

**Long Range Plan
for the
Little Kanawha Local Work Group**



Helping People Help the Land



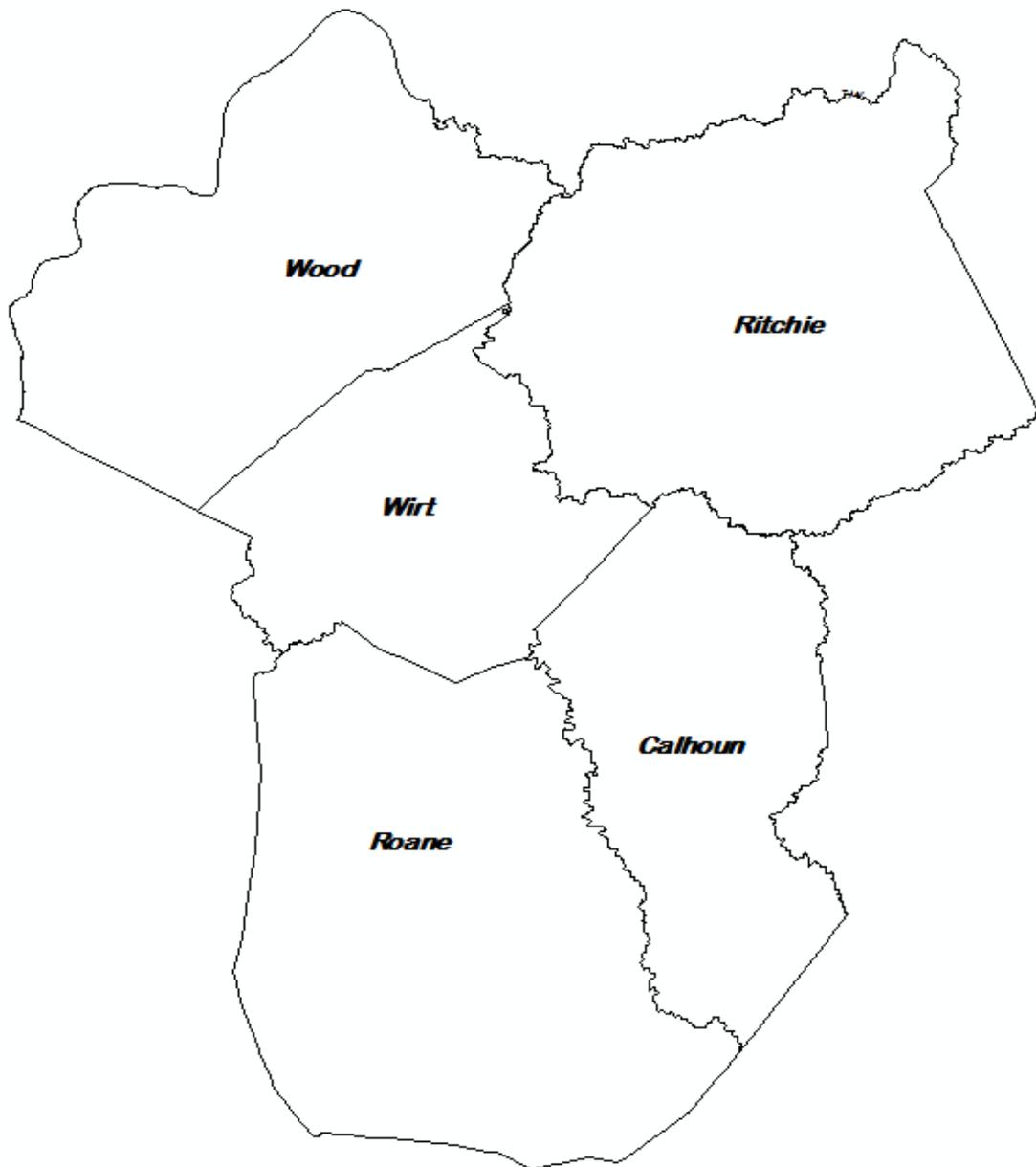
Parkersburg and Spencer Field Offices

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Conservation District Organization

The Little Kanawha Conservation District is an entity of state government, Chartered October 25, 1946, in accordance with State Soil Conservation District Law passed by the West Virginia Legislature on March 10, 1939 and signed into law by Governor Homer Adams Holt on June 10, 1939. The District is 1 of 14 Conservation Districts in West Virginia. The counties in the Little Kanawha Conservation District include: Calhoun, Ritchie, Roane, Wirt and Wood.



About the District

The District is located in the west-central part of West Virginia and totals 1,160,684.8 acres. The LKCD is largely rural with the exception of the Parkersburg area. The population of the District is 124,270 people accounting for 7% of West Virginia's population. The median household income for the area is \$35,965. Most income is earned off the farm. There are 2,263 farms within the District totaling 374,962 acres which makes up 10.4% of the farms in West Virginia. This is the largest percentage of farms outside of the Potomac Valley and Greenbrier Valley.

Throughout the District most farms are the general type and raising beef cattle is the most common enterprise. According to the Agricultural Census in 2012 there was 33,599 head of beef cattle within the District. Most farms are spring calving cow/calf operations, selling calves in the fall either through local livestock markets or calf pools. Several producers purchase stockers in the fall to be fed stored forage and then pastured until August before they are marketed through state board sales. 63,084 acres of hay are harvested utilizing tall grass-legume forage base. Row crops are grown mainly in Wood County on the Ohio River bottoms. In 2012, 782 acres of row crops were reported to the Ag. Census. Some truck crops are grown on a small scale and marketed through local farmers markets or the farm to school program. 78% of the District is forested accounting for 909,617 acres. The most common forest type is oak-hickory, northern hardwoods and oak-pine. Forestland is managed through the development of Forest Stewardship Plans on 249 properties totaling 32,831 acres.

Conservation Activities

Conservation activities have taken place throughout the District for many years. With a large number of beef cattle present most of the work has been focused on grazing management and water development. Over the last 10 years a higher emphasis has been placed on the implementation of stabilized winter feeding areas with manure storage. Common practices include: brush management, division fence, exclusion fence, livestock water development, pasture planting, nutrient management, access road, heavy use area protection, and waste storage facility. The work has been spread throughout the counties within the District with the higher number of completed practices being in the counties where farming operations are more concentrated.

With over 78% of the District being forested, timber stand improvement and wildlife practices are very crucial to the landowners in the District. There are a wide variety of goals and objectives of the cooperators. Practices

implemented on woodland include, timber stand improvement, tree planting, brush management, early successional habitat management, wildlife habitat structures, and forage planting. These practices have been implemented throughout the District and well received in each county.

Farm Bill Programs have had great success in the District since 2005. During that time 970 contracts have been obligated for \$14,198,280 on 111,042 acres resulting in \$12,088,375 in payments to participants. In recent years the District has been near the top of total contracts obligated and has processed over 1,000 payments annually. In addition to Farm Bill activities the District has developed a very successful Agricultural Enhancement Program resulting in 184 agreements totaling \$207,178.

NRCS works closely with the Little Kanawha Conservation District, West Virginia Conservation Agency, West Virginia Division of Forestry, West Virginia Division of Natural Resources, West Virginia University Extension Service, and USDA Farm Service Agency.



Soils

The soils of Calhoun, Ritchie, Roane, Wirt, and Wood Counties, West Virginia, can best be generalized by the positions they occupy in the landscape. The area is dominated by steep hillslopes between narrow ridge tops and narrow valleys. There are limited areas of broader, low slope gradient valleys along the Ohio and Little Kanawha Rivers and other major drainage systems.

Typical hillslope and ridge top soils are of the Gilpin, Upshur, or Peabody series. These soils are well drained. Gilpin is 20 to 40 inches deep over siltstone, sandstone, or shale, with loamy textures, and a pH typically in the 3.5 to 5.5 range. Upshur and Peabody soils have clayey textures and a pH range of 4.5 up to 8.4. Both Upshur and Peabody soils form in red clay shale bedrock. Upshur is greater than 40 inches deep over the bedrock, and Peabody is 20 to 40 inches deep. The major soil resource concerns for these hillslopes are sheet, rill, and gully erosion, compaction by livestock on pastures, and land slippage.

The hillslope landscape also includes areas of footslopes and narrow valleys. Dominant soils on footslopes are Vandalia, which are greater than 40 inches over bedrock, have clayey textures, and a pH range of 4.5 to 7.3. The narrow valleys are typically Sensabaugh or Hackers soils. These soils formed in alluvium and are deeper than 40 inches to bedrock. Sensabaugh and Hackers soils are well drained, but have a flooding hazard. They have a pH in the range of 5.1 to 7.8. These footslopes and narrow valleys are also subject to sheet, rill, and gully erosion, compaction, and land slippage. The Sensabaugh and Hackers soils may also be subject to streambank erosion, and where cropped, have reduced organic matter content.

In the areas of larger creeks and rivers, Moshannon, Senecaville, and Monongahela soils dominate. Moshannon and Senecaville soils are formed in alluvium and have a flooding hazard. Moshannon is well drained and Senecaville is moderately well drained. They are greater than 40 inches deep over bedrock with a pH ranging from 5.1 to 7.3. These soils may also have inclusions of the Melvin soil, which is poorly drained and considered a hydric soil. Monongahela soils are on higher stream terraces along rivers. They are moderately well drained, greater than 40 inches deep over bedrock, and have a pH range of 4.5 to 7.3. Monongahela is not subject to flooding. Soil resource concerns in these areas are streambank erosion, sheet or rill erosion, compaction by livestock, and reduced organic matter content where cropped.

Resource Concerns

1) Over grazed and over stocked pastures

- *Soil Erosion Sheet and Rill
- *Excessive Sediment in Surface Water
- *Soil Compaction
- *Undesirable Plant Productivity and Health.

A large number of the pastures are over stocked and therefore over grazed. Many winter feeding practices result in bare areas and heavy traffic transporting feed to animals causing rutting. Most of these areas exceed the acceptable soil loss for the given soil type. These concerns are widespread throughout the District however the effort to address this resource concern would be focused on Roane and Wirt Counties because these counties have a higher number of pasture based farming operations. These resource concerns can be evaluated by the use of RUSLE and the Pasture Condition Score Sheet.

Program Suitability

This resource concern can be addressed utilizing funding from the Environmental Quality Incentives Program (EQIP). Installing practices such as: water development, pasture division fence, forage biomass planting, brush management, critical area planting, and prescribed grazing can result in increasing the PCS from a District average of 26 to a score greater than 30 and to decrease soil loss below acceptable levels. Nutrient Management practices would be installed using funding through AgEP. An estimated \$1,500,000 over 5 years would be required to address this resource concern on 75 farms in Roane and Wirt Counties. Current staffing levels are suitable to complete the work required to address this resource concern.

Partnerships

- 1) Little Kanawha Conservation District - AgEP participation and Outreach Activities
- 2) West Virginia University Extension - Outreach Activities
- 3) Farm Bureau - Outreach Activities



2) Winter feeding livestock

- *Soil Compaction
- *Soil Erosion Sheet and Rill
- *Excessive Sediment in Surface Water
- *Nutrients in Surface Water

Cow/Calf and stocker feeding operations are the two most common livestock enterprises in this area. Winter feeding locations vary from farm to farm, but the one thing that can be consistently evaluated is the soil type at the feeding area. These areas are subject to traffic associated with the management of winter feeding, with the wet weather, slope, and soil types of this area multiple resource concerns have been known to arise. Over time with winter feeding soil erosion in the same location, topsoil loss will be substantial and nutrient runoff has the potential to alter the health of adjacent streams. This concern is widespread throughout the District. This resource concern can be evaluated utilizing the Pasture Condition Score Sheet and RUSLE.

Program Suitability

This resource concern can be addressed utilizing funding from the Environmental Quality Incentives Program (EQIP). Installing practices such as: roofed feeding area with manure storage, heavy use area, access road, water development, and nutrient management. Installing these practices would result in reducing soil erosion to acceptable levels. The goal would be to reduce soil erosion to less than approximately 4 Ton/ac/yr per 25 head of cattle. An emphasis will be placed on confinement situations and smaller scale sacrifice areas. Sites will be evaluated by the existing feeding areas soil type and slope. An estimated \$2,500,000 over 5 years would be required to address this resource concern on 50 farms. Based on the average herd size in the District this would save 200 tons of soil. Current staffing levels are suitable to complete the work required to address this resource concern.

Partnerships

- 1) Little Kanawha Conservation District – Outreach Activities
- 2) West Virginia University Extension - Outreach Activities
- 3) Farm Bureau - Outreach Activities



3) Decrease in the population of the Whip-Poor-Will

***Habitat Degradation**

Whip-poor-wills are doing poorly throughout most of their range. The North American Breeding Bird Survey estimates a 69% drop in populations between 1966 and 2010. The population decrease is a result of the maturation of forests resulting in less early successional habitat. The Whip-poor-will is listed as a species in greatest need of conservation in the West Virginia State Wildlife Action Plan. This concern is spread throughout the District and can be evaluated by doing population surveys.

Program Suitability

This resource concern can be addressed utilizing funding from the Environmental Quality Incentives Program (EQIP). Installing practices such as: forest openings, field borders, tree plantings, conservation cover (pollinator habitat), and timber stand improvement would be utilized to address to increase habitat favorability for the whip-poor-will. The goal would be to install these practices on 2,500 acres or create 50 homeranges. Population surveys would be conducted annually for 5 years to determine population increases. An estimated \$500,000 over 5 years would be required to address this resource concern. A partnership position with West Virginia Division of Natural Resources would be required to address this resource concern.

Partnerships

- 1) West Virginia Division of Natural Resources – Outreach activities, cooperator education, technical assistance, and population surveys.
- 2) West Virginia Division of Forestry – Outreach activities and technical assistance.
- 3) Local Birding Groups – Outreach activities and monitoring
- 4) National Wild Turkey Federation – Outreach Activities
- 5) Little Kanawha Conservation District – Outreach Activities



4) Decrease in the population of the Eastern Meadowlark

***Habitat Degradation**

Eastern Meadowlarks are a declining species. The North American Breeding Bird Survey shows a severe rangewide decline estimated at between 2.9 percent and 14.8 percent per year from 1966 to 2010. Cumulative loss to population numbers may be as high as 75 percent during that time. The main causes of the decline in the population have been identified as: intensification and modernization of farming practices promoting earlier and more frequent haying during the nesting season, which results in low breeding success; reforestation of abandoned farmland and urbanization, high rate of nest predation, and overgrazing pastures. The Eastern Meadowlark is listed as a species in greatest need of conservation in the West Virginia State Wildlife Action Plan. This concern is spread throughout the District. This concern can be evaluated by doing population surveys.

Program Suitability

This resource concern can be addressed utilizing funding from the Environmental Quality Incentives Program (EQIP). Installing practices such as: Forage Harvest Management, conservation cover and, field borders would be utilized to address this concern. The goal would be to install these practices on 1,250 acres or create 25 homeranges over 3 years. An estimated \$300,000 over 3 years would be required to address this resource concern. Population surveys would be conducted annually for 3 years to determine population increases. A partnership position with West Virginia Division of Natural Resources would be required to address this resource concern.

Partnerships

- 1) West Virginia Division of Natural Resources – Outreach activities, cooperator education, technical assistance, and population surveys.
- 2) Local Birding Groups – Outreach activities and monitoring
- 3) Little Kanawha Conservation District – Outreach Activities



5) Restoration of the American Chestnut

*Undesirable Plant Productivity and Health

* Excessive Plant Pest Pressure – Pasture and Forestland

Numerous farms throughout the District are being reverted back to forestland because they are not being farmed or properly managed. In these areas, woody invasives are thriving and are reducing the quality of the natural regeneration process. This concern is widespread throughout the District and can be evaluated by utilizing planner observation as well as forest transects.

Program Suitability

This resource concern can be addressed utilizing funding from the Environmental Quality Incentives Program (EQIP). Installing practices such as: brush management and tree planting. The goal would be to reestablish the American chestnut trees by planting these in areas where grazing is no longer taking place or as a restocking in woodland settings. Establishing 11,000 trees over 3 years would require \$200,000 in EQIP funding.

Partnerships

- 1) West Virginia Division of Forestry – Outreach activities and technical assistance.
- 2) American Chestnut Society - Outreach activities
- 3) Little Kanawha Conservation District – Outreach Activities



6) Forestland Herbaceous Weed Population Increase

*** Excessive Plant Pest Pressure – Forest Herbaceous Weeds**

The introduction of non-native invasive plant species on natural biological diversity, in numerous locations throughout the District, has reduced available habitat for native species and/or eliminated associated native species altogether. The populations of invasive weed species have exploded in the forestland. Populations of Japanese Stiltgrass, Garlic Mustard, European Privet, and Mile-A-Minute have increased to levels where forest ecosystems are being degraded. This concern is widespread throughout the District, however, greater populations exist in areas where the Emerald Ash Borer has devastated the Ash populations. The highest rate of Ash mortality is found in Calhoun and Roane Counties. This concern can be evaluated by the development of a Forest Stewardship Plan or by a conservation planner. The success of control is determined by evaluating post-treatment regrowth of the target species after sufficient time has passed to monitor the situation and gather reliable data. The length of these evaluation periods will depend on the species being monitored, the proximity of seeds to the site, how the seeds are transported (wind or animals) and the methods and materials used.

Program Suitability

Under the current practice standard, acceptable management activities cannot take place. Evaluation of this resource concern will take place to determine program suitability on an annual basis.



7) Forestland Woody Invasive Population Increase

*** Excessive Plant Pest Pressure – Forest Woody Species**

Woody invasive species have been present in the District's forestland for many years. The Emerald Ash Borer's impact on the Ash population has allowed many closed canopy woods to receive significant amounts of sunlight. This has increased the population of species like Tree of Heaven. Other woody invasive or noxious species impacting forestland include: multiflora rose, autumn olive, Tatarian honeysuckle, Japanese barberry, and oriental bittersweet. This concern is widespread throughout the District. This concern can be evaluated by the development of a Forest Stewardship Plan or by a conservation planner. The success of this control is determined by evaluating post-treatment regrowth of the target species after sufficient time has passed to monitor the situation and gather reliable data. The length of these evaluation periods will depend on the species being monitored, the proximity of seeds to the site, how the seeds are transported (wind or animals) and the methods and materials used.

Program Suitability

Current levels of EQIP funding through Forestry is meeting the demand of this concern.



8) Increase forest diversity and economic return

***Undesirable Plant Productivity and Health**

Many forestlands that managed as an overstory could benefit from mutli-story cropping practices. With a large amount of the District being wooded the quality of the woodland would increase by the planting over understory with plants that could be harvested. These plants would include: ginseng, ramps, goldenseal, and mushrooms. Addressing this concern would result in increased plant health and vigor, decreased intensity of pest outbreaks, decreased spread of diseases, decreased use of pesticides and improved water quality. This concern is widespread throughout the District and can be evaluated by development of a Forest Stewardship Plan or by a conservation planner.

Program Suitability

This resource concern can be addressed utilizing funding from the Environmental Quality Incentives Program (EQIP) by installing multi story cropping, however funding is available through the Conservation Stewardship Program (CSP) through implementation of enhancements.



9) Woody invasives in pastures

*** Excessive Plant Pest Pressure – Pasture**

Large populations of woody invasives including autumn olive and multiflora rose are present in many pastures. Over grazing and routine pasture maintenance are the major causes of this concern. This concern is widespread throughout the District and can be evaluated using the Pasture Condition Score.

Program Suitability

This resource concern can be managed through EQIP utilizing pasture improvement funding. AgEp funds are also available for the control of invasive species in pasture fields.



10) Loss of hayland due to streambank erosion

***Streambank Erosion**

Many of the larger stream bottoms are utilized for hay production. Many producers utilize all the standing forage leaving very little buffer along the stream. With the high percentage of clay present in most of our soils this allows a large amount of erosion to take place on the streambank. This concern is widespread throughout the District but is more significant in the following watersheds: Reedy Creek, Goose Creek, Lee Creek, and the West Fork of the Little Kanawha. This resource concern can be evaluated using SVAP.

Program Suitability

Resource concern better suited to Conservation Reserve Program.

Local Work Group Activities

The local work group met on 3 different occasions. The first 2 meetings were brainstorming sessions to prioritize the resources concerns for the District. The third meeting February 24th was to finalize the resource concerns for the District and the location of the resource concerns. The group voted on the resource concerns and their location listed in the long range plan. The attendees included: WVU Extension (3 counties), Little Kanawha Conservation District, FSA County Committee, WV DOF, WVDNR, and WVCA. Decisions were based on field office input, local knowledge, AG Census, Wildlife Action Plan, and WVD OF reports.