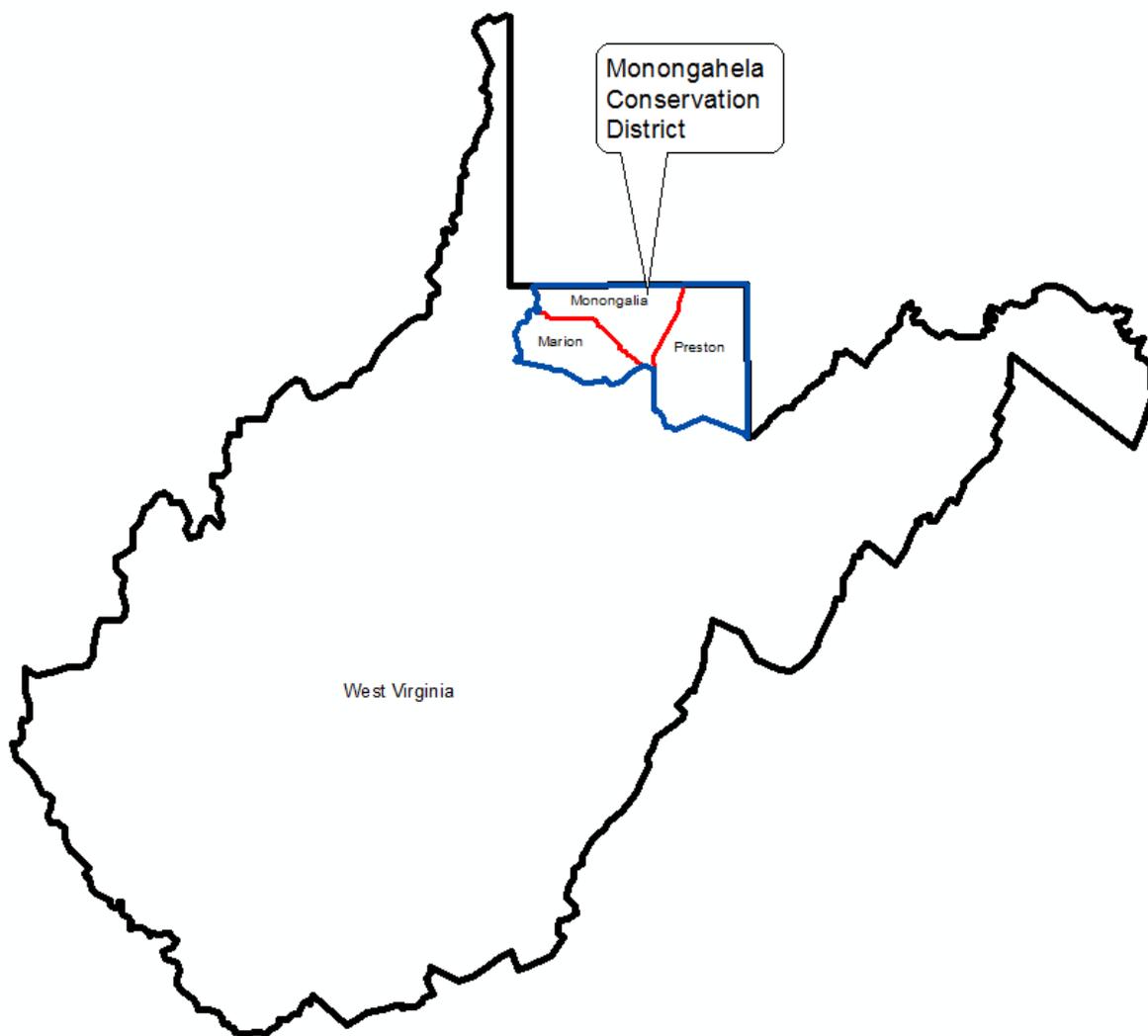


MONONGAHELA CONSERVATION DISTRICT



LONG RANGE PLAN (LRP)

2016-2021

Monongahela Conservation District

Long Range Plan (LRP)

2016-2021

Introduction

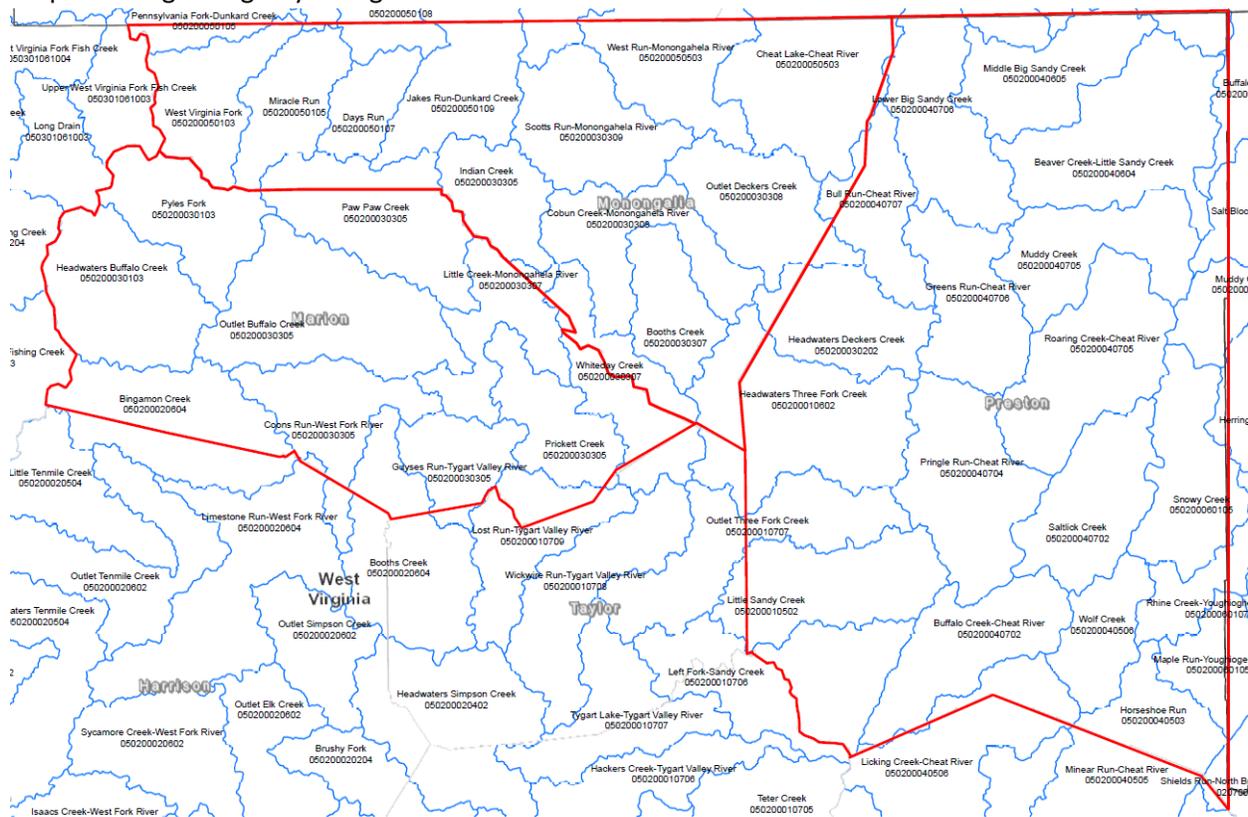
The LRP is written with understanding that NRCS statewide Environmental Quality Incentive Program (EQIP) funding pool will continue be available to the Monongahela Conservation District (MCD) to address resources concerns related to Forestry, High Tunnels, Golden Wing Warbler and Cerulean Warbler projects.

LRP for the MCD is a working document that will ever be changing, considering this is a new era in how USDA-NRCS is focusing EQIP funds. Open discussion and other ideas still need to be gathered, evaluated and added from other partners mentioned in this document. Over the next few years, through the locally led/local work group process, the LRP will be evaluated and updated as necessary.

-General Information

MCD is located in the North Central part of West Virginia, joined by Pennsylvania and Maryland on the North and East respectfully. Marion, Monongalia and Preston Counties make up the MCD of approximately 1329 square miles/850,500 acre area. Preston County is very rural compared to Marion and Monongalia counties which have large urban areas. West Fork, Tygart, Monongahela, Cheat River, and Youghiogheny River are the main river basins flowing through the District Boundaries.

Map outlining 12 digit hydrologic code watersheds in the MCD.

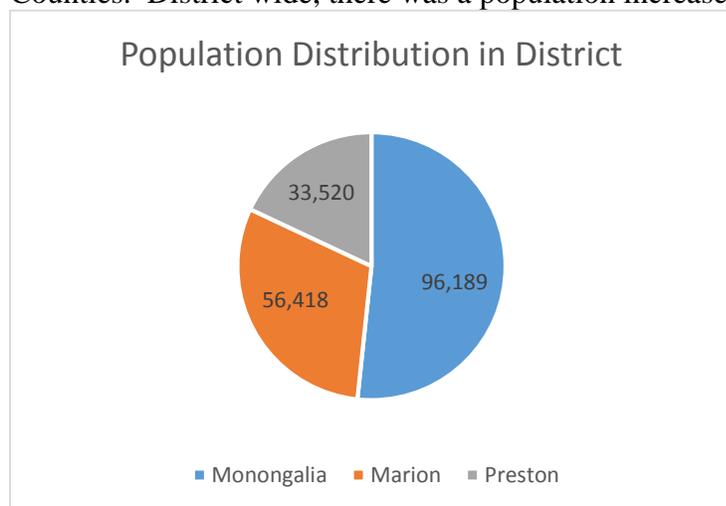


-Socio-economic

Monongahela Conservation District

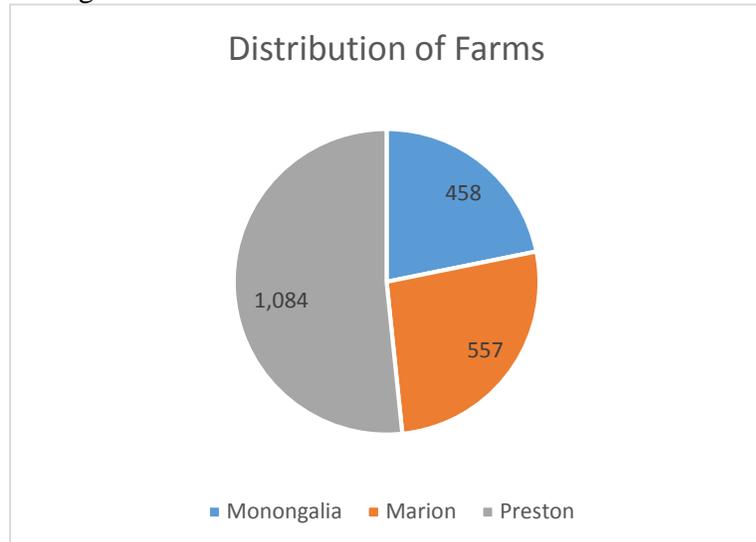
Population and economic characteristics in MCD (Monongalia, Marion, and Preston Counties) were derived from several references including the US Census and USDA National Agriculture Statistics Service.

Population: In 2014, there were approximately 194,054 people residing within the district. Monongalia County has the largest population compared to Marion and Preston Counties. District wide, there was a population increase of 3% since the 2010 Census.



Income: The average per capita income for the MCD in 2013 was \$23,739 while median household income is estimated at \$45,019. An estimated 17% of the MCD population are below the poverty rate. A comparison of Monongahela's income statistics compared to State wide averages indicate higher values for the District. State wide, per capita income is \$23,237, median household income is \$41,576 and the poverty rate is 18.3%.

There are approximately 2,099 farms in the MCD. The farms span over 272,048 acres with the average farm size around 129 acres. The number of farms per county are fairly evenly

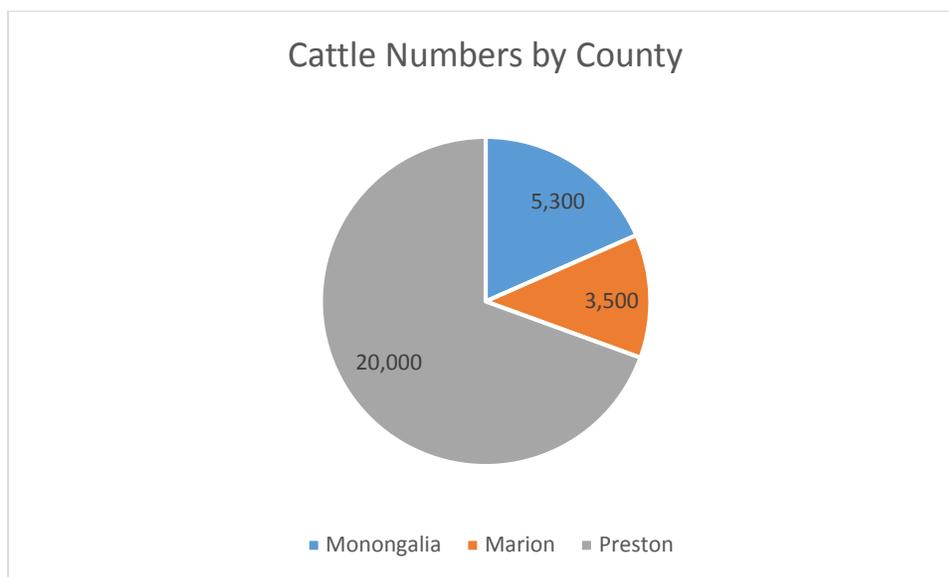


distributed across the counties in the district.

The MCD contains about 8% of the total farmland in West Virginia.

Like most of WV, the majority of farmers in the District rely on off-farm income.

Cattle are the largest agricultural sector in the MCD with the majority of farms producing cattle for the beef industry.



-Soils

The MCD is located within two major land resource areas. All of Marion County and most of Monongalia County are part of the Central Allegheny Plateau (MLRA 126). The eastern quarter of Monongalia County and all of Preston County are part of the Eastern Allegheny Plateau and Mountains (MLRA 127). While some soils may be mapped in both MLRAs, others may be restricted to one MLRA or the other.

The soils of the district's MLRA 126 area developed from relatively level bedded shale, siltstone, sandstone, and some limestone. Common soils in this area are the Gilpin, Culleoka, Westmoreland, and Upshur soils. Many times these soils were mapped as complexes and associations due to the bedrock complexity. Both Gilpin and Culleoka soils are moderately deep with loamy, medium textured subsoils. Westmoreland soils are deep with loamy, medium textured subsoils. Upshur soils are deep, with red, fine textured subsoils. Upshur soils have limited suitability to many uses due to their high clay content, erodibility, and high shrink-swell potential. Culleoka and Westmoreland soils tend to make better pasture and hayland due to forming in lime-influenced materials. Other lime influenced soils include the Dormont and Guernsey soils. These soils are somewhat limiting due to a seasonal high water table.

The majority of cropland in this MLRA is located on bottomlands, terraces, and gently sloping foot slopes, with the Lobdell, Chagrin, Monongahela, and Ernest soils making up the most acreage. Slopes generally range from 0-15%. The bottomlands are generally loamy in texture, with low to moderate amounts of clay in the subsoil, and are very deep to bedrock. Occasional flooding can occur in most of these areas. Most areas are moderately well drained to well drained, but some bottomlands may have areas of poorly drained soils in areas away from the main stream channel. The nonflooding Monongahela and Ernest soils on terraces and footslopes are very deep moderately well drained soils with medium textured subsoils. Both soils are limited by a seasonal high water table due to a fragipan layer at around 24 inches deep.

The eastern area of the MCD, covering all of Preston County and a small area of eastern Monongalia County, is in MLRA 127. Soils in this area developed from relatively level bedded to angle bedded shale, siltstone, and sandstone. The Greenbrier limestone is exposed in a few small areas of MLRA 127, but is not an important part of farm lands in this district. Common soils are the Gilpin, Buchanan, Lily, Dekalb, and Calvin soils. The topography is quite rugged in the Cheat River valley, with narrow ridges and steep and very steep side slopes. Sandstone rock outcrops and surface stones are common. Most of this area is primarily used for timber production. However, areas on the plateau have slopes and nonstony soil surface layers more conducive for farming practices. The Gilpin, Lily, Dekalb, and Calvin soils are moderately deep, well drained, and contain low to medium amounts of clay in the subsoil. Buchanan soils are very deep, moderately well drained, and contain medium amounts of clay in the subsoil. Buchanan soils are limited by a seasonal high water table due to a fragipan layer at around 24 inches deep.

Strip mine soils are common in parts of the MCD, both in reclaimed and unreclaimed phases. . The Janelew and Fairpoint soils consist of a mixture of soil, rock, and coal fragments, and contain enough bases to support grassland vegetation. Reclaimed areas are suitable for both pasture and hay production, but surface layers are typically low in organic matter content, and are droughty during summer months due to low available water holding capacity. Other strip mine soils are restricted by medium to high acidity levels, as well as droughtiness, and low organic matter, and are best used for tree production.

Most common/important agricultural enterprises

Marion, Monongalia Preston Counties are predominately livestock farming operations. Marion and Monongalia have none to very few acres of annual crops being produced, with exception of small vegetable producers with products being sold at local Farmers Markets. Preston County has several acres of corn and soybean being produced in northern and southeastern part of the county and an increase in vegetable growers due to Farm to School programs and direct marketing to Camp Dawson. Forest is predominate land use in all of the counties with forest products being timber and pulp wood marketed on the wholesale market. Forest property owners also manage for wildlife habitat. The small dairy farm operations have been on a steady decline due larger dairy operations competing in neighboring states. Apiary industry is strong in the MCD. Marion County Beekeeper Association has 82 members and is increasing in members/beekeepers.

Crop	Marion		Monongalia		Preston	
	Farms	Acres	Farms	Acres	Farms	Acres
Corn	8	35	12	100	100	3700
Vegetables	15	42	17	32	47	180
Orchards	10	27	12	29	25	54
Berries	12	12	12	25	20	15
Honey bees	8	-	10	-	34	-

2012 ag census

Most common /important conservation work/practices historically

Grassland management and water development projects for livestock producers have been the most popular practices installed in the past 20 years.

Approximately 10 animal waste structures have been installed over the past 5 years.

High tunnel structure installation (5-10 per year) has been increasing over the past 5 years due to the increase demand for local grown food and increase of local farmers markets in Monongalia County.

The District has been very active in assisting forest property owners with timber stand improvement and invasive plant control practices. Approximately 187 active WV Forest Stewardship Plans covering 21,670 acres have been developed by WVDOF and private consultant foresters.

In past 50+ years, strip-mining was a common activity in MCD. NRCS has been actively involved in Rural Abandon Mine Program and Acid Mine Water Treatment in cooperation with DEP, OSM, Friends of Deckers Creek, Friends of Cheat River, and the MCD.

In the late 1950's - early 60's Public Law 566, (watershed protection planning) became active in flood prevention and land treatment projects. MCD has 14 completed flood prevention dams and 8 miles of flood control channel in Marion and Preston Counties. Several of the dams are multi-purpose projects with recreation and water supply as secondary purposes.

Established partnerships

Farm Service Agency, Friends of Deckers Creek, Marion County Bee Keepers Association, Preston County Grower CO-OP, Friends of Cheat River, Monongahela Conservation District, West Virginia Division of Forestry, Trout Unlimited, WVU Extension Service, WV Conservation Agency, WV Department of Natural Resources, WV Department of Environmental Protection, WV Department of Agriculture, National Wild Turkey Federation, and US Fish and Wildlife Service.

Resource Concerns evaluation.

Most common resource concerns the Monongahela Conservation District Local work group identified:

Plant Condition - Plant Health and vigor - related to pasture, hayland, forestry, and human food production. Pasture and hayland health and management will focus on control of invasive plant species, rotational grazing system, adequate water, and introduction of improved plant species. Forestry will benefit by promoting forest stewardship plans to address control of invasive species, promote early successional habitat for wildlife habitat, timber stand improvement projects, and tree planting on abandon strip mine lands.

Livestock production limitation – Inadequate livestock water – limits livestock production. Producer can provide dependable water to meet livestock needs as a result of developing water supplies in all counties.

Plant condition – Plant not adapted or suited - as related to not a sufficient amount and types of Pollinator plants available for honey bees and other pollinating insects with priority in Marion County.

Soil erosion - Sheet, rill, and streambank erosion - related to soil disturbance, concentration of livestock during winter feeding periods, and livestock access to streams District wide

Inadequate wildlife habitat- cover/shelter - a lack of diversification of trees and plants and invasive plants competition. Special emphasis on birds and grouse in the District.

Inadequate Fish and wildlife Habitat- degradation- a proposal to improve water quality and stream bank vegetation for aquatic habitat in Rhine Creek and other streams in MCD.

Water quality degradation – Excess nutrients in surface and ground waters from manure on winter feeding areas not protected from runoff, and inadequate manure storage and handling facilities in MCD.

Water quality degradation –heavy metals and other pollutants transported to receiving waters by acid mine drainage in all three counties. The focus on a few streams to be identified in Preston County with assistance from DEP, Friends of Deckers Creek and Friends of Cheat River.

-Identification and Prioritization of Projects

The pollinator emphasis to address plant health and adaptability will occur in Marion County working with the Marion county beekeeper association and WVU Extension Service, to establish a marketing plan, input on size/acre needed in given area, evaluate type of plants most needed, etc. Practices would include forage and biomass planting, fence, critical area planting, nutrient management, brush control and tree planting. This can be considered in other counties at the completion of this project. Estimated 200 acres of combined renovated and new plantings would be established.

Dairy Farm assistance program, would assist 5-7 small family owned and operated dairy operations in Preston County, to apply water quality and plant health related conservation practices. The WVU Extension Service and NRCS under joint agreement would conduct a farm evaluation on the farmer interest and conservation needs and objectives. Resources concerns most commonly to be addressed are water quality, plant health, and soil erosion. Practices would include pasture and hayland management, brush management, access control, access road, cover crops, water development practices, forage harvest management, forage and biomass planting, heavy use area protection, nutrient management, roof runoff structure, stream crossing, fence, and waste storage facility. Estimated 1200 acres of pasture, hayland, and cropland would receive some sort of land management treatment through a three year project.

Grassland based livestock operation is the most dominant agriculture enterprise with emphasis on pasture and hayland management in the District. Practices include prescribed grazing, nutrient management, forage and biomass planting, water development, fence, and stream crossing with the main emphasis on plant health resource concern. US Fish and Wildlife Service would assist participant with installation of fence and water development in area associated with protection of stream corridors. It is recommended that one project area, based on 8 to 12 digit hydrologic unit

code watershed, would be submitted each year partnering with MCD Agriculture Enhancement program. Estimated 500 acres of pasture and hayland would receive some sort of land management treatment in each priority area.

Water Quality issue, involving livestock winter feeding areas and accumulation of manure exposed to weather, occurs throughout the MCD. These feeding areas are not concentrated in any one watershed. To reduce the impact of animal waste on water quality, the plan is to have a MCD wide project with requirements related to reducing the impacts on water quality. Practices may include; nutrient management, waste storage structure, diversion, fence, critical area planting, prescribed grazing, and water development. Proposed project plan would consider 2-3 of the highest priority farm plans per year.

Forestland is the dominant land use in the MCD of 573,000 acres (NAIP). West Virginia Division of Forestry, National Wild Turkey Federation, and NRCS propose to promote Forestry Stewardship Planning in localized areas to encourage timber stand improvement and wildlife habitat (Cerulean Warbler project). MCD, NRCS, WV DOF, and WVU will initiate a marketing plan to promote EQIP funds and WVDOF forest stewardship planning funds in small project areas, selected by the local work group. Priorities would be directed towards practices such as, timber stand improvement, fence, brush control (invasive species), early successional habitat management, and tree planting. Cerulean warbler project would be focused in the Marion and Monongalia counties west of the I79 corridor with goal of developing 10 plans covering 1500 acres and creating 150 acres of habitat per year. Other forest related project would funded through the state wide EQIP funding in this project area.