

Proposal for the Collaborative Forest Landscape Restoration Program

Oak Ecosystem Restoration in Southern Illinois

Shawnee National Forest



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Proposal Overview

This project is part of an overall landscape strategy in which the SHA and partners seek to accelerate oak ecosystem restoration and reduce risk through a combination of timber harvest, mid-canopy treatments, and prescribed fire on all ownerships.

The Shawnee National Forest (SHA) comprises 286,312 acres nestled into parts of the 11 southern-most counties of Illinois (see Attachment A - Maps). This region's broad landscape, resting just north of the confluence of the Mississippi and Ohio Rivers, is typified by oak forests. Studies conducted at nearby Southern Illinois University (SIU) would indicate that oak has been the dominant forest type in this region for at least the past 5000 years. However, research also indicates that oak is declining across much of its native range, and that the region above the Mississippi/Ohio confluence may be among the first to lose this critical natural system.

Oak is this region's "keystone" species. Oak acorns are a superfood for over 100 native species of wildlife. Research has found 532 species of pollinators dependent upon oaks at some point in their life cycle, while themselves being an important element of the food chain. The structural diversity and light-filled canopy of native oak forests create thriving communities of grasses and forbs on the forest floor, contributing tremendous biodiversity while protecting soils and watersheds from erosion and sedimentation.

The factors that influence the health of oak forests are well researched and documented. Oak requires relatively high light levels to thrive and without natural or human-induced intervention oak typically is replaced by species more tolerant of shade. Because of the research conducted at SIU and elsewhere, and because of the efforts of many individuals and organizations, there is an increasing understanding within this region of the need to intervene in the health of oak forests. Increasing emphasis is being placed on proper forest management on private and public lands throughout the region.

This project will excel at a landscape scale because collaborators share an understanding of the necessity of preserving oak forests and each partner has oak ecosystem restoration programs currently underway within the CFLRP proposal footprint. The Natural Resources Conservation Service has established a Regional Conservation Partnership Program area in this landscape. The Illinois Forestry Action Plan and Wildlife Action Plan, developed by the Illinois Department of Natural Resources (IDNR), along with The Nature Conservancy's Shared Conservation Agenda promote fire and harvest to maintain oak ecosystems. Thirty-four percent of private landowners are enrolled in the State's Forestry Development Act and have a management plan. The National Wild Turkey Federation, through their restoration work on the Forest and private land in southern Illinois, promote oak habitat. A growing collaborative, "Let the Sun Shine In," addresses biodiversity and oak management. These and other partners have now combined to preserve the values of the regions oak forests and are poised to leverage supplemental funding.

Landscape Boundaries

The SHA CFLRP proposes oak restoration treatment of 130,000 national forest acres and 25,000 acres of adjacent lands. These lands are important to the re-establishment of plant and animal

biodiversity, threatened or endangered species habitat, watershed function and overall health of the region's oak ecosystems.

Landowner or Manager	Total Acreage within Proposed Landscape Under this Ownership	Estimated Total Area to be Treated in Acres
USFS	286,312	130,000
Illinois Depart. of Natural Resources	68,175	5,000
Non-Forest Service	2,002,352	20,000
TOTAL:	2,422,986	155,000

Ecological, Social and Economic Context

Agriculture is the largest employer in the southern 11 counties in Illinois. Local, state and federal government accounts for another 40% of employment. Work in the forestry sector accounts for less than 3% of the region's employment. Ten of the 11 southern counties have lost population in the past decade with one losing 10%. Employment opportunity for young people is often cited as the most important contributor to the exodus. Coal mining was a major industry until the 80's when many companies pulled out of the region and employment rates plummeted. Since 1976, the annual unemployment rate in the 11-county area ranged from a high of 15.7% in 1983 to a low of 4.9% in 2006. The most recent unemployment rate reported was about 5%, while the national rate was at 3.5%. Area unemployment is consistently a few points higher than the state or national average and there is a need to create or retain jobs in a variety of sectors.

Historically, this area above the confluence has been dominated by oak forests. Between 1806-1810 surveyors sent to the region by the General Land Office (GLO) documented oak and hickory trees comprising nearly 61% of the species found in southern Illinois. Their notes described a structurally diverse landscape of woodlands, savannah, and prairie. More than 25% of the survey points contained 34 trees per acre or less, far fewer than a survey would find today. For large portions of the region to have remained in an open condition, forested predominantly in species requiring high light levels, would require that some agent of disturbance be present and widespread.

Modern research using tree-ring studies has identified fire, whether naturally occurring or human-induced, as the principal agent of disturbance influencing the openness of the oak forest. The historic oak landscape burned frequently, but with low intensity in forested areas (higher intensity and severity in prairies). Oaks and hickories are fire-adapted, surviving much more often than other species, although at lesser density per acre than would be present in an unburned forest. Fire-scarred tree rings reveal mean fire return intervals in the post-settlement era were likely 8-15 years, and as little as every 1-2 years at their minimum, while fire size was thought to be often hundreds to thousands of acres. Additional natural disturbance from wind and ice would historically open the canopy, allowing for recruitment of oaks into the overstory.

The fire suppression that began about 90 years ago has interrupted the millennia-old pattern of forest development. Fire no longer thins seedlings and saplings to a few oak trees per acre, and now maple, beech and poplar are more likely than oak to fill gaps in the forest canopy. Fire suppression, coupled with reductions in forest management, have had cascading detrimental effects on oak-dominated communities. Open and structurally rich communities have converted to closed-canopied forests with dense mid and understories comprised largely of fire-sensitive, shade-tolerant trees. Deep shade has virtually eliminated native ground flora, threatening the biodiversity of the forest floor. This scenario, dubbed mesophication, creates cool, humid microclimates in the understory and increasingly moist, compact litter beds largely devoid of fine (herbaceous) fuels – making conditions less receptive to fire today (Nowacki and Abrams 2008). As native vegetation disappears it is often replaced by a variety of non-native shrubs, forbs and grasses now plaguing the region. The vertical structure, variety of oak size classes, coarse woody material and standing dead tree component that once existed in remnant pockets of old-growth oak forests is becoming unrecognizable.

The loss of the oak ecosystem places the region's biodiversity at-risk. The oak forest allowed light to filter down to the forest floor fostering a highly diverse and robust ground flora layer of shrubs, forbs, and grasses. Because oak has a large disproportional effect on other species any disruption to oak populations and their historic open structures would, in turn, ripple across the entire ecosystem and component species. This includes myriad wildlife species that have coevolved with and are dependent on oaks (McShea et al. 2007). Without active restoration southern Illinois might be the first area within the Central Hardwoods Region to fully convert to mesophytic forests (Fralish and McArdle 2009; Helmig and Fralish 2012).

The loss of the oak ecosystem threatens forest health. Insect and disease damage have been increasing as stands age and become increasingly dense. As a result, the SHA received designation as an Insect and Disease Area under the Healthy Forest Restoration Act on 116,873 acres. Key concerns include oak wilt, oak decline, Emerald Ash Borer and Southern Pine Beetle.

The loss of the oak ecosystem places greater pressures on species already listed as threatened or endangered. The diverse habitats and two major rivers, the Mississippi and Ohio, provide important summer grounds for bat species adapted to different foraging methods on terrestrial and aquatic habitats. The SHA is among the most biological diverse areas for bats in the Eastern Region, containing 13 species. The federally endangered Indiana and the Gray bats, and the federally threatened Northern long-eared bat, occur on the SHA. The confluence region contains 13 percent of the entire North American population of Indiana bat. Other state and Regional Forester sensitive species include: the tri-colored bat, little brown bat, southeastern bat and small-footed bat. The structural diversity of oak forests provides important habitat for bats and other species during various stages of their life cycle.

The loss of the oak ecosystem will have implications for the region's water quality. Southern Illinois is heavily dependent upon surface water for its drinking-water supply. Even remote communities are increasingly connected to municipal water supplies sourced from one of numerous water supply reservoirs. Water quality has been a concern since the early days of the

last century, when a dense network of native surface roads combined with difficult farming conditions to create tremendous levels of soil erosion throughout the region. Even today almost all projects on the national forest, including oak management, have a nexus to watershed health and function. Projects to stabilize this erosive legacy occur in conjunction with forest management and serve to improve soil and watershed health and preserve the life span of the region's reservoirs. Meanwhile, the re-establishment of the open-canopied oak forest promotes healthy, diverse plant layers on the forest floor, holding soil in place.

The ownership pattern is considered one of the patchiest in the nation, with numerous small landowners sharing a boundary with the national forest. Over 260,000 people live within the project area further highlighting social and economic risk. Most of these people are in the 290 towns and communities, though there is low density rural housing throughout the area. Over 230,000 acres of Wildland Urban Interface (WUI) occur within the project area according to the SILVIS lab estimates (University of Wisconsin, 2005). Local definitions suggest a more ubiquitous WUI. An estimated 138,006 structures are found in the project area, with 23% of those structures within 1.5 miles of the Forest boundary.

Wildfire occurrence and area burned have decreased steadily post organized fire suppression. In the years between 1992-2015, the Fire Occurrence Dataset reported 903 fires in the project area covering almost 9,000 acres, though many fires on private land go unreported. There has been a recent increase in the frequency of summer wildfires driven by hotter, drier, and longer summers. These can be much higher severity and cause extensive vegetation mortality.

Despite the moderate fire occurrence and small average acreage burned, structures are lost every year to wildfires. The land is covered in utility and communications infrastructure. To reduce the threat to values at risk, the SHA and partners have developed Community Wildfire Protection Plans (CWPPs) in three counties (see attached maps). Funding to develop a fourth plan was included in a FY20 Adjacent Lands funding request. Plans focus on 1) risk reduction and ecological restoration, 2) Coordination of emergency services, training, and preparedness and 3) Public education, outreach, and development of fire-resilient communities. A Wildfire Risk Reduction proposal was recently submitted to provide for regional coordination of the actions to implement these CWPPs.

Landscape Strategy and Proposed Treatments

Forest Service Ecologist Greg Nowacki has compiled research conducted over the past several decades that looks at the loss of the oak from the central hardwoods region and describes the multi-step process for re-establishment of these important forests. This data, presented in Appendix A, is gleaned from the best available science concerning oak ecosystem recovery, and forms the foundation of this CFLRP proposal. The research indicates that the resumption of fire, coupled with mechanical thinning and the creation of canopy gaps will all be required components of any restoration effort. This proposal seeks funding to leverage the efforts and energy of a consortium of organizations already actively engaged in the region. This request will enable an effort large enough in scale to maintain the critical biodiversity of the oak forest throughout the region.

The boundary depicted on the maps in Attachment A has been defined based on strategic commitments by several agencies and conservation groups (the project partners) to restore oak ecosystems. Each partner recognizes priorities within the project area and is currently engaged with public and private landowners in restoration work. Working at this regional landscape scale becomes possible with the combined efforts of the partners.

This CFLRP proposal will restore the ecosystem functionality of former oak forests, woodlands and savannas through treatments that vary the composition, structure and pattern of those various communities and reverse the trend of mesophication. Management actions will include prescribed fire, timber harvest using a shelterwood silvicultural system, and stand improvement of understory and midstory seedlings and saplings. The project will create no new permanent roads, while decommissioning temporary roads. Road maintenance and reconstruction efforts on existing permanent forest roads will decrease erosion and sedimentation, restore watershed function and provide more reliable public access where appropriate. See Attachment B for annual proposed treatments.

- Forest health will be improved by creating healthy, resilient and functioning oak communities that include more young forest, enhanced oak regeneration, and more open and closed woodlands with herbaceous understories of native plants. The resulting structure and ecological function achieved through this mixture of oak ecosystems will more accurately replicate that provided by the old pre-settlement forest. The 116,873-acre Insect and Disease Treatment Area designation will become a tool to prioritize forest insect and disease concerns, reduce risk and improve resilience. Non-native invasive species will be controlled to the extent practicable to restore biodiversity.
- Oak ecosystem-dependent wildlife species will benefit from the sustainable mast-producing forest. Oak habitat restoration on private land in Illinois has shown an increase to early successional species like the Bell's Vireo. Conserving bird community composition and diversity is clearly linked to maintaining a corresponding diversity of habitat structure. Meanwhile the increased floral resources of the young forest will benefit a wide variety of pollinators.
- Providing a large spectrum of habitat types of varying age classes and forest structure across the landscape while ensuring some habitat connectivity, particularly with early successional habitats, may be the best approach for maintaining diverse and viable bat populations. Shelterwood harvest and prescribed fire will benefit Indiana bats by creating canopy gaps and improving foraging habitat. Continued snag management will ensure the continued presence of suitable roosts for Indiana, Gray, and northern long-eared bats.
- The oak forest's function as watershed filter and regulator will be enhanced as legacy roads and trails are decommissioned or rehabilitated to reduce erosion and sedimentation. Increased light levels on the forest floor will restore diversity and abundance in native understory forb and grass communities, along with their inherent capacity to stabilize soil.

Wildfire Risk Reduction

Fire occurrence and extent are much below historic levels. This has increased fuel loads and

ecological risk from overcrowding, insects, disease, or other stressors. We have seen shifts toward longer growing seasons, wetter winters and springs (when most fires have historically occurred), and hotter summers. Summer fires can have uncharacteristically severe effects.

To reduce these risks, we plan to increase the use of dormant season prescribed fire. Creating burned patches would make it easier to choose “monitor” or “confine” strategies when dealing with wildfires, which are typically less costly and increase the chances of suppression success. In many cases dormant season burning would be sequenced with silvicultural treatments to restore oak ecosystem composition, structure and function, including reestablishing historic fire regimes and increasing forest diversity and resiliency. The restoration of fire to the landscape and the perpetuation of the oak ecosystem are also expected to improve the region’s adaptation to climate change.

Our strategy to increase prescribed fire acreage is to increase: 1) burn unit size, 2) the use of aerial ignition, 3) the amount of simultaneous burning (making best use of days with optimum atmospheric conditions), and 4) use of partners to conduct burning and build relationships with adjacent private landowners.

Nearly all the Shawnee is within ½ mile of private land. Most of our planned projects are in proximity to at-risk communities (determined collaboratively in CWPPs) or in ecologically important areas (determined collaboratively in the Let the Sun Shine In! campaign). Through extensive use of Participating (Wyden) Agreements, we can take advantage of existing natural barriers on private land, which reduces prep time and cost, and often makes implementation easier and safer. It also extends the benefits of prescribed fire to a larger landscape. We anticipate beginning Forest-wide prescribed fire NEPA in 2022, which would also help design larger burns.

Benefits to Local Communities

The benefits generated by this CFLRP proposal’s economic and social goals will increase the quality of life in rural communities throughout the 11-county region. The SHA encompasses 11 counties with a population of over 260,000. Oak restoration will occur in rural areas where population densities are lower and opportunities for higher paying jobs are limited. During its ten-year life and beyond, the project will increase employment opportunities and have a positive economic impact on rural life. The by-products of restoration, including small diameter forest products will generate receipts that will be retained for use in service contracts and stewardship agreements. Project activities will generate a need for a workforce trained in restoration techniques, and many project partners have added additional professional and technical staff to accomplish this work. Local communities will have increased training and business opportunities to support the families and equipment needed to accomplish work on the ground.

Improved forest health and forest diversity will increase and promote game species for hunting and recreational opportunities. Hunting is an economic driver of the local tourism and outdoor economy, particularly during deer, turkey and duck seasons. Southern Illinois attracts hunters

from all over the US supporting the local, rural economy. Wildlife viewing, equestrian riding and hiking are some other economic drivers that will benefit from management activities. Diverse successional habitat will bring a suite of species that visitors will be able to view. Commercial treatment activities also will allow receipts to be reinvested for trail improvements to benefit soil and water quality.

Active management in the Water Supply Watershed Management Areas (17,400 acres) will protect drinking water to local communities by decreasing sedimentation and runoff in the watershed.

The increase in receipts from restoration byproducts, including small diameter material, will increase payments to counties for roads and education. These communities have not seen increases or significant returns over the last 30 years due to lack of active management. In fact, from 1986 to 1987, Forest Service revenue sharing payments shrank from \$248,474 to \$59,538, a decrease of 76 percent. The direct economic effects associated with the proposed treatments will further stimulate indirect and other secondary effects for the regional economy.

Many local communities have recognized their wildland fire risk. Some addressed the risk by developing CWPPs, while others included it in their Countywide Hazard Mitigation Plans. Community leaders recognized the value of healthy natural environs to tourism, agriculture and forestry economic sectors, and public health and well-being. Half of the planned treatments are in existing CWPP areas. Additional CWPP areas are planned. Priority for hazard reduction treatments is given to those within CWPPs.

Among CFLRP community benefits, the SHA partnership expects to provide the greatest public service using the following planned metrics:

Enhance community sustainability:

- Maintain or increase number of workers employed by the project area each month, season, or year
- Maintain or increase the number and/or type of training opportunities for youth
- Maintain or increase the number and/or size of contracts offered each year to do restoration work
- Maintain or increase the percentage of contracts awarded that go to local contractors
- Maintain or increase number of youths, minority group representatives, or people from low- income communities hired to work on the project and the type of work they are conducting
- Maintain or increase acceptance of frequent, low intensity wildfire or prescribed fire

Improve or maintain quality of life:

- Maintain or increase the number of jobs/shifts/amount paid to workers
- Maintain or increase acres protected from fire through creation of defensible space, fuel breaks, and other fuels reduction projects

- Maintain or increase fuels reduction acres in relation to areas considered to be at highest risk from wildfire

Improve capacity for collaboration:

- Maintain or increase extent to which different perspectives are represented
- Maintain or increase extent to which stakeholders previously in conflict are now working together
- Maintain or increase the partner contributions (in kind time and funding) committed to shared project goals
- Maintain or increase perceived benefits of restoration activities

Utilization of Forest Restoration Byproducts

Southern Illinois has a diverse range of product utilization within and adjacent to the 11 counties identified within the project area. A variety of hardwood species and pine are within the project boundary. Hardwood product markets are stronger compared to pine products. The forest has primarily sold pine sawtimber and pulpwood since 2012 and in 2019 sold over 10,000 CCF of pine products. In FY20, 4,000 CCF of hardwoods in combination with 10,000 CCF of pine will be offered for sale. Outyear planning has provided an outline for the removal of more volume (hardwood) to support the local communities.

There are over 54 registered purchasers available to bid on forest products that are within and immediately adjacent to the SHA. There are 10 mills registered and located within the project boundary with an additional 6 mills that could utilize products from the forest in adjacent areas of Missouri, Kentucky and Indiana.

This project will use standard timber sale contracts, agreements and stewardship timber sale contracts to implement a shared stewardship concept and expand the Forest’s capabilities to accomplish the work.

The Forest has been challenged to accomplish the heavy workload associated with implementation and monitoring of oak restoration. Two years ago, the Forest has begun implementing a strategy to insert key positions to support this work including a Timber Management Assistant (TMA), a Pre-Sale/Prescription Forester and a Silviculture Technician. Positions that are needed this fiscal year to support program growth include an additional 3-person sale preparation crew, an engineering technician to complete transportation system design and contracting, and a term CFLRP Coordinator. Along with existing staff, these positions would place the Forest in a position to maintain the allowable sale quantities even after the CFLRP monies are utilized. Environmental analysis and decisions would continue to be developed on a bi-annual basis to sustain the increased volumes of hardwood sales and other restoration projects.

The SHA has developed an extensive collaborative over the years and have worked closely with our partners to accomplish objectives. Even so, there are a few individuals who object to restoration projects developed on the Forest. Engaging all project partners in hosting public

field tours with interested stakeholders and developing communication plans will be key to explaining the rationale for active management.

The SHA has a diverse range of tree species. There are currently markets and sawmills for pine and hardwood sawtimber. A paper mill has re-opened within 60 miles of the forest to receive pulpwood products. This mill is accessible by barge, rail, and truck, allowing for easy access and large-scale processing of small diameter forest products. The hardwood market is very strong, and with current market conditions high bid rates and values are expected. The pulpwood market can accept our products, but the SHA does not anticipate high rates. However, removing the pulpwood products should decrease our stand improvement contract rates since fewer trees per acre would need felled. Perhaps most importantly, the region has an efficient way to remove otherwise non-merchantable products. This would facilitate regeneration, reduce fuel loads, and provide open midstory conditions for species such as Indiana bat for foraging opportunities.

Existing roads allow access to the proposed and future projects areas. However, maintenance on these roads has been lacking due to budget constraints. The local road infrastructure and access will benefit greatly from the increased timber production and maintenance work needed during operations. The maintenance accomplished to support the removal of products and paid for using the timber sale contracts, stewardship agreements and service items embedded within stewardship contracting will also decrease soil erosion and sedimentation, benefitting the region with improved watershed function. Expected outputs can be found in Attachment C.

Collaboration

The Forest has spent the last 15 years developing a strong collaborative with the “Let the Sunshine In” partner group. It has over 15 land management partners that align with the oak ecosystem restoration goals of the Shawnee Forest Plan. These partners have already leveraged support and applied for a significant two Forest Joint Chiefs project in 2019. The CFLRP will complement the Joint Chiefs Project and use Good Neighbor Authority with the State and multiple agreements with partners conducting a shared stewardship concept.

The partnership, called “Let the Sun Shine In!”, includes the U.S. Forest Service, U.S. Fish and Wildlife Service, National Resource Conservation Service, Illinois Department of Natural Resources, The Nature Conservancy, National Wild Turkey Federation, River-to-River Cooperative Weed Management Area, Southern Illinois Prescribed Burn Association, Southern Illinois University, and others. These partners agree on a shared vision specific to maintaining and restoring oak ecosystems, maintaining and increasing the region’s biodiversity, and reducing forest fragmentation by working together to implement forest management at the largest scale possible.

Additionally, emphasis for engaging local landowners in restoration efforts on private lands is occurring to raise awareness locally about the oak decline and the ongoing oak management efforts. The implementation efforts have been accompanied by pre- and post-management

biological data collection and monitoring.

An early success for the partnership was assembling a working group of members, reflecting diverse interests and perspectives, to develop a strategy for establishing a well-monitored, experimental forest management effort. That work led to the creation of a nearly 1,000-acre Demonstration Forest Area in the Trail of Tears State Park, which is within the proposed CFLRP project boundary. The Demonstration Forest includes two experimental management units and a control unit. Ongoing data collection in the units, especially herbaceous plant and bird responses, is providing valuable feedback to land managers. There is also interpretive signage on the site to help explain the goals and objectives of the effort, and several public field tours have been conducted at the site.

The transparency of the restoration effort and the commitment to monitoring and adaptive management has gone a long way toward satisfying potential critics of the conservation effort. Within the partnership, there is little conflict due to the mission overlap that exists between partners, but the partnership meets quarterly to discuss ongoing efforts and issues. The partnership's decision-making process remains one of consensus of the partners.

The partnership has brought well over two million dollars of federal, state, and private funding to southern Illinois for oak ecosystem restoration since 2016, enabling in part the Shawnee NF to conduct record amounts of prescribed fire over the last few years. In 2019, more than 15,000 acres were treated, with about 20% of this on adjacent, non-federal lands. Other partners have also set record prescribed fire years by working with the Forest and with each other. The success of this collaborative group has generated interest in the development of similar partnerships associated with other National Forests in the region.

Multi-Party Monitoring

A shared goal for the Central Hardwoods region is restoration of oak ecosystem composition, structure and function through integrated treatments that include canopy manipulation, mid-story thinning and prescribed burning. Ecological restoration success for the Oak Ecosystem Restoration CFLRP project will be assessed using multi-party monitoring, from which data will be used to highlight progress towards desired condition and inform adaptive management through the duration of the project and beyond. A plot-based inventory of ecological conditions will occur prior to implementation, and these sites will be monitored over time for treatment effectiveness. We anticipate doing walk-through, subjective monitoring as well as a collaborative group. One area of known uncertainty is the response of invasive species to increased light levels. We will look at previously treated areas as well as the Trail of Tears Demonstration Project to inform actions that can be taken both pre- and post- treatment to address invasive species.

Current multi-party monitoring partners include U.S. Fish and Wildlife Service, National Resource Conservation Service, Illinois Department of Natural Resources, The Nature Conservancy, National Wild Turkey Federation, River-to-River Cooperative Weed Management Area, Southern Illinois Prescribed Burn Association, Southern Illinois University, and the Northern Research Station. Monitoring results will be summarized annually and shared with

Forest leadership, partners and the public.

In addition to direct partner collaboration, the forest will expand its existing citizen science program (established in 2019) to facilitate monitoring efforts and enable local stakeholder involvement and learning opportunities. In 2019, the Sierra Club applied for an initiation phase grant to begin the process of engaging local chapter members, students and other interested publics to conduct effectiveness monitoring in active management areas, as well as baseline inventories of natural areas. A challenge cost share agreement will be created if grant funding is awarded in February 2020.

Readiness to Implement Strategy

The level of treatments proposed in this project requires personnel that is outside the current organization and capacity on the SHA. Therefore, permanent positions, shared positions, term positions, seasonal positions, contracts, agreements, and partner work will contribute to the outcomes described in this project (see Unit Capacity and Funding).

Planning and decisions have been completed on 130,926 acres for a combination of vegetation and prescribed fire treatments. In addition, the SHA has 116,873 acres identified under the Insect and Disease designation in which a categorical exclusion can be used to collaboratively determine priority areas for treatments. Other collaborative priorities are within the 149,790 acres of stewardship clusters, where numerous private partners are interested in sharing management across boundaries. The SHA will be making assessments in completing NEPA for the remaining acreage for both fuel and vegetation on the SHA, including plans to analyze Forest-wide prescribed fire and pine thinning NEPA.

Treatments and goals are consistent with collaborative partners. Agreements, stewardship contracting, and Good Neighbor Authority will be utilized to implement and monitor work.

The Shawnee has become a leader in cross-boundary prescribed burning. Through extensive use of Participating (Wyden) agreements, the Forest burned on at least 26 separate adjoining non-federal parcels in 2019. This is typically done to take advantage of existing natural barriers on private land, which reduces prep time and cost, and often makes implementation easier and safer. It also extends the benefits of prescribed fire to a larger landscape. An exclusive use helicopter is contracted to be on Forest for 30 days each spring.

Unit Capacity and Project Funding

The SHA has been increasing the pace and scale of treatments over the past decade. Five-year timber implementation plans have been developed and a yearly priority prescribed burn plan is coordinated with staff and partners. However, there is a need to add positions within the first two years to ensure success. These positions include:

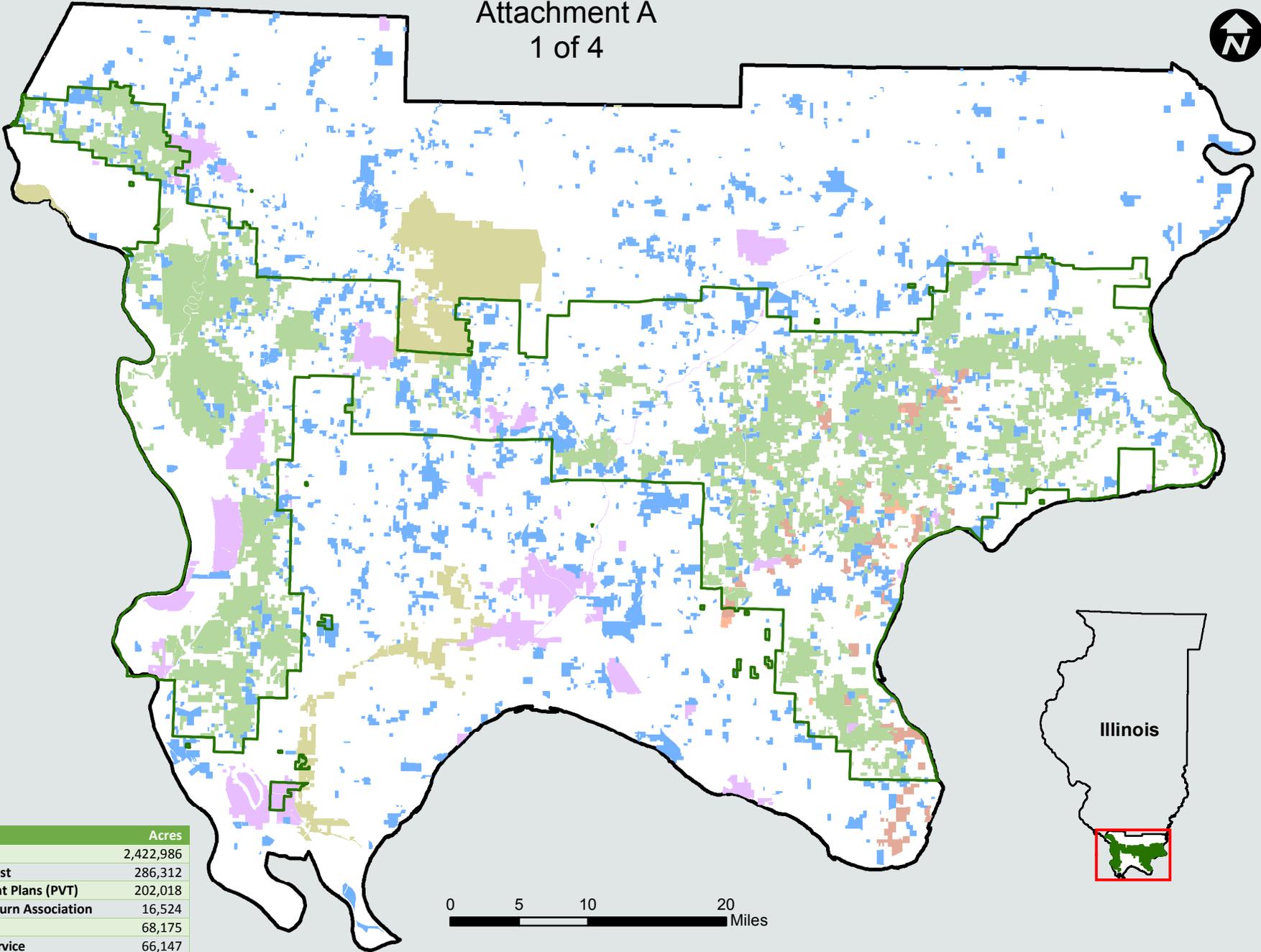
POSITION	TYPE
CFLRP Coordinator	Term
Mobile Technology Specialist	Term
Lead Forestry Technician	Permanent
Forestry Technician	Permanent
Assistant Fire Management Officer	Permanent
Civil Engineering Technician	Permanent
Fuels Technician	Permanent

The Forest has a network of partners to help conduct landowner outreach and education and design, prepare and implement large, public/private prescribed fires and other treatments. This has been mostly funded through short-term special projects (e.g. Adjacent Lands funding, State and Private programs). Because of this, partners have had frequent turnover, and we have had to spend a lot of time writing proposals and developing new agreements. We plan to use CFLR funding to institutionalize this work. They would still be partially funded through other means (partner funding, appropriations, and potentially timber sale revenue) to cover the non-federal and non-CFLR parts of their job. Coordinating the activities of these organizations, however, has become a challenge. We would use CFLR funding to co-fund a shared partnership coordinator.

To increase the use of aerial ignition, CFLR funding would pay for helicopter flight time, availability, and/or personnel costs for a call-when-needed (CWN) or second exclusive-use ship.

The Forest lacks the personnel to burn more than one large unit per day and achieve the increased acreage of this project. Program CFLR funding would be used to bring in additional, off-site Forest Service personnel as well as supplement agreements with partners to fund local crews. The strategy requires an increased level of burn plan writing, agreement development and administration, aviation supervision, and partner coordination. To provide this support, program funding would be used to hire a GS-11 Assistant Fire Management Officer or Fuels Specialist and fill an existing, yet unfunded GS-7 Fuels Technician vacancy.

The project is built to be sustainable after the full ten years because it is based on the Forest Plan's Annual Sale Quantity (ASQ) decadal outputs. As volume of restoration by-products increases so will the available funding in perm and trust funds. These can be used to fund the added personnel. We anticipate that at the conclusion of the project (or available funding) we would zone these fuels positions with an adjoining unit or consolidate them with existing positions. Work accomplished through agreements, contracts, temporary positions, or short-term assignments would cease when the project ends or CFLR funds are no longer available.



	Acres
CFLRP Boundary	2,422,986
Shawnee National Forest	286,312
IL Forestry Management Plans (PVT)	202,018
Southern IL Prescribe Burn Association	16,524
State Ownership	68,175
US Fish and Wildlife Service	66,147



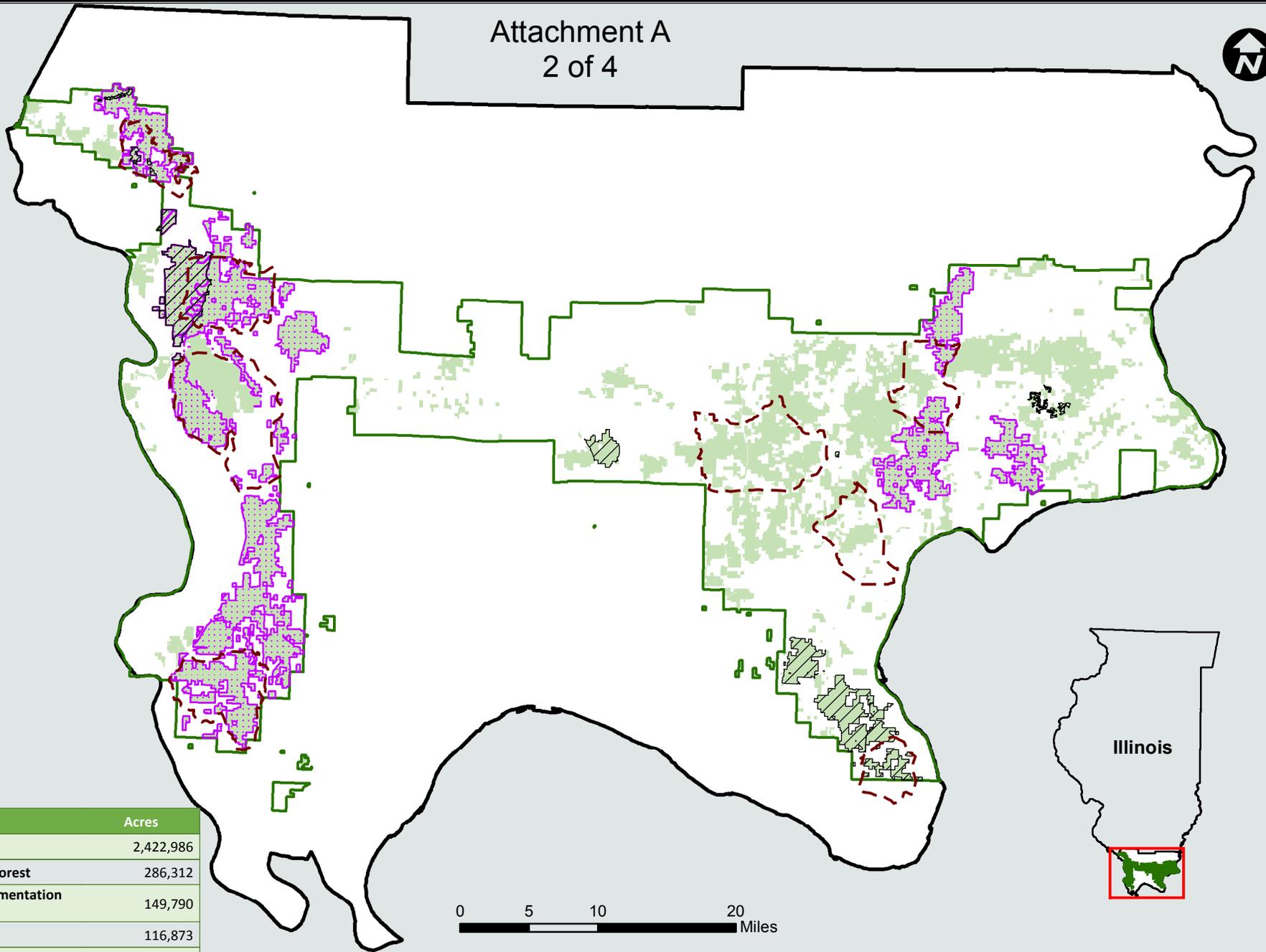
Oak Restoration in Southern Illinois Land Management Plans

Date: 1/22/2020



- CFLRP Boundary
- Southern IL Prescribed Burn Association
- IL Forestry Management Plans (PVT)/ Partners in Flight

- State Ownership
- US Fish and Wildlife Ownership
- Shawnee National Forest
- Forest Boundary



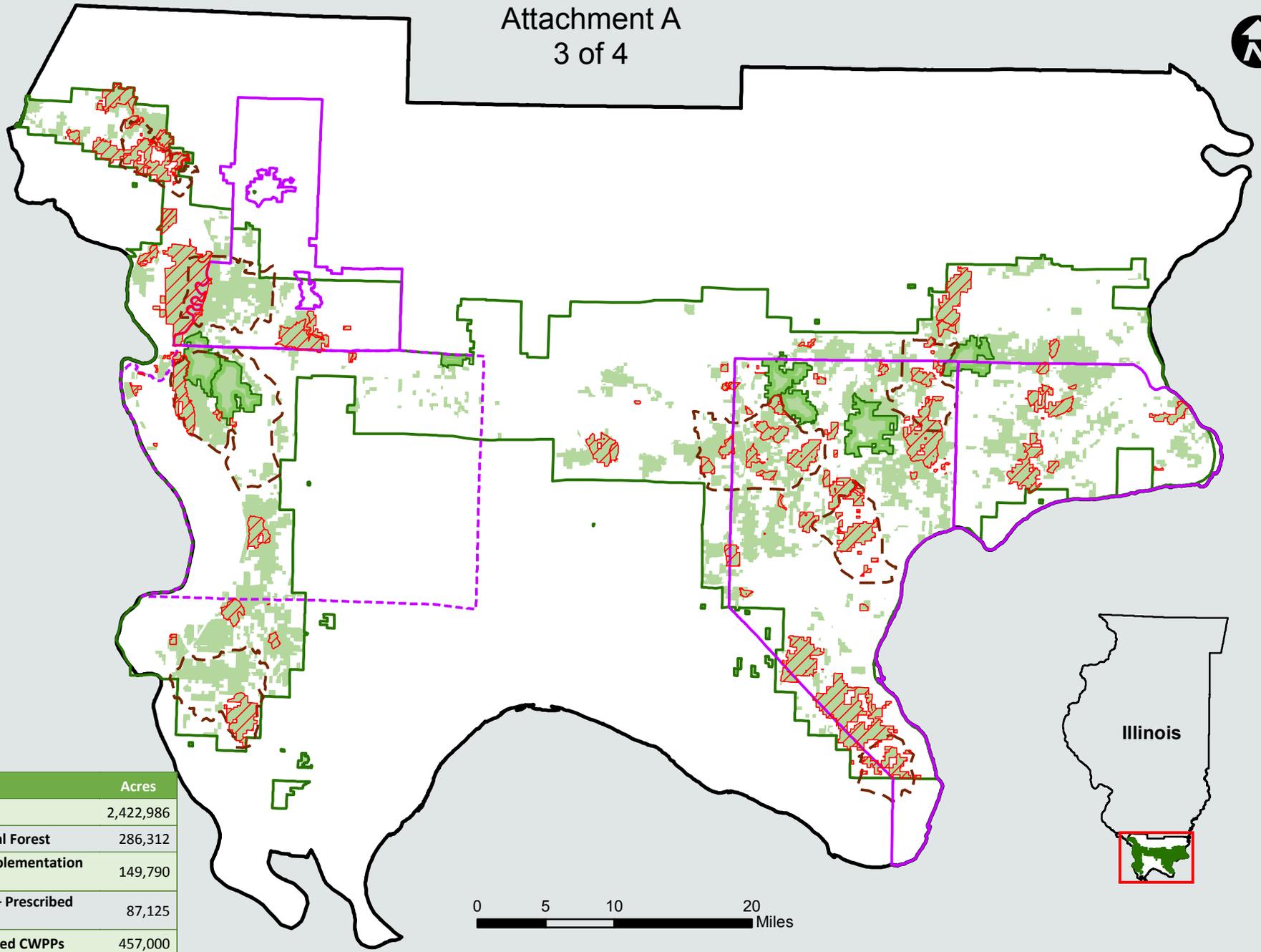
Boundary	Acres
CFLRP	2,422,986
Shawnee National Forest	286,312
Collaborative Implementation Area	149,790
I&D Designation	116,873
NEPA - Vegetation Management	43,801

Oak Restoration - Shawnee National Forest Vegetation Management

Date: 1/22/2020



-  CFLRP Boundary
-  Collaborative Implementation Area
-  Insect and Disease Designation Land
-  NEPA - Vegetation Management
-  Shawnee National Forest
-  Forest Boundary

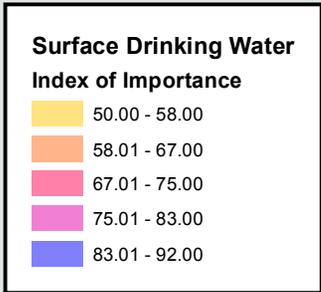


Oak Restoration - Shawnee National Forest Fire and Fuels

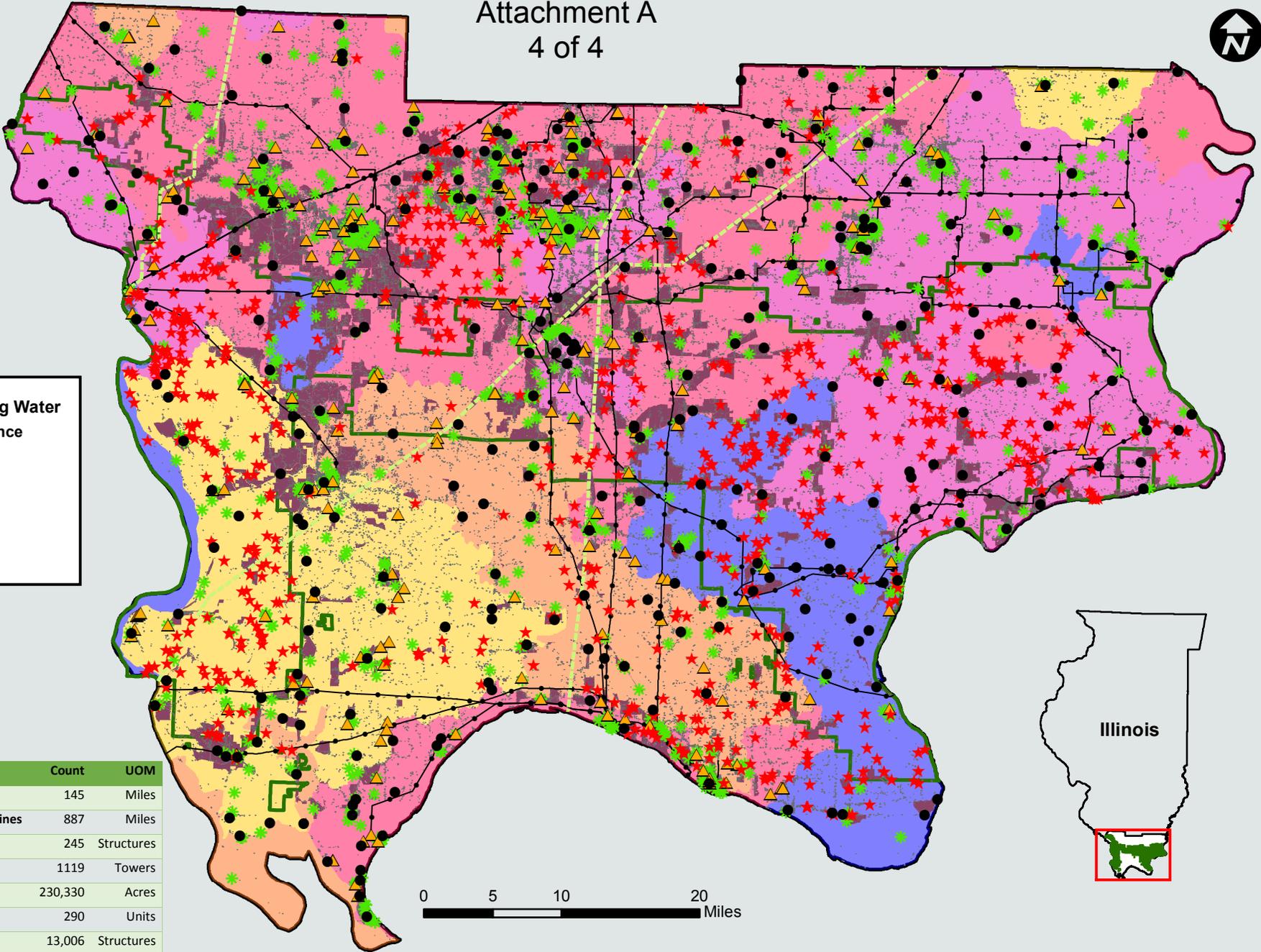
Date: 1/22/2020



- NEPA - Prescribed Fire
- CFLRP Boundary
- CWPP Boundary
- Proposed CWPP Boundary
- Collaborative Implementation Area
- Wilderness
- Shawnee National Forest
- Forest Boundary



Values At Risk	Count	UOM
Natural Gas Lines	145	Miles
Electrical Transmission Lines	887	Miles
Antenna Structures	245	Structures
Transmission Towers	1119	Towers
Intermixed WUI	230,330	Acres
Communities	290	Units
Buildings	13,006	Structures



Oak Restoration in Southern Illinois
Values at Risk

Date: 1/22/2020



- ★ Fire Occurance
- ★ Transmission Tower
- Interfaced WUI
- Forest Boundary
- Communities
- Electric Transmission Lines
- Building Footprints
- CFLRP Boundary
- ▲ Antenna Structure
- - - Natural Gas Pipeines

Attachment B: Planned Treatments

Core Restoration Treatment Types	Year 1*	Year 2	Year 3	Year 4	Years 5-10	TOTAL	Key treatment objectives	Estimated % accomplished on NFS lands (across all ten years)	Other landownership types (other federal, tribal, state, private, etc.) where treatments will occur
Hazardous Fuels Reduction (acres)						353,500			
Mechanical Thinning (acres)	300	300	400	100	500	1,600	Reduce crown spacing, decrease torching potential	25%	State, Private
Prescribed Fire (acres)	14,000	16,000	18,000	22,000	132,000	202,000	Oak restoration, fuel reduction, habitat improvement, slash reduction, invasive plant control, reintroducing fire as a natural ecosystem process	80%	USFWS, State, Private
Wildfire Risk Mitigation Outcomes - Acres treated to mitigate wildfire risk	10,500	12,000	13,500	16,500	99,000	151,500			
Invasive Species Management (acres)	14,000	14,500	14,500	15,000	84,000	142,000	Maintain and enhance native vegetation	25	USFWS, State, Private
Road Decommissioning (miles)	2	2	2	2	11	20	Road needs identified for upcoming vegetation projects	100	
Road Maintenance and Improvement (miles)	74	74	74	74	370	666	Road needs identified for upcoming vegetation projects	100	
Road Reconstruction (miles)	5	5	5	5	27	48	Road needs identified for upcoming vegetation projects	100	
Trail Reconstruction (miles)	3					3	Road needs identified for upcoming vegetation projects	100	
Wildlife Habitat Restoration (acres)	2,500	4,000	4,000	4,000	24,000	38,500	Prescribed fire and mechanical treatments to enhance foraging habitat	100	
Crossing Improvements (number)	3	5	5	5	30	48		100	
Stand Improvement (acres)	3,550	3,000	2,100	2,100	7,600	18,350	Mechanical treatments for oak restoration	60	USFWS, State, Private
Reforestation and revegetation (acres)	850	1,153	1,175	1,153	11,530	15,861	Mechanical treatments for oak restoration	99	USFWS, State, Private
Timber Harvest (acres)** All Ground Based Logging methods	1,600	1,500	1,600	1,900	11,000	17,600	Mechanical treatments for oak restoration	90	Private with IDNR GNA

Attachment C: Utilization of Forest Treatment By-Products

Fiscal Year	Estimate of acres treated annually that will generate restoration byproducts	Total projected annual harvested volume (ccf) from NFS lands	Expected percentage commercially utilized* from NFS lands
2020	1,600	14,000	90
2021	1,500	16,000	90
2022	1,600	18,000	100
2023	1,800	19,000	100
2024	1,900	18,000	90
2025	1,900	20,000	100
2026	1,900	20,000	100
2027	1,900	20,000	100
2028	1,900	20,000	100
2029	1,900	20,000	100
TOTALS:	17,900	185,000	
	<i>Estimated % of TOTAL acres accomplished on NFS lands:</i>		90
	<i>Estimated % of TOTAL acres accomplished on other landownerships within the CFLRP boundary:</i>		500

Attachment D: Collaborative Membership

Collaborative Member/Partner Name	Organizational Affiliation (if applicable)	Was this person involved in proposal development?	Primary Issue Category	Second Issue Category	Third Issue Category	If "other," briefly describe
Jason Lupardus	National Wild Turkey Federation	Yes	Other	Other	Fire Management	Oak restoration
Tharran Hobson	The Nature Conservancy	Yes	Other	Fire Management	Environmental	Oak restoration
Andrew Radomski	USFWS Partners in Flight	Yes	Other	Fire Management	Environmental	Oak restoration
Mike Baltz	Let the Sun Shine In	Yes	Other	Other	Other	Oak restoration, biodiversity and landscape restoration
Jody Shimp	Shawnee RC&D	No	Fire Ecology	Community Development	Environmental	Risk Reduction, Fire Department Assistance / Fire Adapted Communities
Ben Snyder	IDNR Division of Forestry	Yes	State	Forest Products	Fire Management	
Jenny Lesko	IDNR Division of Forestry	Yes	State	Forest Products	Fire Management	
David Allen	IDNR Division of Forestry	Yes	County	Fire Management	Other	Oak restoration, biodiversity and landscape restoration
Tom Gargrave	IDNR Division of Forestry	No	State	Forest Products	Fire Management	
Ron Zehm	NRCS	No	Federal	Other	Other	Application of conservation practices on private land for ecological purposes

Attachment E: Collaborative Letter of Commitment

Oak Ecosystem Restoration in Southern Illinois**Letter of Commitment**

We, the partners included below, pledge our support and shared stewardship of the Oak Ecosystem Restoration Project throughout southern Illinois. We embraced collective and cooperative planning, implementing and monitoring the ecological restoration of this landscape well before the creation of this potential project. Whether this proposal is funded or not, we support collaborative forest management objectives and will continue to collectively manage natural resources within this region.

Each of our organizations has a niche. The Southern Illinois Prescribed Burn Association is a landowner cooperative that helps plan, prepare, and conduct prescribed fires on private land. The Shawnee Resource Conservation and Development, Inc. is a non-profit organization dedicated to the wise use and conservation of natural resources in southern Illinois. They assist agencies and non-profit organizations with funding, planning and conducting many kinds of management treatments and programs, and outreaching to landowners and the public about such activities. The National Wild Turkey Federation has financially supported a variety of habitat improvement treatments on multiple ownerships over the years, and currently co-funds a shared wildlife biologist with the Shawnee NF and oversees several Stewardship Agreements in this landscape. The Nature Conservancy has supported conservation efforts here by purchasing and protecting land and assisting the Forest and other landowners with its stewardship. The US Fish and Wildlife Service manages land in southern Illinois and supports active management on private lands who voluntarily join its Partners for Fish and Wildlife program. The Department of Natural Resources oversees stewardship of state and private lands throughout the region. Conserving oaks are a key component of its Forest Action Plan and Wildlife Action Plan.

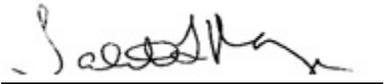
Collectively, we provide land protection, scientific discovery and knowledge transfer, planning, funding, coordination, implementing, or monitoring projects. However, much of our collaborative work has been done in short-term, limited scope projects. This Collaborative Forest Landscape Restoration Proposal represents the best chance to turn these projects into programs, to institutionalize the knowledge and relationships, and to focus ourselves to effectively implement landscape restoration in the long term. It would further the goals of each of our organizations and provide support to our local, rural economies.

Therefore, our collective group commits to continue our efforts working together to restore ecological function within this landscape. We whole-heartedly support this project and collaborative effort. We sincerely thank the Federal Advisory Committee's time to review our landscape needs and opportunities.



Jesse Reichman
Coordinator

Southern Illinois Prescribed Burn Association (SIPBA)



Tabitha Ayres
Executive Director

Shawnee Resource Conservation and Development, Inc.



Jason Lupardus
Director of Conservation Operations

National Wild Turkey Federation



Michelle Carr
Illinois State Director

The Nature Conservancy in Illinois



Tom Gargrave
Acting State Forester, Division of Forestry
Illinois Department of Natural Resources

Fiscal Year 1*	Funding Planned/Requested
Partner fund contributions on NFS lands	\$159,000
Partner in-kind contributions on NFS lands	\$86,000
Goods for Services or Revenue from GNA to be applied within CFLRP landscape	\$0
USFS Appropriated, Perm, and Trust fund contributions on NFS lands	\$1,327,000
Total non-CFLRP funding for NFS lands	\$1,572,000
CFLRP Funding Request	\$1,105,750
Total CFLRP funding for NFS lands	\$1,105,750
Partner fund contributions on non-NFS lands	\$156,800
Partner in-kind contributions on non-NFS lands	\$574,000
USFS Appropriated, Perm, and Trust fund contributions on non-NFS lands	\$200,000
Total non-CFLRP funding for non-NFS lands	\$930,800
Fiscal Year 2	Funding Planned/Requested
Partner fund contributions on NFS lands	\$161,000
Partner in-kind contributions on NFS lands	\$28,000
Goods for Services or Revenue from GNA to be applied within CFLRP landscape	\$80,000
USFS Appropriated, Perm, and Trust fund contributions on NFS lands	\$1,600,000
Total non-CFLRP funding for NFS lands	\$1,869,000
CFLRP Funding Request	\$1,600,000
Total CFLRP funding for NFS lands	\$1,600,000
Partner fund contributions on non-NFS lands	\$156,800
Partner in-kind contributions on non-NFS lands	\$559,000
USFS Appropriated, Perm, and Trust fund contributions on non-NFS lands	\$0
Total non-CFLRP funding for non-NFS lands	\$715,800
Fiscal Year 3	Funding Planned/Requested
Partner fund contributions on NFS lands	\$65,000
Partner in-kind contributions on NFS lands	\$45,000
Goods for Services or Revenue from GNA to be applied within CFLRP landscape	\$100,000
USFS Appropriated, Perm, and Trust fund contributions on NFS lands	\$1,735,000
Total non-CFLRP funding for NFS lands	\$1,945,000
CFLRP Funding Request	\$1,635,485
Total CFLRP funding for NFS lands	\$1,635,485
Partner fund contributions on non-NFS lands	\$671,500
Partner in-kind contributions on non-NFS lands	\$584,000
USFS Appropriated, Perm, and Trust fund contributions on non-NFS lands	\$0
Total non-CFLRP funding for non-NFS lands	\$1,255,500
Fiscal Year 4	Funding Planned/Requested

Partner fund contributions on NFS lands	\$65,000
Partner in-kind contributions on NFS lands	\$45,000
Goods for Services or Revenue from GNA to be applied within CFLRP landscape	\$120,000
USFS Appropriated, Perm, and Trust fund contributions on NFS lands	\$1,780,000
Total non-CFLRP funding for NFS lands	\$2,010,000
CFLRP Funding Request	\$1,687,172
Total CFLRP funding for NFS lands	\$1,687,172
Partner fund contributions on non-NFS lands	\$88,500
Partner in-kind contributions on non-NFS lands	\$634,000
USFS Appropriated, Perm, and Trust fund contributions on non-NFS lands	\$0
Total non-CFLRP funding for non-NFS lands	\$722,500
Fiscal Years 5-10	Funding Planned/Requested
Partner fund contributions on NFS lands	\$390,000
Partner in-kind contributions on NFS lands	\$270,000
Goods for Services or Revenue from GNA to be applied within CFLRP landscape	\$250,000
USFS Appropriated, Perm, and Trust fund contributions on NFS lands	\$10,680,000
Total non-CFLRP funding for NFS lands	\$11,590,000
CFLRP Funding Request	\$10,996,982
Total CFLRP funding for NFS lands	\$10,996,982
Partner fund contributions on non-NFS lands	\$531,000
Partner in-kind contributions on non-NFS lands	\$3,354,000
USFS Appropriated, Perm, and Trust fund contributions on non-NFS lands	\$0
Total non-CFLRP funding for non-NFS lands	\$3,885,000
Please provide an estimate of any funding needed for NEPA and environmental compliance in support of the CFLRP	
Total non-CFLRP Funding for NFS Lands	\$18,986,000
Total non-CFLRP Funding for non-NFS Lands	\$7,509,600
Total CFLRP Funding Request over 10 year period	\$17,025,389

ATTACHMENT G – Forest Leadership Letter of Commitment

To Whom It May Concern,

The Oak Ecosystem Restoration is a large scale restoration project that builds upon collaborative efforts of Federal, State and NGO partnerships, who share objectives, to address successional changes and forest health concerns over fragmented ownerships in southern Illinois. This collaboration has enabled the partners to leverage funding and work on multiple projects across private, state and federal lands creating momentum to address these issues across the larger landscape.

Integrated project objectives promote ecosystem integrity of keystone oak forests. Prescribed fire is an important tool for the restoration and reduction of wildland fire risk in a landscape that has high ownership fragmentation and values at risk. The wood by-products are expected to stimulate the local economy and provide ecosystem benefits for TES and a suite of game and non-game wildlife.

Collaborative based monitoring will inform not only leadership and partners of the project success but also be a circular loop of knowledge transfer to the scientific community in which the implementation strategies are derived.

I support the Oak Ecosystem Restoration Project in southern Illinois.



Forest Supervisor
Shawnee National Forest

Shawnee National Forest

Oak Ecosystem Restoration in Southern Illinois

Appendix A;
Collaborative Forest Landscape Restoration Program Supplemental
Documents

Appendix A, Ecological Current Conditions and Values at Risk

Greg Nowacki, Ph.D.

USFS, R9 Ecologist

Oak ecosystems have dominated southern Illinois over millennia (Parker and Ruffner 2004, Fralish 2004). Maintained by frequent surface burning, these were often open woodlands comprised of a single strata of trees (Hanberry and Abrams 2018). The lack of mid and understories allowed light to filter down to the forest floor fostering a highly diverse and robust ground flora layer of shrubs, forbs, and grasses. Oak is considered a keystone species, having a large disproportional effect on other species and the ecosystem as a whole (Fralish 2004). As a consequence, any disruption to oak populations and their historic open structures would, in turn, ripple across the entire ecosystem and component species. This includes a myriad of wildlife species that have coevolved with and are dependent on oaks (McShea et al. 2007).

Prehistoric fire regimes were mainly driven by American Indian ignitions as lightning-caused fires are negligible in the region (Ruffner and Groninger 2006). The prominence of cultural burning continued with early European settlement as fire was abundantly used for land clearing and maintenance (Parker and Ruffner 2004, Fralish and McArdle 2009). However, fire suppression and reductions in certain land-use practices (e.g., logging, grazing) over the past 70+ years have had cascading negative effects on oak-dominated systems (van de Gevel and Ruffner 2007). To wit, open systems converted to closed-canopied systems, dense mid and understories developed comprised largely of fire-sensitive, shade-tolerant trees, and the virtual elimination of native, heliophilic (sun-loving) ground flora due to deep shade. This scenario, dubbed mesophication, has led to cool, humid microclimates in the understory and moist, compact litter beds largely devoid of fine (herbaceous) fuels – making conditions largely unreceptive to fire today (Nowacki and Abrams 2008). The magnitude of this oak-to-mesophyte (maple, beech, cherry) transition has been enormous, occurring ubiquitously across the eastern United States. This phenomenon has unfolded swiftly in Illinois, where a 4,000% increase in maple-beech has been reported from 1962 to 1985 (Iverson et al. 1989). Mesophication pressures have been particularly severe in southern Illinois, so much that it might be the first area within the Central Hardwoods Region to fully convert to mesophytic forests (Fralish and McArdle 2009; Helmig and Fralish 2012).

Oak dynamics have been extensively studied and documented at the site level in southern Illinois (Fralish 1976, 1988, 1994). Aspect and topographic position exert strong control on community composition, structure, and productivity throughout unglaciated portions of Mid-America (Iverson et al. 2019) and have been used to define ecological sites locally. Ecological

sites serve as a basis to evaluate vegetation trends over time by comparing presettlement to present-day data. Within the Shawnee Hills (Fig. 1), tree density and basal area increased whereas mean tree diameter decreased across all sites since the early 1800s (Fralish et al. 1991; summarized in Table 4 of Nowacki and Abrams 2008). Here, a compositional shift towards mesophytes (principally maple and beech) occurred on mesic, low topographic positions (low north slopes and stream terraces). Similar trends were found in the neighboring Ozark Hills (Ozark Plateau in Fig. 1; Fralish and McArdle 2009). Here, when comparing presettlement overstories with present-day understories, early successional xeric (oak) species were projected to decrease and late successional mesic (maple and beech) species increase on all upland sites (Table 1). Here too, when comparing presettlement vs. present-day overstory structures, tree densities have increased whereas average tree sizes have decreased.

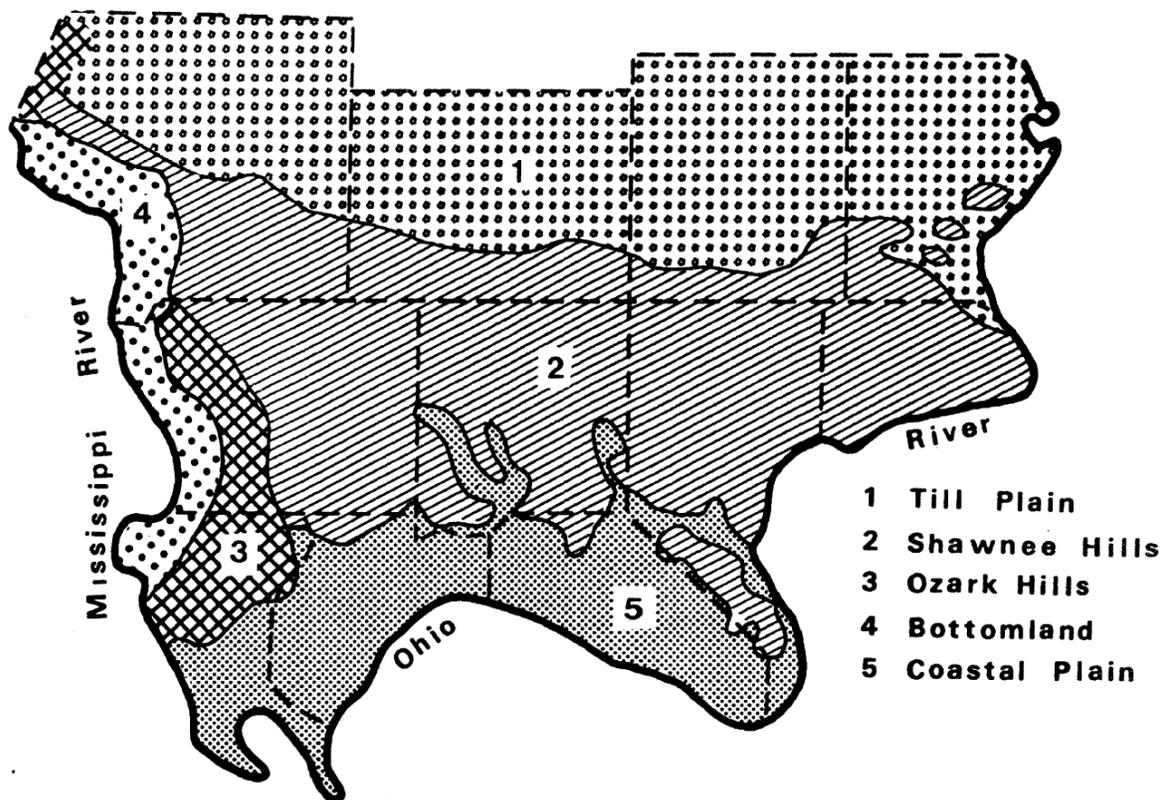


Figure 1. Physiographic provinces of southern Illinois (Fralish 1988).

Table 1. Compositional and structural shifts across six Landtype Phases in the Illinois Ozark Hills over time (from Fralish and McArdle 2009). For composition, importance values within a column represent presettlement overstory (1806-7), present overstory, and present understory conditions, respectively. For structure, only values for presettlement overstory and present overstory conditions were used. Cells colored yellow represent decreases, green represent increases, no color = little or no change.

	Southwest Slope	South Slope	Broad Ridgetop	North Slope	Low Slope	Alluvial Terrace
Early Successional Xeric Species	81→90→47	81→89→30	78→94→34	74→64→19	40→68→25	14→22→16
Late Successional Mesic Species	19→10→51	18→11→56	22→6→65	26→36→77	50→25→73	64→22→63
Hydric Species	0→0→3	1→0→14	0→0→1	0→0→5	10→6→2	23→56→22
Trees/ha	299→493	194→468	201→560	198→485	264→359	262→557
Mean Diameter (cm)	33→23	45→23	44→24	41→27	46→33	40→28
Stand Basal Area (m ² /ha)	26→20	27→20	31→25	26→27	39→30	32→34

In summary, tree communities have changed at the site level in southern Illinois consistent with the mesophication hypothesis. Stand densification is occurring across all sites, mainly through increases of small-diameter stems (as expressed in the reduction in average tree diameters). Although oak is still abundant in overstories, sometimes exceeding presettlement importance values, today's structural conditions (high tree densities, multi-canopies of late successional competitors with high leaf area, etc.) clearly inhibit oak regeneration. It has been shown that oak stands that develop a mesophytic understory experience a 90% reduction in photosynthetically active radiation at ground level (Fralish 2004). Furthermore, these deep-shade conditions have major negative impacts on the ground flora as most plant associates are physiologically unable to exist under such low light levels (Fralish 1997).

Surface fire is a unique disturbance agent as it controls stand development from below (tree regeneration). As such, its effects cannot be easily substituted by other disturbance types. As a matter of fact, other disturbance factors that historically co-occurred with past fire now only exacerbate mesophication trends today (Holzmueller et al. 2012). Wind, ice-storms, insects and

diseases normally affect stands from above, disproportionately killing large overstory trees, which effectively releases pre-existing understory trees. Hence, in an environment without fire, these companion disturbances now only accelerate succession to mesophytic dominance (Abrams and Nowacki 1992).

Ecosystem restoration is the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed (Day et al. 2005). A key piece of restoration is emulating historic disturbance regimes that led to the origin and long-term maintenance of ecosystems (Engstrom et al. 1999; Egan and Howell 2001; Wiens et al. 2012). With its strong association and dependence on past fire, clearly the road to oak ecosystem restoration involves silvicultural activities that includes prescribed burning. However, it is becoming increasingly apparent that burning alone is ineffective for oak restoration as systems have “mesophied” to such a degree that it will take decades of burning to have a positive impact. For instance in northeast Illinois, 20+ years of annual prescribed burning has failed to produce the open canopy conditions and high light availability required for successful oak recruitment (Carter et al. 2015). To expedite the recovery process and retain existing native ground flora, burning should be coupled with canopy thinning. Thinning increases the light environment whereas fire serves as a species filter – these disturbances when coupled benefit oaks and native associates while discriminating against fire-sensitive, mesophytic competitors (Carril 2009). Kinkead et al. (2013) found maximum woodland ground cover response with a combined harvest-burn treatment (45%; 22x over control) compared to just burning (16%; 7x over control) or harvest (12%; 6x over control) alone.

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Appendix A, National Forest Socioeconomic Indicators

Shawnee National Forest

Selected Geographies:

Hardin County, IL; Saline County, IL; Gallatin County, IL; Pope County, IL; Massac County, IL; Pulaski County, IL; Williamson County, IL; Jackson County, IL; Johnson County, IL; Union County, IL; Alexander County, IL

Benchmark Geography:

U.S.

Report Date:

January 21, 2020

Headwaters Economics

National Forest Socioeconomic Indicators

The National Forest Socioeconomic Indicators reporting tool makes socioeconomic data accessible and useful for Forest Service planning. The reporting tool is free and an ideal solution for Forest NEPA project documentation at all levels, from forest plans to categorical exclusions to large landscapes. The tool delivers county and Forest-level socioeconomic indicators that are defensible (accurate, relevant, and reliable) and establish appropriate context for monitoring National Forest contributions and impacts on surrounding communities.

For more detailed reports, try these other tools by Headwaters Economics:

Populations at Risk

Populations at risk are more likely to experience adverse social, health, and economic outcomes due to their race, age, gender, poverty status, and other socioeconomic measures.

Free and easy-to-use

Quickly create reports of current socioeconomic data in convenient formats, including Excel and PDF.

Available nation-wide

Build reports for geographies from states to census tracts. Aggregate multiple geographies into custom study areas.

Updated continuously

Make use of reliable, published government data. The Populations at Risk report always shows the latest available data and trends.

headwaterseconomics.org/par

Economic Profile System

The Economic Profile System (EPS) generates reports on a range of topics including local economics, demographics, and income sources while providing historic context and trends.

Free and easy-to-use

Like Populations at Risk, EPS is free, updated continuously, and easy-to-use.

Integrates federal data sources

Access data from many sources, including the Census, Bureaus of Economic Analysis, Labor Statistics, and others.

Widely used

For more than a decade, EPS has been used by researchers, economic developers, grant writers, elected officials, cities, planners, federal agencies, reporters, and others.

headwaterseconomics.org/eps

National Forest Socioeconomic Indicators

County Region

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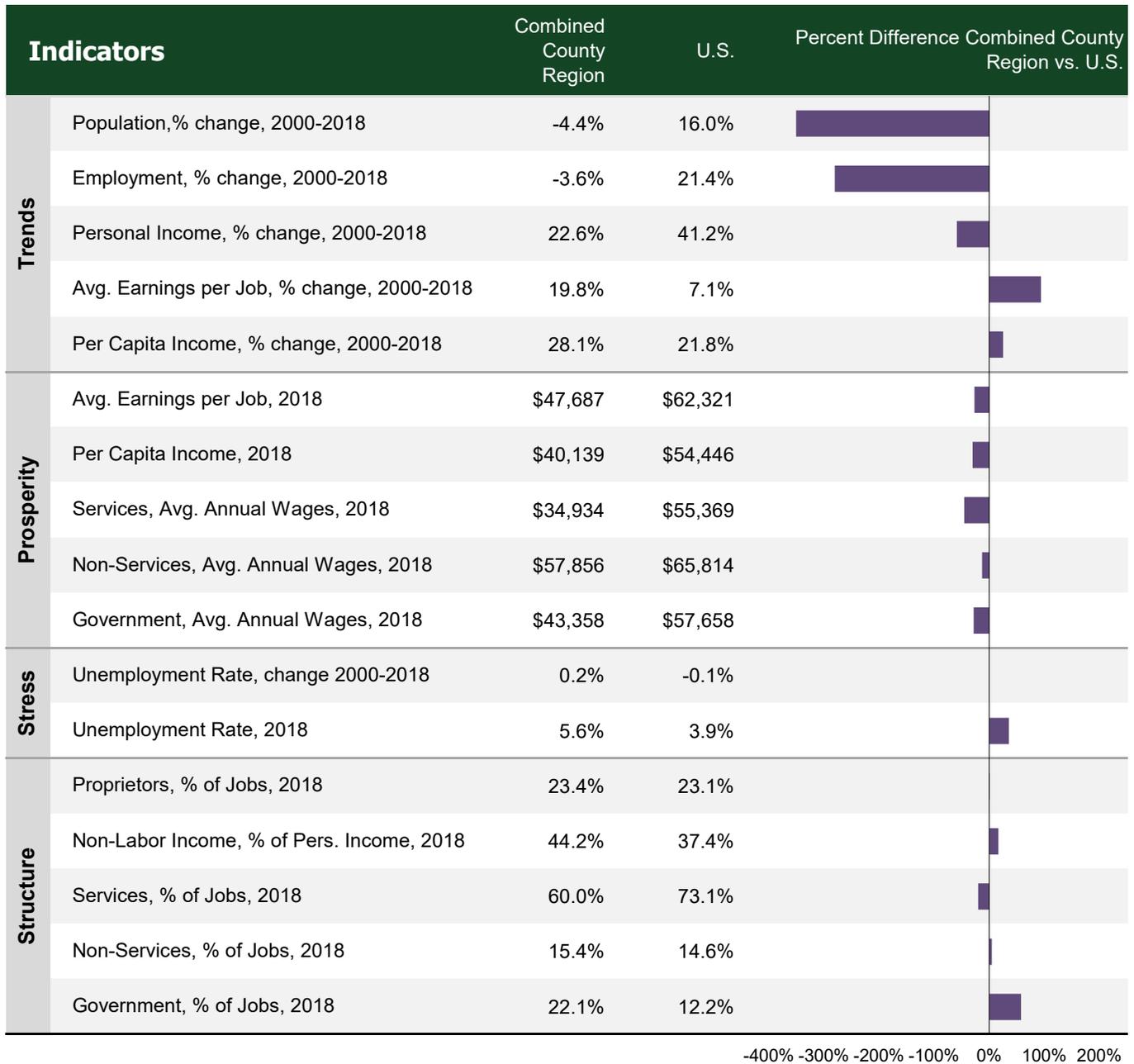
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Click the links above for quick access to report sections.

National Forest Socioeconomic Indicators

Combined County Region

Region Benchmarks



CITATION: U.S. Department of Commerce. 2019. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.; U.S. Department of Labor. 2019. Bureau of Labor Statistics, Local Area Unemployment Statistics, Washington, D.C.; U.S. Department of Labor. 2019. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, Washington, D.C.

National Forest Socioeconomic Indicators

Combined County Region

Region Benchmarks

What do we measure on this page?

This page shows a quick comparison for indicators of economic performance that highlight how the region differs from the selected benchmark geography.

The percent, or relative, difference between the selected geography and the benchmark is calculated by dividing the difference between the values by the arithmetic mean of the values.

The term "benchmark" in this report should not be construed as having the same meaning as in the National Forest Management Act (NFMA).

Why is it important?

These indicators can be analyzed to get a comprehensive view of the economy.

When considering the benefits of growth, it is important to distinguish between standard of living (such as earnings per job and per capita income) and quality of life (such as leisure time, crime rate, and sense of well-being).

In some cases it may be appropriate to compare a local economy to the U.S. economy. In most cases, however, it will be more useful to compare county or regional economies with other similar county or regional economies. For example, if the region being analyzed is rural, it should be compared to similar regions because comparing against the U.S. will include data from large metropolitan areas.

National Forest Socioeconomic Indicators

Combined County Region

County Benchmarks

Indicators	Hardin County, IL	Saline County, IL	Gallatin County, IL	Pope County, IL	Massac County, IL	Pulaski County, IL	Williamson County, IL	Jackson County, IL	Johnson County, IL	Union County, IL	Alexander County, IL	Combined County Region	U.S.
Population, 2018	3,910	23,906	5,058	4,212	14,080	5,463	67,056	57,419	12,456	16,841	6,060	216,461	327,167,434
Trends													
Population % change, 1970-2018	-20.4%	-7.7%	-32.1%	9.0%	2.0%	-37.7%	36.2%	4.1%	65.2%	4.3%	-49.5%	5.7%	60.5%
Employment % change, 1970-2018	-27.5%	26.2%	-39.5%	42.6%	-1.4%	-10.5%	116.3%	56.7%	57.8%	7.2%	-61.9%	42.3%	119.9%
Personal Income % change, 1970-2018	64.8%	71.9%	43.4%	139.8%	96.7%	35.8%	174.2%	111.5%	213.6%	104.0%	0.8%	113.2%	222.1%
Prosperity													
Unemployment rate, 2018	7.8%	6.5%	5.8%	6.1%	7.0%	6.2%	5.1%	4.6%	7.8%	6.5%	7.9%	5.6%	3.9%
Average earnings per job, 2018 (2018 \$s)	\$39,676	\$43,701	\$54,404	\$29,881	\$45,648	\$53,065	\$47,672	\$52,526	\$35,361	\$39,993	\$47,056	\$47,687	\$62,321
Per capita income, 2018 (2018 \$s)	\$37,155	\$39,687	\$44,602	\$30,306	\$38,360	\$36,146	\$44,509	\$37,284	\$35,956	\$42,760	\$34,713	\$40,139	\$54,446
Economy													
Non-Labor % of personal income, 2018	52.5%	48.8%	45.7%	51.8%	50.6%	54.6%	38.7%	44.4%	41.6%	46.5%	59.0%	44.2%	37.4%
Services % of employment, 2018	43.9%	66.6%	35.3%	28.3%	64.1%	30.9%	67.8%	56.7%	46.7%	59.3%	40.2%	50.0%	73.1%
Government % of employment, 2018	16.6%	16.0%	12.7%	18.4%	19.6%	36.2%	15.7%	32.1%	23.2%	17.8%	19.7%	22.1%	12.2%
Use Sectors*													
Timber % of private employment, 2016	0.0%	-0.5%	-0.7%	0.0%	0.0%	0.0%	-0.0%	-0.2%	-0.6%	-2.2%	-4.7%	-0.4%	0.6%
Mining % of private employment, 2016	14.3%	10.2%	-1.1%	0.0%	0.0%	5.0%	-0.7%	-0.3%	-2.8%	-0.4%	-5.6%	-2.0%	0.5%
Fossil fuels (oil, gas, & coal), 2016	-1.7%	-19.3%	-1.1%	0.0%	0.0%	0.0%	-0.0%	0.0%	0.0%	0.0%	0.0%	-1.2%	0.4%
Other mining, 2016	12.4%	-0.2%	0.0%	0.0%	-0.5%	-0.0%	-0.7%	-0.5%	-2.5%	-0.4%	-5.6%	-0.9%	0.3%
Agriculture % of employment, 2018	10.4%	3.8%	12.2%	24.6%	8.1%	8.0%	1.6%	2.0%	13.3%	8.3%	7.9%	4.0%	1.3%
Travel & Tourism % of priv. emp., 2016	6.8%	-15.7%	9.2%	-12.3%	-28.9%	-8.2%	-15.7%	-21.4%	-23.7%	-13.4%	-8.8%	-17.7%	15.8%
Federal Land													
Federal Land % total land ownership	24.6%	5.8%	5.5%	38.9%	1.8%	8.3%	15.7%	13.9%	8.6%	15.7%	18.8%	14.5%	27.5%
Forest Service %	24.6%	5.8%	5.5%	38.9%	1.8%	8.3%	0.1%	13.2%	8.3%	14.2%	17.2%	11.8%	8.4%
BLM %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.5%
Park Service %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.4%
Military %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%
Other %	0.0%	0.0%	0.0%	0.0%	0.0%	8.3%	15.6%	0.7%	0.3%	1.5%	1.6%	2.7%	4.1%
Fed. payments % of gov. revenue, 2012	2.6%	0.3%	0.9%	6.3%	0.1%	0.0%	0.0%	0.3%	0.9%	1.1%	1.5%	0.6%	
Development													
Residential land area % change, 2000-2010	-1.6%	18.9%	4.6%	7.9%	32.9%	5.5%	27.9%	17.0%	58.6%	30.4%	1.1%	23.7%	12.3%
Wildland-Urban Interface % developed, 2010	na	na	na	na	na	na	na	na	na	na	na	na	16.3%

*Data for timber, mining, and travel and tourism-related are from County Business Patterns which excludes proprietors. Data for agriculture are from Bureau of Economic Analysis which includes proprietors.

County Benchmarks

What do we measure on this page?

This page shows a quick comparison for indicators of economic performance and land characteristics. The table allows you to compare performance and characteristics between counties that make up the region and selected benchmark geography.

Trends: Refers to general indicators of economic well-being (population, employment, and real personal income) measured over time.

Prosperity: Refers to common indicators of individual well-being or hardship (unemployment, average earnings per job, and per capita income).

Economy: Refers to three significant areas of the economy: non-labor income (e.g., government transfer payments, and investment and retirement income), and services and government employment.

Use Sectors: Refers to components of the economy (commodity sectors including timber, mining and agriculture, and industries that include travel and tourism) that have the potential for being associated with the use of public lands.

Federal Land: Refers to the amount and type of federal land ownership, and the dependence of county governments on payments related to federal lands. Federal land payments (e.g., PILT) compensate state and local governments for non-taxable federal lands within their borders, and can be an important source of government revenue.

Development: Refers to the residential development of private lands, including the wildland-urban interface. The wildland-urban interface data are available and reported only for the 11 western public lands states (not including Alaska and Hawaii).

Some data are withheld by the federal government to avoid the disclosure of potentially confidential information. Headwaters Economics uses a standardized method to estimate these data gaps.^{1,2} Estimated values are indicated with tildes (~) and gray text.

Why is it important?

Land management actions may affect areas differently, depending on demographics, the makeup of the economy, and land use characteristics.

Use of this table is to explore similarities and differences within the counties that make up the region.

National Forest Socioeconomic Indicators

Combined County Region

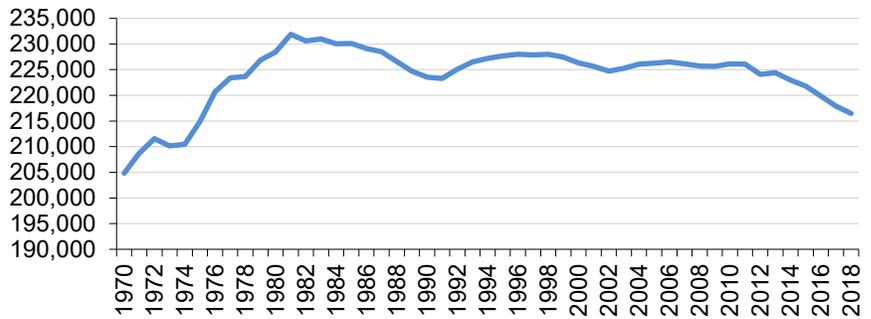
Trends in Population, Employment, and Personal Income

	1970	1980	1990	2000	2018	Change 2000-2018
Population	204,825	228,448	223,516	226,325	216,461	-9,864
Employment (full & part-time jobs)	77,453	89,448	98,518	114,301	110,217	-4,084
Personal Income (thous. of 2018 \$s)	4,075,937	5,400,239	6,127,605	7,088,960	8,688,630	1,599,670

Population and personal income are reported by place of residence, and employment by place of work on this page.

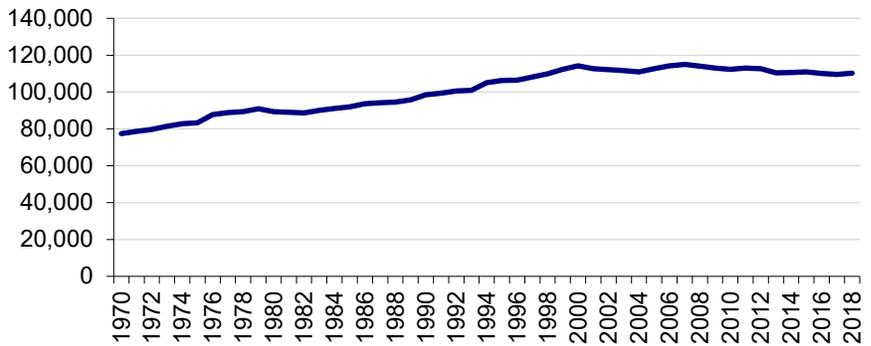
Population Trends, Combined County Region

- From 1970 to 2018, population grew from 204,825 to 216,461 people, a 6% increase.



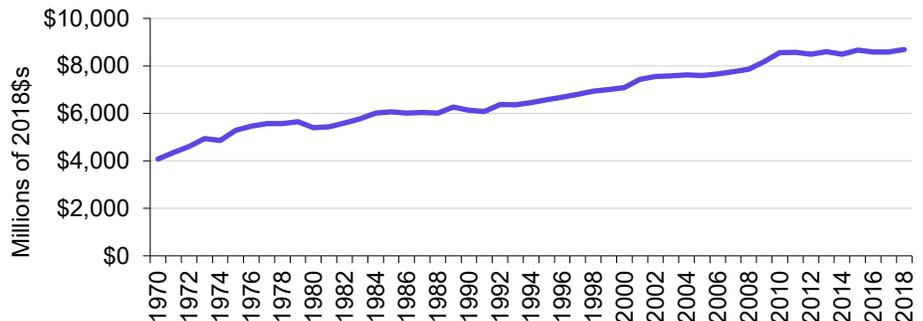
Employment Trends, Combined County Region

- From 1970 to 2018, employment grew from 77,453 to 110,217, a 42% increase.



Personal Income Trends, Combined County Region

- From 1970 to 2018, personal income grew from \$4,075.9 million to \$8,688.6 million, (in real terms), a 113% increase.



Data Sources: U.S. Department of Commerce. 2019. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.

Trends in Population, Employment, and Personal Income

What do we measure on this page?

This page describes trends in population, employment, and real personal income.

Population: The total number of people by place of residence.

Employment: All full and part-time workers, wage and salary jobs (employees), and proprietors (the self-employed) reported by place of work.

Personal Income: Income from wage and salary employment and proprietors' income (labor earnings), as well as non-labor income (dividends, interest, and rent, and transfer payments) reported by place of residence. All income figures in this report are shown in real terms (i.e., adjusted for inflation). Subsequent sections of this report define labor earnings and non-labor income in more detail.

Why is it important?

Long-term, steady growth of population, employment, and real personal income is generally an indication of a healthy, prosperous economy. Erratic growth, no-growth, or long-term decline in these indicators are generally an indication of a struggling economy.

Growth can benefit the general population of a place, especially by providing economic opportunities, but it can also stress communities, and lead to income stratification. When considering the benefits of growth, it is important to distinguish between standard of living (such as earnings per job and per capita income) and quality of life (such as leisure time, crime rate, and sense of well-being).

National Forest Socioeconomic Indicators

Combined County Region

Components of Population Change

	Change 2000-2018
Population Decline, 2000-2018	-9,890
Average Annual Population Change (Natural Change & Net Migration)	-640
From Natural Change	89
Births	2,572
Deaths	2,482
From Net Migration	-652
International Migration	288
Domestic Migration	-940
From Residual	-77

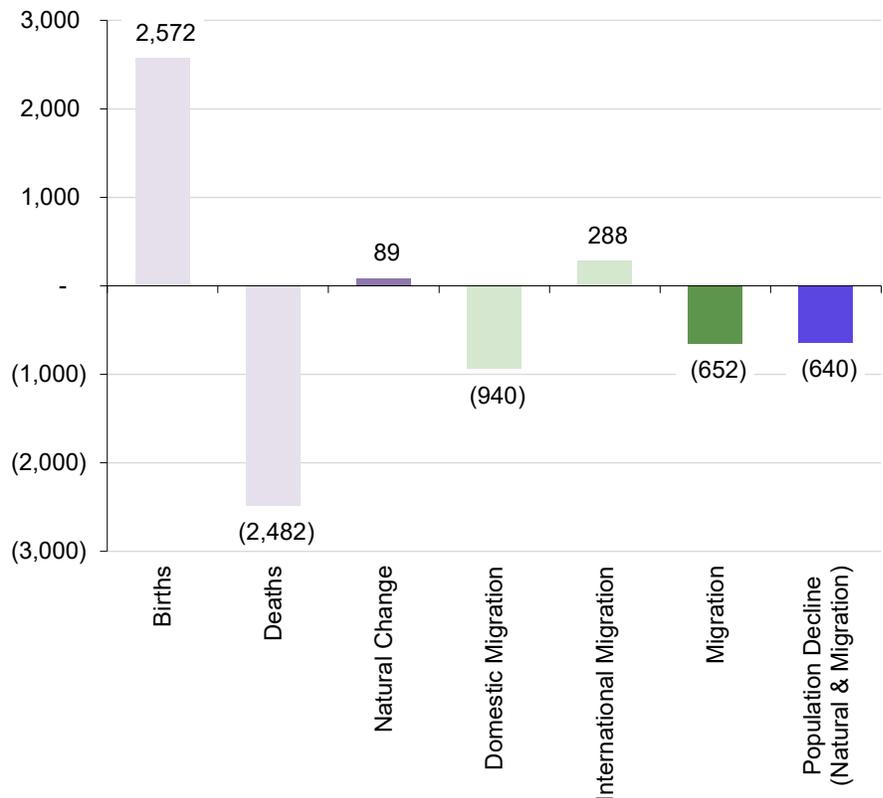
Factors Contributing to Population Change*, 2000-2018

Natural Change	10.9%
Net Migration	79.7%
Residual	9.4%

* The absolute value of the individual component of population change divided by the sum of the absolute values of the three components (natural change, net migration, and the residual).

Average Annual Components of Population Change, Combined County Region, 2000-2018

- From 2000 to 2018, population shrank by 9,890 people, a 4% decrease.
- From 2000 to 2018, natural change contributed to 11% of population decline.
- From 2000 to 2018, migration contributed to 80% of population decline.



The Census Bureau makes a minor statistical correction, called a "residual" which is shown in the table above, but omitted from the figure. Because of this correction, natural change plus net migration may not add to total population change in the figure.

Data Sources: U.S. Department of Commerce. 2019. Census Bureau, Population Division, Washington, D.C.

Components of Population Change

What do we measure on this page?

This page describes various components of population change and total population growth (or decline). Total population growth (or decline) is the sum of natural change (births & deaths) and migration (international & domestic).

The Bureau of the Census makes a minor statistical correction, called a "residual." This is defined by the Bureau of the Census as resulting from "two parts of the estimates process: 1) the application of national population controls to state and county population estimates and 2) the incorporation of accepted challenges and special censuses into the population estimates. The residual represents change in the population that cannot be attributed to any specific demographic component of population change."

Why is it important?

It is useful to understand the components of population change because it offers insight into the causes of growth or decline and it helps highlight important areas of inquiry. For example, if a large portion of population growth is from in-migration, it would be helpful to understand what the drivers are behind this trend, including whether people are moving to the area for jobs, quality of life, or both. If a large portion of population decline is from out-migration, it would similarly be important to understand the reasons, including the loss of employment in specific industries, youth leaving for education or new opportunities, and elderly people leaving for better medical facilities.^{3, 4}

National Forest Socioeconomic Indicators

Combined County Region

Employment by Industry

	2001	2005	2010	2018	Change 2010-2018
Total Employment (number of jobs)	112,601	112,679	112,405	110,217	-2,188
Non-services related	~20,426	~19,575	~17,415	~16,965	-450
Farm	5,880	4,600	4,644	4,369	-275
Forestry, fishing, & ag. services	~172	~179	~176	~180	~4
Mining (including fossil fuels)	~1,661	~2,248	~2,352	~909	-1,443
Construction	~6,050	~6,098	~5,897	~5,410	-487
Manufacturing	~6,663	~6,450	~4,346	~6,097	~1,751
Services related	~59,547	~61,696	~63,422	~66,079	~2,657
Utilities	~572	~546	~530	~565	~35
Wholesale trade	~2,162	~1,819	~1,586	~1,602	~16
Retail trade	~12,620	13,067	12,046	~11,663	-383
Transportation and warehousing	3,112	~3,256	~3,294	~3,682	~388
Information	~1,412	~1,426	~1,320	~1,127	-193
Finance and insurance	~4,179	~4,222	~4,947	~5,116	~169
Real estate and rental and leasing	~2,112	~2,520	~2,811	~2,813	~2
Professional and technical services	~3,133	~3,376	~3,465	~3,785	~320
Management of companies and enterprises	~98	~126	~163	~135	~28
Administrative and waste services	~3,814	~3,823	~4,476	~4,669	~193
Educational services	~662	~700	~780	~767	~13
Health care and social assistance	~11,309	~11,828	~13,166	~13,876	~710
Arts, entertainment, and recreation	~1,165	~1,075	~1,198	~1,434	~236
Accommodation and food services	~6,780	~7,389	~7,304	~8,282	~978
Other services, except public administration	~6,417	~6,523	~6,336	~6,563	~227
Government	27,770	26,917	27,489	24,375	-3,114
Percent of Total					% Change 2010-2018
Total Employment					-1.9%
Non-services related	~18.1%	~17.4%	~15.5%	~15.4%	-2.6%
Farm	5.2%	4.1%	4.1%	4.0%	-5.9%
Forestry, fishing, & ag. services	~0.2%	~0.2%	~0.2%	~0.2%	~2.3%
Mining (including fossil fuels)	~1.5%	~2.0%	~2.1%	~0.8%	-61.4%
Construction	~5.4%	~5.4%	~5.2%	~4.9%	-8.3%
Manufacturing	~5.9%	~5.7%	~3.9%	~5.5%	~40.3%
Services related	~52.9%	~54.8%	~56.4%	~60.0%	~4.2%
Utilities	~0.5%	~0.5%	~0.5%	~0.5%	~6.6%
Wholesale trade	~1.9%	~1.6%	~1.4%	~1.5%	~1.0%
Retail trade	~11.2%	11.6%	10.7%	~10.6%	~3.2%
Transportation and warehousing	2.8%	~2.9%	~2.9%	~3.3%	~11.8%
Information	~1.3%	~1.3%	~1.2%	~1.0%	~14.6%
Finance and insurance	~3.7%	~3.7%	~4.4%	~4.6%	~3.4%
Real estate and rental and leasing	~1.9%	~2.2%	~2.5%	~2.6%	~0.1%
Professional and technical services	~2.8%	~3.0%	~3.1%	~3.4%	~9.2%
Management of companies and enterprises	~0.1%	~0.1%	~0.1%	~0.1%	-17.2%
Administrative and waste services	~3.4%	~3.4%	~4.0%	~4.2%	~4.3%
Educational services	~0.6%	~0.6%	~0.7%	~0.7%	~1.7%
Health care and social assistance	~10.0%	~10.5%	~11.7%	~12.6%	~5.4%
Arts, entertainment, and recreation	~1.0%	~1.0%	~1.1%	~1.3%	~19.7%
Accommodation and food services	~6.0%	~6.6%	~6.5%	~7.5%	~13.4%
Other services, except public administration	~5.7%	~5.8%	~5.6%	~6.0%	~3.6%
Government	24.7%	23.9%	24.5%	22.1%	-11.3%

All employment data are reported by *place of work*. Estimates for data that were not disclosed are indicated with tildes (~) and gray text.

Data Sources: U.S. Department of Commerce. 2019. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.

National Forest Socioeconomic Indicators

Combined County Region

Employment by Industry

What do we measure on this page?

This page describes recent employment change by industry from 2001 to 2008. Industries are organized according to three major categories: non-services related, services related, and government. Employment includes wage and salary jobs and proprietors. The employment data are organized according to the North American Industrial Classification System (NAICS) and reported by place of work.⁵

Some data are withheld by the federal government to avoid the disclosure of potentially confidential information. Headwaters Economics uses a standardized method to estimate these data gaps. Estimated values are indicated with tildes (~) and gray text.^{1,2}

Why is it important?

In most geographies the majority of new job growth in recent years has taken place in services related industries.^{6, 10}

Services related industries encompass a wide variety of high and low-wage occupations ranging from jobs in accommodation and food services to professional and technical services.

It can be useful to ask what factors are driving a shift in industry makeup and competitive position. It may be the case that the economic role and contribution of public lands have changed along with broader economic shifts in many geographies.^{7, 8, 9}

The terms non-services related and services related are not terms used by the U.S. Department of Commerce. They are used in these pages to help organize the information into easy-to-understand categories.¹¹

National Forest Socioeconomic Indicators

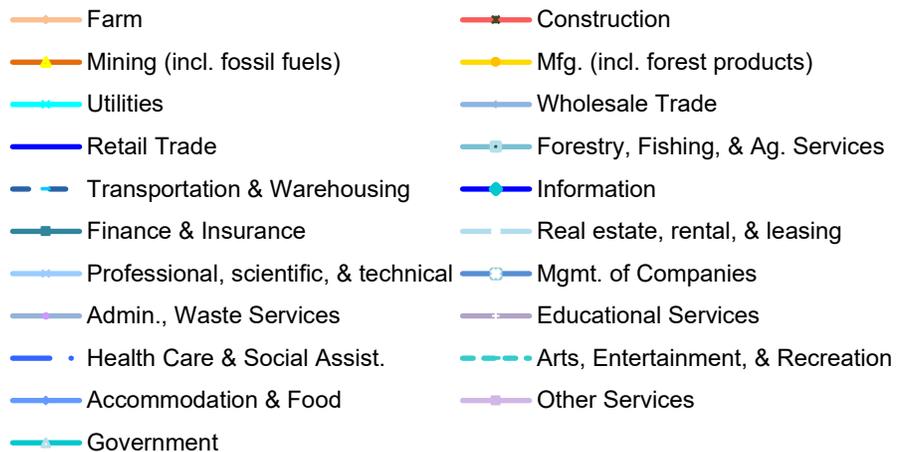
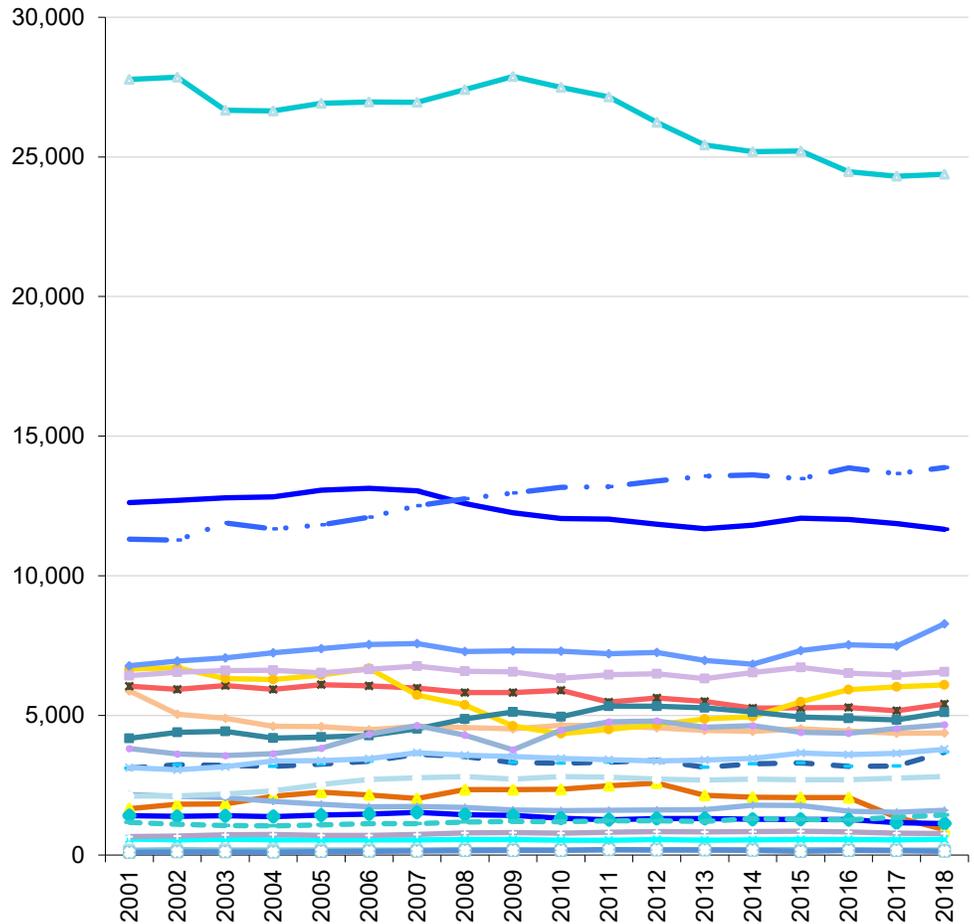
Combined County Region

Employment by Industry

Employment by Industry, Combined County Region

- In 2018 the three industry sectors with the largest number of jobs were government (24,375 jobs), health care and social assistance (13,876 jobs), and retail trade (11,663 jobs).

- From 2001 to 2018, the three industry sectors that added the most new jobs were health care and social assistance (2,567 new jobs), accommodation and food services (1,502 new jobs), and finance and insurance (937 new jobs).



Data Sources: U.S. Department of Commerce. 2019. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.

National Forest Socioeconomic Indicators

Combined County Region

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National Forest Socioeconomic Indicators

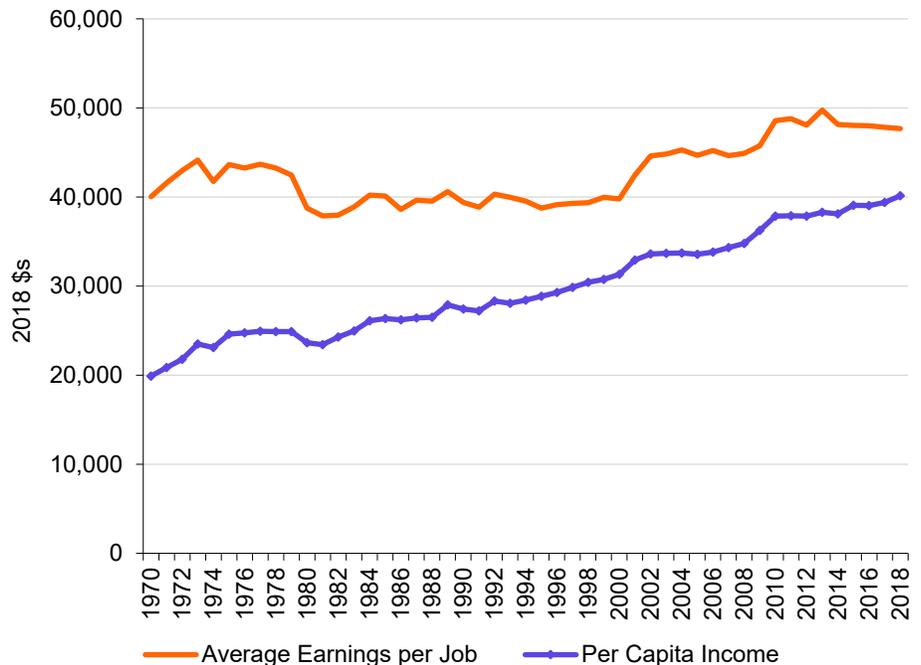
Combined County Region

Average Earnings per Job and Per Capita Income

	1970	1980	1990	2000	2018	Change 2000-2018
Average Earnings per Job, 2018 \$s	\$40,046	\$38,756	\$39,405	\$39,794	\$47,687	\$7,893
Per Capita Income, 2018 \$s	\$19,900	\$23,639	\$27,415	\$31,322	\$40,139	\$8,817
Percent Change						% Change 2000-2018
Average Earnings per Job						19.8%
Per Capita Income						28.1%

Average Earnings per Job & Per Capita Income, Combined County Region

- From 1970 to 2018, average earnings per job grew from \$40,046 to \$47,687 (in real terms), a 19% increase.
- From 1970 to 2018, per capita income grew from \$19,900 to \$40,139 (in real terms), a 102% increase.



Data Sources: U.S. Department of Commerce. 2019. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.

National Forest Socioeconomic Indicators

Combined County Region

Average Earnings per Job and Per Capita Income

What do we measure on this page?

This page describes how average earnings per job and per capita income (in real terms) have changed over time.

Average Earnings per Job: This is a measure of the compensation of the average job. It is total earnings divided by total employment. Full-time and part-time jobs are counted at equal weight. Employees, sole proprietors, and active partners are included.

Per Capita Income: This is a measure of income per person. It is total personal income (from labor and non-labor sources) divided by total population.

Why is it important?

Average earnings per job is an indicator of the quality of local employment. A higher average earnings per job indicates that there are relatively more high-wage occupations. It can be useful to consider earnings against local cost of living indicators.^{12, 13}

There are a number of reasons why average earnings per job may decline. These include: 1) more part-time and/or seasonal workers entering the workforce; 2) a rise in low-wage industries, such as tourism-related sectors; 3) a decline of high-wage industries, such as manufacturing; 4) more lower-paid workers entering the workforce; 5) the presence of a university with increasing an enrollment of relatively low-wage students; 6) an influx of workers with low education levels that are paid less; 7) the in-migration of semi-retired workers who work part-time and/or seasonally; and 8) an influx of people who move to an area for quality of life rather than profit-maximizing reasons.¹⁴

Per capita income is considered one of the most important measures of economic well-being. However, this measure can be misleading. Per capita income is total personal income divided by population. Because total personal income includes non-labor income sources (dividends, interest, rent and transfer payments), it is possible for per capita income to be relatively high due to the presence of retirees and people with investment income.¹⁵ And because per capita income is calculated using total population and not the labor force as in average earnings per job, it is possible for per capita income to be relatively low when there are a disproportionate number of children and/or elderly people in the population.

Data Sources: U.S. Department of Commerce. 2019. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.

National Forest Socioeconomic Indicators

Combined County Region

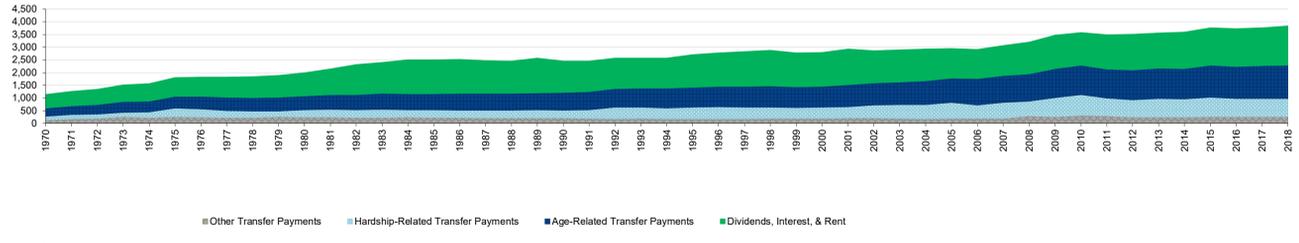
Non-labor Income

	Hardin County, IL	Saline County, IL	Gallatin County, IL	Pope County, IL	Massac County, IL	Pulaski County, IL	Williamson County, IL	Jackson County, IL	Johnson County, IL	Union County, IL	Alexander County, IL	Combined County Region	U.S.
Total Personal Income (thous. of 2018 \$)	145,277	948,765	225,596	127,650	540,108	197,466	2,984,625	2,140,797	447,862	720,125	210,359	8,688,630	17,813,035,000
Total Non-Labor Income	76,266	462,907	103,198	66,133	273,140	107,750	1,153,684	950,479	186,414	335,216	124,103	3,839,290	6,653,585,000
Dividends, Interest, Rent	22,168	159,150	39,140	22,454	88,399	30,943	502,512	469,092	66,285	122,712	31,231	1,564,086	3,662,134,000
Age-Related Transfer Payments	33,057	168,050	39,595	28,075	106,674	38,838	401,108	253,914	81,759	114,626	39,698	1,304,465	1,703,270,000
Social Security	17,568	94,445	22,513	16,935	59,989	21,609	229,949	138,697	46,894	65,286	22,690	736,575	972,412,000
Medicare	15,489	73,605	17,082	11,140	46,885	17,030	114,217	114,217	34,905	49,340	17,238	567,890	730,858,000
Hardship-Related Payments	17,058	107,990	18,986	11,563	54,119	29,235	170,042	150,103	24,948	80,923	45,903	710,870	897,497,000
Medicaid	12,260	74,312	12,558	6,403	33,287	18,697	100,193	80,283	14,562	59,089	26,536	438,202	610,068,000
Income maintenance ("welfare")	4,185	29,914	5,620	4,435	16,678	9,466	60,284	62,305	8,385	19,013	18,363	238,648	259,860,000
Unemployment ins. compensation	613	3,764	808	725	4,154	1,072	9,565	7,515	1,981	2,821	1,002	34,020	27,569,000
Other Transfer Payments	3,983	27,717	5,477	4,041	13,948	8,933	80,022	78,370	13,382	16,955	7,041	259,869	370,684,000
Veterans benefits	1,717	11,649	2,693	1,777	5,558	2,784	32,592	23,013	5,923	6,317	3,167	97,190	124,694,000
Education and training assistance	461	5,260	597	468	1,635	3,640	15,020	28,104	1,326	1,330	702	59,141	69,053,000
All other, incl. Workers' comp.	1,805	10,808	2,187	1,798	6,755	2,509	32,410	27,253	6,133	8,708	3,172	103,538	176,937,000
Percent of Total Personal Income													
Total Non-Labor Income	52.5%	48.8%	45.7%	51.8%	50.6%	54.6%	38.7%	44.4%	41.6%	46.5%	59.0%	44.2%	37.4%
Dividends, Interest, Rent	15.3%	16.8%	17.3%	17.6%	18.2%	15.7%	16.8%	21.9%	14.8%	17.0%	14.8%	18.0%	20.7%
Age-Related Transfer Payments	22.8%	17.7%	17.6%	22.0%	19.8%	19.6%	13.4%	11.8%	18.3%	15.9%	19.0%	15.0%	9.6%
Social Security	12.1%	10.0%	10.0%	13.3%	11.1%	10.9%	7.7%	6.5%	10.5%	9.1%	10.8%	8.5%	5.5%
Medicare	10.7%	7.8%	7.6%	8.7%	8.6%	8.6%	5.7%	5.3%	7.8%	6.9%	8.2%	6.5%	4.1%
Hardship-Related Payments	11.7%	11.4%	8.4%	9.1%	10.0%	14.8%	5.3%	7.0%	5.6%	11.2%	21.8%	8.2%	5.0%
Medicaid	8.4%	7.8%	5.6%	5.0%	6.2%	9.5%	3.4%	3.8%	3.3%	8.2%	12.6%	5.0%	3.4%
Income maintenance ("welfare")	2.9%	3.2%	2.5%	3.5%	3.1%	4.8%	2.0%	2.9%	1.9%	2.6%	8.7%	2.7%	1.5%
Unemployment ins. compensation	0.4%	0.4%	0.4%	0.6%	0.8%	0.5%	0.3%	0.4%	0.4%	0.4%	0.5%	0.4%	0.2%
Other Transfer Payments	2.7%	2.9%	2.4%	3.2%	2.6%	4.5%	2.7%	3.7%	3.0%	2.4%	3.3%	3.0%	2.1%
Veterans benefits	1.2%	1.2%	1.2%	1.4%	1.0%	1.4%	1.1%	1.1%	1.3%	0.9%	1.5%	1.1%	0.7%
Education and training assistance	0.3%	0.6%	0.3%	0.4%	0.3%	1.8%	0.5%	1.3%	0.3%	0.3%	0.3%	0.7%	0.4%
All other, incl. Workers' comp.	1.2%	1.1%	1.0%	1.4%	1.3%	1.3%	1.1%	1.3%	1.4%	1.2%	1.5%	1.2%	1.0%

Components of Non-Labor Income, Combined County Region

- From 1970 to 2018, dividends, interest, and rent grew from \$546 million to \$1,564 million, an increase of 187 percent.
- From 1970 to 2018, age-related transfer payments grew from \$316 million to \$1,304 million, an increase of 313 percent.
- From 1970 to 2018, income maintenance transfer payments grew from \$148 million to \$711 million, an increase of 381 percent.

Millions of 2018 \$



Data Sources: U.S. Department of Commerce, 2019. Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.

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Non-labor Income

What do we measure on this page?

This page describes the components of non-labor income, how they have changed over time (in real terms).

Dividends, Interest, and Rent: This includes personal dividend income, personal interest income, and rental income of persons with capital consumption adjustment that are sometimes referred to as "investment income" or "property income."

Age-Related Transfer Payments: This measures Medicare and Social Security benefits.

Hardship-Related Transfer Payments: These payments are associated with poverty and include Medicaid, Food Stamps (SNAP), Supplemental Security Income (SSI), Unemployment Insurance, and other income maintenance benefits.

Other Transfer Payments: All other components of transfer payments not identified in age and hardship-related categories including veterans benefits, education and training, Workers' Compensation Insurance, railroad retirement and disability, other government retirement and disability, and other receipts of individuals and non-profits.

Why is it important?

In some geographies, non-labor income has grown rapidly over the last three decades, while in others it has not. Also, some geographies are more dependent on non-labor sources of income than others.^{15, 16}

Because non-labor income is often so significant, it is important to understand component details. Some places may rely more on investment income, others on retirement benefits, and still others on welfare-related income streams. The table shows absolute values and percent of total non-labor income, while the figure shows key long-term trends.

Some important metrics include the largest components of non-labor income, whether non-labor income is growing, which components are growing the fastest, whether investment earnings are significant and growing, and whether age-related components of transfer payments are significant and growing. Also worth considering is whether the growth in non-labor income stems from new investment and age-related income and whether poverty-related components of transfer payments are significant and growing.^{17, 18}

If age-related transfer payments are significant and growing, it may be important to consider whether public lands resources are meeting the needs of an aging population. If poverty-related transfer payments are significant and growing, it may be important to consider whether there are environmental justice issues related to public lands management.

Data Sources: U.S. Department of Commerce, 2019, Bureau of Economic Analysis, Regional Economic Accounts, Washington, D.C.

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National Forest Socioeconomic Indicators

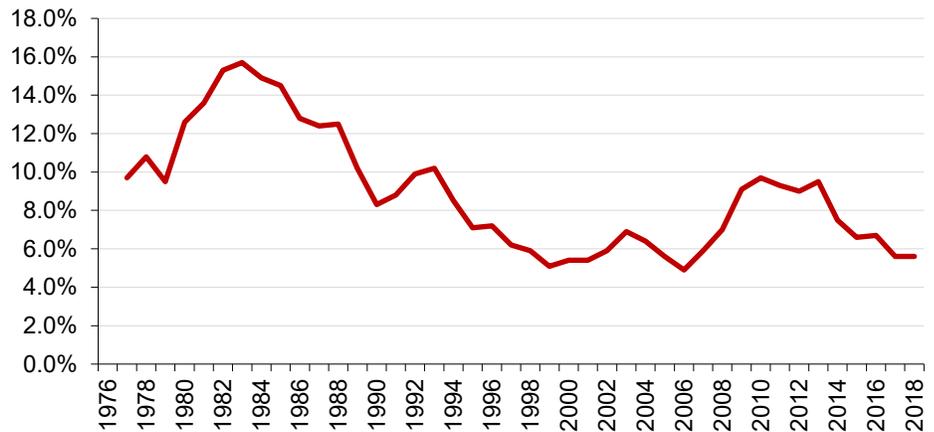
Combined County Region

Unemployment Rate

	1976	1990	2000	2010	2018	Change 2010-2018
Unemployment Rate (Average Annual)	0.0%	8.3%	5.4%	9.7%	5.6%	-4.1%

Unemployment Rate (Average Annual), Combined County Region

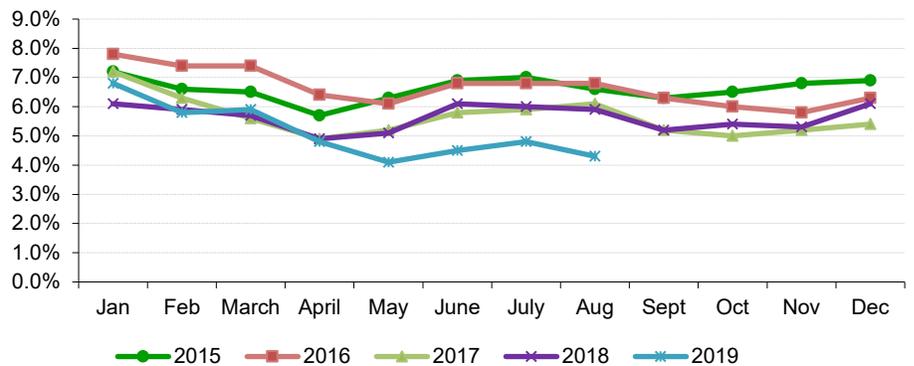
- Since 1976, the annual unemployment rate ranged from a low of 4.9% in 2006 to a high of 15.7% in 1983.



	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
2015	7.2%	6.6%	6.5%	5.7%	6.3%	6.9%	7.0%	6.6%	6.3%	6.5%	6.8%	6.9%
2016	7.8%	7.4%	7.4%	6.4%	6.1%	6.8%	6.8%	6.8%	6.3%	6.0%	5.8%	6.3%
2017	7.2%	6.3%	5.6%	4.9%	5.2%	5.8%	5.9%	6.1%	5.2%	5.0%	5.2%	5.4%
2018	6.1%	5.9%	5.7%	4.9%	5.1%	6.1%	6.0%	5.9%	5.2%	5.4%	5.3%	6.1%
2019	6.8%	5.8%	5.9%	4.8%	4.1%	4.5%	4.8%	4.3%				

Unemployment Rate (Monthly), Combined County Region

- The lowest monthly unemployment rate was May of 2019. The highest monthly unemployment rate was Jan of 2016.



Data Sources: U.S. Department of Labor. 2019. Bureau of Labor Statistics, Local Area Unemployment Statistics, Washington, D.C.

National Forest Socioeconomic Indicators

Combined County Region

Unemployment Rate

What do we measure on this page?

This page describes the average annual unemployment rate and the seasonality of the unemployment rate over time.

The figure Average Annual Unemployment Rate shows the rate of unemployment since 1990. The figure Seasonal Unemployment Rate shows the rate of unemployment for the last five years, for each month of the year. This figure is useful to see if there are higher rates of unemployment during certain months of the year, and whether this has changed over time.

Unemployment Rate: The number of people who are jobless, looking for jobs, and available for work divided by the labor force.

Data begin in 1990 because prior to that the Bureau of Labor Statistics used a different method to calculate the unemployment rate.

Why is it important?

The rate of unemployment is an important indicator of economic well-being.¹⁹ This figure can go up during national recessions and/or when more localized economies are affected by area downturns. There can also be significant seasonal variations in unemployment.

It is important to know how the unemployment rate has changed over time²⁰, whether there are periods of the year where the rate is higher or lower, and if this seasonality of unemployment has changed over time. Geographies that are heavily dependent on the tourism industry, for example, may show higher rates of unemployment during Spring and Fall "shoulder seasons." Places that rely heavily on the construction industry, for example, may have lower unemployment rates during the non-winter months.

As the economy of a place diversifies, it can become more resilient and less affected by downturns and rising unemployment rates. This is particularly true of places that are able to attract in-migration, retain manufacturing, and support a high-tech economy.²¹

Public land agencies sometimes provide seasonal employment and may have an effect on the local rate of unemployment.

National Forest Socioeconomic Indicators

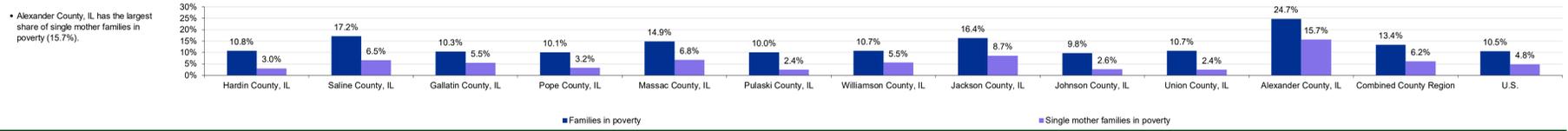
Combined County Region

Families in Poverty

	Hardin County, IL	Saline County, IL	Gallatin County, IL	Pope County, IL	Massac County, IL	Pulaski County, IL	Williamson County, IL	Jackson County, IL	Johnson County, IL	Union County, IL	Alexander County, IL	Combined County Region	U.S.
Total families for whom poverty status is determined, 2017*													
Families in poverty	898	6,645	1,481	1,047	3,854	1,355	17,731	12,623	3,077	4,758	1,545	55,014	78,298,703
Families with children in poverty	97	1,141	153	106	575	136	1,896	2,064	302	508	362	7,360	8,253,888
Single mother families in poverty	51	717	136	64	398	83	1,346	1,627	201	313	301	5,237	6,205,061
	27	435	81	34	261	33	983	1,093	81	115	243	3,386	3,720,341
Percent of Total, 2017*													
Families in poverty	10.8%	17.2%	10.3%	10.1%	14.9%	10.0%	10.7%	16.4%	9.8%	10.7%	24.7%	13.4%	10.5%
Families with children in poverty	5.7%	10.8%	9.2%	6.1%	10.3%	6.1%	7.6%	12.9%	6.5%	6.6%	19.5%	9.5%	7.9%
Single mother families in poverty	3.0%	6.5%	5.5%	3.2%	6.8%	2.4%	5.5%	8.7%	2.6%	2.4%	15.7%	6.2%	4.8%
Change in Percentage Points, 2010*-2017*													
For example, if the value is 3% in 2010* and 4.5% in 2017*, the reported change in percentage points is 1.5.													
Families in poverty	-6.6	3.8	-2.1	3.6	5.2	-6.7	-2.7	-1.1	-1.3	-2.0	12.9	-0.4	0.5
Families with children in poverty	-8.7	0.1	2.7	0.4	3.1	-5.7	-2.7	-0.5	-1.1	-2.8	10.2	-0.9	0.0
Single mother families in poverty	-7.3	-0.6	2.1	0.4	3.1	-5.6	-0.6	0.4	-1.5	-1.1	8.3	-0.1	0.0

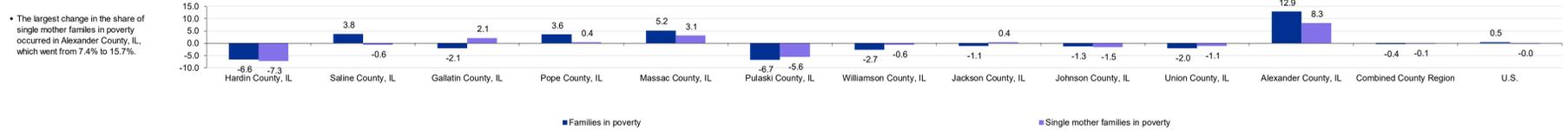
High Reliability Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

Families in Poverty, Percent of Total, 2017*



* Alexander County, IL has the largest share of single mother families in poverty (15.7%).

Families in Poverty, Change in Percentage Points, 2010*-2017*



* ACS 5-year estimates used. 2017 represents average characteristics from 2013-2017; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2018. Census Bureau, American Community Survey Office, Washington, D.C.

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Families in Poverty

What do we measure on this page?

This page describes the number of families living below the poverty line, and separately reports families with children and single mother families with children.

The Census defines a family as a group of two or more people who reside together and who are related by birth, marriage, or adoption.

The Census Bureau uses a set of income thresholds that vary by family size and composition to define who is poor. If the total income for a family or an unrelated individual falls below the relevant poverty threshold, then the family or an unrelated individual is classified as being "below the poverty level."

Why is it important?

Families in poverty may lack the resources to meet their basic needs. Their challenges cross the spectrum of food, housing, health care, education, vulnerability to natural disasters, and emotional stress.

To save money, families with low incomes often have to make lifestyle compromises such as unhealthy foods, less food, substandard housing, or delayed medical care.²²

Lack of financial resources makes families in poverty more vulnerable to natural disasters. This is due to inadequate housing, social exclusion, and an inability to re-locate or evacuate.^{21, 23, 24}

Inadequate shelter exposes occupants to increased risk from storms, floods, fire, and temperature extremes.²² Households with low incomes are more likely to have unhealthy housing such as leaks, mold, or rodents.²⁴

The expense of running fans, air conditioners, and heaters makes low-income people hesitant to mitigate the temperature of their living spaces.^{22, 23} Furthermore, those in high-crime areas may not want to open their windows.²³

Families in poverty are disproportionately affected by higher food prices, which are expected to rise in response to climate change.²⁵

Children in poor families, on average, receive fewer years of education compared to children in wealthier families.^{26, 28}

Low-income residents are less likely to have adequate property insurance, so they may bear an even greater burden from property damage due to natural hazards.²³

Living in poverty can lead to a lack of personal control over potentially hazardous situations such as increased air pollution or flooding. Impoverished families may be less likely to take proactive measures to prevent harm.²⁴

CHANGES IN BOUNDARIES: Data describing change over time can be misleading when geographic boundaries have changed. The Census provides documentation about changes in boundaries at this site: www.census.gov/geo/reference/boundary-changes.html

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National Forest Socioeconomic Indicators

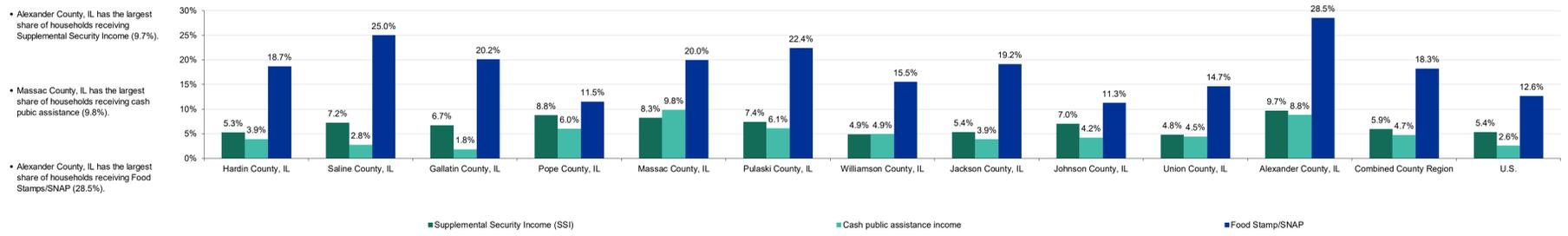
Combined County Region

Households Receiving Public Assistance

	Hardin County, IL	Saline County, IL	Gallatin County, IL	Pope County, IL	Massac County, IL	Pulaski County, IL	Williamson County, IL	Jackson County, IL	Johnson County, IL	Union County, IL	Alexander County, IL	Combined County Region	U.S.
Total Households, 2017*	1,452	9,938	2,272	1,639	6,084	2,246	26,862	23,942	4,486	6,686	2,432	88,039	118,825,921
Households receiving:													
Supplemental Security Income (SSI)	77	720	153	144	502	166	1,311	1,287	315	323	236	5,234	6,390,187
Cash public assistance income	57	274	42	99	598	137	1,328	825	190	298	215	4,163	3,041,626
Food Stamp/SNAP	272	2,489	458	189	1,217	504	4,172	4,587	507	980	694	16,069	15,029,498
Percent of Total, 2017*													
Supplemental Security Income (SSI)	5.3%	7.2%	6.7%	8.8%	8.3%	7.4%	4.9%	5.4%	7.0%	4.8%	9.7%	5.9%	5.4%
Cash public assistance income	3.9%	2.8%	1.8%	6.0%	9.8%	6.1%	4.9%	3.9%	4.2%	4.5%	8.8%	4.7%	2.6%
Food Stamp/SNAP	18.7%	25.0%	20.2%	11.5%	20.0%	22.4%	15.5%	19.2%	11.3%	14.7%	28.5%	18.3%	12.6%
Change in Percentage Points, 2010-2017*													
For example, if the value is 3% in 2010* and 4.5% in 2017*, the reported change in percentage points is 1.5.													
Supplemental Security Income (SSI)	-1.8	-0.4	1.3	3.3	3.3	-2.4	1.6	1.7	2.0	-0.3	5.0	1.3	1.3
Cash public assistance income	3.4	1.3	1.1	-5.2	7.3	4.4	3.1	1.5	2.6	1.0	-5.0	2.6	0.1
Food Stamp/SNAP	-0.6	9.9	5.2	0.4	7.1	0.5	3.3	5.2	0.0	-0.2	3.7	4.1	3.4
Median Household Income (MHI), 2017* (2018 \$)	\$40,473	\$41,699	\$43,469	\$42,126	\$43,180	\$35,487	\$49,766	\$36,872	\$46,841	\$47,837	\$31,758	na	\$59,036
Change in MHI, 2010-2017* (2018 \$)	\$8,731	\$673	-\$272	-\$3,536	-\$4,100	-\$393	\$3,060	-\$195	-\$1,062	\$2,073	-\$1,429	na	-\$717

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

Percent of Households Receiving Earnings, by Source, 2017*



* ACS 5-year estimates used. 2017 represents average characteristics from 2013-2017; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce, 2018. Census Bureau, American Community Survey Office, Washington, D.C.

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Households Receiving Public Assistance

What do we measure on this page?

This page describes the number of households receiving public assistance.

Supplemental Security Income, or SSI, provides financial assistance to people with limited income who are aged, blind, or disabled. Unlike Social Security benefits, which are determined by the recipient's lifetime earnings, SSI benefits are not based on prior work.²⁷

Cash public assistance can be from the Federal program, Temporary Assistance for Needy Families (TANF), or various state-level cash assistance programs. It does not include separate payments received for hospital or other medical care (vendor payments) or SSI or noncash benefits such as the Supplemental Nutrition Assistance Program.

The Supplemental Nutrition Assistance Program, or SNAP, (formerly known as food stamps), provides benefits to those who are unemployed, have no or low incomes, are elderly, are disabled with low incomes, or are homeless. The income threshold for SNAP varies with household size and other factors. SNAP benefits can be used to purchase grocery items such as breads, cereals, fruits, vegetables, meats, and dairy products.²⁸

Median income can be used to identify areas of high or low income, but care should be taken to consider regional differences in cost of living.

Why is it important?

The number of households receiving public assistance are indicative of households living in poverty or with insufficient resources.

In 2011, families receiving public assistance spent 77 percent of their household budget to meet the basic necessities of housing, food, and transportation.²⁹

Payments associated with economic hardship are associated with lower household income and educational attainment, higher poverty and unemployment. They are often high in communities that are losing population.¹⁵

National Forest Socioeconomic Indicators

Combined County Region

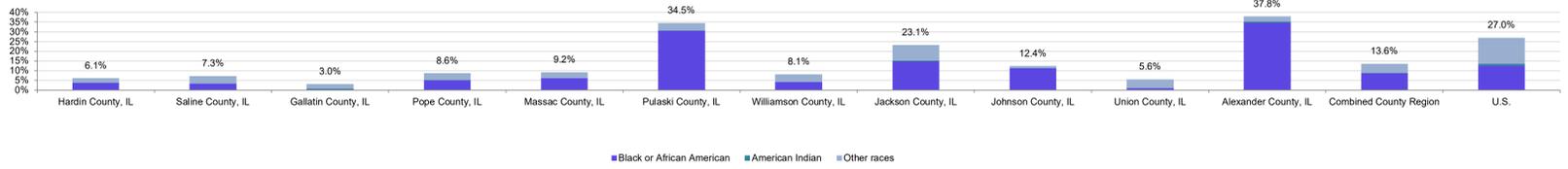
Race & Ethnicity

	Hardin County, IL	Saline County, IL	Gallatin County, IL	Pope County, IL	Massac County, IL	Pulaski County, IL	Williamson County, IL	Jackson County, IL	Johnson County, IL	Union County, IL	Alexander County, IL	Combined County Region	U.S.
Total Population, 2017*	4,161	24,430	5,226	4,360	14,594	5,691	67,477	59,115	12,899	17,267	6,776	221,996	321,004,407
White alone	3,909	22,658	5,067	3,983	13,253	5,067	61,999	45,439	11,302	16,302	4,215	191,852	234,370,202
All other races	252	1,772	159	377	1,341	1,966	5,478	13,676	1,597	965	2,561	30,144	86,634,205
Black or African American	157	941	14	221	889	1,737	2,778	8,713	1,459	168	2,343	19,320	40,610,815
American Indian	8	21	26	7	16	12	130	232	13	15	43	523	2,632,102
Other races	87	910	119	149	436	217	2,570	4,731	125	782	175	10,301	43,391,288
Hispanic ethnicity	74	423	58	94	393	119	1,701	2,518	430	880	68	6,728	56,510,571
Non-Hispanic ethnicity	4,087	24,007	5,168	4,276	14,201	5,572	65,776	56,597	12,469	16,407	6,708	215,268	264,493,836
Percent of Total, 2017*													
White alone	93.9%	92.7%	97.0%	91.4%	90.8%	65.5%	91.9%	76.9%	87.6%	94.4%	62.2%	86.4%	73.0%
All other races	6.1%	7.3%	3.0%	8.6%	9.2%	34.5%	8.1%	23.1%	12.4%	5.6%	37.8%	13.6%	27.0%
Black or African American	3.8%	3.4%	0.3%	5.1%	6.1%	30.5%	4.1%	14.7%	11.3%	1.0%	34.6%	8.7%	12.7%
American Indian	0.2%	0.1%	0.5%	0.2%	0.1%	0.2%	0.2%	0.4%	0.1%	0.1%	0.6%	0.2%	0.8%
Other races	2.1%	3.7%	2.3%	3.4%	3.0%	3.8%	3.8%	8.0%	1.0%	4.5%	2.6%	4.6%	13.5%
Hispanic ethnicity	1.8%	1.7%	1.1%	1.9%	2.7%	2.1%	2.5%	4.3%	3.3%	5.0%	1.0%	3.0%	17.6%
Non-Hispanic ethnicity	98.2%	98.3%	98.9%	98.1%	97.3%	97.9%	97.5%	95.7%	96.7%	95.0%	99.0%	97.0%	82.4%

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

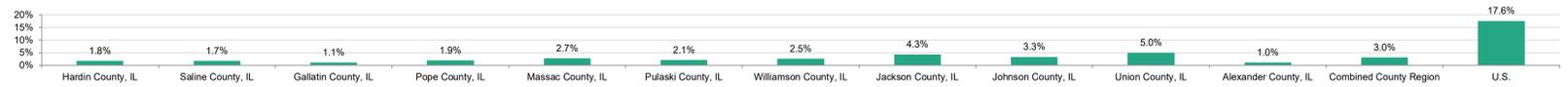
People of Color, Percent of Total, 2017*

Alexander County, IL has the largest share of people of color (37.8%).



Hispanic Population, Percent of Total, 2017*

The U.S. has the largest share of Hispanics (17.6%).



* ACS 5-year estimates used. 2017 represents average characteristics from 2013-2017; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2018. Census Bureau. American Community Survey Office. Washington, D.C.

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Race & Ethnicity

What do we measure on this page?

Race is self-identified by Census respondents who choose the race or races with which they most closely identify. Included in "Other Races" are "Asian," "Native Hawaiian or Other Pacific Islander," and respondents providing write-in entries such as multiracial, mixed, or interracial.

Ethnicity has two categories: Hispanic or Latino, and Non-Hispanic or Latino. The federal government considers race and Hispanic origin to be two separate and distinct concepts. Hispanics and Latinos may be of any race.

Why is it important?

Race and ethnicity are strongly correlated with disparities in health, exposure to environmental pollution, and vulnerability to natural hazards.²²

Research consistently has found race-based environmental inequities across many variables, including the tendency for minority populations to live closer to noxious facilities and Superfund sites, and to be exposed to pollution at greater rates than whites.^{22, 23}

Many health outcomes are closely related to the local environment. Minority communities often have less access to parks and nutritious food, and are more likely to live in substandard housing.²²

Minorities tend to be particularly vulnerable to disasters and extreme heat events. This is due to language skills, housing patterns, quality of housing, community isolation, and cultural barriers.^{21, 22}

Blacks and Hispanics, two segments of the population that are currently experiencing poorer health outcomes, are an increasing percentage of the US population.^{22, 33}

Research has identified measurable disparities in health outcomes between various minority and ethnic communities.

Across races, the rates of preventable hospitalizations are highest among black and Hispanic populations. Preventable hospital visits often reflect inadequate access to primary care. These types of hospital visits are also costly and inefficient for the health care system.²⁵

Relative to other ethnicities and races, Hispanics and blacks are less likely to have health insurance, but rates of uninsured are dropping for both groups.²⁴

Compared to other races, blacks have higher rates of infant mortality, homicide, heart disease, stroke, and heat-related deaths.²⁵

Hispanics have higher rates of diabetes and asthma.²⁵

American Indians have a distinct pattern of health effects different from blacks and Hispanics. Native populations are less likely to have electricity than the general population.²⁷ They have high rates of infant mortality, suicide and homicide, and nearly twice the rate of motor vehicle deaths than the U.S. average.²⁵

CHANGES IN BOUNDARIES: Data describing change over time can be misleading when geographic boundaries have changed. The Census provides documentation about changes in boundaries at this site: www.census.gov/geo/reference/boundary-changes.html

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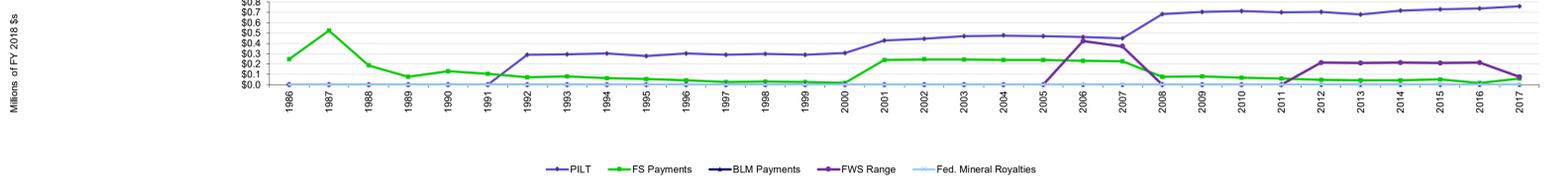
Combined County Region

Federal Land Payments by Geography of Origin

	Hardin County, IL	Saline County, IL	Gallatin County, IL	Pope County, IL	Massac County, IL	Pulaski County, IL	Williamson County, IL	Jackson County, IL	Johnson County, IL	Union County, IL	Alexander County, IL	Combined County Region	U.S.
Total Federal Land Payments to State and Local Gov., FY 2017 (FY 2018 \$)	78,140	39,471	31,817	254,208	7,602	34,949	913	146,402	94,360	120,873	85,963	894,699	2,392,820,254
PILT	76,227	38,502	31,038	247,951	7,415	676	891	132,749	49,108	101,241	73,518	759,317	475,699,827
Forest Service Payments	1,914	969	778	6,257	187	0	23	3,404	41,560	2,573	1,874	59,538	299,617,579
BLM Payments	0	0	0	0	0	0	0	0	0	0	0	0	122,943,586
USFWS Refuge Payments	0	0	0	0	0	34,273	0	10,249	3,692	17,059	10,571	75,844	21,552,581
Federal Mineral Royalties	0	0	0	0	0	0	0	0	0	0	0	0	1,473,006,681
Percent of Total													
PILT	97.6%	97.5%	97.6%	97.5%	97.5%	1.9%	97.6%	90.7%	52.0%	83.8%	85.5%	84.9%	19.9%
Forest Service Payments	2.4%	2.5%	2.4%	2.5%	2.5%	0.0%	2.5%	2.3%	44.0%	2.1%	2.2%	6.7%	12.5%
BLM Payments	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.1%
USFWS Refuge Payments	0.0%	0.0%	0.0%	0.0%	0.0%	98.1%	0.0%	7.0%	3.9%	14.1%	12.3%	8.5%	0.9%
Federal Mineral Royalties	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	61.6%

Components of Fed. Land Payments per FY, Combined County Region

• From FY 1986 to FY 2017, Forest Service revenue sharing payments shrank from \$248,474 to \$59,538, a decrease of 76 percent.



Components of Fed. Land Payments, FY 2017

• In FY 2017, PILT made up the largest percent of federal land payments in Combined County Region (84.9%), and BLM Payments made up the smallest (0%).



Data Sources: U.S. Department of Interior. 2018. Payments in Lieu of Taxes (PILT), Washington, D.C.; U.S. Department of Agriculture. 2018. Forest Service, Washington, D.C.; U.S. Department of Interior. 2018. Bureau of Land Management, Washington, D.C.; U.S. Department of Interior. 2018. U.S. Fish and Wildlife Service, Washington, D.C.; U.S. Department of Interior. 2018. Office of Natural Resources Revenue, Washington, D.C.

Federal Land Payments by Geography of Origin

What do we measure on this page?

Federal land payments: These are federal payments that compensate state and local governments for non-taxable federal lands within their borders. Payments are funded by federal appropriations (e.g., PILT) and from receipts received by federal agencies from activities on federal public lands (e.g., timber, grazing, and minerals).

Payments in Lieu of Taxes (PILT): These payments compensate county governments for non-taxable federal lands within their borders. PILT is based on a maximum per-acre payment reduced by the sum of all revenue sharing payments and subject to a population cap.

Forest Service Revenue Sharing: These are payments based on USFS receipts and must be used for county roads and local schools. Payments include the 25% Fund, Secure Rural Schools & Community Self-Determination Act, and Bankhead-Jones Forest Grasslands.

BLM Revenue Sharing: The BLM shares a portion of receipts generated on public lands with state and local governments, including grazing fees through the Taylor Grazing Act and timber receipts generated on Oregon and California (O & C) grant lands.

USFWS Refuge: These payments share a portion of receipts from National Wildlife Refuges and other areas managed by the USFWS directly with the counties in which they are located.

Federal Mineral Royalties: These payments are distributed to state governments by the U.S. Office of Natural Resources Revenue. States may share, at their discretion, a portion of revenues with the local governments where royalties were generated.

Federal Fiscal Year: FY refers to the federal fiscal year that begins on October 1 and ends September 30.

Why is it important?

State and local government cannot tax federally owned lands the way they would if the land were privately owned. A number of federal programs exist to compensate county governments for the presence of federal lands. These programs can represent a significant portion of local government revenue in rural counties with large federal land holdings.^{35,36}

Before 1976, federal payments were linked directly to receipts generated on public lands. Congress funded PILT with appropriations beginning in 1977 in recognition of the volatility and inadequacy of federal revenue sharing programs. PILT was intended to stabilize and increase federal land payments to county governments. More recently, the Secure Rural Schools and Community Self-Determination Act of 2000 (SRS) decoupled USFS payments from commercial receipts. SRS received broad support because it addressed several major concerns around receipt-based programs--volatility, the payment, and the incentives provided to counties by linking federal land payments directly to extractive uses of public lands.

PILT and SRS each received a significant increase in federal appropriations in FY 2008 through the Emergency Economic Stabilization Act of 2008. Despite the increased appropriations, SRS is authorized only through FY 2011, PILT only through FY 2012, and federal budget concerns are creating uncertainty for the future of both.³⁷

Data Limitations: Local government distributions of federal land payments may be underreported due to data limitations from USFWS, ONRR, and some states that make discretionary distributions of mineral royalties and some BLM payments. USFWS data limitations are relatively insignificant at the federal level, but may be important to specific local governments with significant USFWS acreage. Federal mineral royalties represent a more significant omission in states that share a portion of royalties with local governments.

Data Sources: U.S. Department of Interior, 2018. Payments in Lieu of Taxes (PILT). Washington, D.C.; U.S. Department of Agriculture, 2018. Forest Service. Washington, D.C.; U.S. Department of Interior, 2018. Bureau of Land Management. Washington, D.C.; U.S. Department of Interior, 2018. U.S. Fish and Wildlife Service. Washington, D.C.; U.S. Department of Interior, 2018. Office of Natural Resources Revenue. Washington, D.C.

National Forest Socioeconomic Indicators

Combined County Region

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National Forest Socioeconomic Indicators

Combined County Region

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Combined County Region

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January 8, 2020

USFS Shawnee National Forest
Attention: Scott Crist
50 Highway 145 South
Harrisburg, IL 62946

Re: Support for Shawnee National Forest Collaborative Forest Landscape Restoration Program

Mr. Crist,

On behalf of the National Wild Turkey Federation (NWTF) we offer our full support for the Collaborative Forest Landscape Restoration Program (CFLRP) application that the USFS Shawnee National Forest has developed to support landscape level work across the identified region in southern Illinois. The Shawnee Hills is 1 of 87 key focal landscapes in the US that the NWTF has identified for priority conservation work, and action items in this application fully support the larger strategic conservation vision for Southern Illinois. The NWTF is committed to work with the USFS Shawnee National Forest & associated partners to help meet these desired goals.

The NWTF has a long-term relationship with the USFS Shawnee National Forest, as we have a wide array of agreements and levels of support for joint action. Our Illinois NWTF state chapter has contributed funding annually for projects, we developed the first joint project staff position between forests in Region 8 & 9, secured outside grants to conduct habitat improvements to meet forest goals, and we currently manage 3 different collaborative agreements. We continue to support active forest management to improve habitat for native flora and fauna in the area. Our commitment and financial support shall continue over the next 10 years as collaborative partner with the USFS Shawnee National Forest.

The NWTF appreciates the opportunity to work with this collaborative team for sustainable management of our natural resources in Southern Illinois. We fully support the USFS Shawnee National Forest CFLRP application.

Sincerely,

Jason Lupardus

A handwritten signature in black ink that reads 'Jason Lupardus'. The signature is written in a cursive style.

NWTF Midwest Director of Conservation Operations

National Wild Turkey Federation

P.O. Box 530 • 770 Augusta Road • Edgefield, South Carolina 29824 • Phone: (803) 637-3106 • Fax: (803) 637-9180

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