shinske Road at its north end to River Road at its south end. The road is constructed of asphaltic concrete and is in good condition.

Main Avenue

This roadway is located near the entrance to Savanna Depot Park and runs from Crim Drive to the north-northwest through the former warehouses, west of the LRA offices. From Crim Drive to approximately where the warehouses once stood, Main Avenue is in good condition; thereafter, this roadway is no longer regularly used and is in disrepair.

Lederman Drive

This is an approximately 0.25 mile stretch of asphaltic concrete road connecting Crim Drive to Vincent Road in the Lower Post Area of Savanna Depot Park. This road is in good condition.

System Adequacy/Future Use

Roads in the Lower Post Area are designed and constructed to handle dense and heavy traffic loads. Crim, Shinske, and McIntyre particularly can handle traffic-oriented businesses located within the current LRA properties described above. There is a significant amount of roadway materials that could be reclaimed on the Depot for future road improvement projects.

Intersections with Shinske (Q) Road for future uses should be minimized to avoid bottlenecks, inadequate turning radii, signage and control problems, etc. Specific transportation needs and network improvements will be assessed in the future as development projects become more detailed. Estimated cost for intersections is $30,000 to $40,000 each, plus drainage costs.

There is a potential need for a cross road connecting Shinske (Q) with McIntyre (K) Road, depending upon land use planning and potential development project needs. The cost to construct a new road for truck traffic is estimated to be from $350 to $450 per linear foot.

2.2.4 Railway Network

The BNSF Railway has a main line that runs parallel to the property along its northeasterly border, with two connections to the Savanna Depot Park property. The property is served by an extensive network of spur-lines and sidings off this main line. There are approximately 72 miles of track, all owned by Riverport Railroad either by fee or easement. A small portion of this track is located on LRA property; however, Riverport Railroad owns the access easement for this track. Figure A6 in Appendix A shows the location of the major rail lines at the Depot Park.

There are no railroad bridges and the maximum grade of any rail on the site is two percent. The sandy nature of the soils on the Depot provide a solid base for the rail lines and facilitates drainage.

The weight of rail on the site ranges from 67.5 pounds to 115 pounds. Due to the variants of weight, much of the track cannot sustain heavy loads from fully loaded freight cars

and tankers, which are the most common users of the BNSF main line. The property has a current storage capacity of approximately 2,700 cars throughout the facility.

System Adequacy/Future Use

Coverage of the railway network is excellent and improving. Currently, Riverport Railroad is considering a project to add an additional mile of track on the Depot which in addition to providing more coverage will also provide additional capacity of 80 to 100 cars. There are two rail car cleaning facilities on site. Currently there is no direct rail access to the river.

2.2.5 Sewer Collection/Treatment Systems

There were three different collection systems used by the depot: the Lower Post Area Collection System; Industrial Waste (IW) Collection System (which was abandoned by the Army); and several Individual Septic Tank and Leach Field Systems. Only the Lower Post Area collection system encompasses LRA owned property. Therefore, the IW collection system will not be discussed. Septic systems remain in service within the Lower Post Area on property owned or operated by Washington Township, Eastland Grain (Area 51, LLC property), Inserv Rail Repair Service (Riverport Railroad property), and Riverport Railroad (at the new engine house).

The Lower Post Area Collection System is a gravity collection system located in the south half of the site and is tributary to the wastewater treatment plant. There is one main lift station in this collection system located in Building 244. The station has two 3-HP centrifugal pumps, each with a capacity of 150 gallons per minute (gpm) at 20′ TDH. The forcemain from this pump station is constructed of cement asbestos pipe.

The collection system contains a little less than 6 miles of pipe ranging from 4 inches to 12 inches. Generally, piping 8 inches and greater is considered to be a sewer main and 6 inches and smaller is a sewer service with approximately 5 miles of sewer mains and 1 mile of sewer services.

Table 11

Diameter	Vitrified Clay	Cast Iron	Asbestos Cement	Corrugated Steel
4"	352	80	0	0
6"	4,000	200	200	0
8"	23,000	266	0	0
10"	3,000	0	0	0
12"	0	0	0	1,011
Total	**30,352**	**546**	**200**	**1,011**

Future Use/Capacity

The current system has the capability of managing a substantially larger capacity than it is currently handling. The site utilities were installed between 1940 and 1950. All of the pipe materials except for the Asbestos Cement has a life expectancy of at least 100 years. The Asbestos Cement pipe has a life expectancy of 60-70 years and likely will need to be replaced in the near future. The anticipated cost of replacement is $25 per linear foot (HDPE).

Lower Post Main Disposal Plant

The existing wastewater treatment facility serving the "Lower Post" portion of the property was originally constructed in 1942 and is located at the south end of the site, adjacent to the Apple River. The original facility included manual screening, primary sedimentation, primary and secondary trickling filters, secondary sedimentation, anaerobic digestion and sludge drying beds. Upgrades and modifications at the facility since its original construction have included the addition of a comminutor, an effluent chlorine disinfection system and contact tank, sampling equipment, groundwater pumps and the conversion of the anaerobic digester to an aerobic digester. Normal maintenance and replacement of process equipment or pumps has also occurred during this time. The facility is reportedly designed to treat an average flow of 0.30 million gallons per day (gpd), although an evaluation in 2011 pointed out two locations in the plant where pump capacity and gate operation would limit the plant's treatment capacity under peak hourly loads.

Recommended Capital Improvements/Areas of Future Analysis

Wastewater treatment plants have a typical design life of 20 years, and although this one has been repaired and maintained well, it is over 75 years old and has degraded in its overall efficiency. This loss of efficiency coupled with potential high-use tenants may require the construction of a new WWTF for the Depot's 2,889 acres. Once a new facility is constructed, the Lower Post-Main Disposal Facility should be abandoned. The new WWTF should have approximately 700,000 gpd in capacity. This capacity could vary depending upon the proposed new uses for the property. The LRA should avoid under-sizing this proposed WWTF and plan for the needs of the next 20 years. The estimated cost for this new WWTF is approximately $6.5 million.

If it is deemed unnecessary to construct a new WWTF, some action is required to bring the current WWTF to its maximum design capacity. This work includes projects to replace effluent pumps and motors, the sludge pump, and the shear gate between the two chambers of the effluent wet well. Although much of the facility has been maintained over the years, these portions will also soon reach the end of their useful life and need to be replaced.

There may also be a need for additional 10" forcemain along lands in the LRA corridor along Shinske Road to cover the Industrial Park property. The LRA will have to coordinate forcemain construction with the railroad company as crossings will be

required through the railroad right-of-way. Construction is estimated at $50 per linear foot plus needed lift stations. The new forcemain will be located in the Shinske Road right-of-way. This main will accommodate any new users along the Shinske Road corridor and is estimated to cost approximately $500,000 for a 10,000-foot long installation.

Construction of a new lift station will also be required for the sewer collection system at the industrial park. Estimated costs for this new lift station is $75,000.

Figure A4 in Appendix A shows the location of the water and sewer distribution systems at Savanna Depot Park.

2.2.6 Water System

The easterly one-third of the property is served by a potable water system consisting of supply wells, a storage reservoir, and distribution mains. For the purposes of this report, this system will be referred to as the Lower Post Water System. There are several other wells scattered throughout the property that serve small localized areas. These wells are also described in this report. No testing was done in preparing this report; all data was acquired from water system plates and reports provided by the Depot's Public Works Division.

Lower Post Water System

Supply Wells

There are three primary wells that provide water to the site. They are spaced out in the southeast corner of the Depot. The water receives minimal treatment at each location through the addition of chlorine. There are two additional injection ports located on the discharge header to allow for the addition of fluoride and polyphosphate. In addition to the upgrades identified below, all three well houses were upgraded in 2003 with improvements to the physical structure as well as the chemical feed system, pump controls and the Supervisory Control and Data Acquisition (SCADA) system, which collects and processes real-time data for the wells for operator review.

Lower Post Well and Pumphouse- Building 107: This is a deep rock well, 1,200 feet deep cased to 340 feet with a 12-inch steel casing grouted in a 16-inch drive pipe. The well pump is listed at 650 gallons per minute. The well received a new pump and piping in September 1996.

Well and Pumphouse - Building 260: Also, a deep rock well with a total depth of 1,114 feet, this well is cased to 345 with a 12-inch casing grouted in a 16-inch outer casing. The well pump is listed at 400 gallons per minute.

"700 Area" Well and Pumphouse - Building 701: This is a 1,200-foot-deep rock well cased to 435 feet with a 12-inch casing grouted in a 16-inch drive pipe. The well pump is rated at 750 gallons per minute.

The three wells are operated by an automatic control system located near the elevated storage reservoir (described below). Due to low water demand, only the well in Building 107 is currently active. As water usage increases additional wells can be started up to satisfy the demand. In addition, each wellhouse pump receiver contains a control that will activate the pump if the localized water pressure drops below a predetermined setting.

Summary of Water Supply System

In general, the quality of the water being pumped is good. The Environmental Protection Agency requires that each well be tested on a regular basis for inorganic compounds, organic compounds and pesticides. The water can be characterized as relatively hard with a fair concentration of iron. Chlorine and fluoride are added at the wellheads within the Lower Post System. Polyphosphate is being added to the water supply by the operator.

Elevated Storage Reservoir

The 250,000-gallon elevated storage tank (Structure #904), stands 150 feet tall and was constructed in 1950. Repairs to the tank were made in 1991 to correct safety issues, and the storage tank has recently been repainted. As the water pressure lowers in the elevated tank, the transmitter activates the controls in the main pump receiver located in one wellhouse. If water demand increases, another pump will be activated at a second well. The tower and tank appear to be in good condition. Some spalling (flaking of concrete) is evident on the concrete support pads which will require attention in the future. As stated above, a level controller is located near the base of the tower which signals the wells when pumping is required.

Summary of Elevated Storage System

The elevated storage is adequately sized to service existing demands from the Depot's operations. Any new large-scale user, unless located immediately adjacent to a 12" main, will necessitate construction of more elevated storage capacity. Also, industry demands for fire flows and domestic consumption will have to be evaluated on a case-by- case basis.

Water Distribution System

The Lower Post Area is served quite comprehensively by water mains (approximately 140,000 linear feet) ranging from 4- to 12-inches in diameter. Smaller mains are used as laterals/service lines, ranging in size from 2-3 inches. The system is looped and sub-looped through the area to provide service to most building areas from more than one direction. Numerous valves have been installed since 1990 to allow sections of the system

to be isolated. Mains in the system are predominantly cast iron pipe or asbestos cement pipe. Smaller lengths of galvanized and wrought iron pipe also exist in the system. Discussions with maintenance personnel indicate that very few problems are experienced with the distribution mains.

Table 12

Diameter	Cast Iron	Asbestos Cement	Wrought Iron	Galvanized Iron
1/4"	220	0	0	0
1"	360	0	0	0
1-1/4"	1,160	0	350	0
1-1/2"	1,130	0	910	0
2"	4,110	0	2,480	40
2-1/2"	1,260	0	1,520	110
3"	1,650	810	300	0
4"	2,490	420	0	0
6"	51,440	2,460	230	0
8"	22,040	16,250	0	0
10"	4,960	11,760	0	0
12"	4,870	1,940	0	1,011
Total	**95,690**	**33,640**	**5,790**	**1,161**

System Adequacy/Future Use

Test pumping and drawdown measurements indicate that the wells are capable of supplying much more water than is currently being drawn from them. This means that pump upgrades could be completed in the future to provide more water if the demand increases.

Any significant industrial or institutional development on the site will require additional water storage volume. The most economical and compatible addition would be another elevated storage tank at the same elevation as the existing tower. Location of this additional storage will depend on where the growth occurs, but it should be looped into the existing distribution system.

Additional significant development will also likely require distribution system improvements to meet fire protection needs. Insurance requirements for certain industries mandate fire flows of 1,500 to 2,000 gallons per minute which will not be achievable on portions of the existing distribution system. Necessary improvements will

vary depending on site location but would likely include system looping and supplemental water main installation.

Recommended Capital Improvements/Areas of Future Analysis

Construction of a new water tower near the current elevated storage structure. The recommended capacity/size is at least 750,000 gallons. Capacity/size could vary depending upon potential future users to the system. Estimated cost for construction is approximately $1.8 million.

Water main looping to bring additional users (future industry, institutions, and commercial enterprises) onto the system. Cost per linear foot of main is estimated at $65, engineering fees not included. Size of main could range from 8" to 12", depending upon the user.

Maintenance on the wellhouses is estimated to cost $50,000 annually.

2.2.7 Stormwater/Flood Control

There is a small portion of the Lower Post area which is served by a storm sewer system. The majority of the pipes are 10- and 12-inch diameter clay tile with one line being 30 inches in diameter. There are approximately 17 storm-sewer catch basins in this area.

The balance of the property is surface drained into creeks and sloughs of the Apple and Mississippi Rivers and into low areas on the site where the stormwater infiltrates into the ground. The sandy nature of the soils on the Depot promotes rapid infiltration of the runoff.

A dike system is used to flood-proof the Lower Post Area. It is constructed immediately to the southwest of the Lower Post-Main Disposal Facility. This dike has filters and gauges that are monitored according to the Depot's Disaster Control Plan. Gauges for the river levels and water table are near Building 121 for ground water monitoring purposes.

System Adequacy/Future Use

The stormwater facilities are adequate for the site as it is presently developed. Future industrial development of the property would require associated stormwater improvements. This would be on a site-by-site basis and would depend on the industry's Standard Industrial Classification (SIC) code, as well as its location of the site.

Continued maintenance and upkeep on the dike is important to keep the Lower Post Area from flooding, as well as to protect existing infrastructure from damage, especially the Lower Post-Main Disposal Facility.

2.2.8 Electric Power

Jo-Carroll Energy supplies current via a 35 kilovolt (kV) sub-transmission line to a main substation near building 106 (the old diesel generating plant) on the Lower Post Area where it is transformed to 13.2 kV. The switchgear at this location, which includes six 1,200-amp breakers, then distributes the power throughout the site. There are four, 3-phase distribution lines throughout the site consisting of 4/0 and #2 conductor.

The distribution system in the Lower Post Area is primarily 13.2 kv buried cable. Much of the distribution system has been rebuilt since 1991 with new lines and transformers. The switchgear was installed in 1991.

Figure A3 in Appendix A shows the location of the electrical distribution system.

System Adequacy/Future Use

The system in the Lower Post area is in fair condition and provides good coverage for that area. Currently the 3.5-MW substation is underutilized and has the capacity to provide 2.5-MW of capacity to potential users. A 161-kV transmission line and a new 69-kV transmission line are located within 4-miles of the site and could provide additional power to the site. Depending on the needs of an end user, additional development in this area could be served by the existing system. The addition of a large user of electricity would require some modifications which would vary on a case-by-case basis dependent on location.

2.2.9 Natural Gas

Currently, there is no natural gas service available on the property. The closest location of a large natural gas main is approximately 7 miles from the Savanna Depot Park property. The most feasible route, both financially and physically, to pull in gas service is along Highway 84, from Savanna, Illinois. Alternate options include construction of a supply line across the Mississippi River from a major distribution line in Iowa, or pulling in a new line from the north through Hanover. The estimated cost for such a project has been roughly estimated at approximately $6 to $10 million, though a detailed feasibility study is recommended to determine the optimum way to provide gas service and the costs to do so. Utility providers, future users, and market conditions would dictate any financing arrangements.

2.2.10 Telecommunications

The Lower Post Area is the primary area with telecommunications service. There is an extensive system of copper cables and a high-speed broadband fiber network with ring redundancy at a 40 gig capacity, as shown in Figure A5 in Appendix A for the southern

section of the Depot. The copper cable within the property is connected via a 500-count copper cable installed in Army Depot Road. The copper has been poorly maintained since the Army left and has portions that require frequent troubleshooting. The fiber network was installed in the 1990s and provides high speed internet as well as phone service to locations along the south side of the property. Future service additions will be added on a case-by-case basis, and most likely paid for by each private entity. The LRA has privatized the copper cable and fiber network; currently iFiber Communications maintains these systems. A separate fiber optic cable system, owned by Illinois Information Management/Dejavue Properties, has been installed at Savanna Depot Park. This system extends from the Lower Post Area to the northwest along the southern side of McIntyre Road to Parcel 12. From Parcel 12 a stretch of fiber optic cable also extends south to Parcel 19. Access to this fiber optic system may be available to existing and future tenants through agreement with the owner.

3 Environmental

The Savanna Army Depot Activity (SVDA) site is a 13,062-acre former military installation. Between 1917 and 2000, the U.S. Army used the property for artillery weapons and ammunition testing, as well as the storage of ordnance and the loading and renovating of shells and bombs. The Army used several areas for demolition, burning of obsolete ordnance and waste disposal. Facility operations contaminated soils, groundwater, surface water and sediment with hazardous chemicals. As a result of preliminary investigations by the U.S. Army Toxic and Hazardous Management Agency, the SVDA site was proposed for the National Priorities List (NPL) in 1984 and listed on the NPL in 1989.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Information System (CERCLIS) identification (ID) number for SVDA is IL3210020803. In September 1989, the Army, Illinois EPA (IEPA), and U.S. Environmental Protection Agency (U.S. EPA) signed a three-party federal facility agreement (FFA). The Army, as the lead agency, is conducting the investigation and cleanup of the facility under the oversight of IEPA and U.S. EPA.

In September 1995, the facility was included in the Department of Defense (DoD) Base Realignment and Closure (BRAC) List and was officially closed as a military installation in March 2000. The Jo-Carroll Local Redevelopment Authority (LRA) is charged with reuse and redevelopment of the former SVDA installation, which was named the Savanna Depot Business, Industry, and Technology Park (Savanna Depot Park) in June 2007. The goal for the site has been, and continues to be, the transfer of the property to other entities, including the LRA, to allow for productive reuse.

The Army's BRAC Environmental Restoration Program is a comprehensive program identifying, investigating, and cleaning up contamination at closing and realigning Army installations with transferable real property, and the environmental program is performed in compliance with CERCLA. A Restoration Advisory Board (RAB) was established 1995. The RAB is intended to improve public participation by involving the community in the restoration decision-making process. The RAB meetings are scheduled by the Army and the most recent meeting was held in May of 2017.

The following section is a summary of the current environmental status of the sites not yet transferred from the Army to the LRA. Detailed information supporting this summary is presented in the subsections thereafter. Illustrative maps for this section are found in Appendix B.

3.1 Summary of Army BRAC Environmental Restoration Program

The Army's BRAC Environmental Restoration Program consists of three subcategories: Installation Restoration Program (IRP), Military Munitions Response Program (MMRP), and Closure-related Compliance. As of Fiscal Year (FY) 2017, there are 34 IRP sites, 5 MMRP sites, and 1 Compliance site within the LRA parcels at Savanna Depot Park. Of the 34 IRP sites:

- 21 sites require Land Use Controls (LUCs) to restrict reuse of the property;
- 6 sites are currently in the Remedial Investigation (RI) or Feasibility Study (FS) phase of the CERCLA process;
- 4 sites are currently in Proposed Plan (PP) or Record of Decision (ROD) phase of the CERCLA process; and
- 3 sites have ongoing remediation.

Table 13 presents the current status as of FY17 for the sites within the LRA Parcels that have not been closed under the BRAC program. Additional detailed information on the sites is included in Appendix C.

Table 13

Parcel Number	Current Site Status (FY17)	Parcel Status
LRA-5	1 IRP site (223) and 1 MMRP site (006-R-01) pending MD LUCs decision.	Not transferred
LRA-7	4 IRP sites (15, 33, 67, and 223) and 1 MMRP site (006-R-01) pending MD LUCs decision.	Not transferred
LRA-8	2 IRP sites (95 and 135) requiring LUCs - Industrial land use only.	Not transferred
LRA-9	1 IRP site (85) anticipated to achieve RC in FY18 to achieve unrestricted use.	Not transferred
	1 MMRP site (006-R-01) pending MD LUCs decision.	
LRA-10	2 IRP sites (189 and 192) requiring LUCs - Industrial land use only. Site 192 also requires signage to ensure railroad tracks remain in place.	Not transferred
LRA-11	3 IRP sites (102LB, 183, 192) requiring LUCs - Industrial land use only. Site 192 also requires signage to ensure railroad tracks remain in place.	Not transferred
	1 IRP site (126) anticipated to achieve RC in FY16, formal documentation from the Army is pending.	
	1 IRP site (47) anticipated to achieve RC in FY20 to achieve unrestricted use.	
	1 IRP site (84) anticipated to achieve NFA in FY18.	
	1 IRP site (222) undergoing investigation, RC anticipated to be achieved in FY20.	

Parcel Number	Current Site Status (FY17)	Parcel Status
	1 IRP site (99) is undergoing remedial action RC anticipated in FY18 with LUCs required.	
LRA-12	1 IRP site (226) and 1 MMRP site (012-R-01) pending MD LUCs decision.	Not transferred
LRA-13	5 IRP sites (88HD, 128, 131, 190A, HA) requiring LUCs - Industrial land use only. Site HA also has LUCs that prohibit the use of groundwater as a drinking water source.	Not transferred
	1 IRP site (90 [which also includes Site 18]) anticipated to achieve RC in FY21 with LUCs required.	
	1 Compliance site (66) anticipated to be closed as a 90-day storage facility in FY20.	
LRA-14	2 MMRP sites (010-R-01 [includes IRP sites 110A and 110B] and 012-R-01) pending MD LUCs decision.	Not transferred
LRA-15	3 IRP sites (60PS, 60S2, and 60S3) requiring LUCs - Industrial land use only.	Not transferred
	1 MMRP site (015-R-01 [includes IRP Site 83]) anticipated to achieve RC in FY20. LUCs may be required for MD. LUCs for industrial land use and LTM for groundwater anticipated.	
LRA-15A	1 MMRP site (015-R-01) anticipated to achieve RC in FY20. LUCs may be required for MD. LUCs for industrial land use and LTM only for portion of Site on Parcel LRA-15.	Transferred from the Army
LRA-16	1 MMRP site (003-R-01) anticipated to achieve RC in FY19. Site 003-R-01 will be NFA, and MEC found is part of 012-R-01.	Not transferred
	1 MMRP site (012-R-01) anticipated to achieve RC in FY20. LUCs may be required for MD.	
LRA-16B	1 IRP Site (111) anticipated to achieve RC in FY19. LUCs and LTM for groundwater will be required.	Not transferred
LRA-17	9 IRP site (76FA, 76GS, 76RH, 86, 92, 93, 95, 135, and SEW) requiring LUCs - Industrial land use only.	Not transferred
	1 IRP site (76AD) anticipated to achieve RC in FY18. LTM required for groundwater.	
LRA-18	1 IRP site (192) requiring LUCs - Industrial land use only. Signage also required to ensure railroad tracks remain in place.	Not transferred

FY – Fiscal Year
IRP Installation Restoration Program
LTM – Long-Term Monitoring
LUC – Land Use Control
MD –Munitions Debris
MEC – Munitions/Explosives of Concern
MMRP - Military Munitions Response Program
NFA – No Further Action
RC – Remedy Complete

LUCs at Savanna Depot Park have been implemented as Institutional Controls (ICs) and/or Engineering Controls (ECs). The ICs at the 21 IRP sites within the LRA parcels that require LUCs consist of administrative restrictions to maintain future use of the site for industrial purposes due to remaining soil contamination at the sites. The Army is responsible for

maintaining and reporting on the LUCs. The LUCs will remain in place until the concentrations of hazardous substances in the soil and groundwater have been reduced to levels that allow for unlimited exposure and unrestricted use. If conditions at the site improve, land use objectives change, or remedial goals are met, then the parties agree to evaluate whether to modify or discontinue the LUCs. Restrictions will be maintained through all potential future property transfers. Concurrent with the transfer of the fee title from LRA to new owners, information regarding the LUCs in place will be communicated in writing to the property owners, IEPA, Army, and any other relevant state or local agencies to ensure that these agencies can factor such conditions into their oversight and decision-making activities regarding the property.

The form of LUCs is a Uniform Environmental Covenant filed concurrently with property transfer to the LRA. The Uniform Environmental Covenants Act (UECA) (IL Public Act 095-0845 and 765 ILCS 122) created an interest in real estate called an "environmental covenant" that controls the use of a property. The environmental covenant for the Savanna Depot Park sites will be between IEPA, U.S. EPA, the Army, and the LRA, with IEPA and the Army as the holders, the Army as the grantor, and the LRA as the future property owner. UECA environmental covenants for 20 LUCs sites within the LRA parcels have yet to be executed. A separate UECA environmental covenant has been prepared for SVAD-192 and has been executed by the LRA. IEPA signature and the deed from the Army is pending as of December 2017 for the SVAD-192 UECA environmental covenant.

Sites with long-term monitoring requirements for groundwater (SVAD-99 within LRA-11, Site HA within LRA-13, SVAD-015-R-01/Site 83 within LRA-15, SVAD-111 within LRA-16B, and SVAD-76AD within LRA-17) are an Army responsibility until the deed transfer to the LRA. Based upon the anticipated remedy completion dates and monitoring requirements of 30 to 50 years, the last parcel of property has ongoing groundwater monitoring requirements through 2068. The Army may not transfer property under a Finding of Suitability to Transfer (FOST)s with ongoing groundwater monitoring requirements, until EPA has determined that the remedial approach is “Operating Properly and Successfully (OPS)” under CERCLA. Since an OPS determination cannot be achieved without regulatory approval, it is important to understand that many of the above properties may not be available to transfer until an OPS determination is proposed by the Army and approved by U.S. EPA and IEPA.

There is also an ongoing disagreement between the Army and U.S. EPA and IEPA about the need for CERCLA LUCs on sites that may contain munitions debris (MD), which is holding up cleanup and transfer of remaining property. The mediation among the Army, U.S. EPA and IEPA is ongoing; no timeframe has been identified for resolution of this issue. Sites that are not impacted by the long-term groundwater monitoring requirements or the MD determination are also subject to schedule impacts related to timely completion and review of documents and completion of remedial actions.

3.2 Regulatory Overview

The Base Closure and Realignment Act of 1988 (P.L. 100-526, 102 Stat. 2623, aka BRAC 88), and the Defense Base Closure and Realignment Act of 1990 (P.L. 101-510, 104 Stat. 1808) (BRAC 91, 93 and 95), require the DoD to comply with a variety of laws and associated regulations to effect federal real property disposal at most BRAC installations. Pertinent environmental legal provisions with jurisdiction at BRAC installations include:

- CERCLA Section 120, which establishes a framework for responding to releases of hazardous substances, pollutants, or contaminants in all media at all installations, as well as specific requirements for property transfer at BRAC installations;
- Executive Order 12580 and the statutory provisions of the Defense Environmental Restoration Program (DERP), of which the IRP is a component;
- National Environmental Policy Act (NEPA), which governs the federal evaluation of the environmental consequences of disposal (i.e., selling or transferring) of surplus federal property to the public or private sector;
- Section 330 of the FY 1993 National Defense Authorization Act provides protection for future developers from environmental risk; and
- Other applicable statutes that protect natural and cultural resources, which govern environmental compliance on federal lands.

In addition to CERCLA Section 120, the DoD Component must comply with Executive Order 12580 and DERP. Executive Order 12580, signed in January 1987, addresses delegation of duties and powers assigned to the President in CERCLA, and specifically accomplishes the following:

- Delegates to DoD Components substantial authority and responsibility to carry out response actions, including cleanup;
- Delegates to DoD Components lead agency authority to select remedial actions consistent with CERCLA Section 121;
- Requires the development and use of an Administrative Record;
- Provides for public review and comment on remedial action plans;
- Delegates to DoD Components authority to seek information, entry, inspections, samples, or response actions with the concurrence of the Attorney General; and
- Provides for CERCLA Section 104 removal authority.

Compliance with CERCLA Section 120 is required for all BRAC installations. Federal installations, including military bases, which have areas of environmental contamination are governed by a special section of the Superfund Cleanup Law, Section 120(h). Section 120(h)(3) states that a deed to federal land cannot be issued unless the Federal Government gives warranty that all necessary cleanup has been accomplished, and that the DoD will pay for any future cleanup that is caused by DoD waste.

In accordance with Superfund Amendments and Reauthorization Act (SARA) Section 211, DERP has three main objectives:

1. The identification, investigation, research and development, and cleanup of contamination from hazardous substances, pollutants, and contaminants.
2. Correction of other environmental damage (such as detection and disposal of unexploded ordnance) which creates an imminent and substantial endangerment to the public health or welfare or to the environment.
3. Demolition and removal of unsafe buildings and structures, including buildings and structures of the Department of Defense at sites formerly used by or under the jurisdiction of the Secretary.

The IRP, a component of DERP, addresses the first two objectives cited above. SARA Section 211 and Executive Order 12580 require that the IRP be conducted in a manner consistent with CERCLA Section 120. DERP requires the DoD to proceed expeditiously to remediate environmental contamination from hazardous substances, pollutants, and contents due to past practices. This includes accommodating environmental response processes under other federal and State statutes, as appropriate.

Compliance with NEPA is required by section 2905 (c) of the Base Closure and Realignment Act of 1990. In order to comply with NEPA for disposal of installation property, the DoD must comply with regulations in 40 Code of Federal Regulations (CFR) 1500-1508 developed by the Council on Environmental Quality (CEQ) and service-specific NEPA regulations. These regulations define the NEPA process for examining the potential impacts to the environment that may result from Federal actions, in this case the decision to dispose of BRAC installation property and facilities to either public or private users. In preparing these analyses, reasonable reuse alternatives are identified and characterized for each BRAC installation. Environmental impacts associated with each alternative are disclosed, along with a preferred course of action.

In an effort to protect future developers and users from environmental risk at former military bases closed pursuant to the Base Closure process, Congress passed section 330 of the FY 1993 National Defense Authorization Act. This statute provides for the defense, hold harmless, and indemnification of owners and others in control of such property from "…any suit, claim, demand or action, liability, judgment, cost or other fee arising out of any claim for personal injury or property damage … that results from , or is in any manner predicated upon, the release or threatened release of any hazardous substance, pollutant or contaminant or petroleum or petroleum derivative as a result of Department of Defense activities at any military installation (or portion thereof) that is closed pursuant to a based closure law." The breadth of this statute has been interpreted broadly by the United States Court of Appeals for the Federal Circuit, which found that the provisions protected owners for both first party and third party claims.

The section 330 provision of law, coupled with the statutory warranty recited in the deed for such property pursuant to 42 U.S.C. 9620(h)(3), provides for a level of financial protection from liabilities and responsibilities related to the military's past environmental activities at

the property. The deeds for the transfer of this Base Closure property include the statutory warranty.

3.2.1 Environmental Restoration Program

Under BRAC 95 rules, the BRAC environmental restoration program at an installation begins by conducting an Environmental Baseline Survey (EBS). The EBS describes the environmental condition of the property that is used to determine the suitability to lease or transfer excess BRAC property. An EBS for SVDA was completed by Science Applications and International Corporation (SAIC) (SAIC, 1999). The EBS compiled all of the information gathered to date by the military, based on soil, vapor and groundwater sampling and modeling, and adds a search for potential contamination sites that may have been overlooked under normal CERCLA protocols.

The objectives of the EBS included identifying areas at SVDA where storage, release, or disposal of hazardous substances or petroleum products or their derivatives has occurred; non-CERCLA-related environmental or safety issues (i.e., asbestos, lead-based paint, radon, polychlorinated biphenyls [PCBs], radionuclides, and unexploded ordnance [UXO]) that would limit or preclude the transfer of the property for unrestricted use; completed or ongoing removal or remedial actions taken at the installation; and possible sources of contamination on adjacent properties that could migrate to SVDA real property.

The 1999 EBS Report identified 76 sites at SVDA as potentially posing environmental concern or requiring environmental investigation. Forty-one of the sites required additional investigation. The EBS also identified an additional 86 aboveground storage tanks (AST) and underground storage tanks (UST). Additional sites have been identified over the years based on additional evaluation of environmental investigations. Sites across the facility are in various stages of investigation and remediation. Figure B1 in Appendix B presents the parcels and environmental sites.

In an effort to coordinate planning information between the BRAC environmental coordinator (BEC), the U.S. Army Environmental Command (USAEC), the SVDA, the regulatory agencies, executing agencies, the BRAC division and the public, a BRAC Installation Action Plan (BIAP) was completed and is updated annually. The BIAP outlines the total multiyear cleanup program for SVDA and was initiated in 2006 to demonstrate that the Army has a credible, organized program to carry out the clean-up of environmental contamination. The plan identifies environmental cleanup requirements at each site, and proposes a comprehensive, installation-wide approach, along with the costs and schedules associated with conducting investigations and taking the necessary remedial actions. The BIAP is used to track requirements, schedules, and tentative budgets for all Army installation cleanup programs.

The Army's BRAC Environmental Restoration Program consists of three subcategories: IRP, MMRP, and Closure-related Compliance. Table 1 in Appendix C provides the current status

of each site and the following sections provide a summary of the status of the programs as of the FY17 BIAP.

3.2.2 BRAC IRP Sites at Savanna Depot Park

The IRP, established in 1985, is used to address contamination from hazardous substances, pollutants, and contaminants as defined under CERCLA that pose environmental health and safety risks. As of FY17, there are 34 IRP sites within the LRA parcels at Savanna Depot Park that have not been declared No Further Action (NFA). Sites within the LRA parcels that have been declared NFA are shown on Figure B2 in Appendix B. Twenty-one IRP sites within the LRA parcels require LUCs to restrict reuse of the property; six sites are currently in the RI or FS phase of the CERCLA process; four sites are currently in PP or ROD phase of the CERCLA process; and three sites have ongoing remediation.

Table 14 below provides a summary of the site history, current status, planned or completed remedy, and the future plans for each of these 34 IRP sites within the LRA Parcels. The following sections present a synopsis of the sites listed in Table 14 and identifies the LUCs currently imposed on each of the sites, or the current phase of the CERCLA process for the site (e.g., Remedial Investigation). Detailed information on each of these sites is found in Table 2 in Appendix C, which includes the types of ICs and ECs that are in place, the status of ongoing RI efforts, and the details of ongoing Remedial Actions.

Sites with Land Use Controls

LUCs at Savanna Depot Park have been implemented as ICs and/or ECs. ICs are non-engineered instruments such as administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior. For instance, zoning restrictions prevent land uses, such as residential uses, that are not consistent with the level of cleanup. ECs can be a physical barrier such as either fencing, signage or security personnel that limits the potential for exposure to site contamination. Sites with LUCs are presented on Figure B3 in Appendix B.

The following nine sites are located within the Lower Post Shop Area and are under area-wide LUCs consisting of ICs:

- SVAD-076FA, Furnace Area (Building 117);
- SVAD-076GS, Former Service Station (Building 111);
- SVAD-076RH, Locomotive Roundhouse (Building 115);
- SVAD-086, Building 128 Storage Area;
- SVAD-092, Pesticide Storage (Building 113);
- SVAD-093, Pesticide Mixing Pad (Building 112);
- SVAD-095, Flammable Storage (Building 104);

- SVAD-135, Former Coal Storage Areas (Buildings 127 & 115); and
- Site SEW, Lower Post Sewerlines.

The following five sites are located within the H-Area Warehouses complex and are under area-wide LUCs consisting of ICs:

- SVAD-088HD, H-Area Drainage Ditch;
- SVAD-128, H-Area Zinc Ingot Piles;
- SVAD-131, Building 137 Scrap Pile;
- SVAD-190A, H-Area Material Storage Area (Area A); and
- Site HA, H-Area Warehouses Groundwater Monitoring Program.

The following six sites have individual site LUCs consisting of ICs:

- SVAD-060PS, Special Weapons Maintenance and Storage (Propellant Storage Area, Buildings 802 and 803);
- SVAD-060S2, Special Weapons Maintenance and Storage (Building 800 Septic System);
- SVAD-060S3, Special Weapons Maintenance and Storage (Building 810 Septic System);
- SVAD-102LB, Building 642 Leaching Beds;
- SVAD-183, CL Plant Storage Building (Building 615); and
- SVAD-189, Water Tower (Building 904).

The following site has individual site LUCs consisting of ICs and ECs:

- SVAD-192, Manganese Ore Storage Mounds

LUCs for 20 of the sites are outlined in the Land Use Control Implementation Plan (LUCIP) for Twenty-One Lower Post and Plant Area Sites (ERT, Inc., 2015). LUCs for SVAD-192 are outlined in the Final SVAD-192, Manganese Ore Storage Mounds Land Use Control Plan (URS, 2012).

The ICs at the 21 IRP sites within the LRA parcels that require LUCs consist of administrative restrictions to maintain future use of the site for industrial purposes due to remaining soil contamination at the sites. The ICs restrict use of the site for residential land use such as elementary or secondary school, child care facilities, playgrounds, or other occupancy uses that are incompatible with industrial/commercial activity or are tantamount to residential occupancy including growing of crops and produce for human consumption.

Additionally, an IC is required to prohibit the use of groundwater as a source of drinking water at Site HA. ECs, including perimeter signs, have been installed along the perimeter of Site HA. The LUCs will prevent and prohibit the use and installation of groundwater wells in the surficial aquifer for consumptive use (i.e., potable use or irrigation).

ICs/ECs will also be implemented at SVAD-192 to require the existing railroad tracks remain in place as an engineered barrier to limit potential future industrial/construction worker exposure to underlying contaminated soil. Signs have also been installed every 500 feet near

the tracks to indicate that removal of railroad tracks is restricted. The LUCs at SVAD-192 also require a site safety plan to be developed and implemented by the property owner if temporary track removal (e.g. for replacement) is planned in areas located within the LUC boundaries to ensure that workers are adequately protected pursuant to Occupational Safety and Health Administration regulations and safe worker practices.

As discussed above, the form of LUCs is a Uniform Environmental Covenant filed concurrently with property transfer to the LRA. The environmental covenant for the Savanna Depot Park sites will be between IEPA, U.S. EPA, the Army, and the LRA, with IEPA and the Army as the holders, the Army as the grantor, and the LRA as the future property owner. The UECA environmental covenant that was prepared and approved by U.S. EPA and IEPA needs to be signed and recorded with Carroll and Jo Davies Counties, Illinois. UECA environmental covenants for the 20 LUCs sites within the LRA parcels outlined in the LUCIP for Twenty-One Lower Post and Plant Area Sites have yet to be executed. A separate UECA environmental covenant has been prepared for SVAD-192 and has been executed by the LRA. IEPA signature and the deed from the Army is pending as of December 2017 for the SVAD-192 UECA environmental covenant.

Once executed, the environmental covenant is recorded like a deed in every county within which the property subject to the covenant is located (765 ILCS 122/8). A legal boundary survey is conducted to record area-wide and individual LUC boundaries. The survey map of the legal boundaries is included as an attachment to the environmental covenant.

Monitoring will be conducted during CERCLA 5-year reviews to assess the effectiveness of the LUCs. The first CERCLA 5-year review was conducted on July 10, 2015. Five-year reviews include a visual site inspection, signage inspection and maintenance, review of records, interview(s) with the property owner(s), and completion of a LUC Inspection Checklist. Results from the review are reported to IEPA and U.S. EPA. The Army is responsible for maintaining and reporting on the LUCs. The Army may later transfer these procedural responsibilities to another party by contract, property transfer agreement, or through other means. Overall, the Army will retain ultimate responsibility for remedy integrity.

The LUCs will remain in place until the concentrations of hazardous substances in the soil and groundwater have been reduced to levels that allow for unlimited exposure and unrestricted use. If conditions at the site improve, land use objectives change, or remedial goals are met, then the parties agree to evaluate whether to modify or discontinue the LUCs.

IEPA must be notified at least 60 days in advance of any conveyance of the areas governed by LUCs to another agency, person, or entity. Such notice must: (1) indicate the mechanism(s) intended to be used to reasonably ensure any LUC(s) needing to remain in place after interest conveyance will be maintained; and (2) include an assurance that the property disposal agent who shall prepare the deed(s) or other instruments that will be used to convey the property has been fully advised of the need to include the LUCs on the property in those documents.

Any new owner must be notified of the existing site conditions and agree to maintain the LUCs in place, and the LUCs must be incorporated into property disposal documents as needed to meet CERCLA and 40 CFR 373 (Reporting Hazardous Substance Activity when Selling or Transferring Federal Real Property) notice requirements. This will be done in order to obtain IEPA concurrence. Each transferee shall be given adequate notice of existing site conditions and shall agree to accept the responsibility for maintaining any LUCs previously implemented on the property. The notice will indicate that if the LUCs are not maintained, risk-based scenarios based on the LUCs may no longer be valid.

Restrictions will be maintained through all potential future property transfers. In accordance with the UECA, the environmental covenants for the LUC sites remain in place if any real property conveyance occurs. Concurrent with the transfer of the fee title from LRA to new owners, information regarding the LUCs in place will be communicated in writing to the property owners, IEPA, Army, and any other relevant state or local agencies to ensure that these agencies can factor such conditions into their oversight and decision-making activities regarding the property.

Sites with Remedial Investigation and/or Feasibility Study Underway

RI activities are ongoing at the following site (see Figure B4 in Appendix B):

- SVAD-222, Explosive Building Decontamination

SVAD-222 is an ongoing hazardous, toxic, and radioactive waste (HTRW) investigation explosives-contaminated soil in and around buildings that were previously decontaminated for explosives.

As of December 2017, FSs are being prepared for the following sites (Figure B4 in Appendix B):

- SVAD-015, Small Arms Ammunition Burn Area;
- SVAD-033, Artillery Tunnel Test Site (Mounds);
- SVAD-067, Fire Training Area;
- SVAD-223, Small Arms Ammunition Disposal Area; and
- SVAD-226, J-609 Open Burn Area.

Sites SVAD-015, SVAD-033, SVAD-067, and SVAD-223 are located within the geographic footprint of MMRP Site SVAD-006-R-01. The Focused FS (FFS), PP and ROD for Sites 15/33, 67, 223, and 006-R-01 will be combined into one document. SVAD-226 is located within the geographic footprint of MMRP Site SVAD-012-R-01. SVAD-226 will be included in the same FS as MMRP Sites SVAD-003-R-01, SVAD-012-R-01, and SVAD-015-R-01. HTRW investigations are complete at these five sites and NFA is recommended. As discussed further in the BRAC-MMRP Sites section below, discussions on MD is ongoing between the Army and U.S. EPA to determine if CERCLA LUCs are required for MD sites or if only a deed notice is required.

Sites Undergoing PP or ROD preparation

PP or RODs are being prepared for the following sites (see Figure B4 in Appendix B):

- SVAD-047, Chromium Ore Open Storage Area;
- SVAD-084, Scrap Wood Open Burn Area;
- SVAD-085, New Small Arms Range; and
- SVAD-090, H-Area Landfill Cells (includes SVAD-018, Sodium Exhaust Valve Burial Area).

Table 2 in Appendix C provides a summary of the site history, current status, and the future plans for each of these sites. A soil removal action is anticipated at SVAD-047 and SVAD-085 after the ROD is complete in order to achieve NFA for the sites. An interim soil removal action was completed at SVAD-084, NFA is recommended pending approval of the ROD. LUCs are anticipated at SVAD-090 at the completion of remediation action to maintain future use of the site for industrial purpose.

Site with Ongoing Remedial Activities

Remedial activities have been implemented and are ongoing at the following sites (see Figure B4 in Appendix B):

- SVAD-076AD, APE Shop Rear Dock Area;
- SVAD-099, Building 762 CF Plant Battery Shop and Leaching Pits; and
- SVAD-111, 1934 Outdoor Washout Plant.

Table 2 in Appendix C provides a summary of the site history, current status, and the future plans for each of these sites. LUCs are anticipated at all three of these sites at the completion of remediation action to maintain future use of the site for industrial purpose and to prohibit the use of groundwater as a source of drinking water.

3.2.3 BRAC-MMRP Sites at Savanna Depot Park

There are a total of 15 MMRP sites throughout SVDA (SVAD-001-R-01 through SVAD-015-R-01). The following five MMRP sites are located within LRA parcels (see Figure B4 in Appendix B):

- SVAD-003-R-01, A-Area Detonation Pit;
- SVAD-006-R-01, Mortar Range Impact Area (ASR Zone C);
- SVAD-010-R-01, 1936 Detonation Pits (formerly SVAD-110A and 110B, 1936 Detonation Pits);
- SVAD-012-R-01, Proof Range Group; and
- SVAD-015-R-01, New Function Test Range (formerly SVAD-083, New Function Test Range).

SVDA served as a storage, maintenance, and issue point for artillery material and ammunition; proof fired and tested a variety of weapons; trained military personnel; supported various manufacturing and renovation projects; and accommodated the nation's demilitarization requirements. Because of SVDA's ordnance mission, it is known that

ordnance and explosives (OE) are present at SVDA. The BRAC closure process, therefore, must include an assessment of OE-related contamination. The Ordnance and Explosives Archive Search Report (ASR) (USACE, 1999) determined the probable location of three impact areas and three previously unknown sites contaminated with explosives. The ASR determined (according to their system) that 10,239 acres are potentially contaminated with UXO/ordnance and explosives (OE) and 2,402 acres are confirmed to be contaminated with UXO/OE. In 2002, the Strategic Management, Analysis, Requirements and Technology (SMART) team revised that to 5,590 acres. Table 2 in Appendix C provides a summary of the site history, current status, planned or completed remedy, and the future plans for each of the five active MMRP sites within the LRA Parcels.

There is an ongoing disagreement between the Army and U.S. EPA and IEPA about the need for CERCLA LUCs on MD sites that is holding up cleanup and transfer of property. The mediation among the Army, U.S. EPA and IEPA is ongoing, no timeframe has been identified for resolution of this issue.

3.2.4 BRAC-Compliance Sites at Savanna Depot Park

The one remaining BRAC-Compliance site is SVAD-066 (PCB Container Storage Building H420). SVAD-066 is a less than 90-day RCRA hazardous waste storage area located in the northwestern end of Building 420 in the H-Area within LRA Parcel 13. Wipe samples will be taken in the building when the 90-day storage facility is closed. RC is anticipated to be achieved in 2020.

3.3 Cleanup/Exit Strategy

Table 14 presents the current status as of FY17 and the exit strategy for the sites within the LRA Parcels that have not been closed under the BRAC program. Site SEW, referred to as the Lower Post Sewerlines, includes the stormwater and sanitary wastewater systems that serviced the Lower Post Shop Area. The Lower Post Sewerlines connect buildings and cross through Parcels LRA-3, LRA-3A, LRA-3B, LRA-5, LRA-7, LRA-8, LRA-13, and LRA-17. Site SEW LUCs are correlated to Site 76; therefore, Site SEW is only listed as part of Parcel LRA-17.

Table 14

Parcel Number	Site Number	Site Name	Current Status (FY17)	Cleanup/Exit Strategy
LRA-5	223	Small Arms Ammunition Disposal Area	LUCs may be required for MD. FFS, PP and ROD for sites 15/33, 67, 223, and 006-R-01 will all be combined in one document.	RC anticipated in 2019.
	006-R-01	Mortar Range Impact Area (ASR Zone C)	LUCs may be required for MD. FFS, PP and ROD for sites 15/33,	RC anticipated in 2021, LTM

Parcel Number	Site Number	Site Name	Current Status (FY17)	Cleanup/Exit Strategy
			67, 223, and 006-R-01 will all be combined in one document.	through 2051.
LRA-7	15	Small Arms Ammunition Burn Area	LUCs may be required for MD. FFS, PP and ROD for sites 15/33, 67, 223, and 006-R-01 will all be combined in one document.	RC anticipated in 2019.
	33	Artillery Tunnel Test Site (Mounds)	LUCs may be required for MD. FFS, PP and ROD for sites 15/33, 67, 223, and 006-R-01 will all be combined in one document.	RC anticipated in 2019.
	67	Fire Training Area	LUCs may be required for MD. FFS, PP and ROD for sites 15/33, 67, 223, and 006-R-01 will all be combined in one document.	RC anticipated in 2019.
	223	Small Arms Ammunition Disposal Area	LUCs may be required for MD. FFS, PP and ROD for sites 15/33, 67, 223, and 006-R-01 will all be combined in one document.	RC anticipated in 2019.
	006-R-01	Mortar Range Impact Area (ASR Zone C)	LUCs may be required for MD. FFS, PP and ROD for sites 15/33, 67, 223, and 006-R-01 will all be combined in one document.	RC anticipated in 2021, LTM through 2051.
LRA-8	95	Flammable Storage (Building 104)	LUCs - Industrial land use only.	LTM through 2046.
	135	Former Coal Storage Areas (Buildings 127 & 115)	LUCs - Industrial land use only.	LTM through 2046.
LRA-9	85	New Small Arms Range	ROD in final stages. Remedial action required to achieve unrestricted use.	RC anticipated in 2018.
	006-R-01	Mortar Range Impact Area (ASR Zone C)	LUCs may be required for MD. FFS, PP and ROD for sites 15/33, 67, 223, and 006-R-01 will all be combined in one document.	RC anticipated in 2021, LTM through 2051.
LRA-10	189	Water Tower (Building 904)	LUCs - Industrial land use only.	LTM through 2046.
	192	Manganese Ore Storage Mounds	LUCs - Industrial land use only. Signage required to ensure railroad tracks remain in place.	LTM through 2063.

Parcel Number	Site Number	Site Name	Current Status (FY17)	Cleanup/Exit Strategy
LRA-11	102LB	Building 642 Leaching Beds	LUCs - Industrial land use only.	LTM through 2046.
	126	CN Plant Boiler Building USTs (Building 502)	The removal action was planned for FY2016. A Construction Completion Report is under Army review.	RC anticipated in 2016.
	183	CL Plant Storage Building (Building 615)	LUCs - Industrial land use only.	LTM through 2046.
	192	Manganese Ore Storage Mounds	LUCs - Industrial land use only. Signage required to ensure railroad tracks remain in place.	LTM through 2063.
	47	Chromium Ore Open Storage Area	The ROD is anticipated to be complete in February 2018. Remedial action required to achieve unrestricted use.	RC anticipated in 2020.
	84	Scrap Wood Open Burn Area	An IRA being completed. ROD anticipated for December 2018. NFA anticipated.	RC anticipated in 2018.
	222	Explosive Building Decontamination	Explosives investigation is ongoing.	RC anticipated in 2020.
	*99**	Building 762 CF Plant Battery Shop and Leaching Pits	Remedial action is ongoing. LUCs and LTM anticipated for groundwater.	RC anticipated in 2018, LTM through 2048.
LRA-12	226	J-609 Open Burn Area	LUCs may be required for MD. The FS report (3-R, 12-R & 15-RFS, 181, 226) is on hold until the 12-R high-density issue/RI work is complete.	RC anticipated in 2019.
	012-R-01	Proof Range Group	MEC IRA is ongoing. Supplemental RI work anticipated based upon the findings of the IRA. LUCs may be required for MD.	RC anticipated in 2020, LTM through 2050.
LRA-13	88HD	H-Area Drainage Ditch	LUCs - Industrial land use only.	LTM through 2046.
	128	H-Area Zinc Ingot Piles	LUCs - Industrial land use only.	LTM through 2046.

Parcel Number	Site Number	Site Name	Current Status (FY17)	Cleanup/Exit Strategy
	131	Building 137 Scrap Pile	LUCs - Industrial land use only.	LTM through 2046.
	190A	H-Area Material Storage Area (Area A)	LUCs - Industrial land use only.	LTM through 2046.
	*HA**	H-Area Warehouses Groundwater Monitoring Program	LUCs - Industrial land use only and prohibit the use of groundwater as a drinking water source.	LTM through 2048.
	90 (Includes Site 18)	H-Area Landfill Cells	ROD expected in February 2018. Landfill capping and LUCs anticipated.	RC anticipated in 2021, LTM through 2051.
	66	PCB Container Storage Building H420	Wipe samples will be taken in the building when the 90-day storage facility is closed.	RC anticipated in 2020.
LRA-14	010-R-01 (Sites 110A and 110B)	1936 Detonation Pits	MEC IRA is ongoing. PP/ROD to be completed. LUCs may be required for MD.	RC anticipated in 2020, LTM through 2050.
	012-R-01	Proof Range Group	MEC IRA is ongoing. Supplemental RI work anticipated based upon the findings of the IRA. LUCs may be required for MD.	RC anticipated in 2020, LTM through 2050.
LRA-15	60PS	Special Weapons Maintenance and Storage (Propellant Storage Area, Buildings 802 and 803)	LUCs - Industrial land use only.	LTM through 2046.
	60S2	Special Weapons Maintenance and Storage (Building 800 Septic System)	LUCs - Industrial land use only.	LTM through 2046.
	60S3	Special Weapons Maintenance and Storage (Building 810 Septic System)	LUCs - Industrial land use only.	LTM through 2046.
	*015-R-01 (Site 83)**	New Function Test Range	PP/ROD to be completed. LUCs may be required for MD. LUCs for industrial land use and LTM for groundwater anticipated.	RC anticipated in 2020, LTM through 2050.

Parcel Number	Site Number	Site Name	Current Status (FY17)	Cleanup/Exit Strategy
LRA-15A	015-R-01 (Site 83)	New Function Test Range	PP/ROD to be completed. LUCs may be required for MD.	RC anticipated in 2020, LTM through 2050.
LRA-16	003-R-01	A-Area Detonation Pit	PP/ROD to be completed. Site 3-R will be NFA, and MEC found is part of 12-R.	RC anticipated 2019.
	012-R-01	Proof Range Group	MEC IRA is ongoing. Supplemental RI work anticipated based upon the findings of the IRA. LUCs may be required for MD.	RC anticipated in 2020, LTM through 2050.
LRA-16B	*111**	1934 Outdoor Washout Plant	Remedial action is ongoing. LUCs and LTM for groundwater will be required.	RC anticipated in 2019, LTM through 2068.
LRA-17	76FA	Building 117 Furnace Area	LUCs - Industrial land use only.	LTM through 2048.
	76GS	Former Service Station (Building 111)	LUCs - Industrial land use only.	LTM through 2048.
	76RH	Locomotive Roundhouse (Building 115)	LUCs - Industrial land use only.	LTM through 2048.
	86	Building 128 Storage Area	LUCs - Industrial land use only.	LTM through 2046.
	92	Pesticide Storage (Building 113)	LUCs - Industrial land use only.	LTM through 2046.
	93	Pesticide Mixing Pad (Building 112)	LUCs - Industrial land use only.	LTM through 2046.
	95	Flammable Storage (Building 104)	LUCs - Industrial land use only.	LTM through 2046.
	135	Former Coal Storage Areas (Buildings 127 & 115)	LUCs - Industrial land use only.	LTM through 2046.
	*76AD**	APE Shop Rear Dock Area	Groundwater remedial action is ongoing. LTM required for groundwater.	RC anticipated in 2018, LTM

Parcel Number	Site Number	Site Name	Current Status (FY17)	Cleanup/Exit Strategy
				through 2048.
	SEW	Lower Post Sewerlines	LUCs - Industrial land use only. Included with Site 76.	LTM through 2048.
LRA-18	192	Manganese Ore Storage Mounds	LUCs - Industrial land use only. Signage required to ensure railroad tracks remain in place.	LTM through 2063.

* - Sites with long-term monitoring requirements.
ASR – Archive Search Report FS – Feasibility Study FFS – Focused Feasibility Study
FY – Fiscal Year IRA – Interim Response Action LTM – Long-Term Monitoring
LUC – Land Use Control MD – Munitions Debris MEC – Munitions and Explosives of Concern
PCB – Polychlorinated Biphenyl PP – Proposed Plan RC – Remedy Complete
RI – Remedial Investigation ROD – Record of Decision UST – Underground Storage Tank

The long-term monitoring requirements identified in the table above are an Army responsibility, until the deed transfer to the LRA. Based upon the monitoring requirements identified above, the last parcel of property has ongoing groundwater monitoring requirements through 2068. The Army may not transfer property under a FOST with ongoing groundwater monitoring requirements until EPA has determined that the remedial approach is "Operating Properly and Successfully (OPS)" under CERCLA. Since an OPS determination cannot be achieved without regulatory approval, it is important to understand that many of the above properties may not be available to transfer until an OPS determination is proposed by the Army and approved by U.S. EPA and IEPA.

3.3.1 Emerging Contaminants

Per- and poly-fluoroalkyl substances (PFASs) are compounds used in the formulation of Aqueous Film Forming Foam (AFFF), which was formerly used at military installations to extinguish petroleum fires starting in approximately 1970. Releases of AFFF to the environment routinely occurred during fire training exercises. In 2016, the U.S. EPA issued Drinking Water Health Advisory Levels for two specific PFASs, perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA). In their anionic forms, PFOS and PFOA are water soluble and can migrate readily from soil to groundwater. The U.S. EPA has not established Provisional Health Advisory Levels for PFOS and PFOA in soil. The primary exposure pathway for PFOS and PFOA would be the ingestion of contaminated drinking water.

A sample obtained from the drinking water distribution system in September 2016 was analyzed for perfluorinated compounds; no PFAS were detected. No documentation was available showing whether soils or groundwater at SVDA have been tested for PFASs; therefore, it is unknown whether PFASs are present in soil or groundwater at the site. However, based on historical practices, these substances may be present in the soil in the

vicinity of fire training areas. The Army will be discussing the need for PFAS investigations at SVDA with the regulatory agencies in FY18.

3.3.2 Ecology

The former Savanna Army Depot (SVDA) lies within a major ecotone that extends in an eastward arc from Minnesota to Texas, where a transition occurs from the Eastern Deciduous Forest biome to the Prairie and Plains phytogeographic provinces (Gleason and Cronquist, 1964). The excessively well-drained sands in the higher central region of the Installation support very different communities than the poorly drained silty clays along the eastern boundary or the frequently flooded to temporarily saturated mixed alluvial silt and sand of the bottomlands (Dames & Moore, 1994).

Land use practices also have greatly influenced the distribution and composition of SVDA plant communities. The activities of previous owners and Installation-related activities have physically disturbed large areas of surface soil. Using soil conditions and hydrologic regimes and considering land usage, Dames & Moore (1994) delineated the Installation into the following six simplified vegetational and habitat types, or communities:

1. Bluestem Sand Prairie Association - This community occupies approximately 45 percent of SVDA and is dominant throughout the excessively well-drained sand prairies and sand savannas at the Installation. The grassland and bluestem prairie is an herbaceous community dominated by graminoids (e.g., grasses, sedges, and rushes), but with forbs, which are seasonally dominant in some locations.
2. Oak-Ash Savanna Association - This association is present on SVDA in areas where the interaction of geomorphic and hydrologic conditions is suitable for continuous grass cover, but with scattered trees that contribute as much as 30 percent cover.
3. Mesic Oak Forest Association - This community grows in several SVDA locations and is characteristic of an oak-hickory stand of the Eastern Deciduous Forest biome.
4. Emergent Marshes, Wet Meadows, and Wet Fringe Forests - Emergent marshes typically occur in poorly drained depressional areas and along fringes of ponds, lakes, streams, and rivers. These aquatic communities typically have less than 30 percent areal vegetative cover. Wet meadows occur in areas saturated less frequently than emergent marshes and are found in the poorly drained, depressional landforms at SVDA. These early seral open areas contain moist to saturated soil, with standing water present for only brief to moderate periods during the growing season. Herbaceous species are dominant, with woody vegetation comprising less than 30 percent of the total areal cover. Wet fringe forest communities of SVDA occur along the floodplains of lower perennial streams, recently disturbed portions of slough, and the Mississippi River waterway.

5. Bottomland Hardwood Forest Association - The Bottomland Hardwood Forest community in this area lies approximately between the elevations of 585 and 600 feet and is limited at its lower extent by the ordinary Mississippi River pool elevation. Thus, ordinary rising and falling of the water elevation associated with the seasonally controlled river flow level has a major effect on the local high-water elevation in the backwater areas of SVDA.
6. Open Water Systems - Open water systems at SVDA include lakes, ponds, backwater sloughs, and the Mississippi River. Many of these systems include man-made as well as beaver-impounded open water systems.

Of these six vegetational and habitat types, or communities, the LRA-owned property includes areas of Bluestem Sand Prairie Association, Mesic Oak Forest Association, and Bottomland Hardwood Forest Association.

Forest and land management programs were implemented by the government at SVDA. The forest management program, initiated in 1962 for the harvesting of timber, is no longer active. As of 1986, approximately 10 million board-feet of timber had been harvested at SVDA. The land management program once consisted of controlling and improving vegetative growth through grazing, mowing, and new plantings (SVDA, 1986). SVDA (1986) notes that silver maple is the most abundant tree species in the Installation's woodlands, accounting for approximately one-half of the stand. A large elm population has suffered from Dutch Elm disease. Red oaks, birch, ash, and cottonwood (listed in order of abundance) also are prevalent. SVDA (1986) notes that several small stands of potentially valuable black walnut trees grow on the Installation.

The first cattle grazing lease was initiated in 1950 and included 7,277 acres. Grazing was terminated upon closure in 1999.

The Installation harbors a wide variety of animal life indigenous to the area. Wildlife investigations have identified a number of mammal, bird, and amphibian and reptile species at SVDA. A Fish and Wildlife Management Plan for the remaining government land at SVDA has been developed to preserve and improve wildlife habitats. The plan focuses on managing several wildlife species, including the American bald eagle (*Haliaeetus leucocephalus*), great blue heron (*Ardea herodias*), American egret (*Casmerodius albus*), white-tailed deer (*Odocoileus virginianus*), beaver (*Castor canadensis*), and wood duck (*Aix sponsa*). Management procedures are concerned with preserving the habitats of the American bald eagle (*H. leucocepalus*), great blue heron (*A. herodias*), American egret, and wood duck (*A. sponsa*) populations and with controlling the buildup of the white-tailed deer (*O. virginianus*) and beaver (*C. canadensis*) populations. The Installation also put in place measures to protect the pileated woodpecker (*Dryocopus pileatus*) (SVDA, 1986).

State and Federal threatened and endangered (T&E) species that have been identified at SVDA include false heather (*H. tomentosa*) (state endangered), James' clammyweed (*Polanisia*

jamesii) (state endangered), kitten tails (*Besseya bullii*) (state threatened), bald eagle (*H. leucocephalus*) (state threatened, federally threatened), lined snake (*Tropidoclonion lineatum*) (state threatened), and northern harrier (*Circus cyaneus*) (state endangered).

REFERENCES

Dames & Moore. 1994. Remedial Investigation Report, Savanna Army Depot Activity, Savanna, Illinois, Preliminary Draft. Prepared for U.S. Army Environmental Center. June.

ERT, Inc. 2015. Land Use Control Implementation Plan for Twenty-One Lower Post and Plant Area Sites, Savanna Army Depot Activity, Savanna, Illinois, Final. Prepared for U.S. Army Corps of Engineers. March.

Gleason, H.A. and A. Cronquist. 1964. *The Natural Geography of Plants*. Columbia University Press, New York.

SAIC (Science Applications International Corporation). 1999. Final Environmental Baseline Survey Report, Savanna Army Depot Activity, Savanna, Illinois. Prepared for the U.S. Army Environmental Center. May.

SVDA 1986. Master Plan-Phase I, Analysis of Existing Facilities/Environmental Assessment Report. January.

URS. 2012. SVAD-192, Manganese Ore Storage Mounds Land Use Control Plan, Savanna Army Depot Activity, Illinois, Final. Prepared for U.S. Department of the Army Corps of Engineers – Louisville District. August.

USACE. 1999. Defense Environmental Restoration Program for Base Realignment and Closure Sites, Ordnance and Explosives Archives Search Report for Savanna Army Depot Activity, Savanna, Illinois. Volume 1: Technical Report, Revised Final. March.

This page left intentionally blank

4 Opportunities & Constraints

4.1 Introduction

The continued reuse and redevelopment of the former Savanna Army Depot site is impacted by a variety of potential opportunities, as well as constraints on development. These issues reflect the existing and foreseeable conditions at the site, the overall regional market and opportunities which could be supported. Both opportunities and constraints are summarized below.

4.1.1 Opportunities

The redevelopment of the former Savanna Army Depot site could benefit from several potential opportunities which are related to the site, location, tenant base and assets at the site. Each of these opportunities are briefly summarized below.

Large Industrial-Oriented Site – The former Savanna Army Depot site is a very large industrial property, containing more than 13,000 total acres. Though some property has been transferred to end users, including but not limited to Midwest 3PL, Riverport Railroad and US Fish and Wildlife, the LRA still controls more than 400 acres for future development at the site. At an average development density of 5,000 to 8,000 square feet per acre, the undeveloped LRA property alone could support between 1.5 million and 3.2 million square feet of development at buildout. The property could also support development of additional rail trackage for rail car storage, and/or a more traditional rail yard or intermodal center. In addition to the remaining LRA property, owners of previously sold parcels could also make their property available for one or more large scale users.

Barge Terminal for Shipping Commodities In and Out – The location of the Savanna Depot Park property along the Mississippi River offers the opportunity to develop a barge terminal for shipment of goods along the river. Depending upon the type of uses developed at the Savanna Depot Park, a barge terminal could be used to ship goods into the site for processing or trans-shipment, or a terminal could support outbound shipping of products such as bulk agricultural products or scrap steel. The recently completed Barge Feasibility Study provides additional detail on this opportunity. Federal planning money may be available in the near term to further study this option on land that could potentially transfer to the LRA or another entity when released by the Army.

Ability to Support Noxious Uses – The Savanna Depot Park property is relatively remote from markets and major population centers and has low population density. As such, the facility could support a variety of uses generally considered "noxious". Potential uses include

heavy manufacturing, chemical manufacturing, uses which produce odors (such as some food manufacturing) and uses which produce noise, to name a few.

Figure 13

Existing Rail Lines – The Savanna Depot Park property has an extensive network of on-site rail lines in place, operated by Riverport Railroad. In general, these lines are undersized for moving or storing loaded rail cars, and for trains traveling at any appreciable speed. However, these lines are presently used for storing rail cars which are predominantly empty, and therefore have lower weights. The existing on-site rail connects to the Burlington Northern Santa Fe (BNSF) Railway system, offering access to major markets across the United States. BNSF is the second largest railroad in the US, with more than $16.8 billion in annual revenues. BNSF also operates a significant portfolio of logistics centers and rail-oriented industrial properties. The LRA should work with BNSF to closely evaluate whether the Savanna Depot Park property might be of interest to BNSF as a logistics park or rail-industrial development site.

Existing On-Site Rail System – The geographical and physical linkage between Riverport Railroad's on-site rights and the adjacent BNSF main line is a critical component of any large-scale development project, particularly one that might incorporate

Mississippi River access for commodity movement, handling, and storage. Riverport's current activities are focused almost exclusively on rail car storage and repair. These activities are not necessarily incompatible with future development opportunities that would integrate commodity transportation by rail, but an accommodation with Riverport's activities would be an appropriate approach in order to deconflict any rail use issues on the former Depot property. An expanded use of the on-site rail capability would be beneficial to both parties (LRA and Riverport), inasmuch as Riverport would expect to be reasonably compensated, either in fees or perhaps with an equity interest in future activities, for the use of its property rights. If such an approach at accommodation were to fail, there are other avenues that may warrant consideration.

Interest by BNSF in On-Site Rail – BNSF Railway is familiar with the Savanna Depot Park property. Conversations with BNSF's economic development group indicates that BNSF would consider looking more closely at investing in the site, or acquiring property at the site. BNSF recognizes that the track at Savanna Depot Park is rated below what their standard is, and that significant investment would be required to bring the on-site rail to a level where it could function as a more active facility for loaded rail cars. BNSF would need to consider a variety of market and financial factors before making any investment.

Telecom Infrastructure – One of the prior reuse efforts at the Savanna Depot Park was the conversion of some former ammunition storage igloos to be used as data centers. The property owner/ developer reportedly invested significant funds to develop prototype data centers on a portion of the Savanna Depot Park. Typically, data centers require redundant sources of power, as well as redundant telecommunications capabilities. It is believed that the developer upgraded infrastructure systems to support the creation of the data center prototypes. However, it is not clear whether the upgraded infrastructure systems could be beneficial to other portions of the Savanna Depot Park property. It is recommended that the LRA work with the developer and a utility systems professional to more thoroughly evaluate any infrastructure upgrades which may have been completed to support the development of data centers on-site.

Existing Employers On-Site – The existing users of the Depot property have developed a certain synergy among them that takes advantage of the site's location and other attributes, resulting in over one hundred jobs. These include two rail car repair and cleaning firms, which work in concert with Riverport Railroad's tank car storage operations, and which could be expanded to include the scrapping of cars when they are no longer financially viable (see below). This in turn could lead to the need for transporting the resulting scrap steel to markets, possibly by rail or barge. Similarly, a grain distributor on site, who currently relies on trucking, could expand to point where transshipments by rail or barge are feasible. Any future uses of the property should try to capitalize on these existing strengths and skill sets, which in turn could enhance other uses at the Depot.

Refurbishing and Scrapping of Rail Cars – U.S. Department of Transportation regulations promulgated in 2015 mandated that thinner-shelled tank cars used to transport flammable liquids (DOT-111 tank cars) be phased out. DOT has mandated that flammable liquids be carried in DOT-117 tankers, which are a newer, safer design. However, according to the Bureau of Transportation Statistics (BTS), at the end of 2016, only 9% of rail tank cars carrying flammable liquids met the new, stricter safety standard. Perhaps more importantly, the BTS report indicates that total replacement or upgrade of the DOT-111 tankers isn't expected to be completed until 2029. DOT/BTS indicates that more than 81,000 rail tank cars carried Class 3 flammable liquids in 2016. Of these 81,000 rail tanks cars, only about 3% met the new standard through a retrofit, while approximately 6% were new tank cars (DOT-117) that met the 2015 standard. This means that about 91%, or almost 74,000 rail tanks cars do not meet the 2015 standard for the transportation of flammable liquids. These 74,000 tank cars will need to either be retrofitted or scrapped in the coming years.

Savanna Depot Park has two on-site tenants that perform rail car maintenance and retrofitting. These tenants (or others) could see increased demand for their services, which could lead to additional space requirements and additional employment on-site. The ability to support a larger presence, in terms of employment, square footage and rail car storage, will be critical to meeting increased demand for rail car retrofitting.

This could also lead to an opportunity for scrapping older tank cars, which combined with the site's national rail access and potential future barge access, could provide the critical mass needed for a larger scale regional metal recycling industry cluster.

Potential Sale of a Portion of the Site to a Conservation Group – As part of the field research for this analysis, a regional conservation group was interviewed. The group expressed interest in purchasing some of the remaining LRA land at Savanna Depot Park due to its characterization as unique high-quality sand prairie. However, this would not stimulate the creation of jobs or revenue at the Depot. Negligible spin off economic activity would be gained at the site and surrounding community by bringing visitors to the site.

Expanded Grain Operation – The on-site grain operation (Area 51, LLC) indicated that the business could expand to include larger silos and increased rail car activity. However, the company indicates that the ability to support an expansion would be tied to rail upgrades and the capability to support 100-car unit trains at the site.

Government Incentives –The Savanna Depot Park is included under several state and federal economic incentive programs including the following:

- Enterprise Zone (EZ) – provides state tax incentives and other benefits;
- Foreign Trade Zone #271 – provides tax and duty incentives to importers of materials;
- HUB Zone (Carroll County) – an SBA sponsored incentive program (expired); and

- Upper Mississippi River International Port District – a quasi-public organization that provides a range of financial and funding incentives.

A new incentive program resulting from the 2018 Tax Cuts and Jobs Act, signed into law in December 2017, allows for the deferral of capital gains taxes on investments in qualified Opportunity Zones. The Savanna Depot Park has approached the State of Illinois to be nominated as a qualified zone, which should help attract private investment capital.

4.1.2 Constraints

While the Savanna Depot Park property has a significant number of opportunities for success, the property, and the regional market in which it operates, also face multiple constraints which affect the economic development potential of the site. These issues are discussed below.

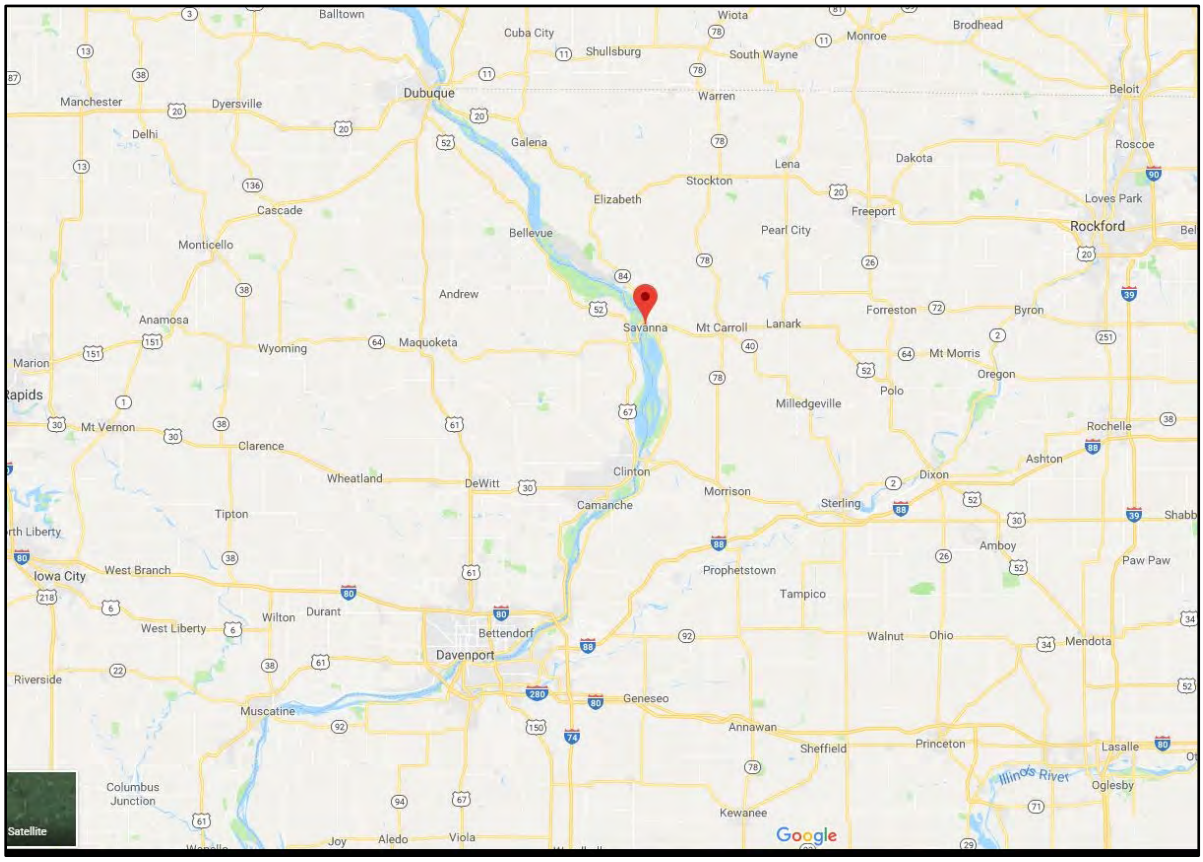
Lack of Natural Gas – The Savanna Depot Park property does not have natural gas service on-site. The availability of natural gas is considered a critically important site selection factor for many manufacturers.

The nearest viable location for bringing natural gas to the site is a Nicor Gas line located approximately seven miles away. Bringing natural gas to the site would require a significant financial investment, which would be difficult to justify without an identified high-volume user(s). Installing natural gas would be further complicated by the fact that the available gas line is a Nicor line, while natural gas service in the area of Savanna Depot Park is provided by Jo-Carroll Energy, the regional co-operative. Installation of a Nicor natural gas supply line would involve some level of negotiation with Jo-Carroll Energy as to service territory.

Poor Quality Existing Buildings – Many of the existing buildings have seen only limited investment since Savanna Army Depot was officially closed in 2000. While ownership of many of the buildings have yet to transfer from the Army, and some have been transferred to other entities, the overall appearance of the Park is distressed. This makes marketing the property, particularly for new investment, more difficult.

Uncertainty Regarding Water and Sewer Service – Water and sewer service at the Savanna Depot Park is currently managed by the LRA. The system reportedly operates at a substantial deficit. The LRA has an agreement with Riverport Railroad to acquire the water and sewer system, and to operate those systems for the benefit of tenants at the Park, once it is transferred from the Army. However, Riverport Railroad has indicated that it desires to terminate that agreement. On-site tenants have expressed concern over the current quality of the water supply, as well as the ability of the LRA (or a successor entity) to continue providing water and sewer services in the future, and some tenants are reportedly evaluating the feasibility of installing wells and septic systems to meet these needs, which may not be feasible in some cases. Uncertainty associated with key utility systems makes marketing the property to new users more challenging.

Figure 14



Transportation Access – While the Savanna Depot Park property has access to both rail transportation (BNSF) and the Mississippi River, highway access is less than optimal. North-south access is via Illinois Route 84, which is predominantly a two-lane road. Ten miles to the North, Route 84 connects to US Route 20, which provides East-West access to Interstates 39 and 90 near Rockford. Access to Interstate 88 is approximately 55 miles to the south of Savanna Depot Park.

Rail Operator Seems to Have Limited Desire to Expand – The existing rail operator has a well-established business primarily focused on rail car storage at Savanna Depot Park, operating as a state and federally regulated Class III common carrier railroad. While rail car storage represents the vast majority of the company's business, switching fees and shipments of products into and out of the site also generate revenues. Anecdotally, some rail users have indicated that the switching fees at Savanna Depot Park are much higher than competing locations, such that it is inhibiting additional rail uses on-site. Regardless, the rail operator uses much of the available track for rail car storage, and is estimated to generate substantial cash flow from storage operations, such that there is limited incentive to increase operations at the site.

Environmental Contamination – The Savanna Army Depot, as a former U.S. Army weapons manufacturing and testing facility, is listed as a USEPA's National Priority List (NPL), commonly referred to as a "Superfund" site. Despite the government's ongoing mitigation of the most serious issues (as required under CERCLA), the market stigma attached to being on the NPL may dissuade many potential users (and their lenders) from considering the site for an investment.

Uncertain Timeline for Transfer of Remaining Properties – The former Savanna Army Depot was officially closed in 2000. Since that time, property transfers have been delayed by environmental cleanup activities, such that the transfer of hundreds of acres is "pending". The Army and the Corps of Engineers have not been able to provide a definitive timeline for transfer. This type of uncertainty negatively impacts marketing property and makes it unlikely that any company (or financial institution) would invest significant funding for new development at Savanna Depot Park. This leads to a secondary issue that is nevertheless a concern for marketing the Savanna Depot Park property – the possibility of lawsuits related to the Army's cleanup of the property and/or lawsuits from conservation groups seeking to stop development of portions of the site for preservation purposes. Again, this issue negatively affects marketing as it increases risk for both potential buyers and their financial institutions.

USFWS – The presence of the US Fish and Wildlife Service on the site is a potential constraint to development. The USFWS has control of a very large portion of the former Savanna Army Depot, and limits access to those areas under its control. This includes the vast majority of the river frontage associated with the former Depot. While the presence of a large environmental preserve can be viewed as an amenity to the overall site, it brings with it some concerns about the ability to develop additional uses on the site, especially those that may be seen as 'noxious' or that potentially conflict with the agency's goals and objectives.

Risk Aversion of the Counties – Both Jo Daviess and Carroll counties are reportedly concerned about long term operating and capital costs associated with the Savanna Depot Park and have different perspectives regarding the need for supporting economic development. This is somewhat understandable, given the potential need for significant capital improvement upgrades, as well as the potential requirement for operating subsidies for water and sewer systems, should the agreement with Riverport Railroad to acquire the sewage treatment and distribution system not go through. However, making Savanna Depot Park successful may require support for "big ideas", such as natural gas service, upgraded water and sewer service, development of a barge terminal and/or purchase of the existing rail system. These projects could be considered "above average" in terms of their risk. The risk averse nature of the counties, and in particular Carroll County, may mean that other entities will have to take a lead role in supporting these complex economic development projects, including a Port Authority, regional utility company, Jo Daviess County, the State of Illinois or a regional economic development entity.

Limited Labor Market – Jo Daviess and Carroll counties are relatively small in terms of population, at 22,353 and 14,627 respectively, or a combined population of under 37,000 in 2016. Of this population, approximately 17,000 persons are either under 20 years of age or over 65 years of age. For comparison, the Quad Cities MSA has a population of almost 385,000, with more than 220,000 of their residents between the ages of 20 and 65. The counties have much lower labor force participation rates than the State as a whole, 61% for Carroll County and 63% for Jo Daviess County as compared to 66% for the State. This is due, in part, to the higher median age in the counties. Given these constraints, there is an extremely limited labor pool to support any significant new employers at Savanna Depot Park. This issue is exacerbated by low unemployment rates in the region, reported to be below 4% in both Carroll County and Jo Daviess County in September 2017.

Aging Population – As discussed in the Demographics section of this report, both Carroll County and Jo Daviess County have an aging population. The median age in Carroll County was 47.7 years in 2016, while Jo Daviess County was higher at 48.8. The medians are substantially higher than the median age for the Quad Cities Metropolitan Statistical Area (MSA), which was estimated to be 39.6 years in 2016. This results in an aging workforce making it difficult for employers to attract and hire younger skilled workers. The Deport is relatively far from major population centers (50+ miles) resulting in potentially long commute times for workers from the larger labor market.

Limited Success in Developing Since Closure – Since the closure of the former Savanna Army Depot in 2000, the LRA has sold much of the land and facilities at the site to a variety of users. The majority of these users, in general, have made use of the facilities with limited upgrades. In a sense, many of the existing facilities have moved to their "highest and best use" as low-end industrial, warehouse and storage facilities. Since closure, the LRA has had limited success in attracting new investment in either new facilities or in upgrading the existing facilities. The limited success inhibits marketing of available land for development, as potential buyers/developers see the large amount of square footage that has not been upgraded, and question whether the quality and condition of "the neighborhood" will negatively affect the value of their investment.

LRA Planned Sunset – The Jo Carroll Depot LRA has indicated that it desires an analysis of the continued redevelopment of the Depot if and when it sunsets (goes out of business as the redevelopment agency). There are several potential options for continuing the operation of the Depot that are discussed elsewhere in this report. However, this element adds a level of uncertainty to the future of the site and its marketability. The LRA is the designated recipient of the surplus lands transferred from the Army under the BRAC process. It has received deeds for several parcels, many of which were subsequently transferred to other parties, and anticipates receiving the remainder of the property as the Army completes its environmental cleanup over the next several years. The Army cannot transfer property to any other entity without re-opening the BRAC process. However, the Army can transfer its authority to

successor LRA, if it meets the economic development requirements spelled out in the BRAC legislation.

Should the existing LRA go out of existence without setting up a successor organization, the Army would most likely end up disposing of the remaining property on a parcel by parcel basis through auction as they are released (environmental clean-up completed). Surplus property auctions are typically conducted with the assistance of the Army Corps of Engineers, or some cases, the Government Services Agency. A minimum acceptable bid price would be set, based on a fair market value appraisal, and the property auctioned off to the highest bidder, usually via the internet. In this case, purchasers would be required to meet any local land use controls as well as any site-specific requirements imposed by the Army based on the environmental conditions (e.g. land use controls and future access for monitoring). Because of the extended duration of the Army's clean-up effort, the ultimate transfer may take several years.

If the LRA, or a successor authority or other organization, continues to oversee the transfer of property and the associated planning for Savanna Depot Park, it will need to be in existence until all, or nearly all, of the remaining parcels are released by the Army. As discussed in the Environmental section, this may take several more years – at least through 2021 based on the Army's latest estimates, but likely longer based on performance to-date. Most of the transferred property will be subject to long term monitoring (LTM) and/or land use controls (LUC) which may impact the value and reuse potential of individual parcels. Under this approach, the LRA will require ongoing funding for staff, outside consultants and other requirements.

Complicating the sunset issue is the fact that the LRA entered into contracts for the sale of parcels to private owners prior to their transfer to the LRA from the Army, pending environmental clean-up. These agreements, which in effect are "lease to purchase" arrangements, have nearly all been completed (all lease payments have been made) with the owners awaiting the deed to their property as soon as the LRA receives one from the Army. It is not clear what the LRA's legal responsibilities are or whether the responsibility for delivering a deed to a lessee can be transferred. A legal review and opinion is recommended.

The LRA also continues to operate the Depot's water supply and wastewater treatment plants, at an annual cost of over $80,000, currently offset by only approximately $20,000 in annual revenues from users. If the LRA sunsets, and the agreement with Riverport Railroad to own and operate the system does not go through, the responsibility for continuing to operate the plants may shift to Carroll County and/or Jo Daviess County, to the users themselves or stop completely, requiring those using the systems to find alternative sources of water and sewer services which may or may not be possible or financially feasible.

This page left intentionally blank

5 Market Assessment

5.1.1 Introduction

This section of the Reuse Plan for the Savanna Depot Park summarizes the findings of the Existing Conditions section relative to the ability of the property to attract financially viable land uses looking forward, with particular focus on the LRA's remaining 400+/- acres of land. Six major market segments were looked at by the Weston team, based on existing land uses at the Depot Park and within the region.

5.1.2 Agricultural Uses

In 2015, the greatest drawing areas for soybean and corn production around Savanna were East-Central Iowa (54,571,000 bushels of soybeans and 257,582,000 bushels of corn), Southwestern Wisconsin (13,474,000 bushels of soybeans and 85,412,00 bushels of corn) and Northwest Illinois (61,095,000 bushels of soybeans and 371,327,000 bushels of corn).

While containerized and non-containerized soybean exports originating in Illinois have grown in the past ten years, non-container growth has outpaced containerized soybean exports, capturing a much larger share. Ten years ago, containerized tonnage represented more than 50% of soybean exports originating in Illinois but that share has shrunk to roughly 25% in recent years. Soybean exports originating in Iowa have seen a similar trend, though at a lower scale.

Corn exports have experienced a similar shift. The share of containerized corn tonnage has decreased in favor of non-containerized tonnage. Containerized tonnage of corn exports originating in Illinois peaked in 2009 but have been decreasing since. Meanwhile, non-containerized corn tonnage has grown, though sporadically. Corn exports originating in Iowa have seen a remarkable increase in non-containerized tonnage, while containerized tonnage have been relatively negligible.

Total corn and soybean exports from Illinois, Iowa and Wisconsin have been increasing in recent years. Yield per acre has also been increasing for soybeans. Containerization of soybean exports from Illinois have been increasing to the tune of 1.1 million to 1.5 million tons annually, but the growth of non-containerization has been greater. Compounding this issue, barge transportation along the Illinois River is currently more competitive than the Mississippi River, where there are already numerous barge facilities competing for business. Also, there are already three competing private facilities within a 50-mile radius of the study area.

The combination of stable national and regional market forces, locational disadvantage and strong competition indicates that while Savanna Depot Park could conceivably serve as a

large scale centralized redistribution point for agricultural commodities, it is unlikely without a major shift in market conditions. There is the potential for existing users in this industry to continue to grow and expand, especially if transportation access via the railroad and perhaps a barge port, is improved.

5.1.3 Industrial Uses

Industrial commodities such as steel, coal, frack sands and scrap metals are key markets for waterborne transportation, especially inland waterways. While Illinois has seen a dramatic increase in steel imports over the past several years, other ports are currently handling the demand. The steel market is volatile, constantly adapting to domestic and foreign competition and transit cost and times. This market typical favors coastal ports with robust transportation access to urban markets, where demand is greatest.

Coal freight is inextricably tied to utility plants. Further, the coal market in general is trending downward in favor of alternative fuel sources.

Frack sands, used in oil fracking, are in abundance in Wisconsin and in demand in Texas and Louisiana. However, this market is currently being served by more northern ports along the Mississippi River near Minneapolis. The additional costs of trucking to reach Savanna Depot Park likely outweighs any possible savings in barge costs.

Scrap metal is used in electric arc furnace utilities and is often transported via waterborne transportation such as barges, but also requires rail access. The supply of scrap metal generally originates in areas of high population density and demand is or has been, for the most part, from overseas markets, mainly China, which has radically reduced its purchasing of foreign scrap in the past few years. As with other bulk commodities, the costs of handling the raw materials and transporting by truck adds significantly to the cost of getting scrap metal to where it is needed, thereby making Savanna Depot Park less competitive than other locations on major interstate highways and/or existing barge facilities. In their 2017 report, Martin Associates discussed the potential of a major scrap trading company to develop a niche market at Savanna. However, the presence of US Fish and Wildlife presents a major obstacle, and operators would have to be willing to haul from a short line switch.

5.1.4 Transportation Uses

The costs and time efficiencies of different modes of transportation (truck, rail, water, air) differ, but are all subject to fluctuations in the market. As such, access to multiple transportation modes is critical in providing companies with options in moving their goods while minimizing costs. Easy access to truck, rail and another high capacity mode (such as water or air) gives companies the greatest ability to respond to shifts in the market. Furthermore, the ability to respond quickly allows companies to take advantage of short term transportation cost changes. In short, companies will locate where it is most efficient from a cost stand-point and operationally, connecting them with their supply chain via multiple modes of transportation. Although Savanna Depot Park has the advantage of having a major

north/south rail line (BNSF), the distance from interstate highways makes it less competitive than many other locations in the Midwest.

5.1.5 Conservation Uses

Most of the property at the former Savanna Army Depot has been conserved by the U.S. Fish & Wildlife Service. Other organizations have advocated for additional lands to be set aside for conservation purposes, including the preservation and reclamation of 'sand prairie' in the central portion of the site, on property currently owned by the LRA. Although a conservation use may be an option, there are low economic benefits in terms of jobs and taxes.

5.1.6 Business & Technology Uses

Several small-scale businesses and uses for the land and buildings at Savanna Army Depot, ranging from agriculture to high-tech, have been proposed over the past several years, with most lured by the prospect of inexpensive property. Some have established businesses on the Depot, which with a few exceptions, are operating somewhat marginally. Distance from markets and workforce are the primary issues facing these prospective users. Many other uses have been suggested for the site, such as an underground nuclear waste storage facility, but none have gone beyond mere speculation.

5.1.7 Residential Uses

Included in the original 1997 Reuse Plan was the potential development of residential areas of the site for vacation/recreational and retirement housing, echoing the success (at the time) of the new communities being established at the Galena Territories and Apple Canyon Lake. The 1999 Supplemental Reuse Plan proposed a mixed-use and industrial park development in place of the residential development. Since then, the market has shifted demand away from more housing, reflected in the number of lots and houses for sale and declining prices in the other communities, and residential use is not seen as major potential for Savanna Depot Park. Additional residential use of property at Savanna Depot Park should be discouraged.

This page left intentionally blank

6 Land Development Plan

6.1 Land Use Configuration

The existing configuration of the property, with streets, utilities, buildings and other natural and man-made features, has not changed much over the past two decades of redevelopment. There is no apparent need for any significant changes to the Depot's land use pattern. There are a variety of parcels, ranging from small to large, available for future development if needed. In most cases, the existing parcelization aligns with roadways and the railroad, although some have railroad easements or rights-of-way running through them. For the types of uses envisioned (industrial/commercial) and the anticipated low traffic volumes, this does not appear to be an issue. In addition, the market and economic analysis conducted for this plan did not identify any substantial uses in the near term that would require changes to the existing land use plan.

Three opportunities for land use changes, based on existing and potential future uses at the Depot, may require modifications to the parcel configuration should they come to fruition. These include:

- The construction of additional railroad trackage to accommodate larger "unit" trains (which are reported to be approximately one mile in length) that can pull through the site without backing, to serve larger scale users such as enhanced grain storage and transfer (Area 51), scrap metal (Rescar) and/or warehousing (Midwest 3PL). The construction of new track is likely to impact some existing parcels and roadways; however, this does not appear to create any extraordinary issues since there are many alternative access points. It will, however, require agreement between the rail operator, various private owners and the LRA.
- The development of a barge port in the Apple River Slough is another opportunity. This concept, analyzed in the Barge Feasibility Study, would likely require a reconfiguration of parcels adjacent to the riverfront, where there are currently several buildings. This could require demolition, and the development of access easements or rights-of-way. It would also require extension of the railroad tracks into the area if intermodal transfer (barge to/from train) is needed.
- The addition of more railroad track for storage of rolling stock. Riverport Railroad has grown its business significantly since first acquiring easements and trackage from the LRA. If market and economic conditions allow, the railroad could substantially expand its car storage capacity by adding new track to parcels that currently do not

have any. This would change the overall land development pattern by reducing the number and/or size of parcels available for other uses.

6.2 Potential for Additional Land – Fish 5

Although not currently part of the Savanna Depot Park or included in the LRA's property inventory, an opportunity exists for an additional 132.2 acres to be acquired by a public agency via a Public Benefit Conveyance (PBC) for the potential development of inland Port. The surplus property consists of 132.2 acres of land generally referred to as Ordnance School Lake, or Commander's Pond, and property that lies along the Apple River which falls within the flood plain.

This property has been officially excessed by the Army, the official notification of excess property was advertised in the Federal Register, Vol. 83, No. 11, on Wednesday, January 17, 2018. The Jo Carroll Depot LRA has been recognized by Department of Defense as the Local Redevelopment Authority (LRA) for this surplus property. As required under the Base Closure Community Redevelopment and Homeless Assistance Act of 1994, and as amended (the Redevelopment Act) and its implementing regulations, the Jo-Carroll LRA is seeking NOIs for the surplus property at the installation.

The potential parcel is the only waterside access from the Jo-Carroll LRA's Savanna Depot Park that would allow unconstrained access to the Mississippi River. The LRA is currently in discussions with the Upper Mississippi River Port Authority regarding what role, if any, the Authority may play in the redevelopment program at the Depot.

6.3 Discourage Residential Uses

Because of the overwhelmingly industrial use of the properties at Savanna Depot Park as well as the uncertainty regarding utilities and infrastructure, residential use should be actively discouraged and prohibited moving forward. This should include changing the PUD zoning that is in place now to disallow residential uses. This is supported by an overall shift in the market away from additional housing in the area, reflected by the number of lots and houses for sale and declining prices in nearby communities.

7 Implementation Strategies

A variety of approaches can be used to implement the redevelopment plan for Savanna Depot Park. This section describes six alternative implementation strategies for the future redevelopment of the property. Each of these approaches has potential benefits for the community at large in terms of economic development, job creation, increased investment and tax base enhancement. However, each implementation strategy also has ramifications for tenants, LRA activity and the operation of the Savanna Depot Park.

The six potential implementation approaches include:

- Liquidate Remaining Land;
- Solicit Master Developer;
- Move County Line;
- Aggressively Market to a Rail/Port Operator/User;
- Combine/Transfer LRA to Port Authority; and
- Status Quo.

These strategies are not exclusive and could be combined. Each of these strategies is discussed below.

7.1 Liquidate Remaining Land

At the present time, the LRA owns approximately 400 acres, including 255 acres which have transferred and an additional 148 acres which the Army has not transferred as yet. Liquidation of the remaining land, through traditional sales means or by auction, would remove the marketing and economic development functions from the LRA's list of responsibilities, and the LRA would move to an agency that is exclusively focused on property management and environmental issues. In particular, the LRA's focus would be on monitoring and encouraging the transfer of remaining parcels at the site from the Army.

The liquidation of remaining land at Savanna Depot Park could generate some funding to support ongoing operations of the LRA, and possibly to help subsidize the operation of the water and sewer systems at the site. The LRA's budget could possibly be reduced, if the liquidation of the remaining land resulted in lower staffing requirements. The amount of money realized from liquidation is likely to be substantially less than "market value" given the relatively slow absorption of land transactions over the past several years and the continued uncertainty over when the Army will release the remaining land.

On the other hand, the liquidation of the remaining land could potentially generate a small scale "bidding war". Two existing tenants, Riverport Rail and Midwest 3PL, have reportedly expressed interest in acquiring more land at Savanna Depot Park, and a regional conservation group has expressed an interest in acquiring much of the remaining land for conservation purposes (including the harvesting of seeds for prairie grasses). Assuming a sales price of between $3,000 and $6,000 per acre, the liquidation of the remaining 400 acres could generate between $1.2 million and $2.4 million to support the LRA's remaining operation and to subsidize the water and sewer systems. In the absence of such immediate interest, the offered price land (e.g. at auction) is likely to be substantially less, perhaps $500 to $1,000 per acre.

7.2 Solicit Master Developer

Transferring the property through the solicitation of a Master Developer would allow the LRA to effectively sunset yet provide additional leverage in terms of how the remaining property will be used, through a negotiated *development and disposition agreement* or similar process. Issuing a Request for Proposals (RFP) allows the LRA the opportunity to frame specific issues that are of concern, such as the long-term operation of the water and sewer systems and use of the land for industrial development. Obviously, inclusion of requirements which are seen as "additional costs", will negatively affect the potential revenue that the LRA might receive from the sale of the property. The LRA would remain, but would only be responsible for taking title from the Army for the remaining property and immediately transferring it to the Master Developer, although this role and the right to enforce the terms of the development and disposition agreement, would need to remain until all land is transferred.

Transfer of the property to a Master Developer provides the LRA with an opportunity to negotiate specific terms and performance requirements as part of a development and disposition agreement. This offers the LRA the opportunity to go beyond issues which might be typical in an outright sale, to potentially negotiate issues which are important to the community.

It will be important to closely evaluate the experience, capability, capacity and financial condition of any individual or organization seeking to be the Master Developer for the remaining land at the Savanna Depot Park. In particular, a Master Developer should have a clear plan for development of the property, and the financial capability to implement that vision.

Negotiating the transfer also offers the possibility of including a "reverter clause" in the event the Master Developer does not or cannot fulfill the terms of the development and disposition agreement. This feature may or may not be attractive to the LRA and the specific communities/ counties which make up the LRA.

Because of the market risk that is inherent in the property, a Master Developer will not likely be willing to pay market value and will heavily discount the price of the property and payment to the LRA.

7.3 Aggressively Market to a Rail/Port Operator/User

There is an inherent synergy between port operations and rail operations. Simply put, each operation can help to make the other more efficient, and therefore successful. The potential development of a barge port at the Savanna Depot Park property will almost certainly require rail access for both inbound and outbound shipments. Similarly, the trans-shipment of goods between rail and barges will have obvious benefits to a rail operator. Integrating trucking access as another means of moving bulk freight through the port could lead to a true intermodal inland port development. Given the success of the existing rail operation, it may be possible to create a partnership between Riverport Rail and a future port operator.

The property may also be attractive for expanded rail use in the absence of a new port. The remaining available acreage could potentially support as much as 100 miles of additional track if developed as a rail yard. Riverport Rail could increase its rail car storage operation substantially, though this type of development would not create significant additional employment at the site. Given the proximity of the Burlington Northern Santa Fe (BNSF) mainline to the Savanna Depot Park site, BNSF could be a potential buyer for the property. BNSF has experience operating at former military installations and has previously developed rail-related industrial parks. Interestingly, the size of the remaining LRA property (400 +/- acres) by itself may be too small for BNSF to acquire. However, discussions with BNSF's regional business development specialist indicated some potential interest in the site.

7.4 Combine/Transfer LRA to Port Authority

Transferring of some or all of the remaining property to the Port Authority could provide access to funding for planning and feasibility studies of a future port. The Port Authority has the ability to sell revenue bonds, to levy taxes and access Federal grant funding related to the development of a new port. This may be important in evaluating the acquisition and development of the so-called "Fish 5" parcel, which has attributes that are consistent with a port site. However, it will be critically important for the LRA to evaluate whether and to what extent the Port Authority has the financial, managerial and marketing capacity to take on the Fish 5 parcel and/or the remaining 400 +/- acres of available land at Savanna Depot Park. The fact that the LRA does not own any Depot land adjacent to Fish 5 will require the development of a barge port at that location to be coordinated with existing owners for access.

7.5 Move County Line

The two counties which comprise the LRA have significantly different philosophies and capabilities as it relates to the development and marketing of Savanna Depot Park. Carroll County's preference is to limit financial investment in the property, given the County's financial situation. In contrast, Jo Daviess County has a more robust tax base, giving it the ability to invest additional funding to support economic development and ongoing operation of Savanna Depot Park. In addition, since only 0.2 percent of Jo Daviess County's land area is considered "Industrial", adding the southern portion of Savanna Depot Park could provide areas for future economic development and job growth.

The ability to invest additional funding is considered critically important as it relates to the operation and maintenance of the water and sewer systems at Savanna Depot Park. If the water and sewer systems cannot be operated on an ongoing basis, individual property owners could be forced to install individual wells and septic systems. This could significantly de-value properties, increase costs for the owners and inhibit the marketability and development potential for the remaining properties.

Assuming Jo Daviess County's ability and willingness to invest in the property, and the reported reluctance of Carroll County to financially support the operation, maintenance and marketing of the Savanna Depot Park property, one solution could be to relocate the boundary between the two counties, such that the entire Savanna Depot Park property falls under the jurisdiction of Jo Daviess County. Obviously, implementing this option would require significant political effort, given the infrequency of relocating County boundaries. In addition, implementation of this option would also require that the LRA Board be re-constituted, as it would no longer be necessary for the Board to have representation from Carroll County.

It should be noted that implementation of this option does not necessarily foreclose the other redevelopment strategies described above. Implementation of this option provides for changes to the makeup of the LRA, which would still have the responsibility for redevelopment and/or disposal of the remaining property. However, under this scenario, it is considered more likely that the water and sewer services would be maintained, thus making marketing efforts for the remaining properties more likely to be successful.

7.6 Status Quo

As with any project, maintaining the status quo is an option. The LRA can continue to market individual properties for development, and continue to operate and maintain the water and sewer systems. However, at some point in the not-too-distant future, it is likely that the LRA will become insolvent, unless additional sources of revenue are identified. As discussed in a previous chapter, the water and sewer systems operate at an annual deficit, and the LRA's

operating expenses total approximately $200,000 annually. There are limited opportunities to increase revenues other than through the sale of remaining properties. Without additional funding, the LRA is likely to become insolvent within five years, even if all of the remaining property is sold off.

In the event that the LRA becomes insolvent, any remaining land would likely be auctioned off along with the rights to any property not yet transferred from the Army, if allowed under BRAC regulations. If not, then the Army would most likely auction off remaining parcels as they were released. The rights of the property owners who have already "bought and paid for" property from the LRA but that have not received title (at total of 1,702 acres, primarily Midwest 3PL and Riverport Railroad) and the LRA's obligations, if any, would need to be carefully evaluated in this situation.

7.7 Summary

Implementation of any of these strategies must also recognize the potential for litigation from current property owners or others including environmental organizations that could add time and expense to the process.

7.8 LRA Sunset Analysis

As part of the Reuse Plan, the Weston team was tasked to analyze the options available to the LRA regarding sunsetting the organization, which has been in the business of redeveloping the former Savanna Army Depot since the closure announcement in the 1995 BRAC round and the creation of the Jo-Carroll Local Redevelopment Authority as the *implementing LRA* in 1997. With only 400 of over 3,000 acres currently under its direct control, and with approximately 1,850 acres left to be transferred in fee from the Army, the LRA has achieved much of its original mission. The LRA will be disbanded once all remaining property is transferred by the Army, letting future owners or other organizations continue any necessary property management or undertake other activities.

The Implementation Strategies presented above provide a framework for the sunsetting of the LRA.

This page left intentionally blank

8 Recommendations

This section discusses a series of recommendations for the Jo Carroll LRA relative to the remaining Savanna Depot Park property. They are organized in terms of a timeline – from short term to longer term – and present a series of options that the LRA will want to discuss internally and publicly, prior to making any policy decisions. The RKG/Weston team is solely responsible for these recommendations based on the technical, market and financial information reviewed and analyzed for this Reuse Plan.

8.1 Short Term (2018-2019)

- Undertake an evaluation of the Fish 5 parcel to determine whether the LRA should seek to acquire the property from the Army. Evaluate necessary capital investments, and how access to the property will be developed, as well as what key regulatory and environmental hurdles may need to be overcome to utilize the property.
    - *Do not sell or transfer (other than by short term lease) any additional LRA property until disposition of USFWS parcel 5 has been finalized.*
- Begin a dialogue with the two major property owners, Riverport Railroad and Midwest 3PL, regarding planning for the future and alternative development scenarios. Attempt to set up a meeting with the Riverport Railroad owners regarding their long-term goals and aspirations for the property.
- Aggressively market the property to BNSF as a logistics, operation and/or maintenance location. Working through the Regional BNSF Economic Development Manager, meet with BNSF real estate, economic development and system planning staff to promote the property and determine whether BNSF is interested in the property and under what terms and conditions.
- Determine whether a Request for Proposals (RFP) for a Master Developer is desirable for the LRA, and if so, develop an RFP for distribution to interested parties. Conduct an "Industry Day" to familiarize potential bidders with the property and the opportunities available at Savanna Depot Park.
- Look into consolidating the existing Ports Authority and Jo-Carroll LRA leadership to streamline management of redevelopment efforts, and to bring the Port Authority's additional governmental powers to the Savanna Depot Park.

- After acceptance of this Reuse Plan (and it being made available to the public), hold a meeting with all tenant property owners to explain options and get their feedback on future direction for the Depot.
- Continue to work with the State of Illinois to have the Depot nominated as an Opportunity Zone.
- Continue to work with NW Illinois Economic Development to target scrap metal recyclers/ other commodities industries for potential interest in barge access/ site interest, as well as on targeting site selectors to attract additional rail and/ or barge sister industries to the site.
- Identify additional grant sources to support barge development.

8.2 Intermediate Term (3-5 years)

- Enter into Early Transfer discussions with the Army to expedite property transfer of remaining property and USFWS parcel 5, as applicable.
- Work with LT. Governors' office to obtain additional support for economic development at the site.
- Develop a political action plan for state and national representation to facilitate political engagement and potential economic development opportunities for the property.
- Identify New Market Tax Credit organization(s) in Illinois to initiate potential Opportunity Zone interest. Pending Opportunity Zone designation, identify opportunity zone management organizations to support investment at Savanna Depot Park.
- Initiate discussions between the counties to determine whether there is interest in relocating the County boundary to move the entire Savanna Depot Park into a single county. Concurrently, contact the State's attorney to identify procedures and actions required to implement a relocation of the county boundary.
- Identify, negotiable with, and transfer Fish 5 property to a port developer or the Port Authority, if the decision is made for the LRA to acquire the Fish 5 parcel.
- Discourage, and to the extent possible, prohibit any residential use of property at Savanna Depot Park.

8.3 Longer Term

- Dispose of all remaining property through direct sale or auction.
- Sunset the LRA after transfer of the final parcel of property.

9 APPENDICES

A - Infrastructure Maps

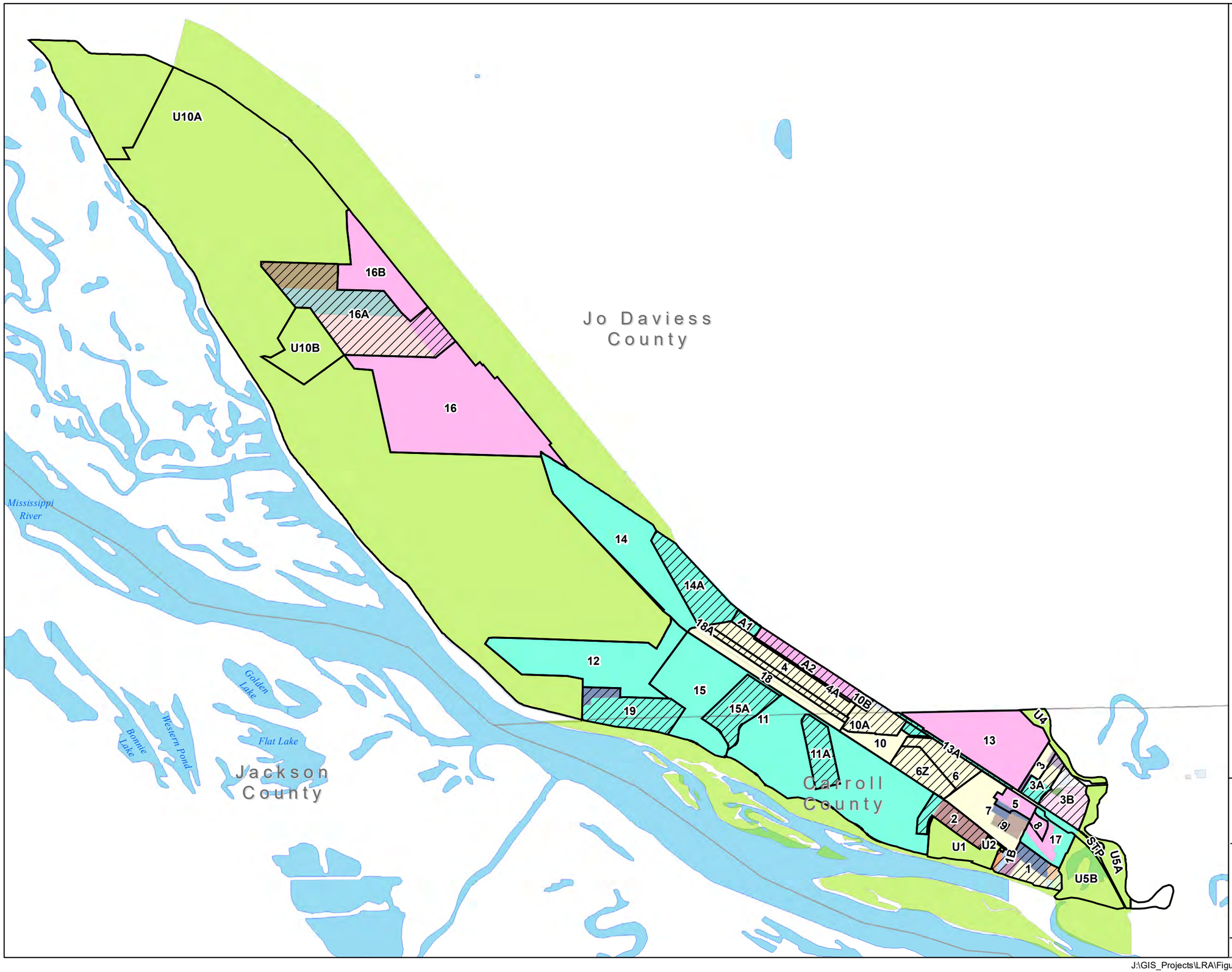
B - Environmental Maps

C - Environmental Status Tables

This page left intentionally blank

APPENDIX A

Infrastructure Maps



Legend

- Parcels
- Transferred From Army
- Other
- A & B HOLDINGS KHANT ALBERT
- AREA 51 E LLC
- ATG TRUST COMPANY/RIVERPORT RR
- BISON AEROSPACE
- BRY~ER PRODUCTIONS
- DEPOT ELECTRIC SUPPLY LAURA ROACH
- FLICKINGER MARK & MARSHA
- FLUIDIC MICROCONTROLS INC
- GALENA STATE BANK & TRUST TR#647/KACHING
- HANOVER FIRE PROTECTION DISTRICT
- IDNR
- ILLINOIS INFORMATION MANAGEMENT LLC
- JO-CARROLL LRA
- JO DAVIESS WAREHOUSING LLC
- L & M ENVIROMENTAL SERVICES
- MIDWEST 3PL
- RANGEL, SERGIO & CAMILLE R
- SAVANNA army DEP LLC/ELIZABETH IL FARM LLC
- SAVANNA STABLES LLC
- SPEER, JESSE J & HEATHER L
- USFWS PROPERTY
- WASINGTON TOWNSHIP
- WITTE DREW B

Notes:
STP - Sewage Treatment Plant

N

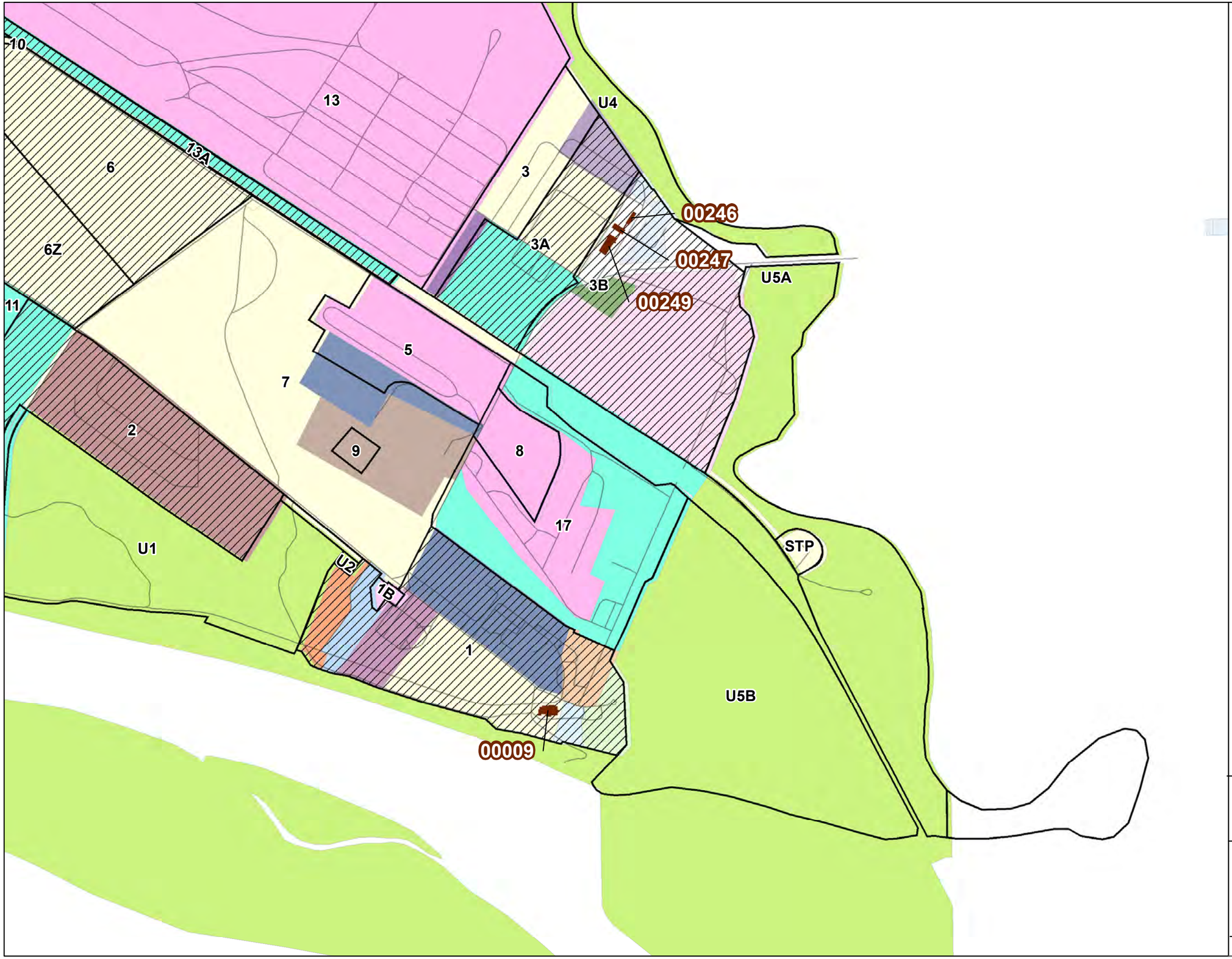
0 4,500 9,000
Feet

WESTON SOLUTIONS

FIGURE A1
SITE PARCELS/OWNERSHIP MAP
SAVANNA DEPOT PARK REUSE PLAN

PRODUCTION DATE: Sep 2018

J:\GIS_Projects\LRA\Figure A1 LRA parcels_180926.mxd 9/26/2018 11:52:54 AM MYERSJT



Legend

- LRA Buildings
- LRA Streets
- Parcels
- Other
- A & B HOLDINGS KHANT ALBERT
- AREA 51 E LLC
- ATG TRUST COMPANY/RIVERPORT RR
- BISON AEROSPACE
- BRY~ER PRODUCTIONS
- DEPOT ELECTRIC SUPPLY LAURA ROACH
- FLICKINGER MARK & MARSHA
- FLUIDIC MICROCONTROLS INC
- GALENA STATE BANK & TRUST TR#647/KACHING
- HANOVER FIRE PROTECTION DISTRICT
- IDNR
- ILLINOIS INFORMATION MANAGEMENT LLC
- JO-CARROLL LRA
- JO DAVIESS WAREHOUSING LLC
- L & M ENVIROMENTAL SERVICES
- MIDWEST 3PL
- RANGEL, SERGIO & CAMILLE R
- SAVANNA ARMY DEP LLC/ELIZABETH IL FARM LLC
- SAVANNA STABLES LLC
- SPEER, JESSE J & HEATHER L
- USFWS PROPERTY
- WASINGTON TOWNSHIP
- WITTE DREW B

Notes:
STP - Sewage Treatment Plant

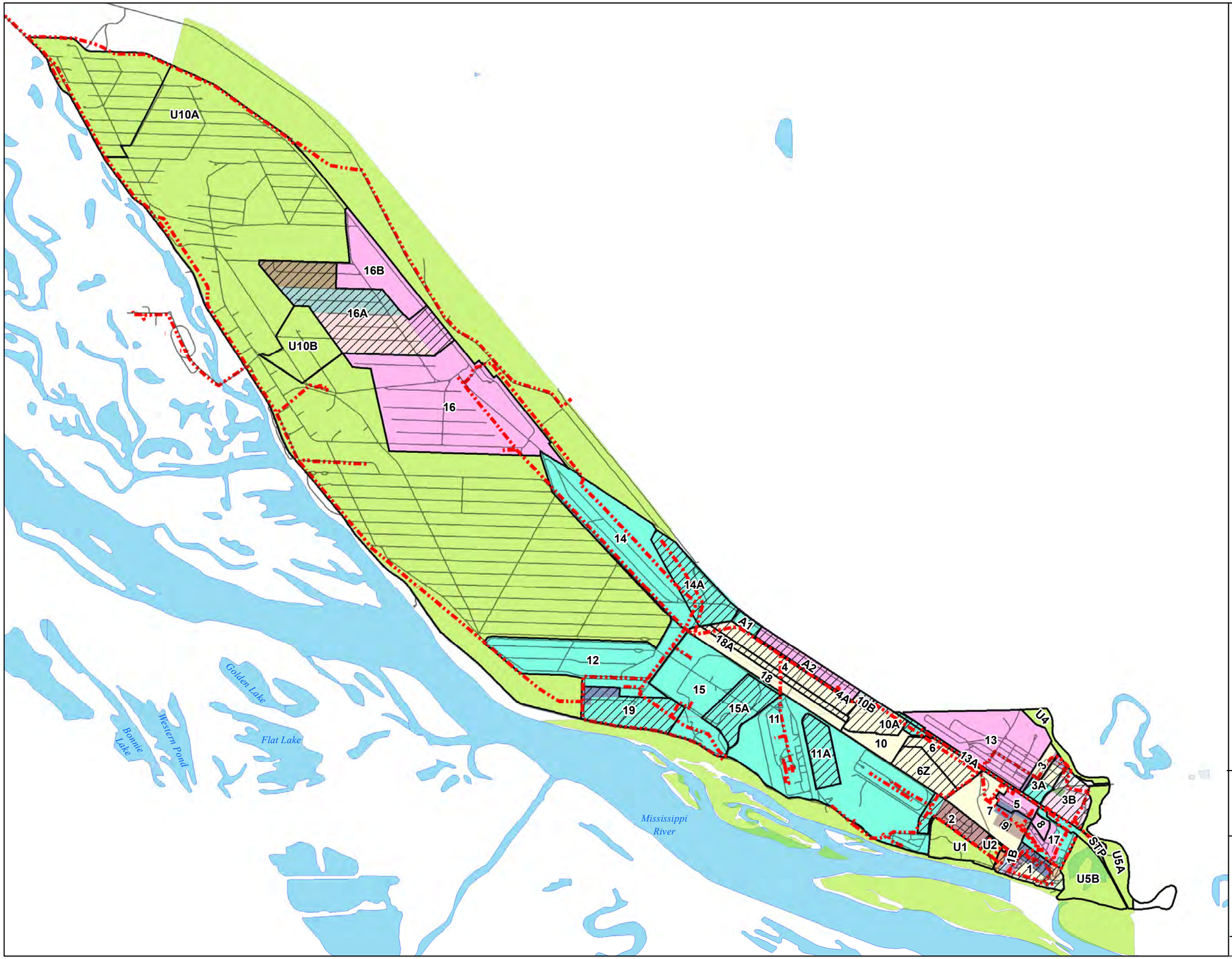
N

0 700 1,400
Feet

FIGURE A2
LRA BUILDINGS MAP
SAVANNA DEPOT PARK REUSE PLAN

PRODUCTION DATE: Sep 2018

J:\GIS_Projects\LRA\Figure A2 LRA buildings_180926.mxd 9/26/2018 12:13:02 PM MYERSJT



Legend

- Power
- Parcels
- LRA Streets
- Other
- A & B HOLDINGS KHANT ALBERT
- AREA 51 E LLC
- ATG TRUST COMPANY/RIVERPORT RR
- BISON AEROSPACE
- BRY~ER PRODUCTIONS
- DEPOT ELECTRIC SUPPLY LAURA ROACH
- FLICKINGER MARK & MARSHA
- FLUIDIC MICROCONTROLS INC
- GALENA STATE BANK & TRUST TR#647/KACHING
- HANOVER FIRE PROTECTION DISTRICT
- IDNR
- ILLINOIS INFORMATION MANAGEMENT LLC
- JO-CARROLL LRA
- JO DAVIESS WAREHOUSING LLC
- L & M ENVIROMENTAL SERVICES
- MIDWEST 3PL
- RANGEL, SERGIO & CAMILLE R
- SAVANNA army DEP LLC/ELIZABETH IL FARM LLC
- SAVANNA STABLES LLC
- SPEER, JESSE J & HEATHER L
- USFWS PROPERTY
- WASINGTON TOWNSHIP
- WITTE DREW B

Notes:
STP - Sewage Treatment Plant

N

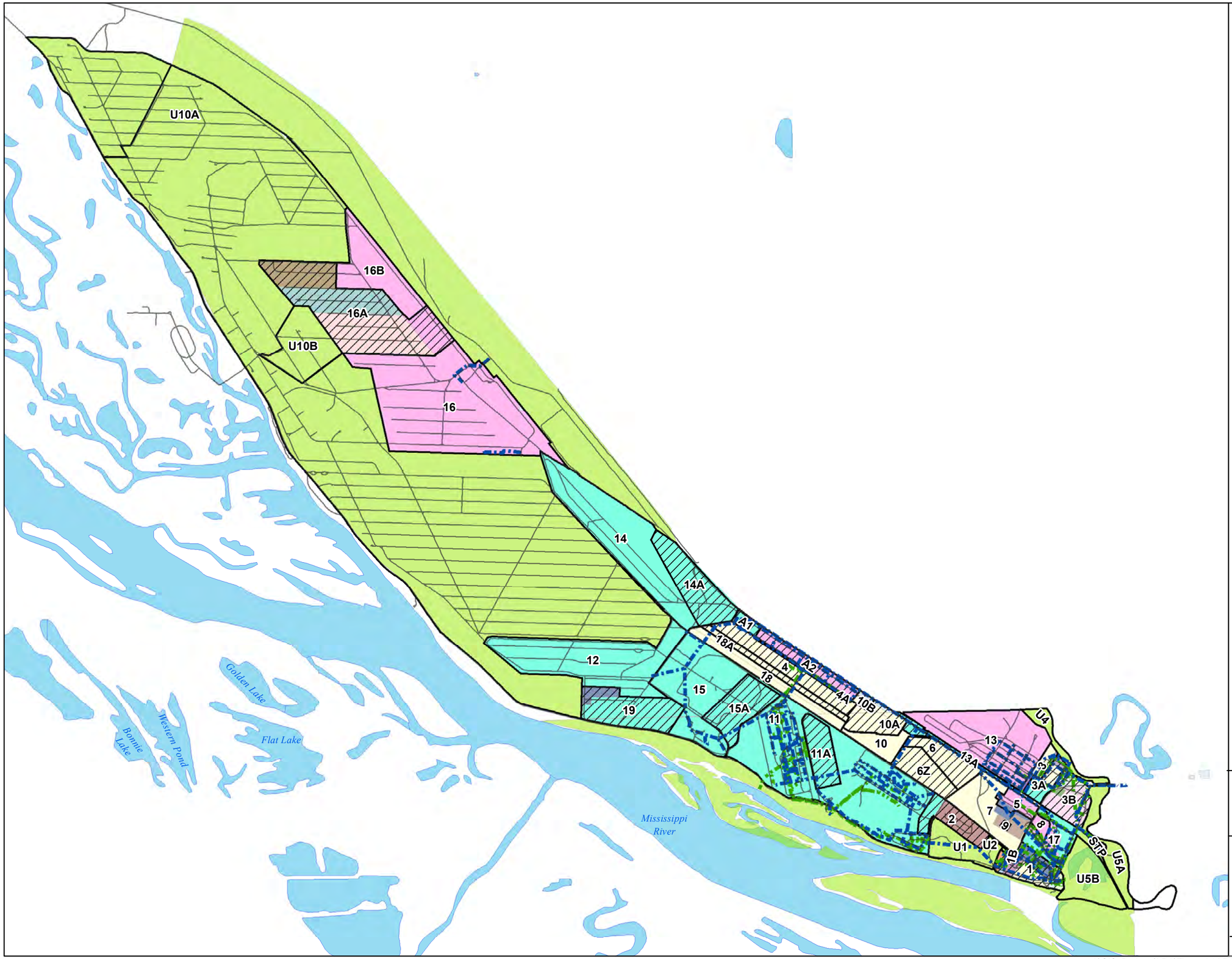
0 3,250 6,500
Feet

WESTON SOLUTIONS

FIGURE A3
LRA UTILITIES MAP
ELECTRICITY DISTRIBUTION SYSTEM
SAVANNA DEPOT PARK REUSE PLAN

PRODUCTION DATE: Sep 2018

J:\GIS_Projects\LRA\Figure A3 LRA electric_180926.mxd 9/26/2018 11:59:19 AM MYERSJT



Legend

- Sewer
- Water
- Parcels
- LRA_Streets
- Other
- A & B HOLDINGS KHANT ALBERT
- AREA 51 E LLC
- ATG TRUST COMPANY/RIVERPORT RR
- BISON AEROSPACE
- BRY~ER PRODUCTIONS
- DEPOT ELECTRIC SUPPLY LAURA ROACH
- FLICKINGER MARK & MARSHA
- FLUIDIC MICROCONTROLS INC
- GALENA STATE BANK & TRUST TR#647/KACHING
- HANOVER FIRE PROTECTION DISTRICT
- IDNR
- ILLINOIS INFORMATION MANAGEMENT LLC
- JO-CARROLL LRA
- JO DAVIESS WAREHOUSING LLC
- L & M ENVIROMENTAL SERVICES
- MIDWEST 3PL
- RANGEL, SERGIO & CAMILLE R
- SAVANNA army DEP LLC/ELIZABETH IL FARM LLC
- SAVANNA STABLES LLC
- SPEER, JESSE J & HEATHER L
- USFWS PROPERTY
- WASINGTON TOWNSHIP
- WITTE DREW B

Notes:
STP - Sewage Treatment Plant

N

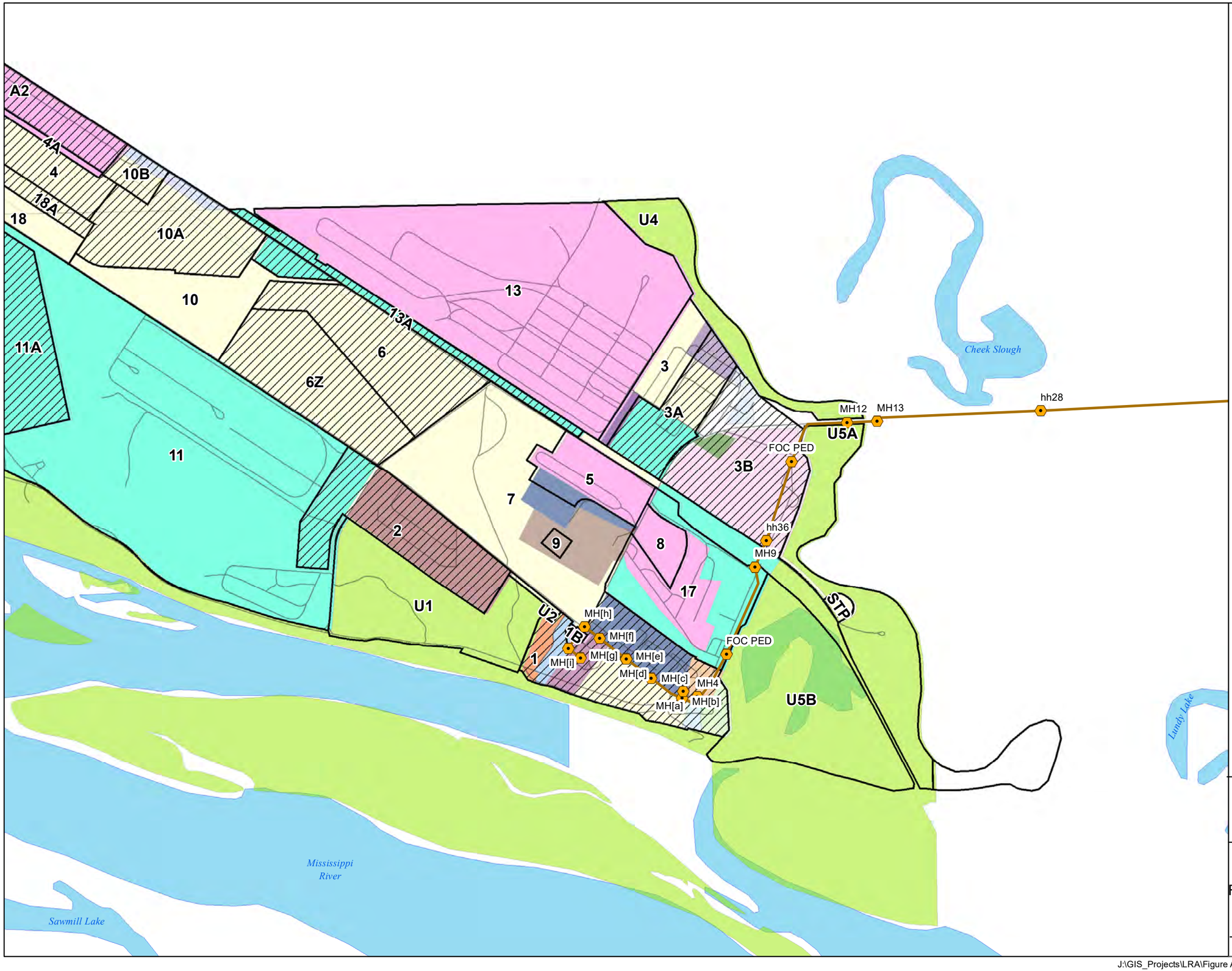
0 3,250 6,500
Feet

WESTON SOLUTIONS

FIGURE A4
LRA UTILITIES MAP
WATER AND SEWER
DISTRIBUTION SYSTEM
SAVANNA DEPOT PARK REUSE PLAN

PRODUCTION DATE: Sep 2018

J:\GIS_Projects\LRA\Figure A4 LRA water and sewer_180926.mxd 9/26/2018 12:01:41 PM MYERSJT



Legend

- iFiber Handholes
- iFiber Fiber Lines
- Parcels
- LRA Streets
- Other

- A & B HOLDINGS KHANT ALBERT
- AREA 51 E LLC
- ATG TRUST COMPANY/RIVERPORT RR
- BISON AEROSPACE
- BRY~ER PRODUCTIONS
- DEPOT ELECTRIC SUPPLY LAURA ROACH
- FLICKINGER MARK & MARSHA
- FLUIDIC MICROCONTROLS INC
- GALENA STATE BANK & TRUST TR#647/KACHING
- HANOVER FIRE PROTECTION DISTRICT
- IDNR
- ILLINOIS INFORMATION MANAGEMENT LLC
- JO-CARROLL LRA
- JO DAVIESS WAREHOUSING LLC
- L & M ENVIROMENTAL SERVICES
- MIDWEST 3PL
- RANGEL, SERGIO & CAMILLE R
- SAVANNA ARMY DEP LLC/ELIZABETH IL FARM LLC
- SAVANNA STABLES LLC
- SPEER, JESSE J & HEATHER L
- USFWS PROPERTY
- WASINGTON TOWNSHIP
- WITTE DREW B

Notes:
STP - Sewage Treatment Plant

N

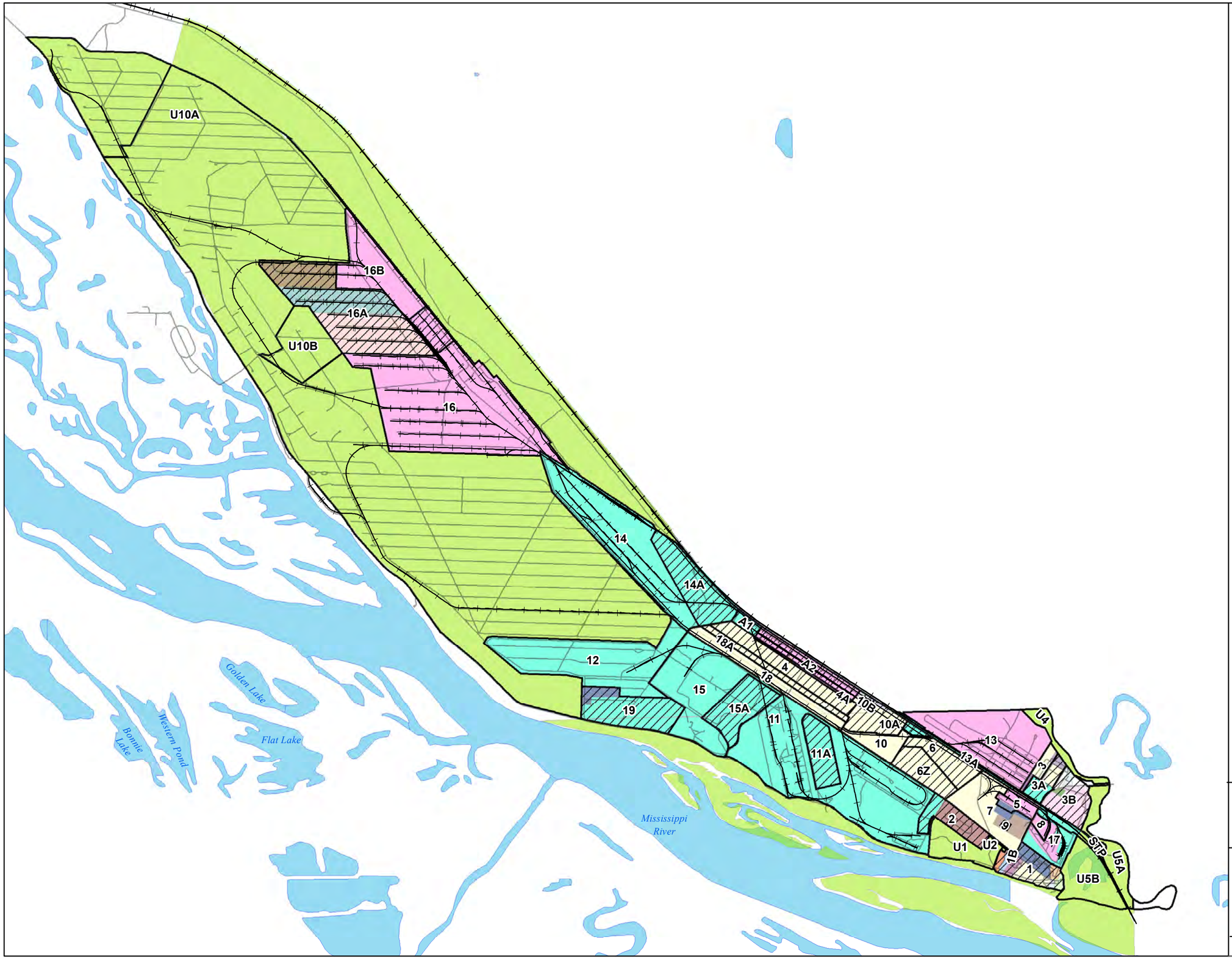
0 1,100 2,200
Feet

WESTON SOLUTIONS

FIGURE A5
LRA UTILITIES MAP
FIBER OPTIC TELECOMMUNICATIONS DISTRIBUTION SYSTEM
SAVANNA DEPOT PARK REUSE PLAN

PRODUCTION DATE: Sep 2018

J:\GIS_Projects\LRA\Figure A5 LRA fiberoptics_180926.mxd 9/26/2018 12:05:06 PM MYERSJT



Legend

- LRA Railroads
- Parcels
- LRA Streets
- Other
- A & B HOLDINGS KHANT ALBERT
- AREA 51 E LLC
- ATG TRUST COMPANY/RIVERPORT RR
- BISON AEROSPACE
- BRY~ER PRODUCTIONS
- DEPOT ELECTRIC SUPPLY LAURA ROACH
- FLICKINGER MARK & MARSHA
- FLUIDIC MICROCONTROLS INC
- GALENA STATE BANK & TRUST TR#647/KACHING
- HANOVER FIRE PROTECTION DISTRICT
- IDNR
- ILLINOIS INFORMATION MANAGEMENT LLC
- JO-CARROLL LRA
- JO DAVIESS WAREHOUSING LLC
- L & M ENVIROMENTAL SERVICES
- MIDWEST 3PL
- RANGEL, SERGIO & CAMILLE R
- SAVANNA ARMY DEP LLC/ELIZABETH IL FARM LLC
- SAVANNA STABLES LLC
- SPEER, JESSE J & HEATHER L
- USFWS PROPERTY
- WASINGTON TOWNSHIP
- WITTE DREW B

Notes:
STP - Sewage Treatment Plant

N

0 3,250 6,500
Feet

FIGURE A6
LRA RAIL SYSTEM MAP
SAVANNA DEPOT PARK REUSE PLAN

PRODUCTION DATE: Sep 2018

J:\GIS_Projects\LRA\Figure A6 LRA railroads_180926.mxd 9/26/2018 12:09:15 PM MYERSJT

APPENDIX B

Environmental Maps

U10A
SVAD-012-R-01
16B
16A
U10B
16
14
14A
12
19
15
15A
18A
A1
18
4
A2
4A
10B
10A
11
11A
10
6Z
13A
13
6
U4
3
3A
3B
U5A
5
7
2
9
8
17
U1
U2
1B
1
STP
U5B
Site 222
Jo Davies County
Carroll County
Jackson County
Mississippi River
Goldeen Lake
Flat Lake
Bonnie Lake
Western Pond

Legend

- Parcels
- LRA Streets
- IRP Sites
- MMRP Sites

N

0 4,000 8,000
Feet

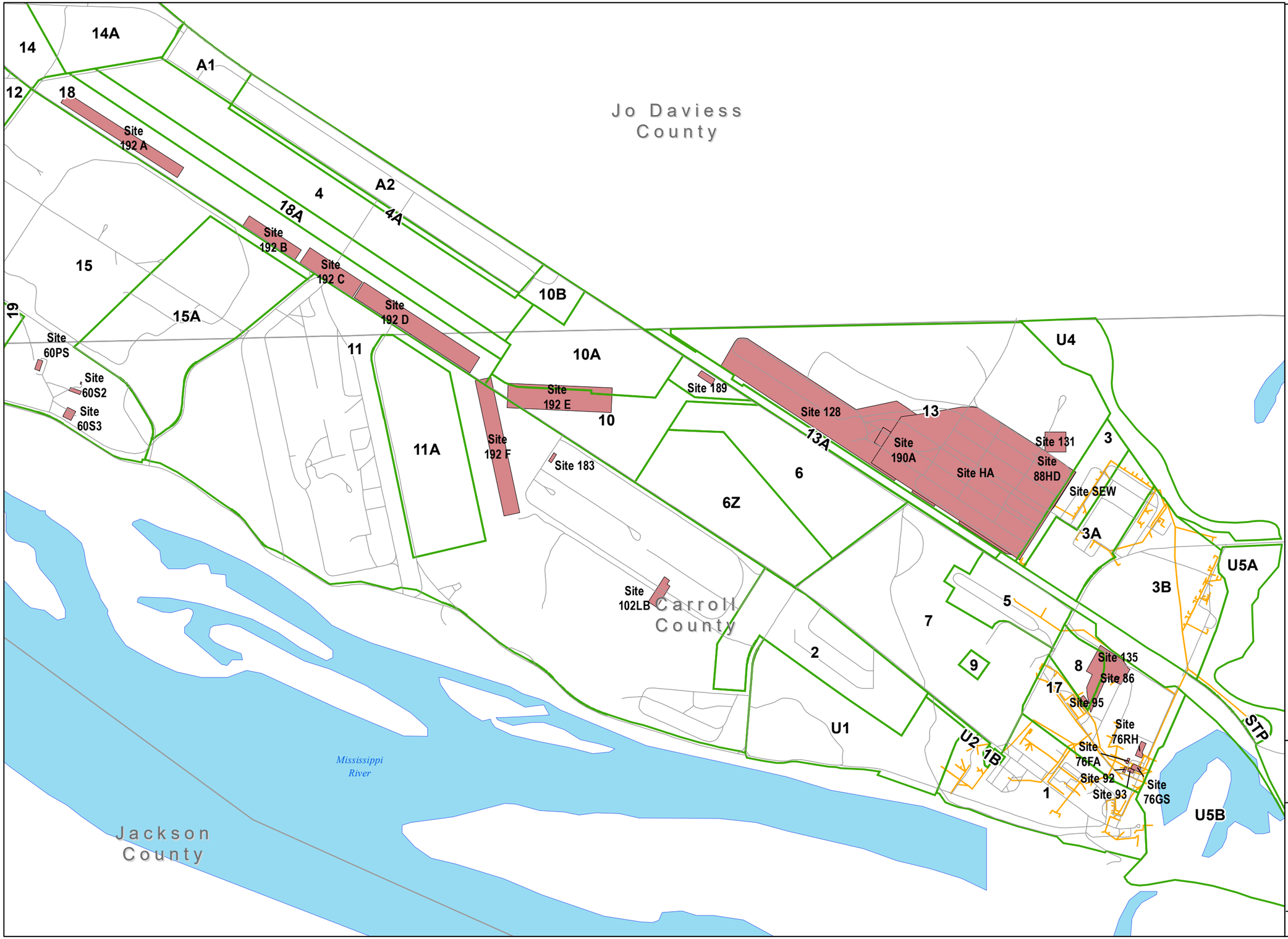
WESTON SOLUTIONS

FIGURE B1
PARCEL AND ENVIRONMENTAL
SITE LOCATION MAP
SAVANNA DEPOT PARK REUSE PLAN

PRODUCTION DATE: Sep 2018

J:\GIS_Projects\LRA\Figure B1 SITE LOCATION MAP_180926.mxd 9/26/2018 12:21:23 PM MYERSJT

J:\GIS_Projects\LRA\Figure B2 IRP MMRP STATUS NFA_180926.mxd 9/26/2018 12:36:08 PM MYERSJT



Legend

- LRA Streets
- Parcels

Status

- LUC
- Sewerlines

Notes

Site HA has long-term groundwater monitoring requirements, the property may not be available to transfer until an "Operating Properly and Successfully" determination is proposed by the Army and approved by EPA and IEPA

N

0 1,500 3,000

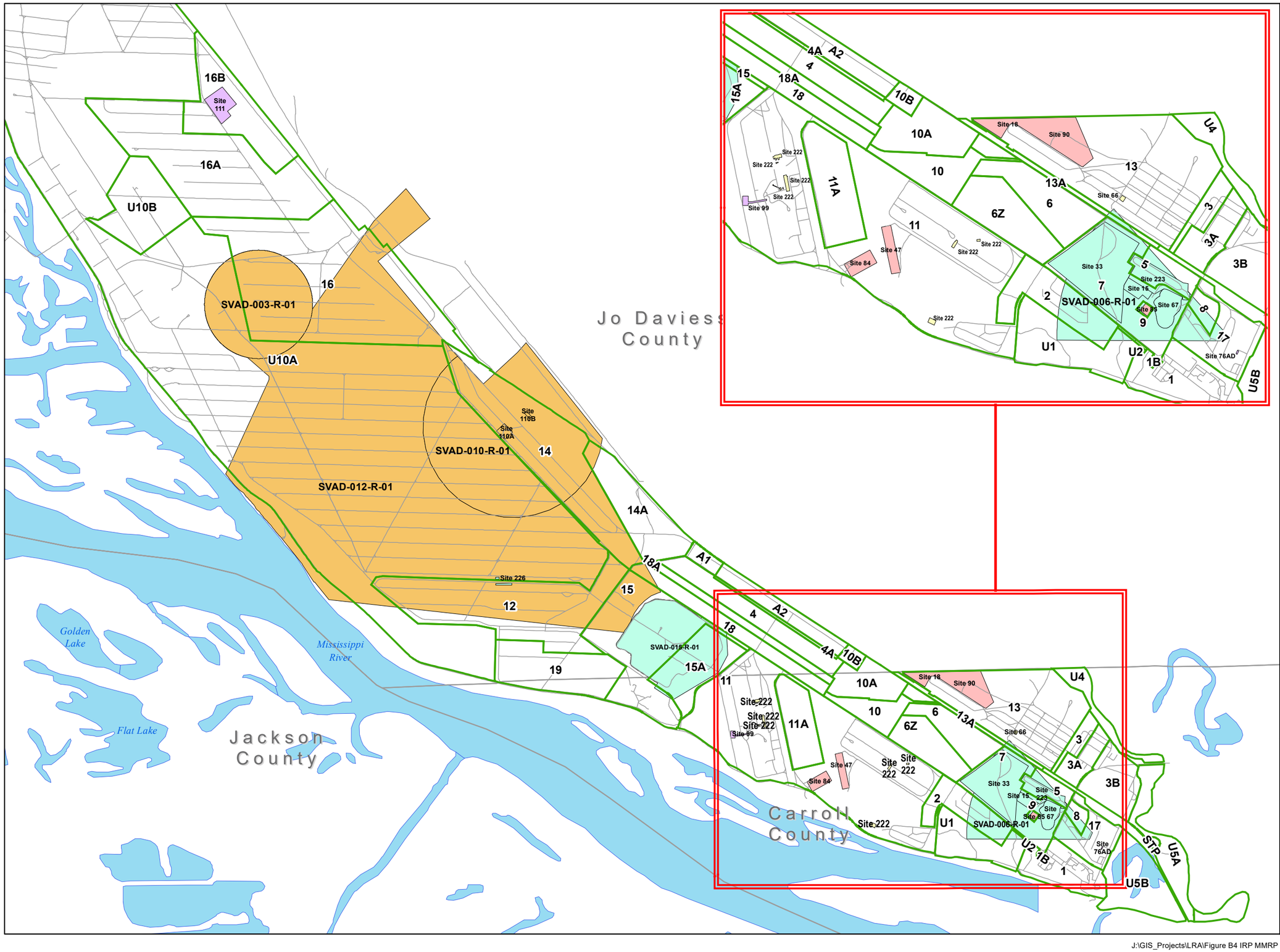
Feet

WESTON SOLUTIONS

FIGURE B3
IRP SITES
LAND USE CONTROLS
STATUS
SAVANNA DEPOT PARK REUSE PLAN

PRODUCTION DATE: Sep 2018

J:\GIS_Projects\LRA\Figure B3 IRP MMRP STATUS LUC_180926.mxd 9/26/2018 1:24:02 PM MYERSJT



Legend

- Parcels
- LRA Streets

Status

- HTRW PP/ROD
- MMRP FS/PP/ROD
- ONGOING HTRW INVESTIGATION
- ONGOING HTRW REMEDIATION
- ONGOING MMRP INVESTIGATION/...

Notes

Sites 76AD, 99, 111, and 015-R-01 (Site 83) have long-term groundwater monitoring requirements, the properties may not be available to transfer until an "Operating Properly and Successfully" determination is proposed by the Army and approved by EPA and IEPA

N

0 3,500 7,000

Feet

WESTON SOLUTIONS

FIGURE B4
IRP AND MMRP SITES
ONGOING INVESTIGATION
OR REMEDIATION
SAVANNA DEPOT PARK REUSE PLAN

PRODUCTION DATE: Sep 2018

J:\GIS_Projects\LRA\Figure B4 IRP MMRP STATUS OTHER_180926.mxd 9/26/2018 1:25:17 PM MYERSJT

APPENDIX C

Environmental Status Tables

Table 1
Environmental Site Status
Savanna Army Depot

Site Number	Parcel Number	Site Name	Current Status (2017)
No Further Action (NFA)			
2	LRA-16	High Explosive Melt and Pour Facility (Building 1007)	Final ROD No Further Action at Twenty-Two Sites (April 2010); NFA
3	LRA-11	CL Plant Melt and Pour Building (Building 634)	Final ROD No Further Action at Twenty-Two Sites (April 2010).
4	LRA-11	Lead Azide Demilitarization Facility (CF Area, Building 757)	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); NFA. Final RI for Explosives Contaminated Soil Around and Under the Explosives Contaminated Buildings (June 2013); NFA.
16	LRA-11	Small Arms Ammunition Deactivation Furnace (Building 941)	Final ROD Sites 16 and 195 (May 2014); NFA.
16S	LRA-11	Small Arms Ammunition Deactivation Furnace (Building 941) Septic System	No Further Action Decision Document for Sites 16S, 34, and 123 (September 2006); NFA
19	LRA-13	Closed Sanitary Landfill 1992	Final Supplemental Lower Post RI Report (December 2005); NFA. RCRA process was reportedly complete in 2011 and IEPA documented the completion of post-closure care in a letter dated January 4, 2012.
23	LRA-16	High Explosive Melt and Pour Facility Sump	Final ROD No Further Action at Twenty-Two Sites (April 2010); NFA
24	LRA-11	CF Plant Melt and Pour Facility	Final ROD Sites 5, 24, 37PS, 69, 76CS, 76OD, 126, 155, 184 and 186 (August 2013); NFA
25	LRA-11	CL Plant Melt and Pour Facility Sump	Construction Completion Report for Remedial Action Environmental Restoration at the Ammunition Peculiar Equipment Shop Rear Dock (Site 76AD), Nitric Acid Storage Area (Site 44), and CF Plant (Site 25) (CAPE, 2006)
26	LRA-11	CL Plant Melt and Pour Facility Sump	Final ROD No Further Action at Twenty-Two Sites (April 2010); NFA
27	LRA-11	CL Plant Melt and Pour Facility Sump	Final ROD No Further Action at Twenty-Two Sites (April 2010); NFA
28	LRA-11	CL Plant Melt and Pour Facility Leaching Pits	Final ROD No Further Action at Twenty-Two Sites (April 2010); NFA
31	LRA-17	Gun Site (World War I)	Areas where no release or disposal of hazardous substances or petroleum products has occurred, Final Environmental Baseline Survey (1999)
34	LRA-11	Quality Control Facility (Building 939)	No Further Action Decision Document for Sites 16S, 34, and 123 (September 2006); NFA
36SL	LRA-11	Industrial Sewage Plant Sewerlines	Final ROD No Further Action at Twenty-Two Sites (April 2010); NFA
37AB	LRA-17	Storage Sheds South of Building 129	Final ROD No Further Action at Twenty-Two Sites (April 2010); NFA
37CD	LRA-17	Storage Sheds South of Building 118	Final ROD No Further Action at Twenty-Two Sites (April 2010); NFA
37FS	LRA-17	Facilities Engineer Storehouse (Building 129)	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); NFA
37GS	LRA-17	Gasoline Spill	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); NFA
37PS	LRA-17	Pole Storage Area	Final ROD Sites 5, 24, 37PS, 69, 76CS, 76OD, 126, 155, 184 and 186 (August 2013). Remedial Action Completion Report for Sites 76CS, 76OD, and 37PS (April 2016). Soil removal was completed in 2015; NFA.
42	LRA-10B	Storage Tanks (3) (G-Area)	Areas where no release or disposal of hazardous substances or petroleum products has occurred, Final Environmental Baseline Survey (1999)
43	LRA-11	Nitric Acid Storage Area and Building 505 - CN Plant Vacuum Producer Building	Final Plant Area No Further Action Decision Document (June 2006, Revised May 2007); NFA
44	LRA-3, LRA-13	Nitric Acid Storage Area, H-Area	Final ROD SVAD-044 (November 2009); NFA
46	LRA-16B	Manganese Ore Storage Pits	Final ROD No Further Action at Fourteen Sites (May 2012); NFA
51	LRA-17	Lower Post Bedrock Well, Building 107	Areas where no release or disposal of hazardous substances or petroleum products has occurred, Final Environmental Baseline Survey (1999)
52	LRA-3B	Base Officers Quarters Area Bedrock Well, Building 260	Areas where no release or disposal of hazardous substances or petroleum products has occurred, Final Environmental Baseline Survey (1999)
53	LRA-11	CL Plant Bedrock Well, Building 645	Well was abandoned as part of Site 221, Well Abandonment at Various Buildings. NFA

Table 1
Environmental Site Status
Savanna Army Depot

Site Number	Parcel Number	Site Name	Current Status (2017)
54	LRA-11	CF Plant Well House, Building 701	Well likely abandoned as part of Site 221, Well Abandonment at Various Buildings. NFA
55	LRA-16	Ammunition Storage Area Bedrock Well, Building 1022	Areas where no release or disposal of hazardous substances or petroleum products has occurred, Final Environmental Baseline Survey (1999)
59	LRA-16	High Explosive Melt and Pour Facility (Shallow Well, Building 1005)	Final ROD No Further Action at Twenty-Two Sites (April 2010); NFA
60CP	LRA-15	Special Weapons Maintenance and Storage Building 801 Liquid Propellant Vehicle Cleaning Pad	Final Plant Area No Further Action Decision Document (June 2006, Revised May 2007); NFA
60DW	LRA-15	Special Weapons Maintenance and Storage Area Building 800 Dry Well	Final Plant Area No Further Action Decision Document (June 2006, Revised May 2007); NFA
60JD	LRA-15	Special Weapons Maintenance and Storage - J-Area Dumpster	Final Plant Area No Further Action Decision Document (June 2006, Revised May 2007); NFA
60S1	LRA-15	Special Weapons Maintenance and Storage - Building 802 Septic System	Final Plant Area No Further Action Decision Document (June 2006, Revised May 2007); NFA
68	LRA-17	Waste Oil UST	Final Closure Report for USTs without Incident Numbers (June 2004). NFA.
72	LRA-16	High Explosive Melt and Pour Facility Leaching Field	Final ROD No Further Action at Twenty-Two Sites (April 2010); NFA
75	LRA-3	Army Reserve Motor Pool	Final ROD No Further Action at Twenty-Two Sites (April 2010); NFA
76CS	LRA-17	Former Coal Storage Area	Final ROD Sites 5, 24, 37PS, 69, 76CS, 76OD, 126, 155, 184 and 186 (August 2013). Remedial Action Completion Report for Sites 76CS, 76OD, and 37PS (April 2016). Soil removal was completed in 2015; NFA.
76OD	LRA-17	Open Drum Storage Area	Final ROD Sites 5, 24, 37PS, 69, 76CS, 76OD, 126, 155, 184 and 186 (August 2013). Remedial Action Completion Report for Sites 76CS, 76OD, and 37PS (April 2016). Soil removal was completed in 2015; NFA.
78	LRA-11	CF Plant Laundry and Leaching Field, Building 702	Final Plant Area No Further Action Decision Document (June 2006, Revised May 2007); NFA
79	LRA-4	G-Area Corral Fuel Spill	Diesel fuel was released to the area and a removal action was performed. NFA recommended from Final Environmental Baseline Survey (1999).
80	LRA-17	Emergency/Auxiliary Electricity Generation Plant	Final Report, SVAD-080, Emergency/Auxiliary Electricity Generation Plant Site Inspection (May 2007) recommended NFA.
81	LRA-16	Former Battery Shop and Battery Shop Leaching Field (Building 1017)	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); NFA
88	LRA-3	H-Area Open Drainage Ditch	Final ROD No Further Action at Twenty-Two Sites (April 2010); NFA
88DB	LRA-13	H-Area Drainage Basic	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); NFA
91	LRA-2, LRA-11	CN Plant Small Arms Stockpile Area	Final Plant Area No Further Action Decision Document (June 2006, Revised May 2007); NFA
94	LRA-17	Building 103 Motor Pool	Final ROD No Further Action at Twenty-Two Sites (April 2010); NFA
96	LRA-11	Building 642 - CL Plant Receiving, Inspection, and Painting (RIP) Building and Annex Septic Tank, Catch Basin, and Leaching Pool	Final Plant Area No Further Action Decision Document (June 2006, Revised May 2007); NFA
97	LRA-11	Buildings 711 and 712 – CF Plant RIP Building and Annex	Final Plant Area No Further Action Decision Document (June 2006, Revised May 2007); NFA
98	LRA-11	Building 716, CF Plant Surveillance Workshop and Former Melt and Pour Building	Final Response Complete Report, Decontamination of Group 1 Explosives-Contaminated Buildings (November 2010). Final RI for Explosives Contaminated Soil Around and Under the Explosives Contaminated Buildings (June 2013). Further investigations are being conducted under Site 222, Explosive Building Decontamination.
102TF	LRA-11	Building 642 Tile Field	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); NFA

Table 1
Environmental Site Status
Savanna Army Depot

Site Number	Parcel Number	Site Name	Current Status (2017)
104	LRA-5, LRA-6Z, LRA-11, LRA-18	CL and CN Plant Transformer Vaults	Final ROD No Further Action at Twenty-Two Sites (April 2010); NFA
121	LRA-11	CF Plant Septic System and Outfall	Final ROD No Further Action at Twenty-Two Sites (April 2010); NFA
122	LRA-11	CL Plant Northern Septic System	Final ROD No Further Action at Fourteen Sites (May 2012); NFA
124	LRA-11	CN Loop Septic Tank and Tile Field	Final Plant Area No Further Action Decision Document (June 2006, Revised May 2007); NFA
125	LRA-3	Old Troop Area (YSI Site)	Project Completion Report, Site 125 Remediation (September 2017); NFA.
126	LRA-11	CN Plant Boiler Building USTs (Building 502)	Final Remedial Action Completion Report For Sites 126 and 225 (January 2016); NFA.
129	LRA-5	PCB Spill Between Buildings 132 & 134	Final ROD No Further Action at Twenty-Two Sites (April 2010); NFA
132	LRA-13	Building 410 Wash Rack and Drainage Basin	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); NFA
133	LRA-13	Field Maintenance Shop (Building 414)	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); NFA
134	LRA-17	Flammable Material Storage (Building 120)	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); NFA
136	LRA-13	Former APE Pilot Shop (Building 412)	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); NFA
137	LRA-11	Building 601 - CL Plant Ammonium Nitrate Service Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
138	LRA-11	Building 604 – CL Plant Ammonium Nitrate Drying and Screening Building	Final Plant Area No Further Action Decision Document (June 2006, Revised May 2007).
139	LRA-11	Building 609 – CL Plant TNT (2,4,6-Trinitrotoluene) Box Opening Building	Final Plant Area No Further Action Decision Document (June 2006, Revised May 2007); NFA
140	LRA-11	Building 613 - CL Plant TNT Service Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
141	LRA-11	Building 620 - CL Plant Stencil, Packing, and Shipping Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
142	LRA-11	Building 628 - CL Plant Drilling & Boostering Building	The Site 142 No Further Action Decision Document (September 2008) indicated that Site 142 is recommended for NFA. Final RI for Explosives Contaminated Soil Around and Under the Explosives Contaminated Buildings (June 2013); NFA.
143	LRA-11	Building 632 - CL Plant Barricade Shelter for Vacuum Machines	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
144	LRA-11	Building 635 - CL Plant Barricade Shelter for Vacuum Machines	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
145	LRA-11	Building 637 - CL Plant Barricade Shelter for Vacuum Machines	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
146	LRA-11	Building 638 - CL Plant Auxiliary Booster Service Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
147	LRA-11	Building 641 - CL Plant Acid Storage Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
148	LRA-11	Building 708 - CL Plant Oil and Paint Storage Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
149	LRA-11	Building 715 – CF Plant Washout Auxiliary Equipment Building	Final Plant Area No Further Action Decision Document (June 2006, Revised May 2007); NFA
150	LRA-11	Building 717 - CF Plant Control Room for the Melt and Loading Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
151	LRA-11	Building 720 - CF Plant Vacuum Producer Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
152	LRA-11	Building 721 - CF Plant Primary Vacuum Receiver Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA.
153	LRA-11	Building 723 - CF Plant Booster Storage Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA

Table 1
Environmental Site Status
Savanna Army Depot

Site Number	Parcel Number	Site Name	Current Status (2017)
154	LRA-11	CF Plant Change House "C"	Final ROD No Further Action at Twenty-Two Sites (April 2010); NFA
155	LRA-11	CF Plant Drilling and Boostering Building (Building 729)	Final ROD Sites 5, 24, 37PS, 69, 76CS, 76OD, 126, 155, 184 and 186 (August 2013); NFA.
156	LRA-11	Building 731 - CF Plant Primary Vacuum Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA. Final RI for Explosives Contaminated Soil Around and Under the Explosives Contaminated Buildings (June 2013); NFA.
157	LRA-11	Building 732 - CF Plant Compressor Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA. Final RI for Explosives Contaminated Soil Around and Under the Explosives Contaminated Buildings (June 2013); NFA.
158	LRA-11	Building 733 - CF Plant Compressor Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA.
159	LRA-11	Building 734 - CF Plant Primary Vacuum Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA.
160	LRA-11	Building 736 - CF Plant Fuze Storage Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
161	LRA-11	Building 738 - CF Plant Change House "A"	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
162	LRA-11	Building 742 - CF Plant Ammunition Can Renovation Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
163	LRA-11	Building 744 - CF Plant Oil and Paint Storage Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
164	LRA-11	Building 745 - CF Plant Compressor Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
165	LRA-11	Building 749 - CF Plant Smokeless Powder Service Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
166	LRA-11	Building 753 - CF Plant Change House "B"	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
167	LRA-11	Building 755 - CF Plant Primer Service Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
168	LRA-11	Building 758 - CF Plant Barricade Shelter for Vacuum Machines	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
169	LRA-11	Building 764 - CF Plant Air Compressor Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
170	LRA-11	Building 765 - CF Plant Ammonium Nitrate Service Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
171	LRA-11	Building 767 - CF Plant Barricade Shelter for Vacuum Machines	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
172	LRA-11	Building 768 – CF Plant High Explosives Preparation Building	Final Plant Area No Further Action Decision Document (June 2006, Revised May 2007). Final RI for Explosives Contaminated Soil Around and Under the Explosives Contaminated Buildings (June 2013); NFA.
173	LRA-11	Building 771 - CF Plant Barricade Shelter for Vacuum Machines	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
174	LRA-11	Building 774 - CL Plant TNT Service Building	Final No Further Action Decision Document for Plant Area Buildings (October 2005); NFA
175	LRA-11	Building 776 - CF Plant Vacuum Collector Building	Final RI for Explosives Contaminated Soil Around and Under the Explosives Contaminated Buildings (June 2013). Further investigations are being conducted under Site 222, Explosive Building Decontamination.
177	LRA-17	Active Service Station (Building 101)	Incident #901584 – 45-Day Report for Former USTs at Building 101 (February 2007); NFA
179	LRA-17	Lower Post Heating Plant	Final ROD No Further Action at Twenty-Two Sites (April 2010); NFA
184	LRA-11	CL Plant Compressor Building (Building 640)	Final ROD Sites 5, 24, 37PS, 69, 76CS, 76OD, 126, 155, 184 and 186 (August 2013); NFA
185	LRA-11	CF Plant Heating Plant (Building 704)	Final ROD No Further Action at Twenty-Two Sites (April 2010); NFA
186	LRA-11	CF Plant Generator Building (Building 707)	Final ROD Sites 5, 24, 37PS, 69, 76CS, 76OD, 126, 155, 184 and 186 (August 2013); NFA

Table 1
Environmental Site Status
Savanna Army Depot

Site Number	Parcel Number	Site Name	Current Status (2017)
187	LRA-11	Building 715 – CF Plant Washout Auxiliary Equipment Building	Final Plant Area No Further Action Decision Document (June 2006, Revised May 2007); NFA
188	LRA-11	Building 743 – CF Plant Powder Packing Operation Building	Final Plant Area No Further Action Decision Document (June 2006, Revised May 2007); NFA
190B	LRA-13	H-Area Material Storage Area (Area B)	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); NFA
191	LRA-15	Building 932 – Boiler House for LCL (Less-than-Car Load) Building	Final Plant Area No Further Action Decision Document (June 2006, Revised May 2007); NFA
197	LRA-1	Indoor Firing Range	Technical Memorandum, Site 197 - Indoor Firing Range (July 2003); NFA.
224	LRA-14	Cosmoline Grease Dump Site	Final ROD Site 224-Cosmoline Grease Dump Site (June 2014); NFA
Long-Term Monitoring (LTM)/Land Use Controls (LUCs)			
60PS	LRA-15	Special Weapons Maintenance and Storage (Propellant Storage Area, Buildings 802 and 803)	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); LUCs. Final LUCIP (March 2015). Contract awarded in July 2014 for a 5-year review and annual LUC Inspections for 5 years (expires July 2019). LUCs are required to prevent residential development at the site and crops from being grown. All future 5 year review and LUC inspection costs will be included under SVAD-192. First 5 year review completed 10 July 2015.
60S2	LRA-15	Special Weapons Maintenance and Storage (Building 800 Septic System)	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); LUCs. Final LUCIP (March 2015). Contract awarded in July 2014 for a 5-year review and annual LUC Inspections for 5 years (expires July 2019). LUCs are required to prevent residential development at the site and crops from being grown. All future 5 year review and LUC inspection costs will be included under SVAD-192. First 5 year review completed 10 July 2015.
60S3	LRA-15	Special Weapons Maintenance and Storage (Building 810 Septic System)	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); LUCs. Final LUCIP (March 2015). Contract awarded in July 2014 for a 5-year review and annual LUC Inspections for 5 years (expires July 2019). LUCs are required to prevent residential development at the site and crops from being grown. All future 5 year review and LUC inspection costs will be included under SVAD-192. First 5 year review completed 10 July 2015.
76FA	LRA-17	Furnace Area (Building 117)	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); LUCs. Final LUCIP (March 2015). Contract awarded in July 2014 for a 5-year review and LUC Inspections for 5 years. All future 5 year review and LUC inspection costs will be included under SVAD-192. First 5 year review completed 10 July 2015.
76GS	LRA-17	Former Service Station (Building 111)	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); LUCs. Final LUCIP (March 2015). Contract awarded in July 2014 for a 5-year review and LUC Inspections for 5 years. All future 5 year review and LUC inspection costs will be included under SVAD-192. First 5 year review completed 10 July 2015.
76RH	LRA-17	Locomotive Roundhouse (Building 115)	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); LUCs. Final LUCIP (March 2015). Contract awarded in July 2014 for a 5-year review and LUC Inspections for 5 years. All future 5 year review and LUC inspection costs will be included under SVAD-192. First 5 year review completed 10 July 2015.
86	LRA-17	Building 128 Storage Area	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); LUCs. Final LUCIP (March 2015). Contract awarded in July 2014 for a 5-year review and LUC Inspections for 5 years. All future 5 year review and LUC inspection costs will be included under SVAD-192. First 5 year review completed 10 July 2015.

Table 1
Environmental Site Status
Savanna Army Depot

Site Number	Parcel Number	Site Name	Current Status (2017)
88HD	LRA-13	H-Area Drainage Ditch	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); LUCs. Final LUCIP (March 2015). Contract awarded in July 2014 for a 5-year review and LUC Inspections for 5 years. All future 5 year review and LUC inspection costs will be included under SVAD-192. First 5 year review completed 10 July 2015.
92	LRA-17	Pesticide Storage (Building 113)	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); LUCs. Final LUCIP (March 2015). Contract awarded in July 2014 for a 5-year review and LUC Inspections for 5 years. All future 5 year review and LUC inspection costs will be included under SVAD-192. First 5 year review completed 10 July 2015.
93	LRA-17	Pesticide Mixing Pad (Building 112)	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); LUCs. Final LUCIP (March 2015). Contract awarded in July 2014 for a 5-year review and LUC Inspections for 5 years. All future 5 year review and LUC inspection costs will be included under SVAD-192. First 5 year review completed 10 July 2015.
95	LRA-8	Flammable Storage (Building 104)	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); LUCs. Final LUCIP (March 2015). Contract awarded in July 2014 for a 5-year review and LUC Inspections for 5 years. All future 5 year review and LUC inspection costs will be included under SVAD-192. First 5 year review completed 10 July 2015.
102LB	LRA-11	Building 642 Leaching Beds	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); LUCs. Final LUCIP (March 2015). Contract awarded in July 2014 for a 5-year review and LUC Inspections for 5 years. All future 5 year review and LUC inspection costs will be included under SVAD-192. First 5 year review completed 10 July 2015.
128	LRA-13	H-Area Zinc Ingot Piles	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); LUCs. Final LUCIP (March 2015). Contract awarded in July 2014 for a 5-year review and LUC Inspections for 5 years. All future 5 year review and LUC inspection costs will be included under SVAD-192. First 5 year review completed 10 July 2015.
131	LRA-13	Building 137 Scrap Pile	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); LUCs. Final LUCIP (March 2015). Contract awarded in July 2014 for a 5-year review and LUC Inspections for 5 years. All future 5 year review and LUC inspection costs will be included under SVAD-192. First 5 year review completed 10 July 2015.
135	LRA-8, LRA-17	Former Coal Storage Areas (Buildings 127 & 115)	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); LUCs. Final LUCIP (March 2015). Contract awarded in July 2014 for a 5-year review and LUC Inspections for 5 years. All future 5 year review and LUC inspection costs will be included under SVAD-192. First 5 year review completed 10 July 2015.
183	LRA-11	CL Plant Storage Building (Building 615)	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); LUCs. Final LUCIP (March 2015). Contract awarded in July 2014 for a 5-year review and LUC Inspections for 5 years. All future 5 year review and LUC inspection costs will be included under SVAD-192. First 5 year review completed 10 July 2015.
189	LRA-10	Water Tower (Building 904)	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); LUCs. Final LUCIP (March 2015). Contract awarded in July 2014 for a 5-year review and LUC Inspections for 5 years. All future 5 year review and LUC inspection costs will be included under SVAD-192. First 5 year review completed 10 July 2015.
190A	LRA-13	H-Area Material Storage Area (Area A)	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); LUCs. Final LUCIP (March 2015). Contract awarded in July 2014 for a 5-year review and LUC Inspections for 5 years. All future 5 year review and LUC inspection costs will be included under SVAD-192. First 5 year review completed 10 July 2015.

Table 1
Environmental Site Status
Savanna Army Depot

Site Number	Parcel Number	Site Name	Current Status (2017)
192	LRA-10 (192E and 192F), LRA-10A (192E), LRA-11 (192E and 192F), LRA-18 (192A-D and F)	Manganese Ore Storage Mounds	Final ROD (April 2010) for excavation and off-site disposal of soil. Remediation completed in October 2010. Final LUCIP (2012). LUCs include signage to ensure tracks remain in place and no residential on the site. First 5 year review completed 10 July 2015.
HA	LRA-13	H-Area Warehouses Groundwater Monitoring Program	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); LUCs. Final LUCIP (March 2015). Contract awarded in July 2014 for a 5-year review and LUC Inspections for 5 years. All future 5 year review and LUC inspection costs will be included under SVAD-192. First 5 year review completed 10 July 2015.
SEW	LRA-17 (crosses through LRA-3, LRA-3A, LRA-3B, LRA-5, LRA-7, LRA-8, LRA-13)	Lower Post Sewerlines	Final ROD for Thirty-Three Lower Post and Plant Area Sites (July 2012); LUCs. Final LUCIP (March 2015). Contract awarded in July 2014 for a 5-year review and LUC Inspections for 5 years. All future 5 year review and LUC inspection costs will be included under SVAD-192. First 5 year review completed 10 July 2015.
Remedial Investigation (RI)/Feasibility Study (FS) Underway			
15	LRA-7	Small Arms Ammunition Burn Area	Discussions are ongoing to determine if CERCLA LUCs are required for munitions debris sites or if only a deed notice is required. SVAD-015 is currently included in a contract for the completion of the FS/PP/ROD with multiple sites to include an MMRP site (SVAD-006-R-01) to address issues at the site.
33	LRA-7	Artillery Tunnel Test Site (Mounds)	Discussions are ongoing to determine if CERCLA LUCs are required for munitions debris sites or if only a deed notice is required. SVAD-033 is currently included in a contract for the completion of the FS/PP/ROD with multiple sites to include an MMRP site (SVAD-006-R-01) to address issues at the site.
67	LRA-7	Fire Training Area	Discussions are ongoing to determine if CERCLA LUCs are required for munitions debris sites or if only a deed notice is required. SVAD-067 is currently included in a contract for the completion of the FS/PP/ROD with multiple sites to include an MMRP site (SVAD-006-R-01) to address issues at the site.
222	LRA-11	Explosive Building Decontamination	Building decontamination for explosives completed for 16 buildings in 2010. Additional RI work at 4 additional buildings (1010, 1011, 1012, 2215) contracted in September 2013. A new RI (Draft June 2017) will be completed to address new buildings that were added and a Phase II RI for the 10 buildings that came out of the original RI requiring additional work. Final RI anticipated February 2018; PP for February 2019; and ROD for February 2020.
223	LRA-5, LRA-7	Small Arms Ammunition Disposal Area	A contract for an RI/FS/PP/ROD was awarded in July 2012. Discussions are ongoing to determine if CERCLA LUCs are required for munitions debris sites or if only a deed notice is required. Phase II RI was submitted for Army review in June 2013. FS/PP/ROD to be completed. A new A/E task order award is needed in FY18 to re-award the RI/FS/PP/ROD for this work.
226	LRA-12	J-609 Open Burn Area	RI completed in July 2014. FS/PP/ROD to be completed; site is tied to Site 12-R. Discussions are ongoing to determine if CERCLA LUCs are required for munitions debris sites or if only a deed notice is required. The FS report (FS 3-R, 12-R & 15-RFS, 181, 226) is on hold until the 12-R high-density issue/RI work is complete. NFA for HTRW is proposed.

Table 1
Environmental Site Status
Savanna Army Depot

Site Number	Parcel Number	Site Name	Current Status (2017)
Proposed Plan (PP)/Record of Decision (ROD) To Be Completed			
47	LRA-11	Chromium Ore Open Storage Area	A contract for the FS/PP/ROD in July 2013. The PP for the site was finalized in May 2017. The ROD is anticipated to be compete in February 2018. The preferred alternative is soil excavation and off-disposal to achieve unrestricted use.
84	LRA-11	Scrap Wood Open Burn Area	An IRA including excavation and off-site disposal of contaminated soils; Final IRA Completion Report (April 2017). PP proposing NFA after IRA is to be completed in December 2017. ROD anticipated for December 2018.
85	LRA-9	New Small Arms Range	FS/PP/ROD awarded in 2014. FS completed April 2016. PP completed September 2016. Regulatory comments on draft final ROD received in April 2017, expected to be finalized in September 2017. Preferred alternative is soil excavation and off-site disposal to get to unrestricted use. RD/RA task order contract will be awarded in September 2017.
90 (Includes Site 18)	LRA-13	H-Area Landfill Cells	A contract awarded FS/PP/ROD in July 2013. The final FS dated Apr 2016 for SVAD-090 calls for state compliant cap. The site was rejected for LUCs and will need to follow IL 807 rules and will require clearing and a new cover. Long-term monitoring of groundwater, LUCs and five-year reviews are expected. Revised FS and PP finalized in May 2017. ROD expected in February 2018.
Ongoing Remediation			
76AD	LRA-17	APE Shop Rear Dock Area	ROD signed May 2016. RD/RA(C)/RA(O) Contract for 76AD awarded September 2015. Final LUCIP February 2017. NFA for soil, in-situ chemical oxidation for groundwater. First round of injections completed in November 2016. RA(O) sampling events have occurred in February and April 2017. Period of Performance for RD/RA ends March 2020.
99	LRA-11	Building 762 CF Plant Battery Shop and Leaching Pits	ROD Site 20 – Abandoned Landfill and Site 99 – Building 762, CF Plant Battery Shop and Leaching Pits. The ROD was signed August 2016. The Draft Final RAWP is in regulatory review (May 2017). Field work scheduled to start in Fall of 2017 for soil removal and groundwater monitoring. A contract modification for sampling under the building was added in March 2016 to delineate the extent of the contamination. LUCs and five-year reviews are expected. The Period of Performance for the current RD/RA(C)/MNA task order expires on 21 September 2019.
111	LRA-16B	1934 Outdoor Washout Plant	Soil treatment began in the summer of 2010 and was completed in the fall of 2010. Soil flushing and groundwater treatment equipment is operating. Awarded a contract for RA(O) in August 2014, for five years of operation. The duration of flushing is likely to be finalized summer of 2017. LUC monitoring and five-year reviews will be required after the soil flushing is complete. Awarded a contract for RA(O) in August 2014, for five years of operation (expires July 2019). All future 5 year review costs will be included under SVAD-192.
Closure-Related Compliance			
66	LRA-13	PCB Container Storage Building H420	The PCB Container Storage Area (Site 66), Building 420, is a less than 90-day RCRA hazardous waste storage area located in the northwestern end of Building 420 in the H-Area. Wipe samples will be taken in the building when the 90-day storage facility is closed.
Military Munitions Response Program (MMRP) Sites			
003-R-01	LRA-16	A-Area Detonation Pit	Final SVAD-003-R-01, SVAD-012-R-01, and SVAD-015-R-01 FS (July 2016). PP on hold. Discussions are ongoing to determine if CERCLA LUCs are required for munitions debris sites or if only a deed notice is required. Site SVAD-003-R-01 is included in the SVAD-003-R-01, 012-R-01, 015-R-01 Final FS and is recommended NFA pending MD decision outcome. Site 3-R will be NFA, and MEC found is part of 12-R. 12-R requires follow-on RI work in FY18 due to high density MEC found at 12-R during the IRA.

Table 1
Environmental Site Status
Savanna Army Depot

Site Number	Parcel Number	Site Name	Current Status (2017)
006-R-01	LRA-5, LRA-7, LRA-9	Mortar Range Impact Area (ASR Zone C)	Discussions are ongoing to determine if CERCLA LUCs are required for munitions debris sites or if only a deed notice is required. FS/PP/DD on hold due to MD issue. A new task order contract is needed in 2018 to put the FS/PP/DD back on an A/E task order. An FS (December 2018), PP (June 2019), and ROD (June 2020) will be completed. The FS, PP and ROD for sites 15/33, 67, 223, and 6R-01 will be combined into one document.
010-R-01 (Sites 110A and 110B)	LRA-14	1936 Detonation Pits	A contract for an IRA was awarded for FY15 and is currently underway. The Draft Final FS is awaiting results of the IRA to incorporate into the FS. An EE/CA was finalized in May 2016 to allow the IRA to proceed. The MEC IRA will be completed in December 2017. The task order schedule for completing the PP/DD is June 2019. A contract will be needed in FY19 for the RA(C) (LUCIP). A portion of the site is affected by the MD issue. There will be MEC LUCs on a portion of the site, which is LRA Parcel 14B.
012-R-01	LRA-12, LRA-14, LRA-16	Proof Range Group	Final SVAD-003-R-01, SVAD-012-R-01, and SVAD-015-R-01 FS (July 2016). PP on hold. Discussions are ongoing to determine if CERCLA LUCs are required for munitions debris sites or if only a deed notice is required. The MEC IRA for 12-R will be completed in December 2017. A new task order is needed for follow-on supplemental RI work due to the site being re-classified as a high-density area based upon the findings of the IRA.
015-R-01 (Site 83)	LRA-15, LRA-15A	New Function Test Range	Final SVAD-003-R-01, SVAD-012-R-01, and SVAD-015-R-01 FS (July 2016). PP on hold. Discussions are ongoing to determine if CERCLA LUCs are required for munitions debris sites or if only a deed notice is required. HTRW LUCs and LTM are anticipated. LUCs and five-year reviews are expected.

Notes:
A/E - Architect/Engineer
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
DD - Decision Document
EE/CA - Engineering Evaluation/Cost Analysis
FS - Feasibility Study
FY - Fiscal Year
HTRW - Hazardous, Toxic, and Radioactive Waste
IRA - Interim Response Action
LTM - Long-Term Monitoring
LUC - Land Use Control
LUCIP - Land Use Control Implementation Plan
MD - Munitions Debris
MEC - Munitions and Explosives of Concern
MMRP - Military Munitions Response Program
MNA - Monitored Natural Attenuation
NFA - No Further Action
OB/OD - Open Burning/Open Detonation
PCB - Polychlorinated Biphenyl
PP - Proposed Plan
RA - Remedial Action

Table 1
Environmental Site Status
Savanna Army Depot

Site Number	Parcel Number	Site Name	Current Status (2017)

RA(C) - Remedial Action-Construction
RA(O) - Remedial Action-Operation
RAWP - Remedial Action Work Plan
RCRA - Resource Conservation and Recovery Act
RD - Remedial Design
RI - Remedial Investigation
ROD - Record of Decision
SAA - Small Arms Ammunition
SVDA - Savanna Army Depot Activity
UST - Underground Storage Tank

Table 2
Environmental Site Summary
Savanna Army Depot

Parcel Number	Site Number	Site Name	Site Background/History	Media Sampled	Chemicals of Concern (COCs) Remaining	Current Site Phase/ Most Recent Document of Record	Relevant Supporting Documents	Remedy	Future Plans	Approved Land Use
LRA-7	15	Small Arms Ammunition Burn Area	Site 15 (SAA Burn Area) is in the Lower Post Area to the south of the H-Area Warehouses and west of the Lower Post Shop Area. Small arms casings and metallic debris were found in the surface burn residue. Test pit investigations from 1992-1997 identified metallic debris extending to 30 inches bgs. An RI was conducted 1992-1997 and included soil sampling for metals, explosives, VOC, and SVOC analysis and groundwater sampling for explosives, metals, and nitrate analysis. A Phase I OE Site Characterization was conducted in 2000 and included geophysical investigations, intrusive MEC investigations, and nonintrusive MEC investigation. An additional RI/FS was conducted in 2001 to further assess the extent of lead concentrations in the soil. Based on the RI/FS activities, a phased removal action was conducted at Site 15. Phase 1 activities were completed between July and September 2003 and consisted of large surface debris removal and geophysical transect surveys. The main objective of the initial removal phase was to assess portions of the excavation and construction support areas at Site 15 for the presence of potential UXO prior to implementing Phase 2 soil excavation, screening, treatment, and disposal activities. The Phase 2 removal action was conducted between September and December 2003 and May to August 2004. Following soil excavation and disposal activities, confirmation soil samples were collected from the remediated areas. A Supplemental RI was conducted after the completion of the removal action to determine if there were potential environmental impacts to the groundwater associated with historic activities and to assess the extent of residual post-removal action debris. Based on the characterization of the site, NFA recommendations from human health and ecological risk assessments, and the comparison to regulatory standards for groundwater quality, the Army's recommendation for the groundwater at Site 15 was NFA. Because the nature and extent of underground site hazards (MEC/MD) remaining within the unremediated areas of the sites are unknown, remedial alternatives were developed in an FFS. The FFS recommended LUCs consisting of administrative restrictions on access and ground-intrusive activities.	Soil and Groundwater	No HTRW COCs; MMRP: MD	Sites 15 and 33 FFS (SAIC, February 2010)	RI/FS for Sites 15 and 33 (Dames & Moore, 1999) Final Technical Memorandum, Sites 15 and 33 Additional Investigation (MWH, 2001) Sites 33 and 15 Groundwater Remedial Investigation Report (SAIC, 2005) Construction Completion Report, Sites 15 and 33 Removal Action (MWH, 2006) Supplemental Investigations at Sites 15 and 33 (SAIC, 2008)	NFA for HTRW; LUCs possibly for MD	Future plan schedule: FFS (12/17), PP (07/18), ROD (03/19); FFS, PP and ROD for sites 15/33, 67, 223, and 6R-01 will all be combined in one document. Discussions are ongoing to determine if CERCLA LUCs are required for MD.	Commercial/ Industrial
LRA-7	33	Artillery Tunnel Test Site (Mounds)	Site 33 (Artillery Ballistic Test Area) is in the Lower Post Area to the south of the H-Area Warehouses and west of the Lower Post Shop Area. This Site included a former ballistic test firing rang and a firing range for 155-mm guns. A field inspection identified a large quantity of MEC debris in the surface soil near the bunker. A 1992-1997 RI consisted of soil sample collection and analyzing samples for metals, explosives, nitrates, and SVOCs. A Phase I OE Site Characterization was conducted in 2000 and included geophysical investigations, intrusive MEC investigations, and nonintrusive MEC investigation. An additional RI/FS was conducted in 2001 to further assess the extent of lead concentrations in the soil. Based on the RI/FS activities, a phased removal action was conducted at Site 33. Phase 1 activities were completed between July and September 2003 and consisted of large surface debris removal and geophysical transect surveys. The main objective of the initial removal phase was to assess portions of the excavation and construction support areas at Site 33 for the presence of potential UXO prior to implementing Phase 2 soil excavation, screening, treatment, and disposal activities. The Phase 2 removal action was conducted between September and December 2003 and May to August 2004. Following soil excavation and disposal activities, confirmation soil samples were collected from the remediated areas. A Supplemental RI was conducted after the completion of the removal action to determine if there were potential environmental impacts to the groundwater associated with historic activities and to assess the extent of residual post-removal action debris. Based on the characterization of the site, NFA recommendations from human health and ecological risk assessments, and the comparison to regulatory standards for groundwater quality, the Army's recommendation for the groundwater at Site 33 was NFA. A supplemental investigation was conducted in 2008 to assess the extent of residual, post-removal action debris. Neither UXO nor DMM was encountered during the test pit investigation. The areas of residual debris were recommended for NFA by the Army with concurrence from regulatory agencies. Because the nature and extent of underground site hazards (MEC/MD) remaining within the unremediated areas of the sites are unknown, remedial alternatives were developed in an FFS. The FFS recommended LUCs consisting of administrative restrictions on access and ground-intrusive activities.	Soil and Groundwater	No HTRW COCs; MMRP: MD	Sites 15 and 33 FFS (SAIC, February 2010)	RI/FS for Sites 15 and 33 (Dames & Moore, 1999) Final Technical Memorandum, Sites 15 and 33 Additional Investigation (MWH, 2001) Sites 33 and 15 Groundwater Remedial Investigation Report (SAIC, 2005) Construction Completion Report, Sites 15 and 33 Removal Action (MWH, 2006) Supplemental Investigations at Sites 15 and 33 (SAIC, 2008)	NFA for HTRW; LUCs possibly for MD	Future plan schedule: FFS (12/17), PP (07/18), ROD (03/19); FFS, PP and ROD for sites 15/33, 67, 223, and 6R-01 will all be combined in one document. Discussions are ongoing to determine if CERCLA LUCs are required for MD.	Commercial/ Industrial

Table 2
Environmental Site Summary
Savanna Army Depot

Parcel Number	Site Number	Site Name	Site Background/History	Media Sampled	Chemicals of Concern (COCs) Remaining	Current Site Phase/ Most Recent Document of Record	Relevant Supporting Documents	Remedy	Future Plans	Approved Land Use
LRA-11	47	Chromium Ore Open Storage Area	The Chromium Ore Open Storage Area (Site 47) is an approximately 4.4-acre area that was used for open storage of chromium ore between 1946 and 2000. Site 47 is located in the Plant Area of SVDA. The ore piles were removed from SVDA in the summer of 2000 after 54 years of open storage. During a visual inspection conducted in the area after the removal action was completed, large pieces of ore were observed to remain on the surface of the site. Soil investigations at Site 47 were to determine if chemical constituents in the soil beneath the former chromium ore pile pose an unacceptable risk to human health and the environment under current or future land use. After samples were collected and analyzed, an FS was recommended based on detecting chromium and hexavalent chromium as COCs in soil. The HHRA concluded that human health risks associated with the planned future industrial/commercial land use (i.e., worker risks) and the hypothetical recreational scenario fall below human health risk targets and are considered acceptable. Risks are unacceptable for hypothetical residents exposed to surface soil. The COC in surface soil associated with the hypothetical residential future land use is chromium. The risk assessment also concluded that groundwater and subsurface soil are not considered media of concern at Site 47. The risks to ecological receptors are acceptable at Site 47; however, IEPA identified potential concerns related to pieces of chromium ore remaining onsite, resulting in a potential ongoing source of release. A PP for the site, finalized in May 2017 and proposes soil excavation/residual chromium ore removal and offsite disposal to address unacceptable soil risk for hypothetical future residents.	Soil and Groundwater	Soil: Chromium for hypothetical resident; Groundwater: No COCs	PP Site 47 – Chromium Ore Open Storage Area (Leidos, May 2017)	RI Report for the CL and CN Plant Areas and Remaining LRA Parcel (SAIC, 2007) Plant Area (Sites 16, 36, 47, and 84) Baseline Ecological Risk Assessment (SAIC, 2011) Site 47 – Chromium Ore Open Storage Area FS (Leidos, 2016)	Soil - Excavation and Offsite Disposal (Unrestricted Use) Groundwater - NFA	ROD Anticipated (02/18)	Unrestricted Use after Remedial Action
LRA-15	60PS	Liquid Propellant Storage Areas (Buildings 802 & 803) **Special Weapons Maintenance & Storage Area	The Liquid Propellant Storage Areas (Site 60PS) are in the Special Weapons Maintenance and Storage Area (J-Area) inside the J-Loop north of West Road. The Liquid Propellant Storage Buildings were constructed in 1957 northwest (Building 802) and northeast (Building 803) of the Liquid Propellant Change House and Laboratory at Building 800. A soil and groundwater investigation was conducted in July 2000. Antimony, cadmium, and zinc were detected in surface soil at concentrations exceeding soil migration to groundwater criteria. The concentrations of antimony, cadmium and zinc attenuate with depth in the soil and were not detected in groundwater. Manganese (the only compound exceeding human health screening criteria) was detected in all of the borings with the highest concentrations detected in the surface soil. Further investigation of groundwater was not warranted. The human health risk assessment results indicate that risks are at or below regulatory targets for the planned future land use; however, noncancer HIs exceeding the target HI for residents thereby warranting the need for LUCs. The ecological risk assessment concluded that the small acreage of available habitat and limited detections of elevated concentrations limit wildlife exposure.	Soil and Groundwater	Soil: Manganese for hypothetical residents. Groundwater: No COCs.	ROD for Thirty-Three Lower Post and Plant Area Sites (SAIC, July 2012); Final LUCIP for Twenty-One Lower Post and Plant Area Sites (ERT, March 2015)	Supplemental Plant Area RI Report (SAIC 2007); Plant Area FFS (SAIC 2008)	LUCs - Industrial Land Use Only	5-year review and annual LUC Inspections. First 5 year review completed 10 July 2015.	Commercial/ Industrial
LRA-15	60S2	Building 800 Septic System **Special Weapons Maintenance & Storage Area	The Building 800 Septic System (Site 60S2) consists of a septic tank and drainage tile field located east of Building 800 and south of Building 803 in the Special Weapons Maintenance and Storage Area (J-Area) in the center of the J-Loop. The septic tank and drain field received sewage from sanitary lines that served Buildings 800 and 803. An investigation was conducted in July 2000 to determine if operations at Buildings 800 and 803 released chemical constituents to the septic system. A GPR survey was conducted and three soil samples were collected, as well as one Hydropunch groundwater sample. Manganese concentrations in the subsurface soil exceeded the human health screening criteria and indicate a potential for manganese to migrate to groundwater. Further investigation of groundwater was not warranted. The human health risk assessment results indicate that risks are at or below regulatory targets for the planned future land use; however, noncancer HIs exceeding the target HI for residents thereby warranting the need for LUCs. The ecological risk assessment concluded that ecological risks are acceptable.	Soil and Groundwater	Soil: Manganese for hypothetical residents. Groundwater: No COCs.	ROD for Thirty-Three Lower Post and Plant Area Sites (SAIC, July 2012); Final LUCIP for Twenty-One Lower Post and Plant Area Sites (ERT, March 2015)	Supplemental Plant Area RI Report (SAIC 2007); Plant Area FFS (SAIC 2008)	LUCs - Industrial Land Use Only	5-year review and annual LUC Inspections. First 5 year review completed 10 July 2015.	Commercial/ Industrial
LRA-15	60S3	Building 810 Septic System **Special Weapons Maintenance & Storage Area	Site 60S3 is the septic system associated with Building 810 and is located to the northwest of Building 810 in the Special Weapons Maintenance and Storage Area (J-Area) in the center of the J-Loop and northeast of West Road. The septic system includes two pumps, a septic tank, a distribution box, four cleanouts and a drain tile field and received sewage from a sanitary line that serviced Building 810. The interior of the building was inspected a as part of the 1999 EBS. During the radiological survey conducted at Building 810 in 1999, Building 810 was identified as an area that may have been affected by the potential use of open sources of radioactive materials. The radiation protection office and radioactive materials storage areas were evaluated and found to be free of radioactive materials. A field investigation was conducted in August 2000 consisting of a GPR survey and soil and groundwater sampling. Manganese was the only constituent detected in soil at concentrations above human health screening levels. Further investigation of groundwater was not warranted. The human health risk assessment results indicate that risks are at or below regulatory targets for the planned future land use; however, noncancer HIs exceeding the target HI for residents thereby warranting the need for LUCs. The ecological risk assessment concluded that ecological risks are acceptable.	Soil and Groundwater	Soil: Manganese for hypothetical residents. Groundwater: No COCs.	ROD for Thirty-Three Lower Post and Plant Area Sites (SAIC, July 2012); Final LUCIP for Twenty-One Lower Post and Plant Area Sites (ERT, March 2015)	Supplemental Plant Area RI Report (SAIC 2007); Plant Area FFS (SAIC 2008)	LUCs - Industrial Land Use Only	5-year review and annual LUC Inspections. First 5 year review completed 10 July 2015.	Commercial/ Industrial

Table 2
Environmental Site Summary
Savanna Army Depot

Parcel Number	Site Number	Site Name	Site Background/History	Media Sampled	Chemicals of Concern (COCs) Remaining	Current Site Phase/ Most Recent Document of Record	Relevant Supporting Documents	Remedy	Future Plans	Approved Land Use
LRA-13	66	PCB Container Storage Building H420	The PCB Container Storage Area (Site 66), Building 420, is a less than 90-day RCRA hazardous waste storage area located in the northwestern end of Building 420 in the H-Area. The building initially was used to store PCB transformers, and also was used to store unregulated and hazardous wastes collected from several SVDA operations. Twenty-two pieces of PCB-contaminated equipment were removed from Building 420 for disposal in 1995; the remaining eight were removed for disposal in January 1996. The types and quantities of materials stored in Building 420 change weekly. SVDA personnel inspect and inventory the building each week and maintain an inspection/inventory record. Wastes stored in Building 420 have included used motor oil, waste batteries, cutting fluid, waste diesel fuel, fluorescent tubes, insecticides, and latex and aerosol paints. SVDA personnel indicate that spills have occurred and response actions have been taken to clean them up. Wipe samples will be taken in the building when the 90-day storage facility is closed.	NA	NA	Installation BEC, 1996	Installation BEC, 1996	NA	NA	NA
LRA-7	67	Fire Training Area	Site 67, the Fire Training Area (FTA), is located in the central portion of the Lower Post facilities and encompasses approximately 8.6 acres behind the Fire Station, Building 100. Site 67 was recommended for investigation in 1988 by USAEHA after evidence of spilled oil and burned residue indicated a potential environmental impact from the past use of the FTA. The FTA is subdivided into two areas of potential contamination: Site 67A, the tank that was used to store waste oil for use during fire training exercises, and Site 67B, the fire training pit where oil was burned on the ground. Other site features include the outfall area used to drain water associated with the waste oil tank, aboveground metal trays used to support fire training exercises, and two 500-gallon fuel ASTs used to supply fuel to the metal trays for training. Source removal and remediation of contaminated soil were initiated in 1994 and consisted of the excavation of more than 20,000 cubic yards of soil followed by treatment using low-temperature thermal desorption (LTTD). Approximately 29 percent of the thermally treated soil required subsequent treatment with lime to stabilize high concentrations of lead. All treated and stabilized soil was returned to the excavation area as backfill and regraded. The removal action successfully eliminated the primary source of groundwater contamination in the area. However, the 1992 RI groundwater sampling results indicated that the groundwater quality in the vicinity of Site 67 had been adversely affected. As part of the Lower Post RI, environmental samples were collected at Site 67 during two phases of sampling conducted in the fall of 1998 and the fall of 1999. Additional groundwater samples were collected in 2003. Based on the results of the HHRA for the 2004 RI Report, TCE and cis-1,2-DCE were identified as groundwater COCs at Site 67. Groundwater sampling conducted in 2003 and early 2007 indicated that TCE and cis-1,2-DCE concentrations were decreasing over time. By the 2007 sampling events, TCE concentrations were below the MCL and Illinois Class I groundwater criteria and cis-1,2-DCE was not detected. In late 2007/2008, 4 additional rounds of quarterly samples resulted in no exceedances of VOCs in groundwater indicating the soil removal action successfully addressed the source of contamination. The cumulative six rounds of continuous quarterly groundwater samples at the site below the MCL and GQS confirm NFA is required at Site 67. The SERA concluded no further evaluation in a BERA is warranted and the site is recommended for NFA from an ecological perspective. Site 67 falls within the footprint of MMRP site SVAD-006-R-01.	Soil and Groundwater	No HTRW COCs; MMRP: MD	Lower Post Groundwater FS (SAIC, February 2009)	Remedial Investigation Report, Savanna Army Depot Activity (Dames and Moore, 1994) Final Permit L0158100002, Carroll County, Illinois, Contract DACA27-93-C-0153 (Four Seasons, 1998) Lower Post RI (SAIC, 2004)	NFA for HTRW; LUCs possibly for MD	Future plan schedule: FFS (12/17), PP (07/18), ROD (03/19); FFS, PP and ROD for sites 15/33, 67, 223, and 6R-01 will all be combined in one document. Discussions are ongoing to determine if CERCLA LUCs are required for MD.	Commercial/ Industrial
LRA-17	76AD	APE Shop Rear Dock Area	Building 117, the APE Shop, was constructed in 1918 as a vehicle shop that operated until 1932. From 1932 to 1951, Building 117 was used as a machine shop, carpenter shop, paint shop, electrical shop, and sand blasting shop. The APE Shop was active from 1951 through closure. Site 76AD is the 60-foot rear loading dock at the northeastern corner of Building 117. According to SVDA personnel, it was common practice to dispose of used machine oil by dumping it from the edge of the dock directly to the ground surface. Based on the findings from the soil and groundwater RI (SAIC, 2004) at Sites 76AD, a soil removal action was initiated in January 2003 at the northeastern corner of Building 117 adjacent to the loading dock area. Further remediation activities at Site 76AD in 2006 included characterization sampling and analysis; removal of a groundwater monitoring well; railroad track removal and replacement; sheet pile installation and removal; excavation and disposal of impacted soil; confirmation sampling; excavation backfilling; and site restoration. Removal actions for soils resulted in contaminant concentrations below IEPA TACO Tier 1 cleanup standards for residential properties and did not exceed migration to groundwater criteria. Confirmation sampling verified that remaining soil concentrations were at or below acceptable risk levels for unrestricted use. In 2015, the northern and central portions of Building 117 were demolished to address concerns related to roof collapse and building integrity. The concrete slab was left in place and no soil removal occurred as part of the building demolition. The baseline human health risk assessment determined that the risks in groundwater at Site 76AD are considered unacceptable for both the current and anticipated future land users (i.e., industrial/commercial receptors). Concentrations of TCE exceed Federal MCLs and Illinois GQS. In situ chemical oxidation was selected as the most effective alternative to achieve the remedial objectives for the groundwater at Site 76AD.	Soil and Groundwater	Soil: No COCs. Groundwater: TCE	ROD Site 76AD - APE Shop Rear Dock Area (Leidos, April 2016) .	Lower Post RI Report (SAIC, 2004) Lower Post Groundwater FS (SAIC, 2009) Site 76AD Updated Groundwater Human Health Risk Assessment (Leidos, 2015)	Soil: NFA. Groundwater: In-Situ Chemical Oxidation; First round of In-situ Chemical Oxidation was completed in November 2016	RA(O) sampling events have occurred in February and April 2017. Period of Performance for RD/RA ends March 2020.	Commercial/ Industrial

Table 2
Environmental Site Summary
Savanna Army Depot

Parcel Number	Site Number	Site Name	Site Background/History	Media Sampled	Chemicals of Concern (COCs) Remaining	Current Site Phase/ Most Recent Document of Record	Relevant Supporting Documents	Remedy	Future Plans	Approved Land Use
LRA-17	76FA	Furnace Area (Building 117)	The Building 117 Furnace Area is located on the southeastern portion of the APE Shop and north of the Central Heating Plant (Building 114). An undated historical map indicates that welding booths, a forge, and an oil quench furnace were located in the southern portion of Building 117. According to a former SVDA employee, the blacksmith's coke furnace was used to make lead hammers and the oil and coke furnaces were vented from the southeastern part of the building. Water from the coke furnace was piped outside the building for disposal. Soil and groundwater samples were collected in 1998 and analyzed for metals. Several metals were detected in the surface soil at concentrations exceeding the human health screening criteria. The highest concentration of site-related metals occurred in an area of black soot deposition between Buildings 117 and 114 resulting from operations at the central heating plant. Groundwater underlying the Lower Post Shop Area was further evaluated as a larger exposure unit and corrective action associated with groundwater was not identified for Site 76FA. The human health risk assessment results indicate that risks are at or below regulatory targets for the planned future land use. The results of the human health risk assessment indicated that resident noncancer HIs, cancer risks, and blood lead levels exceed the targets and therefore LUCs are warranted. Ecological evaluation of the site demonstrated that there is inadequate habitat to support wildlife receptors.	Soil and Groundwater	Soil: Antimony, arsenic, cadmium, copper, lead and zinc for hypothetical residents. Groundwater: No COCs.	ROD for Thirty-Three Lower Post and Plant Area Sites (SAIC, July 2012); Final LUCIP for Twenty-One Lower Post and Plant Area Sites (ERT, March 2015)	Lower Post Shop Area RI Report (SAIC, 2006) Lower Post FFS (SAIC, 2009)	LUCs - Industrial Land Use Only	5-year review and annual LUC Inspections. First 5 year review completed 10 July 2015.	Commercial/ Industrial
LRA-17	76GS	Former Service Station (Building 111)	The Former Service Station (Building 111) was constructed in 1921 in the Lower Post Shop Area. A 15,000-gallon diesel fuel UST and a fuel pump house were located at the site from 1941 until the removal of the system and its associated piping in November 1990. During the tank removal, it was discovered that the UST was a buried railroad tank car. During the 1999 EBS visual survey of Building 111 and adjacent areas, dead grass was noted around the exterior of the building. The west wall of the building interior was covered by eight pipes which exited the building through a hole in the floor to the ground. An approximately 50-gallon tank marked "Diesel fuel No. 2" and two other cylindrical tanks were located along the east wall of the building. A soil gas survey was conducted in 1998 to assess areas of suspected releases and that exhibited stressed vegetation followed by soil and groundwater sampling. The soil and groundwater samples were analyzed for VOCs, SVOCs, and metals. SVOCs were detected in soil at concentrations above screening criteria. Groundwater underlying the Lower Post Shop Area was further evaluated as a larger exposure unit and corrective action associated with groundwater was not identified for Site 76GS. The human health risk assessment results indicate that risks are at or below regulatory targets for the planned future land use. For residents, cancer risks at the upper end of the target risk range; therefore, LUCs are warranted. Ecological evaluation of the site demonstrated that there is inadequate habitat to support wildlife receptors.	Soil, Soil Gas, and Groundwater	Soil: Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, and PCP for hypothetical residents. Groundwater: No COCs.	ROD for Thirty-Three Lower Post and Plant Area Sites (SAIC, July 2012); Final LUCIP for Twenty-One Lower Post and Plant Area Sites (ERT, March 2015)	Lower Post Shop Area RI Report (SAIC, 2006) Lower Post FFS (SAIC, 2009)	LUCs - Industrial Land Use Only	5-year review and annual LUC Inspections. First 5 year review completed 10 July 2015.	Commercial/ Industrial
LRA-17	76RH	Locomotive Roundhouse (Building 115)	The Locomotive Roundhouse (Building 115) is directly east of the APE Shop, Building 117. Building 115 was constructed in 1921 for the maintenance of locomotives. Maintenance activities associated with the roundhouse generated oil and solvent waste. Some of the oil and solvent waste generated at Building 115 was placed in cans and burned at the fire station (Site 67) while some oils were collected in a grease trap in the building's maintenance pit. The features of environmental interest in the roundhouse are the main floor of the engine room and the locomotive maintenance pit used to inspect the underside of the engines. The sewerlines from Building 115 are connected to the sanitary sewerlines. In the fall of 1997, a sewerline investigation was conducted throughout the Lower Post Shop Area to assess soil contamination potentially resulting from compromised sewerlines. Soil samples were collected from two soil borings located adjacent to the sewerline segment on the east side of Building 115. The samples were analyzed for VOCs, SVOCs, metals, pesticides, PCBs, and herbicides. In the fall of 1999, soil samples were collected from multiple intervals in eight soil borings within Building 115. The borings were located to target potential release points within the building (e.g., cracks and sumps). The soil samples were analyzed for VOCs, SVOCs, PCBs, and metals. In addition, two groundwater samples were collected and analyzed for VOCs, SVOCs, PCBs, metals, and anions. Groundwater underlying the Lower Post Shop Area was further evaluated as a larger exposure unit and corrective action associated with Lower Post Shop Area groundwater was not identified for Site 76RH. The human health risk assessment results indicate that risks are at or below regulatory targets for the planned future land use. The samples were collected below the concrete building floor (reducing human exposure) and site concentrations are at or below the Illinois industrial remediation objectives. For residents, noncancer HIs are below the target HI; however, cancer risks exceeding the target risk range warrant LUCs. For the ecological evaluation, the site lacks suitable habitat areas inside the building and has limited habitat area outside.	Soil, Soil Gas, and Groundwater	Soil: Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene for hypothetical residents. Groundwater: No COCs.	ROD for Thirty-Three Lower Post and Plant Area Sites (SAIC, July 2012); Final LUCIP for Twenty-One Lower Post and Plant Area Sites (ERT, March 2015)	Lower Post RI Report (SAIC, 2004) Lower Post FFS (SAIC, 2009)	LUCs - Industrial Land Use Only	5-year review and annual LUC Inspections. First 5 year review completed 10 July 2015.	Commercial/ Industrial

Table 2
Environmental Site Summary
Savanna Army Depot

Parcel Number	Site Number	Site Name	Site Background/History	Media Sampled	Chemicals of Concern (COCs) Remaining	Current Site Phase/ Most Recent Document of Record	Relevant Supporting Documents	Remedy	Future Plans	Approved Land Use
LRA-11	84	Scrap Wood Open Burn Area	The Scrap Wood Burn Area (Site 84) is located along West Road north of the Industrial Sewage Plant (Site 36) and southwest of the Chromium Ore Open Storage Area (Site 47). Site 84 is approximately 4.3 acres. The site was used to train fire fighters by burning scrap wood. Wood collected from the shop areas was stockpiled at the site, covered with diesel fuel, and ignited. Open burning ended in 2000. A passive soil gas survey was conducted in 1998 as a screening tool to assist with the placement of soil borings. 66 passive gas probes were analyzed for VOCs, SVOCs, and TPH. A soil investigation was conducted in 2000. Soil samples were analyzed for VOCs, SVOCs, and metals with one sample also analyzed for dioxins/furans. One groundwater sample was also collected and analyzed for VOCs, SVOCs, metals, and anions. Additional soil samples were collected in 2003. Arsenic was identified as a COC in soil for residential land use. The 2015 FS recommended excavation and offsite disposal to obtain unrestricted use of the site. A non-time critical IRA was conducted in 2016. A total of 145 loads of soil and debris (approximately 3,232 tons) were removed from Site 84. and the Final IRA completion report was finalized in April 2017. A draft NFA PP is in Army review and is expected to be completed in December 2017 with the final ROD completed in December 2018.	Soil and Groundwater	No COCs	IRA Completion Report For Interim Removal Action for Sites SVAD-036, -084, and -045 (ERT, Inc., April 2017)	RI Report for the CL and CN Plant Areas and Remaining Local Redevelopment Authority Parcel (SAIC, 2007) Site 36 – Industrial Sewage Plant and Site 84 – Scrap Wood Open Burn Area FS (Leidos, 2015)	Excavation and Offsite Disposal Completed in 2016	Draft NFA PP in Army review as of May 2017. The PP expected to be complete in December 2017 and the ROD will be completed in December 2018.	Unrestricted Use pending Final ROD
LRA-9	85	New Small Arms Range	The New Small Arms Range (Site 85), Building 160, is west of the Fire Station (Building 100) in the Lower Post Area of SVDA. The range was constructed in 1994 and was used by SVDA military and civilian personnel until base closure in 2000. Since base closure, the range is periodically used for training by Hanover Fire Department. Site 85 consists of covered firing positions (Building 160) along the northeastern side of the range and a bullet trap and bermed area along the southwestern end of the site. Site 85 covers 1.1 acres. A RI was conducted in 2002. The RI identified the metals antimony, arsenic, and lead as COCs that exceed the remediation goals required for unrestricted land use at Site 85. The results of the SERA identified antimony, arsenic, copper, and lead in the surface soil and antimony and lead in the shallow subsurface soil as ecological COCs. The site was recommended for NFA from an ecological perspective (i.e., no ecological COCs were identified) based on continued use of the site as a firing range. The findings of the human health risk assessment conducted in 2006 indicated that the risks fell within the target risk range for the future industrial, recreational and construction land use scenarios for Site 85, but not the future residential land use scenario. A FS was completed in May 2016. A PP was completed in September 2016. A signed ROD is expected in September 2017. The preferred alternative is soil excavation and off-site disposal for unrestricted use. A RD/RA task order contract will be awarded in September 2017.	Soil	Soil: antimony, arsenic, and lead for hypothetical resident.	ROD Site 85 (CAPE, July 2017)	Site 85 – New Small Arms Range RI Report (SAIC, 2006)	Soil: Excavation and Off-Site Disposal	Soil removal task order contract to be awarded in 2017. NFA expected after Remedial Action.	Unrestricted Use after Remedial Action
LRA-17	86	Building 128 Storage Area	The Building 128 Storage Area (Site 86) was constructed north of Building 127 in 1944 and is entirely within the boundary of the Former Coal Storage Area (Site 135). A 1993 Environmental Compliance Assessment System report noted paint cans, aerosol paints, paint thinner, and cylinders of anhydrous ammonium inside Building 128. Soil and groundwater investigations were conducted in 1998, 2001, and 2004. Soil samples were collected and analyzed for VOCs, SVOCs, pesticides, herbicides, and metals. Groundwater samples were collected and analyzed for anions in addition to the aforementioned analytes for soil. The human health risk assessment results indicate that risks are at or below regulatory targets for the planned future land use. For residents, although cancer risks are within the target risk range and noncancer HIs are below the target HI, LUCs are recommended because contamination is not bounded and the site is surrounded by Site 135, which requires LUCs. For the ecological evaluation, the overall habitat quantity and quality were deemed insufficient to support populations of wildlife. Therefore, ecological risks are acceptable.	Soil and Groundwater	Soil: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, 4,4'-DDE, and 4,4'-DDT for hypothetical resident. Groundwater: No COCs	ROD for Thirty-Three Lower Post and Plant Area Sites (SAIC, July 2012); Final LUCIP for Twenty-One Lower Post and Plant Area Sites (ERT, March 2015)	Lower Post RI Report (SAIC, 2004) Lower Post FFS (SAIC, 2009)	LUCs - Industrial Land Use Only	5-year review and annual LUC Inspections. First 5 year review completed 10 July 2015.	Commercial/ Industrial
LRA-13	88HD	H-Area Drainage Ditch	Site 88HD is a drainage ditch network within the H-Area. This network consists of open earth and open wood ditches approximately 3 feet deep and 5 feet across orientated parallel and perpendicular to the H-Area Warehouses. The H-Area contains 40 artillery storage warehouses to store artillery vehicles, trucks, and tanks remaining from WWI activities. The warehouses were used to store, use, or generate petroleum products, solvents, acids, wastes, and military equipment. Maintenance work, including painting, sandblasting, and chemical cleaning occurred in the H-Area. Piles of zinc, debris, and scrap yards were stored in the open in the H-Area in foundation areas of previously existing building structures. Hazardous materials and/or wastes associated with these historical activities potentially could have been released as spills, leaks, or leaching into the H-Area drainage system and deposited in the drainage basins. The human health risk assessment results indicate that risks are at or below regulatory targets for the planned future land use. Resident cancer risks exceeding the target risk range and noncancer HIs exceeding the target HI warrant LUCs. The ecological evaluation concluded that Site 88HD is highly disturbed, possesses limited habitat quality, and contains no important ecological resources that require protection.	Soil and Groundwater	Soil: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, cadmium, zinc, and Aroclor 1260 for hypothetical residents. Groundwater: Evaluated as part of the H-Area Warehouses Groundwater Monitoring Program (Site 88HA).	ROD for Thirty-Three Lower Post and Plant Area Sites (SAIC, July 2012); Final LUCIP for Twenty-One Lower Post and Plant Area Sites (ERT, March 2015)	Lower Post RI Report (SAIC, 2004) Supplemental Lower Post RI Report (SAIC, 2005) Lower Post FFS (SAIC, 2009)	LUCs - Industrial Land Use Only	5-year review and annual LUC Inspections. First 5 year review completed 10 July 2015.	Commercial/ Industrial

Table 2
Environmental Site Summary
Savanna Army Depot

Parcel Number	Site Number	Site Name	Site Background/History	Media Sampled	Chemicals of Concern (COCs) Remaining	Current Site Phase/ Most Recent Document of Record	Relevant Supporting Documents	Remedy	Future Plans	Approved Land Use
LRA-13	90 (includes Site 18)	H-Area Landfill Cells	The H-Area Landfill Cells (Site 90) consists of approximately 32 acres on the southern portion of SVDA. The landfill is located in the H-Area, to the southwest of the Closed Sanitary Landfill (Site 19) between Shinske Road and the Installation fence line. Soil was reportedly removed from Site 90 in the early 1970s and used to cover the solid waste disposal areas of the Abandoned Landfill (Site 20). When Site 20 closed (in the early 1970s), approximately 8 to 10 unlined trenches were dug at Site 90 in the area where the soil previously had been removed. The trenches were used to dispose of solid waste consisting of office and household waste. The trenches were used until 1984. A The Sodium Exhaust Valve Burial Area (Site 18), which is within the western portion of Site 90 was investigated in 1992. Thousands of sodium-filled engine exhaust valves reportedly were buried at Site 18 between 1946 and, but the exact burial location was never recorded. A review of historical aerial photographs conducted as part of the 1992 RI revealed a waste burial area close to (within 400 feet) the suspected location of the valve burial area. Based on information obtained during the 1999 EBS, it was determined that the Site 18 burial area was actually part of the Site 90 landfill. The waste disposal areas have been covered with native soils and the surface of Site 90 is vegetated with native grasses, cactus, shrubs, and trees with a large concentration of trees in the northwestern corner of the site. The planned future use at Site 90 is industrial/commercial. Site characterization activities at Site 90 were conducted from 1992 through 2006. Soil and groundwater samples were analyzed for VOCs, SVOCs, metals, PCBs, pesticides, herbicides, and nitroaromatics/ nitroamines. A baseline HHRA and SERA were conducted for Site 90 as part of the 2004 Lower Post RI. A BERA was conducted as part of the H-Area Landfill Cells RI/FS (USACE 2014) based on data from the Lower Post RI. The HHRA concluded that under the planned future reuse of the site, industrial worker soil cancer risks exceed the target risk range due to the presence of benzo(a)pyrene in soil, while soil noncancer HIs are below the target of 1. Other contributors to the cancer risk are benzo(a)anthracene, benzo(b)fluoranthene, dibenzo-(a,h)anthracene, and indeno(1,2,3-cd)pyrene). Risks also are unacceptable for hypothetical residents. No ecological chemicals of concern were identified and Site 90 was recommended for NFA from the ecological perspective in the BERA.	Soil and Groundwater	Soil: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene Groundwater: No COCs	PP Site 90 H-Area Landfill Cells (Leidos, May 2017)	Lower Post RI Report (SAIC, 2004) SVAD-90, H-Area Landfill Cells RI Report (USACE, 2014)	Landfill Capping and LUCs	A state-compliant cap is expected. Long-term monitoring of groundwater, LUCs and five-year reviews are expected ROD expected in February 2018	Commercial/ Industrial
LRA-17	92	Pesticide Storage (Building 113)	Pesticide Storage (Building 113) was constructed in 1918 and was used initially as an electric shop, then as a railway fire station, and later to store liquid, solid, and aerosol pesticides and herbicides. The 1999 EBS inspection noted an area of stressed vegetation outside a doorway in a grassy area north of the building. Soil and groundwater samples were collected in 1998 and analyzed for pesticides, herbicides, and metals. Additional sampling was conducted in 1999 to further delineate the extent of contamination. Soil samples were collected from multiple intervals in four soil borings in the area of stressed vegetation and near the access door on the southeast corner of the building. Samples were analyzed for pesticides, herbicides, and metals. Site-related PAHs, metals, and pesticides were detected in the surface soil; however, only three PAHs, two pesticides and one metal in surface and subsurface soils were detected at concentrations above the screening criteria for protection of residential health. No site-related inorganics were detected in the subsurface soil indicating that metals concentrations attenuate with depth. Metals concentrations in groundwater samples were below the human health screening criteria and organic constituents were not detected in groundwater. The human health risk assessment results indicate that risks are at or below regulatory targets for the planned future land use. For residents, noncancer HIs are at or below the target HI; cancer risks at the upper bound of the target risk range warrant LUCs. The ecological evaluation concluded that the overall habitat quantity and quality were deemed insufficient to support populations of wildlife. Therefore, ecological risks are acceptable.	Soil and Groundwater	Soil: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, indeno(1,2,3 -cd)pyrene, PCP, 4,4'-DDE, 4,4'-DDT, dieldrin, and heptachlor epoxide for hypothetical resident. Groundwater: No COCs.	ROD for Thirty-Three Lower Post and Plant Area Sites (SAIC, July 2012); Final LUCIP for Twenty-One Lower Post and Plant Area Sites (ERT, March 2015)	Lower Post RI Report (SAIC, 2004) Lower Post FFS (SAIC, 2009)	LUCs - Industrial Land Use Only	5-year review and annual LUC Inspections. First 5 year review completed 10 July 2015.	Commercial/ Industrial
LRA-17	93	Pesticide Mixing Pad (Building 112)	The Pesticide Mixing Pad was constructed in 1918 southwest of Building 111 and north of Building 112 along Lederman Road. Mixing operations involving large capacity (approximately 250 gallons) wheeled applicators were conducted outside the building on a bermed concrete pad. Prior to a 1993 upgrade that included curbing of the concrete pad and installation of a sump and drain to collect pesticides, the mixing pas drained into the storm sewer adjacent to the pad. Areas of stressed vegetation were identified directly north of the pad during a 1999 EBS. Investigations were conducted in 1998 and 1999 and included visual inspection of the sump and mixing pad and soil and groundwater sampling. Inspection indicated the sump had been renovated to include a sealed drain to prevent pesticide and herbicide release to the storm water sewer or underlying soil. Samples were analyzed for pesticides, herbicides, and metals. Eight pesticides and two metals in surface and/or subsurface soil were detected at concentrations above the screening criteria for protection of human health. Pesticides that exceeded the residential screening criteria were primarily detected in surface soil. Lead detected in the surface soil above the screening criteria was limited to the area of stressed vegetation north of the mixing pad. Based on the groundwater results, further investigation of groundwater at Site 93 was not warranted. The human health risk assessment results indicate that cancer risks are within the target risk range, noncancer HIs are below the target HI, and blood lead levels are below the target for the planned future land use. Resident cancer risks exceeding the upper bound of the target risk range, noncancer HIs exceeding 1, and blood lead levels exceeding the target warrant LUCs. The overall habitat quantity and quality were deemed insufficient to support populations of wildlife. Therefore, ecological risks are acceptable.	Soil and Groundwater	Soil: arsenic, lead, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, alpha-chlordane, gamma-chlordane, dieldrin, heptachlor, and heptachlor epoxide for hypothetical resident. Groundwater: No COCs.	ROD for Thirty-Three Lower Post and Plant Area Sites (SAIC, July 2012)	Lower Post RI Report (SAIC, 2004) Lower Post FFS (SAIC, 2009)	LUCs - Industrial Land Use Only	5-year review and annual LUC Inspections. First 5 year review completed 10 July 2015.	Commercial/ Industrial

Table 2
Environmental Site Summary
Savanna Army Depot

Parcel Number	Site Number	Site Name	Site Background/History	Media Sampled	Chemicals of Concern (COCs) Remaining	Current Site Phase/ Most Recent Document of Record	Relevant Supporting Documents	Remedy	Future Plans	Approved Land Use
LRA-8	95	Flammable Storage (Building 104)	Flammable Storage (Building 104) was constructed in 1952 in the combined shop area of the Lower Post. Building 104 was used to store spent oil, lubricants, and solvent used in the daily operation of the Motor Pool. Prior to excavation, the dirt floor of the building was reportedly stained with petroleum products. No written record of the excavation effort exists and no sampling was conducted to confirm that all contaminated soil was removed. The current floor is concrete without drains. Soil and groundwater samples were collected in 1999 and analyzed for VOCs, SVOCs, pesticides, PCBs, herbicides, and metals. Additional sampling was conducted in 2001. Site-related and organic constituents were detected in the soil at Site 95; however, only benzo(a)pyrene and Aroclor 1254 in the surface soil were detected at concentrations above the screening criteria for protection of residential human health. Based on the groundwater results, further investigation of groundwater at Site 95 was not warranted. The human health risk assessment results indicate that risks are at or below regulatory targets for the planned future land use; however, noncancer HIs exceeding the target HI for residents thereby warranting the need for LUCs. The ecological risk assessment concluded that the overall habitat quantity and quality were deemed insufficient to support populations of wildlife. Therefore, ecological risks are acceptable.	Soil and Groundwater	Soil: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, 4,4'-DDT, zinc, and Aroclor 1254 for hypothetical resident. Groundwater: No COCs.	ROD for Thirty-Three Lower Post and Plant Area Sites (SAIC, July 2012); Final LUCIP for Twenty-One Lower Post and Plant Area Sites (ERT, March 2015)	Lower Post RI Report (SAIC, 2004) Lower Post FFS (SAIC, 2009)	LUCs - Industrial Land Use Only	5-year review and annual LUC Inspections. First 5 year review completed 10 July 2015.	Commercial/ Industrial
LRA-11	99	Building 762 CF Plant Battery Shop and Leaching Pits	Site 99 is a small, narrow area (0.8 acres) with a catch basin adjacent to Building 762 and two square concrete leaching pits west of Building 762, in the CF Plant Area of SVDA. Building 762 was constructed in 1950 as the Cartridge Case Chemical Cleaning Building and housed a projectile chemical cleaning operation (acid bath). Floor drains discharged effluent into a catch basin. The catch basin discharged effluent into two leaching pits west of Building 762. A soil investigation was conducted in 1992; soil samples were analyzed for nitrite/nitrate and explosives. No elevated concentrations were detected in the samples. Additional investigations were conducted in 2000. Soil samples were analyzed for metals, VOCs, and SVOCs and a groundwater sample was analyzed for metals, VOCs, SVOCs, and anions. Additional soil samples were collected in 2001 and analyzed for metals, explosives, and VOCs. One sediment sample was collected from the catch basin and analyzed for VOCs, metals, and explosives. Two rounds of groundwater sampling were conducted for VOCs, SVOCs, metals, and explosives. Supplemental groundwater sampling was conducted in 2009. Based on the HHRA, human health risks at Site 99 are considered unacceptable for anticipated future land users (i.e., industrial workers) due to the presence of chromium in soil, which is considered an ongoing threat to groundwater. Risks also are unacceptable for hypothetical residential receptors due to the presence of chromium in soil and groundwater, and the development and use of property for residential housing, elementary and secondary schools, childcare facilities, and playgrounds should be prohibited. The selected remedy from the ROD includes Excavation and Offsite Disposal (Unrestricted Use) for soil and Groundwater Monitoring with LUCs for groundwater.	Soil, Sediment, and Groundwater	Soil: chromium; Groundwater: chromium	ROD Site 20 – Abandoned Landfill and Site 99 – Building 762, CF Plant Battery Shop and Leaching Pits (Leidos, June 2016)	RI Report for the CF Plant Area (SAIC, 2007) Sites 24, 76CS, 99, and 126 FS (SAIC, 2010) Proposed Plan for Site 99 – Building 762, CF Plant Battery Shop and Leaching Pits (Leidos, 2014) Ecological Survey Results, Remedial Design and Remedial Action for SVAD-099 (Plexus, 2015)	Soil- Excavation and Offsite Disposal (Unrestricted Use), Groundwater-Monitoring with LUCs	Field work scheduled to start in Fall of 2017 for soil removal and groundwater monitoring. A contract modification for sampling under the building was added in March 2016 to delineate the extent of the contamination. LUCs and five-year reviews are expected. The Period of Performance for the current RD/RA(C)/MNA task order expires on 21 September 2019.	Commercial/ Industrial pending Remedial Action
LRA-11	102LB	Building 642 Leaching Beds	The Building 642 Leaching Beds (102LB) are southwest of the Receiving, Inspection, and Painting (RIP) Building (Building 642). Building 642 was constructed in 1942 as the CL Plant RIP Building. A 1954 historical report stated that the chemical cleaning process involved paint removal, metal conditioning, metal treating and drying painted parts. Details of the chemical cleaning line and the sewerline indicated that the floor drain from Building 642 egressed the southwestern side of the building beyond the CL Plant fence line to two leaching beds and an associated leaching field. Building layout maps indicate that the building 642 RIP operations included a paint booth, stenciling station, battery charging room, and a mercurous nitrate testing room. Soil and groundwater samples were collected during an investigation in 1999. All samples were analyzed for VOCs, SVOCs, PCBs, explosives, and metals. Aroclor 1254 was detected in soil above the protection of human health screening criteria. Chemical constituents were not detected in groundwater at concentrations exceeding screening criteria. The human health risk assessment results indicate that risks are at or below regulatory targets for the planned future land use; however, noncancer HIs exceeding the target HI for residents thereby warranting the need for LUCs. Aroclor 1254 and thallium present ecological risk; however, due to limited detections, ecological exposures to elevated concentrations would be limited.	Soil and Groundwater	Soil: Aroclor 1254 for hypothetical resident. Groundwater: No COCs	ROD for Thirty-Three Lower Post and Plant Area Sites (SAIC, July 2012); Final LUCIP for Twenty-One Lower Post and Plant Area Sites (ERT, March 2015)	RI Report for the CL and CN Plant Areas and the Remaining LRA Parcel (SAIC, 2007) Plant Area FFS (SAIC, 2008)	LUCs - Industrial Land Use Only	5-year review and annual LUC Inspections. First 5 year review completed 10 July 2015.	Commercial/ Industrial

Table 2
Environmental Site Summary
Savanna Army Depot

Parcel Number	Site Number	Site Name	Site Background/History	Media Sampled	Chemicals of Concern (COCs) Remaining	Current Site Phase/ Most Recent Document of Record	Relevant Supporting Documents	Remedy	Future Plans	Approved Land Use
LRA-16B	111	1934 Outdoor Washout Plant	The plant was constructed in 1933 and used through 1936 to renovate ammunition. The washout plant consisted of a two-cell de-boostering barricade, a shell washout unit, a shell rinse unit, an ammonium nitrate collection sump and storage tank, an explosives sludge collection tank, a locomotive stand used as a source of heat, a tank car used as a source of water, and a TNT purification tank. Investigations were conducted from 1995 to 2009. Soil and groundwater samples were collected during various investigations and analyzed for VOCs, SVOCs, explosives, and metals. The 2008 RI/FS indicated that nitroaromatics/nitramines in soil pose a potential risk to human and ecological receptors and concentrations of nitroaromatics/nitramines in groundwater exceed chemical-specific ARARs. A pilot study was conducted in 2008 including bench scale and field scale tests to evaluate and select grade of hydrated lime. During the lime treatment pilot study, large residual TNT chunks were discovered in the shallow subsurface at one of the stressed vegetation areas. Subsequent testing confirmed these chunks as MEC. Removal and disposal of MEC was completed in 2009. The large TNT chunks were excavated from the subsurface, transported off-site, and incinerated. The selected remedy from the 2010 ROD included implementing a combination of in situ treatments. Soil treatment began in the summer of 2010 and was completed in the fall of 2010. Soil flushing and groundwater treatment operations began in July 2011 and continued for 4 months. Sampling was completed in 2013 to evaluate the need for additional soil flushing. The results of the April 2013 confirmation sampling indicated that soil remedial goals were met. However, the goal to prevent or reduce the potential for nitroaromatic/nitramine compounds in soil to migrate to groundwater resulting in concentrations above IL Class 1 groundwater quality standards was not achieved. Soil flushing resumed in August 2013 through October 2013. In 2015, the soil flushing system operated from May 4 to June 4, June 30 to July 31, and August 12 to October 13, when it was shut down and winterized. Residual explosive compound groundwater concentrations remained above remedial goals in EW-3 and MW-111-06 at the end of 2015	Soil and Groundwater	Soil: 1,3,5-Trinitrobenzene, 2,4,6-TNT, 2,4-DNT, aminodinitrototoluenes, benzo(a)pyrene, dibenzo(a,h)anthracene Groundwater: 1,3,5-Trinitrobenzene, 2,4,6-TNT, 2,4-DNT, aminodinitrototoluenes	Final 2015 Remedial Action Operation Report, Site 111 (PARS Environmental, Inc./ Gannett Fleming, Inc., January 2017)	SVAD-111, 1934 Outdoor Washout Plant RI/FS (URS, 2008) ROD, SVAD-111, 1934 Outdoor Washout Plant (URS, 2010) SVAD-111, 1934 Outdoor Washout Plant, Remedial Action Plan (URS, 2010) 2012 Annual Remedial Action Operation Report, SVAD-111, 1934 Outdoor Washout Plant (URS, 2013) Final Remedial Action Report, SVAD-111, 1934 Outdoor Washout Plant (URS, 2014)	In Situ Chemical Treatment, Soil flushing and Groundwater Treatment; LUCs - Industrial Land Use Only	The duration of flushing is likely to be finalized summer of 2017. LUC monitoring and five-year reviews will be required after the soil flushing is complete. Awarded a contract for RA(O) in August 2014, for five years of operation.	Commercial/ Industrial after remediation is complete
LRA-13	128	H-Area Zinc Ingot Piles	Zinc ingots were stockpiled as strategic materials in a 100,000-square-foot area northwest of the H-Area Warehouses. Various grades of zinc bricks were piled in several open storage areas. The zinc ingots were stored directly on the ground, on pallets, inside the H-Area Warehouses, and in the zinc staging area south of Building 420. The zinc ingot piles were exposed to the elements for more than 40 years before they were removed between 1996 and 2000. Soil and groundwater sampling was conducted in 1999. The soil and groundwater samples were analyzed for zinc and the groundwater sample was also analyzed for anions. In the summer and fall of 2001, an X-ray fluorescence survey was conducted at Site 128 to define the horizontal and vertical extent of zinc. Surface soil samples were collected from 166 XRF grid node locations and were analyzed for metals. Five shallow subsurface soil locations were sampled and analyzed by a fixed laboratory for metals. In addition, 16 surface soil samples (14 from Site 128 and 2 background locations) were collected for bioassay and zinc analysis. Site-related concentrations of antimony, arsenic, lead, and iron exceeded the human health screening criteria in the surface soil. Inorganic constituent concentrations were below background levels in the subsurface soil. The distribution of the site-related metals exceeding the human health screening criteria in the surface soil is not specific to the locations attributed to the storage of zinc ingots. Groundwater directly underlying Site 128 was deemed unaffected by the historical storage of zinc ingots. Groundwater data was evaluated for the H-Area Warehouses Groundwater Monitoring Program (Site HA). The human health risk assessment results indicate that risks are at or below regulatory targets for the planned future land use; however, noncancer HIs exceeding the target HI for residents thereby warranting the need for LUCs. Chemical concentrations presented ecological risk; however, Site 128 does not contain important ecological resources that require protection. Therefore, ecological risks are acceptable.	Soil and Groundwater	Soil: iron, lead, and zinc COCs for hypothetical resident. Groundwater: No COCs	ROD for Thirty-Three Lower Post and Plant Area Sites (SAIC, July 2012); Final LUCIP for Twenty-One Lower Post and Plant Area Sites (ERT, March 2015)	Lower Post RI Report (SAIC, 2004) Lower Post RI BERA (SAIC, 2007) Lower Post FFS (SAIC, 2009)	LUCs - Industrial Use Only	5-year review and annual LUC Inspections. First 5 year review completed 10 July 2015.	Commercial/ Industrial
LRA-13	131	Building 137 Scrap Pile	The Building 137 Scrap Pile (Site 131) is located adjacent to Building 137 in the Lower Post. Building 137 was constructed in 1960 as Guard Post No. 5. Building 137 was moved to its present location when it was no longer needed as a guard post. The building contains large metal piping, scrap wood, fence posts, asphalt, and concrete debris that had been discarded in the area since about 1986. Site 131 was identified during the 1999 EBS as requiring evaluation to confirm that the scrap pile had not received hazardous substances or petroleum products. The scrap pile is not known to be associated with Building 137 activities. In the fall of 1999, soil samples were collected from multiple intervals from borings drilled adjacent to Building 137 and throughout the scrap pile. One groundwater sample was also collected. All samples were analyzed for VOCs, SVOCs, PCBs, and metals. PAHs were detected in the surface soil at concentrations exceeding the screening criteria for the protection of residential human health. Groundwater data was evaluated for the H-Area Warehouses Groundwater Monitoring Program (Site HA). The human health risk assessment results indicate that risks are at or below regulatory targets for the planned future land use. For residents, noncancer HIs are below the target; however, cancer risks reaching the upper bound of the target risk range warrant LUCs.	Soil and Groundwater	Soil: benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene for hypothetical resident. Groundwater: No COCs.	ROD for Thirty-Three Lower Post and Plant Area Sites (SAIC, July 2012); Final LUCIP for Twenty-One Lower Post and Plant Area Sites (ERT, March 2015)	Supplemental Lower Post RI Report (SAIC, 2005) Lower Post FFS (SAIC, 2009)	LUCs - Industrial Use Only	5-year review and annual LUC Inspections. First 5 year review completed 10 July 2015.	Commercial/ Industrial

Table 2
Environmental Site Summary
Savanna Army Depot

Parcel Number	Site Number	Site Name	Site Background/History	Media Sampled	Chemicals of Concern (COCs) Remaining	Current Site Phase/ Most Recent Document of Record	Relevant Supporting Documents	Remedy	Future Plans	Approved Land Use
LRA-8, LRA-17	135	Former Coal Storage Areas (Buildings 127 & 115)	The Former Coal Storage Area (Site 135) was located northeast and west of Building 127 on the Lower Post. Although the exact quantities of coal stored at the stockpile area are unknown, Site 135 was identified as requiring evaluation because the storage of coal may have resulted in the release of PAHs and metals to the soil. Soil and groundwater samples were collected in 1998 and analyzed for PAHs and metals. Additional soil samples were collected in 1999 and analyzed for PAHs and metals. Soil samples were also analyzed for VOCs because solvents may have been sprayed on coal piles to control dust. Concentrations of benzo(a)pyrene, dibenzo(a,h)anthracene, and arsenic exceeded the protection of human health screening criteria in the surface and/or shallow subsurface soil; however, the highest concentrations were detected adjacent to railroad tracks and may be the result of railroad activities. Constituents did not exceed screening criteria in the deep subsurface soil or groundwater. The human health risk assessment results indicate that risks are at or below regulatory targets for the planned future land use. For residents, cancer risks exceeding the upper bound of the target risk range and noncancer HIs exceeding the target HI warrant LUCs. Metals presented ecological risk; however, exposure to these metals would be limited because there are limited detections of the metals above their ESVs and the industrial land use is a deterrent to wildlife usage.	Soil and Groundwater	Soil: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene for hypothetical residents Groundwater: No COCs.	ROD for Thirty-Three Lower Post and Plant Area Sites (SAIC, July 2012); Final LUCIP for Twenty-One Lower Post and Plant Area Sites (ERT, March 2015)	Lower Post RI Report (SAIC, 2004) Lower Post FFS (SAIC, 2009)	LUCs - Industrial Land Use Only	5-year review and annual LUC Inspections. First 5 year review completed 10 July 2015.	Commercial/ Industrial
LRA-11	183	CL Plant Storage Building (Building 615)	The CL Plant Storage Building (Building 615) was constructed in 1942 north of Building 616 on the CL Loop. Installation maps indicate that the building might have been used for the storage of munitions production equipment that was potentially contaminated with SVOCs, metals, or explosives. No release of hazardous substances or petroleum products at Site 183 was identified during the EBS; however, a 1999 site survey noted that the building was constructed with a compacted soil floor. The floor provides a potential pathway for the direct release of contaminants from the munitions production equipment storage area to the environment. In February 2000, soil samples were collected from multiple intervals in five soil borings inside Building 615. One groundwater sample was collected. All samples were analyzed for VOCs, SVOCs, explosives, and metals. In October 2001, shallow soil samples were collected from five borings outside Building 615. Soil samples were analyzed for SVOCs, VOCs, metal and explosives. Site-related metals, VOCs, SVOCs, and explosives were detected in the soil. Groundwater underlying the site is not impacted by VOC, SVOC, or explosives-related organic chemical constituents based on the groundwater sampling results. The human health risk assessment results indicate that risks are at or below regulatory targets for the planned future land use. Resident noncancer HIs are below the target HI; however, cancer risks at the upper bound of the target risk range warrant LUCs. Lead presented ecological risk; however, the small site area (0.1 acre), which is primarily enclosed within a building, suggest that exposure of lead to wildlife would be limited.	Soil and Groundwater	Soil: 2,4-DNT, TNT, hexachlorobenzene, benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, and PCP for hypothetical resident. Groundwater: No COCs.	ROD for Thirty-Three Lower Post and Plant Area Sites (SAIC, July 2012); Final LUCIP for Twenty-One Lower Post and Plant Area Sites (ERT, March 2015)	RI Report for the CL and CN Plant Areas and the Remaining LRA Parcel (SAIC, 2007) Plant Area FFS (SAIC, 2008)	LUCs - Industrial Land Use Only	5-year review and annual LUC Inspections. First 5 year review completed 10 July 2015.	Commercial/ Industrial
LRA-10	189	Water Tower (Building 904)	The Water Tower (Building 904) was constructed in 1954 in the southern portion of SVDA. The tower supports consist of six reinforced concrete piers and the tower comprises an area of approximately 3,600 square feet. The water tower has a capacity of 250,000 gallons and is connected to the Lower Post looped water system. In February 2000, soil samples were collected from multiple intervals in the surface and shallow subsurface soil at 10 locations to identify potential soil contamination resulting from the peeling of lead based paint from the water tower. Soil samples were analyzed for metals. The human health risk assessment results indicate that risks are at or below regulatory targets for the planned future land use. For residents, cancer risks falling within the target risk range are acceptable; however, noncancer HIs exceeding the target warrant LUCs. Some chemicals presented ecological risk; however, the potentially contaminated area is very small (less than 0.1 acre).	Soil	Soil: copper and zinc for hypothetical resident.	ROD for Thirty-Three Lower Post and Plant Area Sites (SAIC, July 2012); Final LUCIP for Twenty-One Lower Post and Plant Area Sites (ERT, March 2015)	RI Report Sites 88 and 189 (SAIC,2007) Lower Post FFS (SAIC, 2009)	LUCs - Industrial Land Use Only	5-year review and annual LUC Inspections. First 5 year review completed 10 July 2015.	Commercial/ Industrial
LRA-13	190A	H-Area Material Storage Area (Area A)	The H-Area is on the Lower Post in the southeastern portion of SVDA. Area A (Site 190A) is west of Building 420. The area was used for temporary storage of surplus military equipment and materials by the DRMO. The areas were also used to store various scrap metals that were being sold or disposed of through the DRMO. Area A measures approximately 150 feet by 600 feet (1.7 acres) and contained noticeable ground staining, debris piles of various scraps metals, and container storage. Soil and groundwater samples were collected in 2000 and analyzed for VOCs, SVOCs, PCBs, and metals. Additional soil samples were collected in 2001. The highest metal concentrations generally are in the center of the site, in an area where piles of scrap metal were observed during the sampling. Groundwater data was evaluated for the H-Area Warehouses Groundwater Monitoring Program (Site HA). Cancer risks for the planned future land use are within the target risk range and noncancer HIs are below the target; these risks are acceptable; site concentrations of the risk driver are consistent with state background levels and PAH risks are driven by concentrations at one location near a railroad. For residents, cancer risks exceeding the upper bound of the target risk range and noncancer HIs exceeding the target HI warrant LUCs. Site 190A possesses limited habitat quality and there are no important ecological resources that require protection.	Soil and Groundwater	Soil: arsenic, cadmium, chromium, copper, iron, lead, zinc, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, and Aroclor 1260 for hypothetical resident. Groundwater: No COCs.	ROD for Thirty-Three Lower Post and Plant Area Sites (SAIC, July 2012); Final LUCIP for Twenty-One Lower Post and Plant Area Sites (ERT, March 2015)	Lower Post RI Report (SAIC, 2004) Supplemental Lower Post RI Report (SAIC, 2005) Lower Post RI BERA (SAIC, 2007) Lower Post FFS (SAIC, 2009)	LUCs - Industrial Land Use Only	5-year review and annual LUC Inspections. First 5 year review completed 10 July 2015.	Commercial/ Industrial

Table 2
Environmental Site Summary
Savanna Army Depot

Parcel Number	Site Number	Site Name	Site Background/History	Media Sampled	Chemicals of Concern (COCs) Remaining	Current Site Phase/ Most Recent Document of Record	Relevant Supporting Documents	Remedy	Future Plans	Approved Land Use
LRA-10 (192E and 192F), LRA-10A (192E), LRA-11 (192E and 192F), LRA-18 (192A-D and F)	192	Manganese Ore Storage Mounds	Site 192 is located north of the New Function Test Range (Site 83), and north and west of the CF Plant between McIntyre and Shinske Roads. Due to the large size of Site 192, the site was evaluated as five different exposure units (EUs) defined as EU-1: Site 192A (northwest portion), 2.6 acres; EU-2: 192A (southeast portion), 2.6 acres; EU-3: Site 192B, 192C, and 192D (14.2 acres); EU-4: Site 192E (8.3 acres); and EU-5: Site 192F (7.2 acres). Site 192 was originally identified during the 1999 EBS evaluation of aerial photographs. Mounds identified in aerial photographs were storage piles of battery-grade manganese ore. A 1959 historical report for the Installation noted 72 piles of manganese ore along the SVDA railroad tracks in the lower storage area. In 1960, the manganese ore was moved into two nitrate pits at Site 46. A Phase I study conducted in 2000 included drilling 10 soil borings with 1 to 2 soil borings in each of the 9 pile areas identified from aerial photographs. During subsequent investigations activities, the nine piles were combined into six grids. All soil samples were analyzed for metals. A Phase II field investigation was conducted in 2001-2002 to delineate the horizontal exten of the metals in soil. A total of 622 surface soil samples were analyzed on-site via XRF. RI field activities in 2006 included sampling surface soil from 27 locations, and developing and sampling one groundwater monitoring well. The 2008 RI/FS indicated that metals in soil pose a potential risk to human receptors for industrial and commercial land use. The remedy selected for Site 192 (completed in 2010) consisted of a combination of excavation and off-site disposal of surface soil and shallow subsurface soil. Soil was excavated from an area of approximately 15 acres to depths ranging from 0.5 to 1.5 feet bgs and disposed of off-site at a licensed, solid waste landfill as nonhazardous waste. Confirmation samples collected from the base and perimeter of each excavation area indicate that the majority of the soil above remedial goals at Site 192 was successfully removed. However, soil with manganese and arsenic concentrations slightly above the industrial and/or construction worker remedial goals remains onsite at a few isolated locations underlying the railroad track	Soil and Groundwater	Soil: arsenic, lead, and manganese	SVAD-192, Manganese Ore Storage Mounds Land Use Control Plan (URS, August 2012)	SVAD-192, Manganese Ore Storage Mounds RI/FS (URS, 2008) ROD SVAD-192, Manganese Ore Storage Mounds (URS, 2010) Site 192 Remedial Action Report (July 2011)	LUCs - Industrial Use Only Existing railroad tracks remain in place as an engineered barrier. Signs placed every 500 feet near the tracks read "Removal of railroad tracks is restricted" A site safety plan is required if temporary track removal is planned in areas located within the LUC boundaries	LUCs restrict residential use and include signage to ensure tracks remain in place 5-year review and annual LUC Inspections. First 5 year review completed 10 July 2015. The environmental covenant for Site 192 will be between IEPA, USEPA, the Army, and the LRA, with IEPA and the Army as the holders, the Army as the grantor, and the LRA as the grantee	Commercial/ Industrial
LRA-11	222	Explosive Building Decontamination	SVAD-222, Explosive Building Decontamination, is a grouping of 16 buildings that were decontaminated for explosives (Buildings 604, 628, 634, 716, 720, 721, 729, 731,732, 733, 734, 757, 768, 776, 941, 2208). The 1999 EBS described these buildings as having various components contaminated with explosives, including equipment, vacuum systems, and interior and exterior items. A PBA contract was awarded for the building decontamination and this action was completed in 2010. RI field work was completed in September 2010 and additional RI work including Phase I sampling at four buildings (1010, 1011, 1012, 2215) and Phase II sampling at the other buildings was contracted in September 2013. Ten buildings from the original decontamination project are slated for further work (604 (former Site 138), 634 (former Site 3), 716 (former Site 98), 720 (former Site 151), 721 (former Site 152), 729 (former Site 155), 733 (former Site 158), 734 (former Site 159), 776 (former Site 175), and 941 (former Site 16)). A new RI is scheduled for completion in February 2018, a PP for February 2019, and the ROD for February 2020.	Soil	Soil: Explosives	Final RI Explosives-Contaminated Soil Under and Around Certain Explosives Contaminated Buildings (EQM and Plexus, June 2013)	Environmental Baseline Survey (SAIC, 1999) Final Response Complete Decontamination of Group 1 Explosives-Contaminated Buildings (EQM, November 2010) Final Response Complete Decontamination of Group 2 Explosives-Contaminated Buildings (EQM, November 2010)	TBD	Phase II Soil and Groundwater Sampling; Final RI - February 2018, a PP for February 2019, and the ROD for February 2020	TBD
LRA-5, LRA-7	223	Small Arms Ammunition Disposal Area	Site 223 is located west of the Lower Post Shop Area. Building 134 was constructed in 1942 as the Small Arms Packing Plant. The plant was used to package SAA and consisted of the packaging plant (Building 134) and a change house (Building 132). Plant operations involved linking and delinking ammunition and tracers from clips, putting the clips in belts, and putting belts in boxes. The nature of the SAA disposal activity at Site 223 is not documented; however, the site consists of approximately 12 acres located southwest of Buildings 134 and 140 and encompasses the yard areas of Buildings 132, 133, 134, 135, 140, 141, 145, 146, and 147. A geophysical survey was conducted in 2005 to delineate the distribution of metallic anomalies. A survey surface sweep yielded no UXO or MEC-related materials. A total of 24,918 anomalies were identified at SVAD-223; however, no intrusive investigation was conducted. Due to the extent of the geophysical anomalies, the entire SVAD-223 area was recommended for future removal action. A Phase I investigation was conducted in November 2011 and 27 of 30 planned test pits were excavated across SVAD-223 to determine the nature of metallic anomalies identified during the 2005 geophysical survey. During the Phase I investigation two subsurface soil samples from each test pit were collected and analyzed for metals, one sample from the debris layer and a second sample from the base of the excavation. Based on lead concentrations exceeding residential screening levels, the presence of chemical constituents exceeding ESVs, and constituents with potential to impact groundwater, Phase II sampling is recommended at SVAD-223. The Phase II RI was submitted for Army review in June 2013; however, the document was not available for review.	Soil	Soil: lead MMRP: MD	Data Collection Quality Assurance Plan Addendum 19 (SAIC, November 2012)	Final Geophysical Investigation Survey Report at Savanna Army Depot Activity (ATI, 2005)	LUCs possibly for MD	FS (12/17), PP (07/18), ROD (03/19); FS, PP and ROD for sites 15/33, 67, 223, and 6R-01 will all be combined in one document. Discussions are ongoing to determine if CERCLA LUCs are required for munitions debris.	TBD

Table 2
Environmental Site Summary
Savanna Army Depot

Parcel Number	Site Number	Site Name	Site Background/History	Media Sampled	Chemicals of Concern (COCs) Remaining	Current Site Phase/ Most Recent Document of Record	Relevant Supporting Documents	Remedy	Future Plans	Approved Land Use
LRA-12	226	J-609 Open Burn Area	Site 226 is located within the GIRF (SVAD-012-R-01) near the southern perimeter of the Ammunition Storage Area. This site was identified in September 2008 based on a MEC survey conducted in AOI-4 within the GIRF and is associated with several geophysical anomalies. The MEC survey indicated that these anomalies were former burn pits and the approximately half-acre site area contained burned masses of lead slag, grenade fuzes, casings, hand tools, and ammunition boxes. Surface and subsurface soil samples were collected during the Phase I investigation at SVAD-226 conducted in September 2010. The investigation consisted of soil sampling within the potential burn pits. Soil samples were analyzed for VOCs, SVOCs, explosives, and metals. Based on the Phase I distribution of MD, and the presence of chemical constituents at concentrations with a potential to impact groundwater and exceeding ESVs, Phase II sampling and analysis was conducted in 2011 to further characterize the site soil and groundwater. Phase II soil borings were biased toward the locations of the burn and demolition pits. Based on the characterization of the site, the absence of evidence of future constituent migration from the soil to the groundwater, the NFA recommendation from the human health risk assessment, and the NFA recommendation from the ecological risk assessment, SVAD-226 was recommended for NFA in the Final RI.	Soil and Groundwater	No HTRW COCs MMRP: MD	RI Report SVAD-226 J-609 Open Burn Area (Leidos, July 2014)	Site Specific Final Report, Munitions and Explosives of Concern, Site Characterization at Graze Impact Range Fan, Upper Function Test Area, and Surface Clearance of Site 83/LRA 15 (USA Environmental, 2009) Data Collection Quality Assurance Plan, Addendum 18 (SAIC, 2011)	NFA for HTRW; LUCs possibly for MD	SVAD-226 being combined with SVAD-012-R-01. SVAD-226 will be included in the same FS as SVAD-003-R-01, 012-R-01(Site 181), 015-R-01(HTRW Site 83 Leidos A/E task order for the PP/DD expires 30 Sept 2019.	Commercial/ Industrial
LRA-13	HA	H-Area Warehouses Groundwater Monitoring Program	The H-Area Warehouse complex encompasses approximately 40 acres on the northern portion of the Lower Post. Forty artillery storage warehouses were constructed in 1920 in the H-Area to store artillery vehicles, trucks, and tanks remaining from WWI. The H-Area Warehouses Groundwater (Site HA) was investigated as part of an area-wide groundwater assessment. The H-Area Drainage System (Site 88HD) is between the warehouse structures within the H-Area. Site 88 is a drainage ditch that extends along the eastern parcel boundary and provides surface drainage from the northern H-Area Warehouses (Buildings 405 through 414) to the Apple River. Buildings, structures, and facilities within the H-Area Warehouse complex have a long history of usage at SVDA with industrial activities, including maintenance and storage of materials in support of facility operations. The H-Area Warehouse complex is where most of the inert open storage at SVDA is found including storage of strategic, salvage, and packing materials. Groundwater samples were collected at eight sites (Sites 88DB, 88HD, 128, 131, 132, 133, 190A, and 190B) within the H-Area Warehouse complex and were analyzed for VOCs, SVOCs, PCBs, metals, and anions as Phase I data for the H-Area Warehouse area-wide groundwater investigation. This information was used to identify locations for Phase II area-wide groundwater monitoring wells in the warehouse area. Six monitoring wells were installed and sampled at Site HA. The monitoring wells, combined with existing piezometers, comprised the H-Area Warehouse groundwater monitoring network. Groundwater samples from the H-Area network were analyzed for VOCs, SVOCs, pesticides/PCBs, metals, herbicides, and common anions. Two organic constituents (MCPA [herbicide] and TCE) were detected at concentrations exceeding the human health screening criteria in groundwater. The detection of MCPA in widely separated well locations may reflect facility-wide herbicide usage. TCE was not detected in the overlying soil, which may indicate that there is no longer an active source that will contribute to the further degradation of groundwater in this area. The human health risk assessment results indicate that risks are at or below regulatory targets for the planned future land use. For residents, cancer risks fall at the low end of the target risk range; however, noncancer HIs exceeding the target warrant LUCs.	Groundwater	Groundwater: aldrin, TCE, and MCPA for hypothetical resident.	ROD for Thirty-Three Lower Post and Plant Area Sites (SAIC, July 2012); Final LUCIP for Twenty-One Lower Post and Plant Area Sites (ERT, March 2015)	Lower Post RI Report (SAIC, 2004) Lower Post FFS (SAIC, 2009)	LUCs - Industrial Land Use Only and Prohibit the use of groundwater as a drinking water source	5-year review and annual LUC Inspections. First 5 year review completed 10 July 2015.	Commercial/ Industrial

Table 2
Environmental Site Summary
Savanna Army Depot

Parcel Number	Site Number	Site Name	Site Background/History	Media Sampled	Chemicals of Concern (COCs) Remaining	Current Site Phase/ Most Recent Document of Record	Relevant Supporting Documents	Remedy	Future Plans	Approved Land Use
LRA-17 (crosses through LRA-3, LRA-3A, LRA-3B, LRA-5, LRA-7, LRA-8, LRA-13)	SEW	Lower Post Sewerlines	The stormwater and sanitary wastewater systems associated with the Lower Post of SVDA have been in operation since their construction in 1918. The Lower Post Sewerlines (Site SEW) are used to transport stormwater and sanitary wastewater through separate pipelines. The stormwater drains transport surface water runoff from the Lower Post Shop Area (Buildings 100 through 129) to outfalls along Ordnance School Lake (Site 178). From 1918 to 1941, sanitary wastewater was transported from the Lower Post area to the Vincent Road Septic System (Site 130). Since 1941, sanitary wastewater from the Lower Post has been discharged to the Main Sewage Treatment Plant (Site 35). Sites 35 and 130 were investigated separately from Site SEW. Industrial operations (degreasing, metal parts cleaning, stripping, spray painting, and sand blasting) in the Lower Post Shop Area have potentially released hazardous substances and petroleum products, including acids, caustics, solvents, detergents, oils, grease, and heavy metals to the stormwater and sanitary sewerlines. Historical records indicated that photographic laboratory processes were conducted in Buildings 1, 9, 13, 132, 134, and 249; therefore, sewerlines from these buildings may have transported waste streams particular to these laboratories. In addition, historical reports indicated that Building 22 was equipped with a chemistry laboratory and Building 134 contained a metallurgical laboratory. All known building floor drains and pipes have been sealed or have been rerouted to the sanitary sewerlines and no longer discharge wastes into the stormwater system. In the fall of 1997, the Lower Post Sewerlines investigation included evaluating the continuity and integrity of the accessible sewerlines and assessing potential environmental releases at compromised portions (e.g., breaks, cracks, and pipe separation) of the piping. Based on the 1997 sewerline survey results, 40 soil borings were drilled in 1998 adjacent to compromised sewerline sections. The soil samples were analyzed for VOCs, SVOCs, PCBs, pesticides, herbicides, and metals. PAHs and one PCB (Aroclor-1260) exceeded the human health screening criteria in the subsurface soil. The highest concentrations of PAHs were in the soil collected immediately below the pipes. The human health risk assessment results indicate that risks are at or below regulatory targets for the planned future land use. For residents, noncancer HIs are below the target HI; however, cancer risks reaching the upper bound of the target risk range warrant LUCs.	Soil	Soil: Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, Aroclor-1260, and PCP for hypothetical residents.	ROD for Thirty-Three Lower Post and Plant Area Sites (SAIC, July 2012); Final LUCIP for Twenty-One Lower Post and Plant Area Sites (ERT, March 2015)	Lower Post RI Report (SAIC, 2004) Lower Post FFS (SAIC, 2009)	LUCs - Industrial Land Use Only	5-year review and annual LUC Inspections. First 5 year review completed 10 July 2015.	Commercial/ Industrial
LRA-16	003-R-01	A-Area Detonation Pit	SVAD-003-R-01 (the A-Area Detonation Pits) is located in the central eastern portion of the Installation along I and A Roads. Aerial photographs taken in 1936 indicated the presence of demolition pits in A-Area located approximately 400 feet from the nearest existing magazine to the northeast and approximately 600 feet from the nearest eastward magazine. The demolition pits and the fragmentation radius were estimated during the MEC characterization activities to be approximately 700 acres. Following the MEC characterization activities, the results concluded that the MEC and MD recovered from SVAD-003-R-01 were a result of historical munitions-related activities completed at SVAD-012-R-01. A geophysical survey was completed in the summer of 2005. The site was divided into two subareas: A1 and A2. Subarea A1 included the suspect former demolition pit. Subarea A2 is the circular kick-out area surrounding the former demolition pits. A total of 1,250 anomalies were recommended for intrusive investigation at Subarea A1 and 520 anomalies recommended for intrusive investigation at Subarea A2. Intrusive investigations were conducted in 2007. A total of 120 MD items were recovered during the intrusive investigation of both subareas. A total of three MEC items (a 155-mm projectile [low order], a 155-mm projectile [unfuzed], and a 155-mm projectile [low order with exposed HE]) were recovered. Large amounts of cultural debris, including asbestos (transite) were found. The 2007 investigation concluded that subarea A1 underwent a 100 percent removal and should be sufficient to allow use of this area for habitat or industrial purposes with intrusive actions being conducted under appropriate restrictions. The remaining area of concern west and south of the boundary of subarea A1 in subarea A2 was evaluated as part of the SVAD-012-R-01 GIRF for further evaluation in an FS. The remainder of SVAD-003-R-01 is recommended for NFA. A debris removal was completed in 2011. Approximately 645 tons of demolition debris were excavated and disposed of. Visual inspections and exploratory test pits performed along the perimeter of the excavation confirmed that no additional debris was outside the delineated area. Samples were collected to confirm the remedial action objective of less than 1 percent asbestos remaining in the soil. No asbestos was detected in the 18 confirmation samples collected.	Soil	No HTRW COCs MMRP: MD	SVAD-003-R-01, SVAD-012-R-01, and SVAD-015-R-01 FS (Leidos, July 2016)	Site Characterization Report for OE Site Characterization and Report Phase I (TTFW, 2004) Geophysical Report for 155-mm HE Proof Range, Zone Q/Site 17 Grenade Burial Area, A-Area Open Demolition Pits, and Zone W Grenade Outlier (TTEC, 2006) MEC Site Characterization at 155-mm HE Proof Range Group, Zone Q/Site 17 Grenade Burial Area, and A-Area Demolition Pits (UXB, 2009) Completion Report, Environmental Restoration Services, Site 003-R-01 (EQM, 2012)	MEC Surface/ Subsurface Clearance with LUCs and Public Awareness and Explosives Safety Education is Proposed Remedy	MEC IRA (planned 12/2017) PP on hold since discussions are ongoing to determine if CERCLA LUCs are required for munitions debris. A new task order is needed with Leidos for follow-on supplemental RI work due to the site being re-classified as a high-density area based upon the findings of the IRA.	Commercial/ Industrial

Table 2
Environmental Site Summary
Savanna Army Depot

Parcel Number	Site Number	Site Name	Site Background/History	Media Sampled	Chemicals of Concern (COCs) Remaining	Current Site Phase/ Most Recent Document of Record	Relevant Supporting Documents	Remedy	Future Plans	Approved Land Use
LRA-5, LRA-7, LRA-9	006-R-01	Mortar Range Impact Area (ASR Zone C)	The Mortar Impact Range was used for testing 3-inch and 4-inch Stokes mortars between 1917 and 1921. Proof testing of STM rounds into ASR Zone C involved the firing of solid and sand-filled proof projectiles or slugs from firing points located to the southeast at Building 125. The Mortar Range Impact Area (ASR Zone C) encompasses several BRAC site areas, including Site 15 (SAA Burn Area), Site 33 (Artillery Ballistic Test Site) Site 67 (Fire Training Area), and SVAD-223. Expended STM rounds were encountered during remediation of the fire training pit at Site 67 (ASR Zone C) in 1996. The fuze impact area in Zone C extends from the firing point at Building 125 to a location 600 yards down range in the vicinity of SVAD-223. SVDA used this same area for testing Stokes mortars and mortar cartridges during WWI. The area was extended approximately 1,100 yards to include all of the small demilitarized components scattered throughout the area. To-date, all of the mortar rounds found have been plaster or sand filled. The Mortar Range Impact Area is recommended for NFA Site SVAD-006-R-01 is currently part of an FS that is being held up due to MD discussions that are ongoing between Headquarters Army and USEPA for Sites SVAD-015, SVAD-033, SVAD-067 and SVAD-223.	No HTRW investigations	MMRP: MD	Decision Document for Mortar Range Impact Area (SVAD-006-R-01) (SAIC, 2009)	Data Collection Quality Assurance Plan Addendum 18 (SAIC, October 2011)	NFA Recommended; LUCs possibly for MD	FS (12/18), PP (07/19), ROD (06/20) The FS, PP and ROD for sites 15/33, 67, 223, and 6R-01 will be combined into one document. New A/E task order needed in 2018.	Commercial/ Industrial
LRA-14	010-R-01 (Sites 110A and 110B)	1936 Detonation Pits	Site SVAD-10-R-01 is comprised of two 1936 Detonation Pit areas (Site 110A and 110B). The Site 110A - 1936 Detonation Pits (Site 110A) is composed of 2.25 acres between D and McIntyre Roads. Area A, or Site 110A, had 24 pits aligned in four rows of six pits each. The detonation pits in Area A or Site 110A have been obscured with time because of construction activities in the ammunition storage area. Site 110A was investigated to determine the potential presence of contamination from past detonation activities. The Site 110B 1936 Detonation Pits is a portion of the 1936 detonation pits; Area B of the detonation pit operation had seven pits aligned in two rows. The investigation site is composed of 0.38 acres north of Powder Spur Road and south of Robinson Spur between the railroad right-of-way and the D-Area magazines. Two field investigations were conducted at each Site 110A and Site 110B to determine if historical detonation activities have impacted the environment. Soil and groundwater samples were analyzed for VOCs, SVOCs, explosives, and metals. Based on the characterization of contamination at this site, the absence of evidence of future migration from the soil to the groundwater, and the NFA recommendation from both the human health and the ecological risk assessments, the Army's recommendation for Site 110A was NFA from the 2007 RI. Based on the characterization of contamination at this site, the absence of evidence of future migration from the soil to the groundwater, and the results from the human health and ecological risk assessments for the planned future use (i.e., as industrial/commercial), the Army recommended from the 2007 RI that Site 110B be further evaluated in an FFS evaluating the potential need for LUCs. In 2004, a MEC removal of 6 acres was initiated and completed in November 2007. Various World War I vintage MEC items were recovered. Scrap lead was found and disposed of during the sifting process. During the sifting process, asbestos was discovered in the form of transite siding and shingles and was sifted out, bagged and placed in storage. Based on the conclusions of the MEC site characterization activities of this MRS, SVAD-010-R-01 is recommended for an IRA to address the hazards related to the potential MEC at the AOC within SVAD-010-R-0SVAD-010-R-01 is currently in a draft final FS waiting to incorporate the results of the IRA.	Soil and Groundwater	Soil: RDX Groundwater: No COCs MMRP: MD	SVAD-010-R-01 and SVAD-012-R-01 Engineering Evaluation/Cost Analysis (Leidos, May 2016)	Data Collection Quality Assurance Plan Addendum 9 (SAIC, July 2001) RI Report for the CL and CN Plant Areas and Remaining LRA Parcel (SAIC, April 2007)	IRA - MEC Surface/ Subsurface Clearance; LUCs will be evaluated in the FS	The FS is awaiting results of the IRA in order to incorporate them into the FS. The MEC IRA will be completed in December 2017. The Leidos task order schedule for completing the PP/DD is June 2019. A contract will be needed in FY19 for the RAC (LUCIP).	Commercial/ Industrial

Table 2
Environmental Site Summary
Savanna Army Depot

Parcel Number	Site Number	Site Name	Site Background/History	Media Sampled	Chemicals of Concern (COCs) Remaining	Current Site Phase/ Most Recent Document of Record	Relevant Supporting Documents	Remedy	Future Plans	Approved Land Use
LRA-12, LRA-14, LRA-16	012-R-01	Proof Range Group	The Howitzer Impact Area (Site 30, now 012-R-01) was used to support proof firing operations at the facility. SVAD-012-R-01 (Proof Range Group) is divided into two distinct impact areas, the GIRF and the 155-mm HE Proof Range, based on the historical munitions-related use at the site. The GIRF is located in the southern half of the Ammunition Storage Area and is approximately 1,443 acres and includes SVAD-003-R-01. The 155-mm HE Proof Range is not located on LRA property. In 1918 and 1919, most of the ordnance workload at SVDA involved proof firing weapons using solid projectiles. The proof program ended in 1921, when associated buildings were reassigned for other uses. Available historical documents list 380 rounds of HE fired and include the following: 75-mm HE projectiles, 155-mm HE projectiles, Mark V fuzes (tested with 75-mm HE projectiles), and HE shell with Mark III fuzes (tested with 75-mm projectiles). Firing occurred from cement revetments presently identified as Building 125 (Site 31). The 1919 history of the proving ground indicates that up to that time, the following ordnance had been tested: 3,320 rounds of 4-inch trench mortar; 2,395 rounds of 75mm field gun artillery; 873 rounds of model 1906 field gun artillery; 25 lots of 155mm high explosive ammunition; two lots of Mark V detonating fuses; and assorted other shells and detonating fuses.	No HTRW investigations	MMRP: MD	SVAD-003-R-01, SVAD-012-R-01, and SVAD-015-R-01 FS (Leidos, July 2016)	Site Characterization Report for OE Site Characterization and Report Phase I (TTFW, 2004) Geophysical Investigation Survey Report (ATI, 2005) Geophysical Report for 155-mm HE Proof Range, Zone Q/Site 17 Grenade Burial Area, A-Area Open Demolition Pits, and Zone W Grenade Outlier (TTEC, 2006) MEC Site Characterization at Graze Impact Range Fan, Primm's Pond, River Road, and Zone F (UXB, 2007) MEC Site Characterization at 155-mm HE Proof Range Group, Zone Q/Site 17 Grenade Burial Area, and A-Area Demolition Pits (UXB, 2009) RI Report for the Upper Post (SAIC, 2009) SVAD-010-R-01 and SVAD-012-R-01 Engineering Evaluation/Cost Analysis (Leidos, May 2016)	MEC Surface/ Subsurface Clearance with LUCs and Public Awareness and Explosives Safety Education is Proposed Remedy	MEC IRA (planned 12/2017) PP on hold since discussions are ongoing to determine if CERCLA LUCs are required for munitions debris. A new task order is needed with Leidos for follow-on supplemental RI work due to the site being re-classified as a high-density area based upon the findings of the IRA.	Commercial/ Industrial
LRA-15, LRA-15A	015-R-01 (Site 83)	New Function Test Range	Site 83 is also known as Site 015-R-01. The New Function Test Range (Site 83) is in the south central portion of the Installation north of J Loop Road, south of McIntyre Road, and midway between the Less-than-Carload (LCL) Building (Building 933) and CF Perimeter Road. The function test range was constructed in 1993 and operated until the Installation closed in April 2000. In addition to Buildings 1100 through 1104, the facility includes an approximately 130-foot-long concrete utility trench; several gravel function testing areas; and a central function test pad with gravel, melted metals, and fused rock. A septic system for lavatories and two 1,800-gallon liquefied petroleum gas (LPG) USTs also are at the site. In 1993, during construction of the New Function Test Range (Buildings 1100 through 1104, function testing pads, and utilities), various types of projectiles, primarily large proof rounds, were discovered at SVAD-015-R-01. Three HTRW field investigations were conducted at HTRW Site 83 to determine if function test activities have impacted the soil and/or groundwater, as detailed in the RI Report for the CF Plant Area. Soil and groundwater samples were collected in 2000 and analyzed for VOCs, SVOCs, metals, and explosives. Additional soil and groundwater samples were collected in 2001 and 2002. The HHRA conducted as part of the 2007 RI concluded that for scenarios evaluated in accordance with the planned future reuse of the site (i.e., industrial and construction scenarios), cancer risks fall below the target cancer risk range and noncancer HIs fall below the target HI. For a hypothetical recreational land use scenario, cancer risks also fall below the target range and noncancer HIs fall below the target HI. For the most conservative and unrestricted use scenario (i.e., residential), cancer risks exceed the target cancer risk range and noncancer HIs exceed the target HI of 1. The ecological assessment concluded no further evaluation was warranted from an ecological perspective. A Phase I OE site characterization was conducted in 2000. One UXO item and several MD items were recovered. A surface clearance was conducted in 2005 to remove MEC, MD and cultural debris from the ground surface. Numerous MD items were recovered; no MEC was identified. A second surface clearance was conducted in 2008. One MEC item and 33 MD items were recovered. Due to the explosives safety hazard related to potential residual MEC remaining following the historical surface clearance activities, a public awareness and explosives safety education program is recommended for SVAD-015-R-01.	Soil and Groundwater	Surface Soil: TNT, 4-amino-2,6-DNT, and RDX; Groundwater: silver MMRP: MD	SVAD-003-R-01, SVAD-012-R-01, and SVAD-015-R-01 FS (Leidos, July 2016)	Site Characterization Report for OE Site Characterization and Report Phase I (TTFW, 2004) MEC Surface Clearance Report for Site 83/LRA Parcel 15A (TTEC, 2007) RI Report for the CF Plant Area (SAIC, 2007) MEC Site Characterization at Graze Impact Range Fan, Upper Function Test Area and Surface Clearance of Site 83/LRA 15 (USA, 2009)	LUCs with Public Awareness and Explosives Safety Education is proposed remedy	PP/DD 2017 FS recommended LUCs with Public Awareness and Explosives Safety Education	The RAO of reducing risks to hypothetical residential receptors while maintaining industrial/ commercial land use at the site will be met by selection and implementation of LUCs.

Notes:
A/E - Architect/Engineer
APE - Ammunition Peculiar Equipment
ARAR - Applicable or Relevant and Appropriate Requiremen
ASR - Archive Search Report
AST - Aboveground Storage Tank
BERA - Baseline Ecological Risk Assessmen
bgs - below ground surface
BTEX - Benzene, Toluene, Ethylbenzene, and Xylene
MEC - Munitions and Explosives of Concern
mm - millimeter
MMRP - Military Munitions Response Program
MNA - Monitored Natural Attenuation
NFA - No Further Action
NTCRA - Non-Time Critical Removal Actior
OE - Ordnance and Explosives
PAH - Polycyclic Aromatic Hydrocarbon

Table 2
Environmental Site Summary
Savanna Army Depot

Parcel Number	Site Number	Site Name	Site Background/History	Media Sampled	Chemicals of Concern (COCs) Remaining	Current Site Phase/ Most Recent Document of Record	Relevant Supporting Documents	Remedy	Future Plans	Approved Land Use

BRAC - Base Realignment and Closure
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Ac
COC - Chemical of Concern
DCE - Dichloroethene
DD - Decision Document
DMM - Discarded Military Munitions
DNT - Dinitrotoluene
DRMO - Defense Reutilization and Marketing Office
EBS - Environmental Baseline Survey
EQM - Environmental Quality Management, Inc
ESV - Ecological Screening Value
FFS - Focused Feasibility Study
FS - Feasibility Study
ft - foot or feet
FTA - Fire Training Area
FY - Fiscal Year
GIRF - Graze Impact Range Fan
GPR - Ground Penetrating Radar
GQS - Groundwater Quality Standard
HE - High Explosives
HHRA - Human Health Risk Assessmen
HI - Hazard Index
HTRW - Hazardous, Toxic, and Radioactive Waste
IEPA - Illinois Environmental Protection Agency
IRA - Interim Response Action
LUC - Land Use Control
LUCIP - Land Use Control Implementation Plan
MCL - Maximum Contaminant Level
MD - Munitions Debris
PCB - Polychlorinated Biphenyl
PCP - Pentachlorophenol
PP - Proposed Plan
RA - Remedial Action
RA(C) - Remedial Action-Construction
RA(O) - Remedial Action-Operation
RCRA - Resource Conservation and Recovery Ac
RD - Remedial Design
RI - Remedial Investigation
RIP - Receiving, Inspection, and Painting
ROD - Record of Decision
SAA - Small Arms Ammunition
SAIC - Science Applications International Corporation
SERA - Screening-Level Ecological Risk Assessmen
SRO - Soil Remediation Objective
STM - Stokes Trench Mortar
SVDA - Savanna Army Depot Activity
SVOC - Semivolatile Organic Compound
TACO - Tiered Approach to Correct Action Objectives
TBD - To Be Determined
TCE - Trichloroethene
TCLP - Toxicity Characteristic Leaching Procedure
TNT - Trinitrotoluene
USAEHA - U.S. Army Environmental Hygiene Agency
UST - Underground Storage Tank
UXO - Unexploded Ordnance
VOC - Volatile Organic Compound
WWI - World War I
WWII - World War II