

Report to General Assembly on the Northcentral ATV Regional Trail Connector Pilot

This report is in fulfillment of requirements set forth by the 2020 fiscal code (HB 2536) that compelled the Department of Conservation and Natural Resources (DCNR) to take specific action to expand regional riding opportunities by establishing and monitoring a three-year “pilot program” for ATV use on Commonwealth lands, with this report due to the General Assembly by December 31, 2023.

Executive Summary

ATV riding in Pennsylvania, as across the nation, is a recreational pursuit growing in popularity. It has evolved over the last several decades from a stacked loop, trail-based activity to one where lone operators are seeking technical riding challenges to an endeavor where operators now ride in multi-passenger UTVs and seek longer, landscape level trail systems for many of the same reasons other non-motorized users of the state do to experience the outdoors, view wildlife, and enjoy camaraderie with like-minded people. Additionally, ATV recreation is among the most accessible of all outdoor recreations, offering opportunities for all to experience Penn’s Woods. There are 285,000 registered ATVs in Pennsylvania and enthusiasts are found in all states. Many states across the country offer an expanding selection of ATV recreation riding options, including regional trail systems hundreds of miles in length to attract visitors from other states. West Virginia and New Hampshire are two examples of nearby states which have established successful ATV tourism ventures, luring many Pennsylvanians to these and other destinations to explore on their ATVs.

DCNR is the state agency with the responsibility of managing the states’ ATV recreation programs. Traditionally this has been done through a series of eleven ATV trails maintained on state forest lands, along with assisting other public and private landowners interested in hosting ATV recreation through grants for feasibility planning and trail construction. Through both user and legislature interactions, DCNR began earnestly seeking to provide landscape-level ATV riding options in the state in the mid-2010s. This culminated with the 2020 revision of the DCNR ATV policy, which enabled the DCNR to consider designation of state forest roads for the purposes of providing strategic connections to legal ATV riding opportunities. Section 1320-E of the 2020 Fiscal Code required the Department to establish a pilot program in northcentral PA and present results of this pilot to the legislature by the end of 2023. Northcentral Pennsylvania lends itself well to this concept as it has both large blocks of state forest and an abundance of township roads designated open to the use.

DCNR worked with county, municipal, and township governments along with the Pennsylvania Department of Transportation (PennDOT) to establish and open a pilot area by July 2021. This area was referred to as the Northcentral PA ATV Regional Connector Pilot. The pilot program was implemented during the summer ATV riding season (Memorial Day weekend to the last weekend of September) over a three-year period beginning in 2021 and ending in Fall 2023. DCNR planned each year’s preferred routes to be proactive in identifying and minimizing potential negative impacts to state forest land and conflicts among various recreational user groups. Growth each year was a result of both townships

expressing interest in participating the following year and increasing the connection of DCNR trail systems within the northcentral region as work to improve the sustainability of necessary connectors was completed. The social, managerial, and environmental sustainability of the routes were primary goals.

The 2021 route consisted of 154 miles located primarily in Potter and Tioga counties. This route connected the Susquehannock ATV Trail to Colton Point State Park and was accomplished by utilizing 58 miles of state forest roads and trails along with 13 miles of PennDOT roads and 82 miles of township roads. The 2021 riding season was partial, opening mid-season on Friday, July 16th. 1,894 Pilot Passes were sold.

The 2022 route consisted of 230 miles and added a connection to business destinations in Lycoming county along Route 44 as well as a significant expansion along township roads into northeastern Potter and northwestern Tioga counties. The 2022 route utilized 57 miles of state forest roads/trails, 22 miles of PennDOT roads, and 151 miles of township roads. The 2022 riding season was a full season beginning on Friday, May 27th. 3,650 Pilot Passes were sold.

The 2023 route consisted of 374 miles located in Potter, Tioga, Lycoming, and Clinton counties. This included connecting two DCNR trail systems – Haneyville in Lycoming county and Whiskey Springs in Clinton county, expanding mileage in this county significantly. The 2023 preferred route utilized 163 miles of state forest roads and trails, 33 miles of PennDOT roads, and 177 miles of township roads. The 2023 riding season opened Friday, May 26th. 5,255 Pilot Passes were sold.

Monitoring

DCNR developed and implemented a monitoring plan as part of the pilot. This plan was developed in consultation with guidance provided in the Fiscal Code Amendment and the 2016 State Forest Resource Management Plan (SFRMP). DCNR determined that each value identified for monitoring could be categorized into Environmental, Social, and Economic impacts. These three categories are often considered the three pillars of sustainability.

Environmental Effects

DCNR's environmental monitoring addressed Sensitive Trail Segments, Sensitive Habitats, Rogue Trails, and Invasive Plants. This monitoring was conducted before the opening, during, and following each year's riding season. A total of 201 Sensitive Trail Segments and Sensitive Habitats were identified on state forest land along the ATV Pilot Corridor with two of these sites requiring in-season remediation or corrective actions. A total of 43 existing unauthorized, rogue ATV trails with varied levels of use along the pilot routes through state forest were inventoried prior to opening that area to ATV use. Only four required remedial action during the pilot. There were 470 existing populations of invasive plants found along the pilot route which continue to be monitored for treatment and suppression of spread.

Social Effects

Social monitoring seeks to understand the way that individuals and communities engage with, perceive of, and are impacted by the ATV Pilot and Pilot area. Through this monitoring, data were gathered regarding the public's perceptions, expectations, values, and concerns regarding the ATV Pilot and for forest use broadly, as well as their experiences engaging with the pilot area. Data were also gathered regarding visitation and visitor experiences and utilization of law enforcement and safety services.

From DCNR's end-of-season non-statistical satisfaction survey in 2022, 70% of respondents that purchased Pilot Passes in 2021 and 2022 indicated their experience with the pilot was improved from the 2021 riding season. 71% of non-motorized recreationists and 46% of local respondents indicated they were dissatisfied with the ATV Pilot Program.

Surveys at Colton Point and West Rim Trail in the Tioga State Forest during the 2022 riding season indicated the ATV Pilot Program did not cause survey participants to alter their recreation plans. Trail counters on West Rim and Susquehannock Trail System (STS) trails suggest hiker frequency was not impacted during the riding season. Additionally, acoustic data collected at Colton Point State Park does not indicate ATVs had significant impact on soundscape among types of vehicle-borne noise.

Dust, noise, traffic, and law enforcement were indicated as the primary considerations for influencing levels of support for the ATV Pilot Program from the statistically based resident survey. DCNR Forest Rangers issued 633 warnings and 157 citations and five ATV accidents were reported during the three-season ATV Regional Connector Pilot.

Economic Effects

A primary rationale for supporting the creation of the ATV Regional Connector Pilot was providing economic benefit to local communities in the region through increased tourism and recreation. The DCNR implemented processes to quantify internal revenues, expenses, and estimate economic impacts to local communities.

A total of 10,799 ATV Pilot Passes were sold over the three-year pilot, generating \$429,702 in revenues. Expenses were approximately \$2.4 million to stand up, maintain, and administer the program over the three-year pilot program.

Surveys of Pilot Pass holders indicated each respondent made nine trips to region, spending on average three nights per trip. 76% indicating the ATV Pilot was their primary motivation for coming to the area. Approximately 18% of Pilot Pass holders indicated they had not visited Potter or Tioga Counties for recreation purposes prior to the ATV Pilot.

The Impact Analysis for Planning (IMPLAN) suggests total economic impact of \$8.2 million in 2022 and \$11.7 million in 2023 for Potter and Tioga counties. Economic impact was greatest in the lodging sector (17.8%). A survey of local businesses suggests that 28% of their business during the riding season was from ATV riders and the average spending per rider, per visit, to their business was approximately \$124.

Summary of Monitoring

DCNR's monitoring results suggest the three-year ATV Regional Connector Pilot encountered relatively minor environmental, social, and management issues through the three years. Generally, motorized recreationalists were strongly supportive of the pilot while non-motorized recreationists indicated they were strongly not supportive. Residents were split nearly evenly on satisfaction with a slight edge toward being dissatisfied. Thoughtful planning of the preferred routes, frequent engagement with stakeholders, proactive patrolling of the route, and addressing issues with the pilot as they arose were key to these results.

Recommendations Resulting from the Commonwealth's Northcentral ATV Regional Connector Pilot

Recommendations with the goal of implementing a sustainable, equitable, and future-oriented ATV regional program are provided. They include:

1. Create a multi-jurisdictional, regional authority to administer the regional trail program.
2. Determine the feasibility of expansion within the regional trail area.
3. Significant changes to the ATV Vehicle Code are necessary, including definitions; reciprocity; safety devices, and registration.
4. Use revenues from the sales to contribute toward financial support of participating municipalities to address dust suppression, law enforcement, emergency response, and road maintenance.
5. Review and revise of ATV accident reporting procedures.

Introduction

Established on July 1, 1995, the Pennsylvania Department of Conservation and Natural Resources (DCNR) is charged with maintaining and protecting 124 state parks, managing 2.2 million acres of state forest land, providing information on the state's ecological and geologic resources, and establishing community conservation partnerships with grants and technical assistance to benefit rivers, trails, greenways, local parks and recreation, regional heritage parks, open space, and natural areas. DCNR's mission is to conserve and sustain Pennsylvania's natural resources for present and future generations' use and enjoyment. As Pennsylvania's leader and chief advocate for conservation and outdoor recreation, DCNR will inspire people to value their natural resources, engage in conservation practices, and experience the outdoors. To conserve and maintain Pennsylvania's public natural resources for the benefit of all people, including generations yet to come, we will take intentional action to ensure DCNR lands are accessible to all, provide inclusive and equitable programs and services, and recruit and retain a diverse workforce.

The state forest system of Pennsylvania, approximately 2.2 million acres, comprises 13 percent of the forested area in the Commonwealth. Pennsylvania's state forest represents one of the largest expanses of public forest land in the eastern United States, making it a truly priceless public asset. This great expanse of forestland provides a wealth of benefits to Pennsylvanians, including wildlife habitats, aesthetic beauty, timber products, water purification, revenue from gas extraction, and a variety of healthful recreation opportunities. Balancing the various uses, resources, and values of state forest land requires a thoughtful and deliberate approach to management to ensure sustainable environmental, social, and economic benefits now and for future generations.

The Bureau of Forestry is the only state land management agency in Pennsylvania that practices ecosystem management on its lands. It is the only state agency that manages large holdings of connected forests for the presence of wild character and low impact recreation. From the 2016 State Forest Resource Management Plan, system-wide it boasts:

- 2.2-million-acre state forest system
- Over 78,000 acres of designated Natural Areas
- Over 160,000 acres of designated Wild Areas

- 1.3 million acres managed specifically for Wild Character
- 11 stacked loop ATV trail systems that total 270 miles
- Approximately 800 miles of designated state forest hiking trails
- Over 4,000 miles of shared-use, non-motorized trails
- Over 4,000 miles of designated Exceptional Value and High-Quality streams
- An entire state forest-wide system where backcountry, primitive camping is promoted
- Numerous vistas and interesting “natural” features

Brief History of the Pennsylvania ATV Program

In 1985, the Snowmobile law was amended to require All Terrain Vehicle (ATV) registration within the Department of Environmental Resources (DER). Shortly after, the Whiskey Springs ATV Trail was developed in 1986 as a stand-alone trail system. It is currently linked to the village of Westport using a township road open to joint use by ATVs and licensed motor vehicles. This area was slightly expanded with the Murphy Estate purchase in 1991.

By the 1990s, the number of registered ATVs had increased significantly. Designated ATV trails were sited along certain existing snowmobile trails and administrative roads following internal feasibility studies and deliberate planning. At the time, 188 miles of authorized ATV trails were available in the winter months and 95 miles during the summer. These trails were in the Michaux, Buchanan, Bald Eagle, Sproul, Tiadaghton, Susquehannock, and Delaware State Forests.

Significant expansions to the ATV trail system spurred an evaluation from the Cooperative Land Management Program in 1999. The report from the DCNR Office of Policy in 2000, titled *District Forester ATV Survey Results: Assessment of Current ATV Situation in Pennsylvania State Forest Lands*, indicated that:

- “ATV riders going off trail” was the top management problem, with “erosion” and “unsafe driving” coming in at 2nd and 3rd, respectively.
- There were up to “10 times” as many illegal trails as legal trails, the former totaling an estimated 2,535 miles across the state forest system (one district reported up to 570 miles of illegal areas).
- Existing enforcement authority was inadequate.
- The report concluded by providing the following recommendations:
 - Enforcement staffing needed to be doubled.
 - Enforcement authority could be increased.
 - Illegal trails need to be eliminated immediately.

In 2001, the department issued a moratorium on further expansion of ATV trails on state forest lands. This moratorium was rescinded briefly in 2002 and reinstated in 2003 and remained in effect until 2020, with one exception. The Bloody Skillet ATV Trail in Curtin Township, Centre county is a 1,200-acre trail system purchased in 2002 as part of a larger land acquisition and developed in multiple phases over the next several years. At the time of the purchase, approximately one quarter of the purchase price was appropriated from the ATV/Snowmobile Fund to develop the area for ATV riding opportunities. The eventual ATV trail system was linked via trails and township roads opened by ordinance into the Snow Shoe Rails to Trails.

In the years following the establishment of the moratorium, the Department sought to maintain clear distinction between state forest roads and ATV trails and limit dual use of roads and trails to crossings or short connectors necessary to access legal riding opportunities and businesses. DCNR did not advance the long-term use of state forest roads for off highway vehicles (OHVs) for a variety of reasons including:

- The safety of ATV and UTV operators.
- The safety of non-ATV traffic, both commercial and private, making legitimate use of administrative, public-use roads.
- The relative inability to control illegal ingress and egress of machines, which often results in extensive environmental and social impacts, and significantly detracts from the wild character of state forests for all users.
- The proximity to state forest leased camps and associated noise concerns.
- Compliance with safety recommendations by ATV manufacturers, nearly all of which do not recommend the use of ATVs on roads; paved or gravel.
- The expressed concerns for expansion of the activity from non-motorized recreation groups on state forest.
- The illegal use on private land and damage to adjacent landowners and inholdings.

Also, through this period of time, the ATV user community was undergoing a significant change in terms of demographics and equipment. Following the recession of 2008, the sales of multi-passenger Utility Terrain Vehicles (UTVs) increased relative to the sales of traditional ATVs. UTVs offered a more comfortable ride, making longer distances more desirable. They provided a more social experience than the traditional use of operation one-person machines around stacked loop trail systems. Increasingly, UTVs transformed the recreational pastime into a group activity where many users were more interested in spending time with friends and family through long-distance, landscape spanning legal routes. The primary challenge for most users was there were not many authorize or legal routes outside of some “pay to play” riding areas around the state.

In 2014, a grass roots effort arose to begin to proactively address this. Led through the Central Mountains ATV club, motorized recreation enthusiasts sought to communicate with townships throughout the northcentral region of the state regarding posting roads open to ATVs in order to connect communities and develop rural businesses and hence, economies. This effort, known as the Northcentral PA ATV Initiative, was supported through Clinton county.

In 2016, the increased interest in ATV opportunities led DCNR to contract with the Larson Design Group to investigate the feasibility of connecting the Bloody Skillet and Whiskey Springs ATV trail systems in Clinton county. The study concluded that there were no feasible ways to connect the two trail systems within the existing jurisdictional, topographical, and ecological constraints necessary to comply with the State Forest Resource Management Plan as applied to all other state forest management activities.

One notable barrier to success was that the Department was bound by its policy that restricted the expansion of ATV trails and prohibited the use of state forest roads for ATV use. Other notable barriers identified included:

- Crossing multiple jurisdictions and private ownerships.
- Safety concerns around the intersection of Pete’s Run Road and State Route 144.
- The intersections with the Bucktail Natural Area.

- Traffic safety concerns regarding the use of PennDOT bridges.
- Securing permission to operate ATVs safely on PennDOT roads and bridges.
- Securing permission to operate ATVs safely on municipal roads in South Renovo.
- The high estimated trails development cost estimated at \$21 million.

Shortly following the conclusion of the feasibility study, an amendment of the 2018 Fiscal Code compelled DCNR to consult with PennDOT in developing, opening, and maintaining an ATV trail to connect the Bloody Skillet and Whiskey Springs ATV trails in Clinton County. Additionally, the amendment directed DCNR to implement the full Northcentral ATV Initiative, which had made significant progress in opening township roads to legal ATV use. The full design concept would effectively connect Clinton County with the state of New York. Per the 2018 Fiscal Code, this was to be completed by 2020.

DCNR began planning for a modified route in a good-faith effort to meet the demands of the 2018 Fiscal Code. This proposed alternative would temporarily permit ATV use on roadways until construction of a new 29-mile trail was completed. DCNR was not able to meet these demands of the mandate because:

- No additional funding or staff increases were provided to DCNR to implement the \$2.4 million project to complete the work.
- Existing policies by jurisdictional authorities (e.g. PennDOT) that did not provide for road use.
- The limiting planning, design, and construction of the project along with the legal and financial complexities made it impossible to meet the 2020 deadline (permitting alone would take 2 years).
- Enforcement and monitoring of illegal trail riding (e.g., Chapter 102 and 105 violations in exceptional-quality watersheds).
- Documenting and quantifying impacts on adjacent landowners.
- Managerial capacity limitations.
- Conflicting recreational uses (e.g., direct impacts on the Chuck Keiper State Forest Hiking Trail).
- Concerns of additional burdens placed on regional, local safety, and emergency services due to increased use in remote areas.

Beginning in 2017, the Bureau of Forestry had concurrently initiated a strategic planning process that included surveys, public meetings, and statistically valid omnibus survey instruments. This process has uncovered foundational public perceptions and sentiments related to ATV use in state parks and forest lands. Highlights from this process related to ATVs include:

- ATVs generally are a frequent resource management topic:
 - 21% of total comments received on the plan included references to ATVs.
 - 81% of the ATV comments were in opposition to the use of ATVs on state forest land.
- Only 4% of participants used these lands for riding off-road, non-snow motor vehicles.
 - Contrastingly, most participants use forest lands for viewing natural scenery, plants, or wildlife (55.3%); hiking (54.9%); or picnicking (53.1%).
- Most participants feel that there should be the same (34.7%) or fewer (30.9%) ATV riding opportunities on state forest land and less than 12% of participants think there should be more opportunities (Figure 1).

- On average, half of participants perceive that hearing or seeing an off-road vehicle, ATV, or snowmobile would make their experience in forests somewhat worse than if they did not hear any (Figure 2).

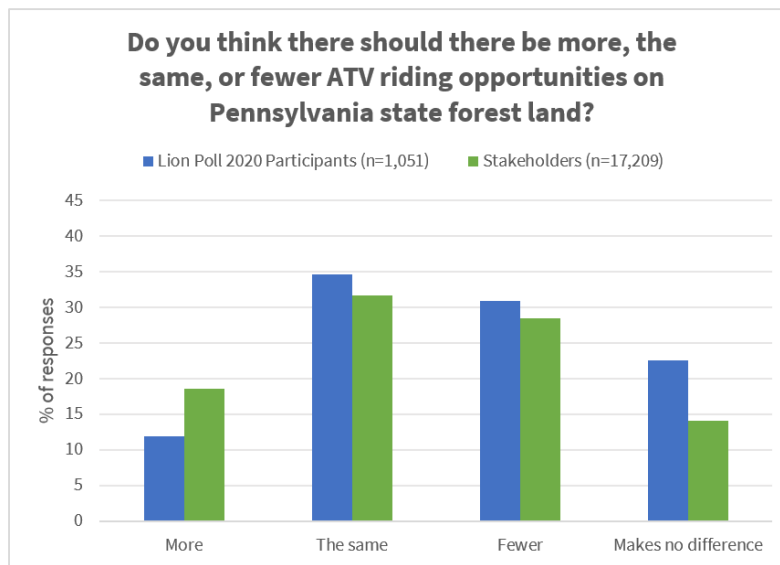


Figure 1. Lion Poll and Bureau of Forestry stakeholder feedback survey on the desired amount of ATV riding opportunities on state forest land.

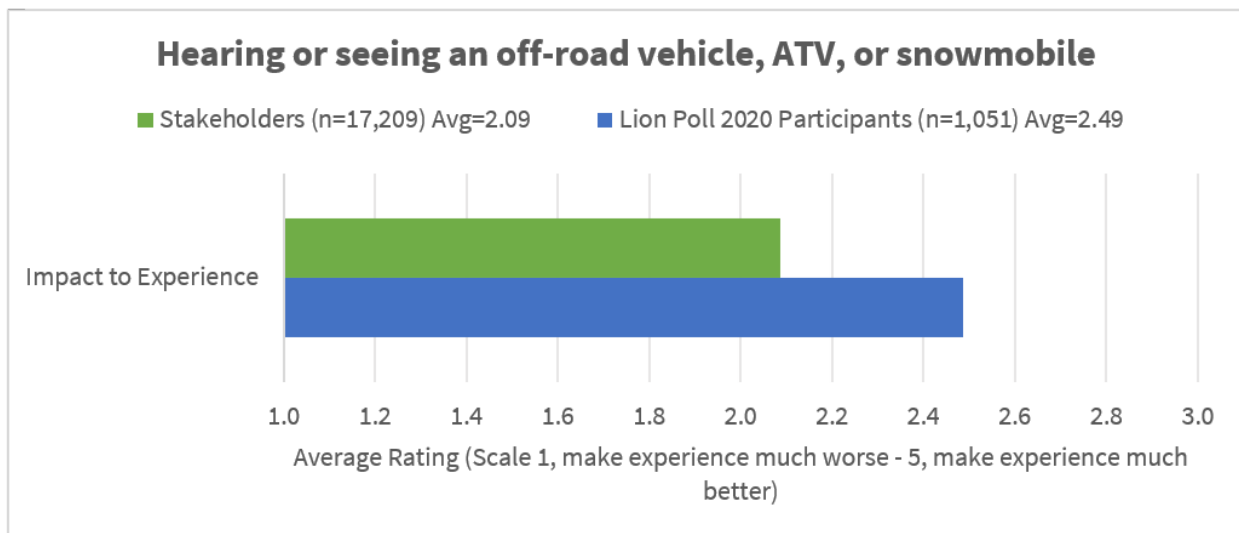


Figure 2. Lion Poll and Stakeholder Feedback Survey on perceived impact of ATV forest recreation on user experience.

A 2017 study titled “PA ATV Riders and Their Needs” by Hardwood Resources Economics, LLC in consultation with Pashek & Associates and DCNR ([2017 Report](#)) documented the growing user preference for long distance riding opportunities that connected business and communities, along with providing camping opportunities. The 2017 study also concluded that there existed a strong preference for riding opportunities on private lands.

In 2019, DCNR commissioned a study of expanding ATV riding opportunities across the Commonwealth that was also conducted by Pashek & Associates ([2019 Report](#)). Large areas of Northcentral Pennsylvania were deemed unsuitable for expansion due to high quality watersheds and other ecological and environmentally sensitive features. However, other parts of the Commonwealth were deemed suitable, mainly due to the presence of privately held mining lands. Nearly all DCNR lands were found unsuitable for ATV riding for environmental sensitivity reasons.

There are currently over 285,000 active registered ATVs in Pennsylvania (Figure 3) and more from other states who seek PA riding opportunities for tourism. Many municipalities in northcentral PA have opened municipal roads to joint use by ATVs and licensed motor vehicles, either as a result of the work done through the Northcentral PA ATV Initiative or to meet the expressed needs of their residents.

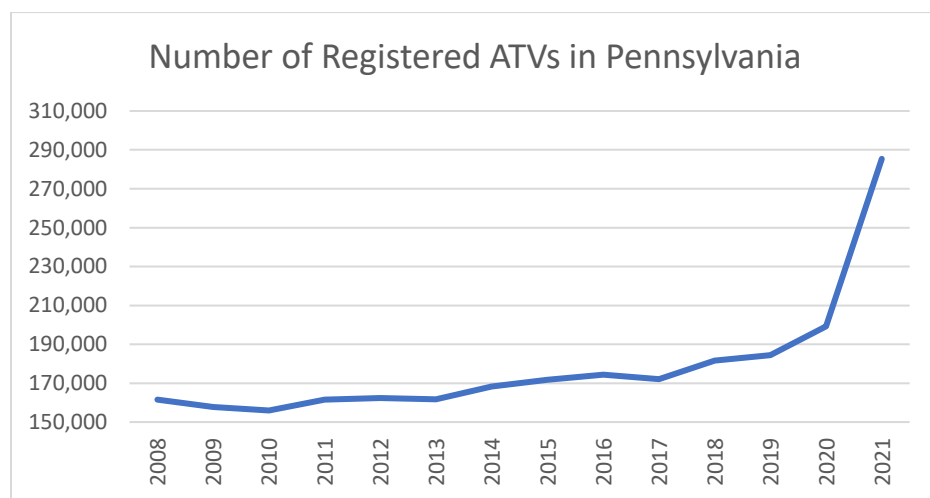


Figure 3. Registered ATVs in Pennsylvania since 2008.

ATVs are prohibited within State Park boundaries to ensure the safety of visitors and staff and reduce user conflicts. However, a small connector trail was established to help resolve an unusual situation at Lyman Run State Park. In 2019, DCNR established a connection between a park campground and the Susquehannock State Forest Rock Run Road trailhead, located within the park. Lyman Run State Park has a township road running through it for which the township permits ATV use, and the park is unique in that it is the only State Park with an ATV-designated trailhead within the park. (Note that the entirety of the Susquehannock ATV Trail, including the section that traverses Lyman Run State Park, is managed by Bureau of Forestry.) To allow campers with ATVs to ride from the park's Lower Campground to the township road then to the trailhead, the park is allowing campers with ATVs to ride on the campground road (normally off-limits for ATVs) to access the township road and ride directly to the trailhead. This special allowance is during the summer camping season only.

DCNR ATV Policy Shift and Fiscal Code Amendment Creating the ATV Regional Connector Pilot

DCNR amended its ATV policy in 2020 ([2020 Policy Amendment](#)). This lifted the long-standing moratorium of expanding the ATV trail system and authorized DCNR to expand ATV riding opportunities on state forest roads. Among the provisions, the policy:

- Authorized DCNR to consider the expansion of existing ATV trails and the construction of strategic connectors on state forest lands while also working with willing landowners and local communities to enhance long-distance riding opportunities off state forest lands.
- Allowed for designation of the administrated state forest road system as temporary, seasonal, or permanent ATV corridors with the following conditions:
 - When authorized ATV use on a state forest road currently open for public use. This can be dual use or all or portions of that road may be closed to other uses.
 - If a road is redesignated, the road will be marked as an ATV trail with appropriate signage indicating temporary, seasonal, or permanent use.

The policy further states that DCNR, in the best interest of visitors and staff, does not consider state forest roads to be a viable option for ATV connectors or trail systems mainly because they may not always be conducive for ATV riding.

The policy also underscores the role DCNR serves as the trustee and steward of the state forests and state parks and its mandated responsibilities, under Article I, Section 27 of the Pennsylvania Constitution, to conserve and maintain these lands for future generations.

The increased demand on our state forests as a result of various forms of development, whether it is recreational or industrial (e.g., mineral extraction, rights of way), requires thoughtful consideration regarding state forest management. According to the 2016 State Forest Resource Management Plan, “state forest infrastructure must be systematically structured and designed to provide social, cultural, and economic forest benefits to present and future users within the constraints of sound ecosystem management.”

The 2020 fiscal code (HB 2536) compelled DCNR to take specific action to expand regional riding opportunities by establishing a three-year “pilot program” for ATV use on Commonwealth lands. These opportunities were to be opened by the 2021 summer riding season. In addition, the amendment directed DCNR to monitor the pilot program and provide a report to the general assembly by December 2023. Specifically, it compelled the department to:

- Evaluate roads and trails in Elk, Moshannon, Sprout, Susquehannock, and Tioga State Forests for potential use in a regional riding network.
- Perform an assessment for charging fees of potential DCNR administered riding facilities.
- Consult with community leaders and stakeholders to ascertain interest and feasibility of the regional riding network.
- Map, mark, and designate roads and trails in the pilot area for ATV use.
- Authorize establishment of a user fee to access the pilot area.
- Monitor the use, enforcement, and maintenance needs of the project, and quantify the impacts to state forest lands for the duration of the pilot.
- Submit a report to the General Assembly before December 31, 2023.

Preferred Route Development and Implementation Process

Connected regional riding opportunities provide nature-based and outdoor experiences for motorized recreationists and can serve as an economic boost to rural communities. The overarching goals of

regional ATV trails is to connect trail systems to other trail systems, providing nature-based experiences for motorized recreationists, and connecting riders to ecosystems and to local businesses.

DCNR explored the feasibility of establishing routes along existing legal ATV riding opportunities as well as connectivity to local businesses and points of interest by analyzing existing facilities in the Moshannon, Sproul, Tiadaghton, Elk, Susquehannock, and Tioga State Forests. A thorough analysis was conducted to identify and evaluate social, managerial, and ecological considerations. The analysis focused on areas where DCNR could facilitate corridor connections through existing state forest roads and trails, PennDOT roads, and local municipalities. DCNR coordinated with municipalities with roads already open to joint use per 75 Pa. 7722 authority and consulted with PennDOT on state highways. The goal of this analysis was to provide connectivity strategically, while minimizing impacts to other resources, uses, and values of state forest. Through this analysis, the DCNR identified both feasible segments and those segments that had significant administrative barriers to providing full connection. DCNR maintains a clear distinction between state forest roads and ATV trails and limits dual use of roads and trails to the maximum extent due to safety concerns.

DCNR piloted the Northcentral ATV Regional Trail Connector in 2021, opening mid-season in July. The route was designated with uniform signage used by all entities. Although municipal and township roadways can be used year-round, the ATV Regional Connector Pilot preferred route is marked with a series of directional arrows as well as the shared use ATV signs used within townships, state forest roads and trails, and approved sections of PennDOT rights of way, as provided by 75 Pa. 7722(b). Each year of the pilot, the route was reviewed and expanded.

Before approval and implementation of each year's preferred routes, a State Forest Environmental Review (SFER) was conducted. Each year, an SFER was developed and conditionally approved by the Pennsylvania State Forester. The SFER approval was conditional on the terms that:

- Operation on the state forest facilities would be limited to the designated segments meaning that no illegal off-trail riding would occur.
- Monitoring would be implemented to identify and correct any negative impacts of the ATV Regional Connector Pilot program.
- Signage indicating the seasonal designation of the road(s) being open to ATVs was displayed on the route.

Joint-use ATV roads, in accordance with State Forest Rules and Regulations, open the Friday before Memorial Day and closed for the season on the last Sunday in September. This is the normal operating period on state forest lands. This timeframe helps to avoid soil wetness rutting issues, and long-term, traditional uses of state forest during the trout and turkey season that occur in the Spring. Similarly, in the Fall it also helps avoid road and trail damages and avoid interfering with traditional state forest use during hunting seasons, foliage season, and eventually snowmobile season.

ATV Regional Connector Pilot Routes

The ATV Regional Connector Pilot routes were developed over a three-year period. Each year, a preferred route was developed to provide connectivity to destinations in the ATV Regional Connector Pilot area. DCNR explored the feasibility of establishing connecting routes each year between existing ATV riding opportunities, local businesses, and points of interest. The preferred routes were developed

through a thoughtful and deliberate process that included a detailed analysis of all proposed alternatives. Analysis was focused on identifying the segments where DCNR had full administration and the segments where there existed administrative barriers prohibiting full connection.

The preferred routes were the most direct and least impactful way of connecting specific destinations. The preferred routes did not include all roads open to ATV riding (i.e., all township road mileage open to ATV riding by ordinance), but rather the roads and trails that provide the strategic connections. Riders were able to purchase a Pilot Pass to legally travel on the designated PennDOT and state forest roads and trails that were opened to ATV riding to facilitate the connections. A Pilot Pass was not required to legally ride on township roads already open to ATV riding by ordinance.

Following each riding season, post-season reviews were conducted to inform the planning of the next year's preferred route. Internally, action reviews were conducted with central office program staff, district administrative and maintenance staff, and law enforcement rangers. In addition, reviews were conducted with local municipalities in the region to gather their feedback on the season. This information was considered in planning the following year's preferred route.

The 2021 preferred route consisted of 154 miles located in Potter and Tioga counties. This route focused on connecting the Susquehannock ATV Trail in Potter county to Colton Point State Park in Tioga county. This was accomplished by utilizing 12 miles of state forest roads, 47 miles of state forest trails, 13 miles of PennDOT roads, and 82 miles of township roads. The 2021 riding season opened on Friday, July 16 and closed on Sunday, September 26, 2021. Total number of Pilot Passes sold was 1,894.

The 2022 preferred route consisted of 230 miles located in Potter, Tioga, and Lycoming counties. This route added a portion of the Rt. 44 snowmobile trail, creating a connection to business destinations in Lycoming county. The 2022 route utilized 6 miles of state forest roads, 51 miles of state forest trails, 22 miles of PennDOT roads, and 151 miles of township roads. The 2022 riding season opened Friday, May 27 and closed on Sunday, September 25, 2022. Total number of Pilot Passes sold was 3,650.

The 2023 preferred route consisted of 374 miles, growing the route over 60 percent from the previous season, located in Potter, Tioga, Lycoming, and Clinton Counties. This route added a connection to Whiskey Springs ATV Trail in Clinton county and added the remaining segment of the Rt. 44 snowmobile trail to connect to the Haneyville ATV Trail in Lycoming county. The 2023 route utilized 33 miles of state forest roads, 131 miles of state forest trails, 33 miles of PennDOT roads, and 177 miles of township roads. The 2023 riding season opened Friday, May 26 and closed on Sunday, September 24, 2023. Total number of Pilot Passes sold was 5,255.

Potential Challenges to Regional ATV Trail Viability

On December 10th, 2021, the Pennsylvania Environmental Defense Foundation (PEDF) filed a Petition for Review in the Commonwealth Court challenging the facial constitutionality of the ATV laws. In the Statement of Material Facts, the plaintiff argues that ATV use causes degradation of Constitutional trust assets, citing that state forests and state parks are constitutionally protected trust assets under the Environmental Rights Amendment (ERA), that ATV use has caused long-standing harm to state forests, and that ATV use in state forests and parks has caused harm to PEDF members. The plaintiff contests these actions:

- Legislatively forced ATV use on our state forest and parks by the Snowmobile and ATV Law.

- Legislatively forced ATV use on our state forest and parks by the 2018 Fiscal Code.
- Legislatively forced ATV use on our state forest and parks by the 2020 Fiscal Code.
- Legislatively mandated regional ATV Pilot Program implemented in 2021.
- Breach of constitutional fiduciary duties by mandating ATV use on state forests and parks.

The Commonwealth Court dismissed the case on preliminary objections, and that decision was upheld by the Pennsylvania Supreme Court. The PEDF could, however, bring an as applied challenge to the DCNR's implementation of the ATV laws.

Role and Vulnerability of Municipal Roads and State Highways

The regional ATV riding network is dependent upon the continued participation of municipal and state administered road segments and systems. Per Vehicle Code statute, respective jurisdictions may designate part(s) or all their road networks open to ATV operation. Continued participation by municipal and state agencies is crucial to the continued operational success of the regional riding network. In some cases, the specific road used is the only viable option to achieve legal connection.

At the municipal level, roads become designated open to ATV use via township ordinance. Township ordinances are subject to change for numerous reasons, including but not limited to public opinion, leadership turnover, fiscal and staffing limitations, maintenance condition, etc.

Currently, participation of municipalities in the regional riding network is voluntary. This puts the long-term viability of the connected riding system at risk and prioritizes the need to keep in close contact with townships to meet their needs when issues arise.

Monitoring Need and Approach

To measure the success of the pilot, DCNR developed and implemented a monitoring plan. This plan was developed in consultation with guidance provided in the Fiscal Code Amendment and the 2016 State Forest Resource Management Plan (SFRMP). DCNR determined that each value identified for monitoring could be categorized into Environmental, Social, and Economic impacts. These three categories are often considered the three pillars of sustainability. DCNR is committed to monitoring this activity in an objective and credible manner and using adaptive management to administer this activity to provide for a sustainable program.

Environmental monitoring protocols were developed between January and April of 2021. The department identified potential environmental impacts that may result from increased ATV use that could have protocols developed and implemented quickly prior to the beginning of the 2021 riding season. Protocols for monitoring the conditions of state forest roads and trails, encroachment or degradation of plant communities, and invasive plants were developed. These protocols pertain to and were implemented solely on state forest lands. Due to the time constraints associated with developing and implementing the ATV Pilot Monitoring program, impacts to wildlife, air, and water resources were not developed or implemented. Pending the continuation or expansion of ATV riding opportunities, additional monitoring protocols will be considered.

ATV usage has the potential to create conflicts among the various forest user groups and this is quantified through internal mechanisms and partnering with outside social scientists at Penn State University (PSU). Additionally, the department recognizes that the ATV Pilot could result in both positive

and negative economic impacts and is quantifying this through internal cost/revenue tracking along with partnering with forest economists from PSU to identify economic impacts to local communities. Below are the findings from the three-year Northcentral ATV Regional Connector Pilot program.

Monitoring Results

DCNR monitored the implementation of the program over the three-year pilot duration. The monitoring program addressed components of what is considered the three pillars of sustainability: Environmental, Social, and Economic considerations. These components were evaluated by Bureau of Forestry staff, social scientists from the PSU Department of Recreation, Park, and Tourism Management, and PSU forest economists. Below are the results and findings from this monitoring.

Environmental Effects

Key Findings

- 201 Sensitive Trail Segments and Sensitive Habitats were identified on state forest land along the ATV Pilot Corridor with two of these sites requiring remediation or corrective actions.
- A total of 43 existing unauthorized, rogue ATV trails with varied levels of use were inventoried and four required remedial action during the pilot. There were 43 potential rogue trails, which are trails with no use but could lend themselves to off-route riding, were identified in the pilot area on state forest land. Four of the potential rogue trails did see use and had to be remediated.
- 470 existing populations of invasive plants were found along the pilot route and will be monitored for treatment and suppression of spread.

Environmental monitoring is the evaluation of the impacts to the natural resources in the ATV Regional Connector Pilot area. Protocols for monitoring environmental conditions were based on monitoring processes routinely implemented for other bureau monitoring efforts. Environmental monitoring protocols addressed Sensitive Trail Segments, Sensitive Habitats, Rogue Trails, and Invasive Plants. This monitoring was conducted primarily by district staff with support from central office program areas.

Sensitive Trail Segments and Sensitive Habitats were identified as a priority for monitoring. Sensitive Trail Segments are segments of the trail system where increased usage could potentially lead to degradation of the trail or its surroundings. This includes the potential for excessive rutting, trail widening, erosion, littering, or unauthorized camping. Sensitive Habitats are ecological features such as wetlands, stream access areas, and sensitive vegetation assemblages. Sensitive Trail Segments and Sensitive Habitats were identified and documented pre-pilot and monitored throughout the riding seasons.

Rogue Trails are trails currently or recently used by ATVs that have been developed and used without authorization. These types of trails are typically prone to having erosion issues. An inventory of existing rogue trails was completed prior to the riding seasons, along with locations having the potential of becoming a rogue trail.

Potential rogue trails are locations that easily lend themselves to travel by ATVs and included administrative roads, pipelines, and retired skid trails as well as completely undeveloped locations that

lead to a unique feature. Existing rogue trails were closed prior to the riding season and all locations were monitored frequently throughout the riding seasons.

The introduction and spread of invasive species are a concern of the bureau. ATVs have the potential to spread invasive plant species through the moving of machines from one riding area to another without performing a weed wash to remove possible seed or plant roots. Invasive insects can be transported into an area on vehicles, equipment, and gear.

Sensitive Trail Segments and Sensitive Habitats

A total of 201 individual Sensitive Trail Segments and Sensitive Habitats were identified on state forest land during the ATV Regional Connector Pilot program in 2021-23. These sites were monitored throughout the riding seasons and as of the end of the 2022 riding season, no sites were found to require any remediation or corrective actions. However, in 2023 two sites had issues that required remediation.

Existing and Potential Rogue Trails

A total of 43 existing Rogue Trails were identified on state forest land during the ATV Regional Connector Pilot program in 2021-23. In addition, 43 locations were identified as having the potential of becoming a rogue trail. These locations were monitored throughout the riding seasons and as of the end of the 2023 riding season, eight locations had evidence of rogue riding that needed to be addressed. Corrective actions at these locations included construction of barricades, signage, and education (Table 1).

Table 1. Sensitive trail segments, habitats and existing rogue and potential rogue trails identified pre-pilot and the post-pilot results.

State Forest	Sensitive Trail Segments and Habitats		Existing Rogue Trails		Potential Rogue Trails	
	Identified	Issues	Identified	Issues	Identified	Issues
Susquehannock	15	0	2	0	21	3
Tiadaghton	123	1	1	1	0	0
Sproul	63	1	40	3	22	1
Total	201	2	43	4	43	4

Invasive Species

DCNR staff documented existing populations of invasive plants in the ATV Regional Connector Pilot area and frequently monitored the route for new introductions. The spread of invasive plant seeds in particular via vehicles and equipment is well acknowledged and documented. This most often occurs through mud on machines from operation in sites with sources of invasive seeds being transported on the machine and then becoming dislodged in another location. A total of 470 populations of invasive plants were found on state forest land along the ATV Regional Connector Pilot route (Sproul 224, Tiadaghton 198, and Susquehannock 48). Twelve different species of invasive plants were encountered with crown vetch, multiflora rose, and autumn olive as the three most prevalent that were discovered. The DCNR is committed to the long-term monitoring of invasive plants along the corridor as the establishment of new populations will take time to express themselves and be detected. Additionally,

invasive insect species, such as the spotted lanternfly, could be introduced through the transporting of vehicles, gear, and other equipment. Educating riders and other visitors to perform gear checks could slow the spread.

Social Effects

Key Findings

- 70% of respondents to the DCNR's end-of-season non-statistical satisfaction survey in 2022 that purchased Pilot Passes in 2021 and 2022 indicated their experience with the pilot was improved from the 2021 riding season.
- 71% of non-motorized recreationists and 46% of local respondents to the end-of-season non-statistical satisfaction survey indicated they were dissatisfied with the ATV Pilot Program.
- Intercept surveys at Colton Point and West Rim trail in the Tioga State Forest indicated the ATV Pilot Program did not cause survey participants to alter their recreation plans.
- The acoustic data does not indicate ATVs had a significant impact on the Colton Point soundscape given all the various classifications of vehicle borne noise.
- Dust, noise, traffic, and law enforcement were indicated as the primary considerations for influencing support of the ATV Pilot Program from the statistically based resident survey conducted by PSU.
- Trail counters suggest hiker frequency on West Rim and Susquehannock Trail System (STS) trails were not impacted during the riding season.
- ATV counters suggest most riding occurs on weekends, with peak riding times between 10AM and 4PM.
- DCNR Forest Rangers issued 633 warnings and 157 citations during the three-year ATV Regional Connector Pilot.
- Five ATV accidents were reported during the three-year ATV Regional Connector Pilot.

Social monitoring seeks to understand the way that individuals and communities engage with, perceive of, and are impacted by the ATV Pilot and Pilot area. Under this leg of monitoring, data were gathered regarding the public's perceptions, expectations, values, and concerns regarding the ATV Pilot and for forest use broadly, as well as their experiences engaging with the pilot area. Data were also gathered regarding visitation and visitor experiences and utilization of law enforcement and safety services.

DCNR ATV Regional Trail Connector Pilot Survey

In 2021 and 2022, DCNR deployed a survey to the public to inquire about visitor use in the pilot area and to gather feedback regarding perceptions, satisfaction, and opinion of the ATV Pilot, as well as the impact on their recreation decisions. The surveys were used as mechanism for broad, statewide feedback and are not statistical in nature. In total, 3,563 people participated in the 2021 and 2022 surveys. Each survey occurred after the riding season concluded (late fall), was advertised via DCNR social media, the DCNR Resource newsletter, and was open for participation for approximately one month.

Respondent Demographics

Survey respondents were asked what their primary activities on state forest land were in the past 12 months. Nearly half of respondents' primary forest activity was on and off-road motorized use (49%) and nearly half, though slightly more, was non-motorized (51%) (Figure 4).

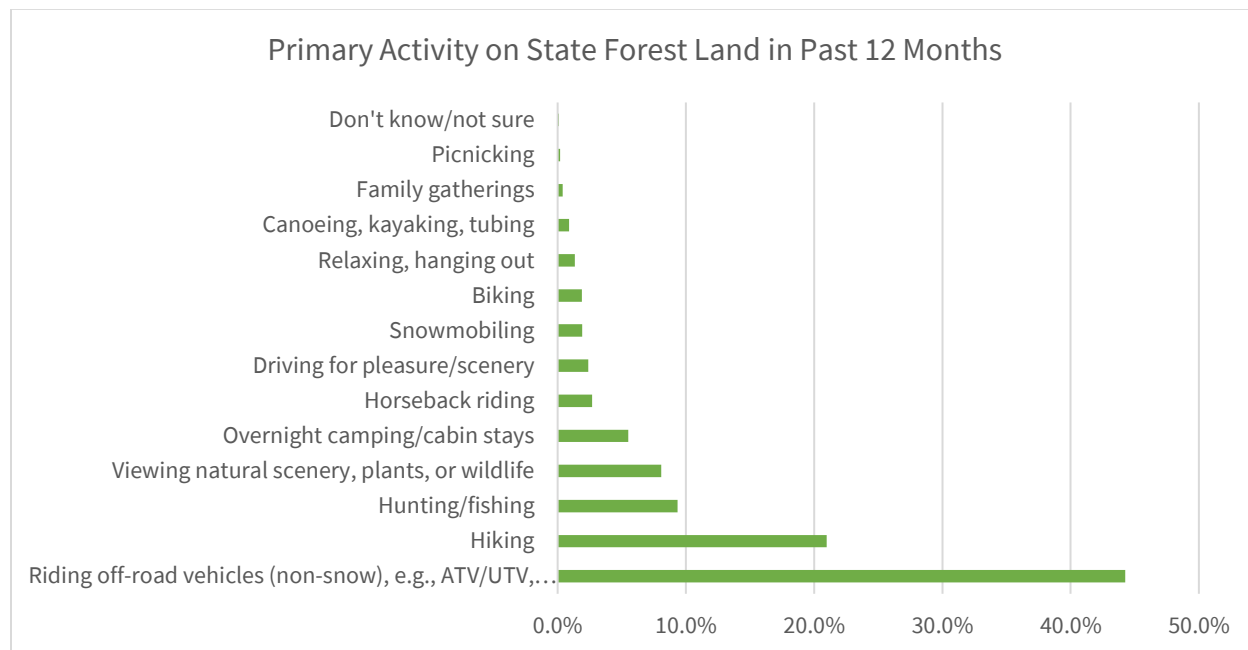


Figure 4. Primary activity on state forest land in past 12 months.

The statistical Lion Poll discussed previously (Figures 1 and 2) indicated that, on average, about 4% of Pennsylvanians use forests for riding off-road vehicles and over 50% use forests for viewing natural scenery and wildlife and hiking.

Most survey respondents were non-local residents of Pennsylvania (73%), meaning that their primary address is within the Commonwealth, but not Tioga, Potter, Lycoming, or Clinton Counties. Twenty percent of respondents indicated they were local residents to these counties, and only 7% of survey participants identified an out of state primary residence (Figure 5).

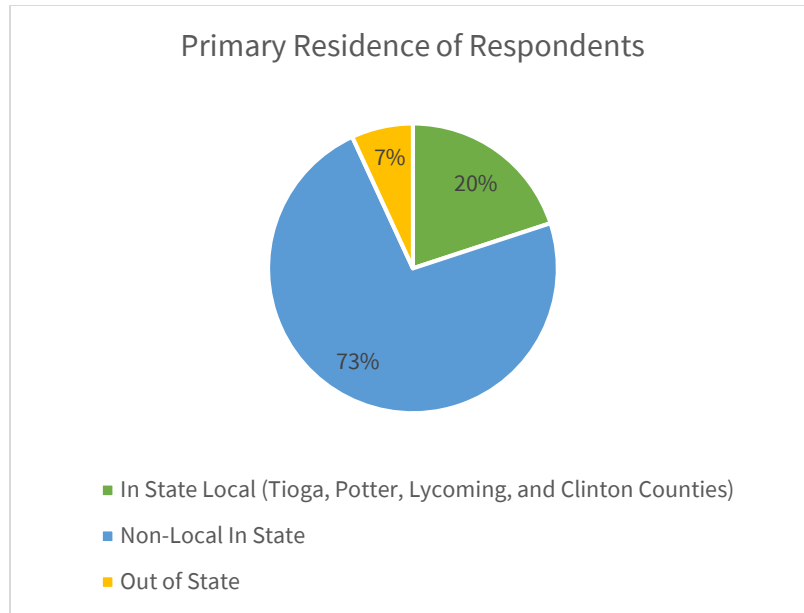


Figure 5. Primary residence of survey respondents.

Visitation and Pilot Pass Purchase of Survey Respondents

Across both years of survey, there was a relatively even divide between total respondents who did and did not visit the pilot area (Tioga, Potter, Lycoming, and Clinton counties) during the pilot season. However, most respondents (nearly 60%) indicated that they had not visited the pilot area.

In 2022, survey respondents were asked to identify in what years of the pilot they had purchased a DCNR Regional ATV Connector Pilot Pass. Nearly 65% of total survey respondents indicate that they had not purchased a Pilot Pass at all. Of those respondents who are motorized users and who indicated that they did visit the pilot area, the majority (49%) had purchased a Pilot Pass in both the 2021 and 2022 riding seasons (Figure 6). Over 32% indicated that they had purchased a Pilot Pass for the 2022 pilot season, and only about 2.5% only purchased a 2021 Pilot Pass. Over 16% of motorized user respondents who visited the pilot area indicated that they had not purchased a Pilot Pass at all.

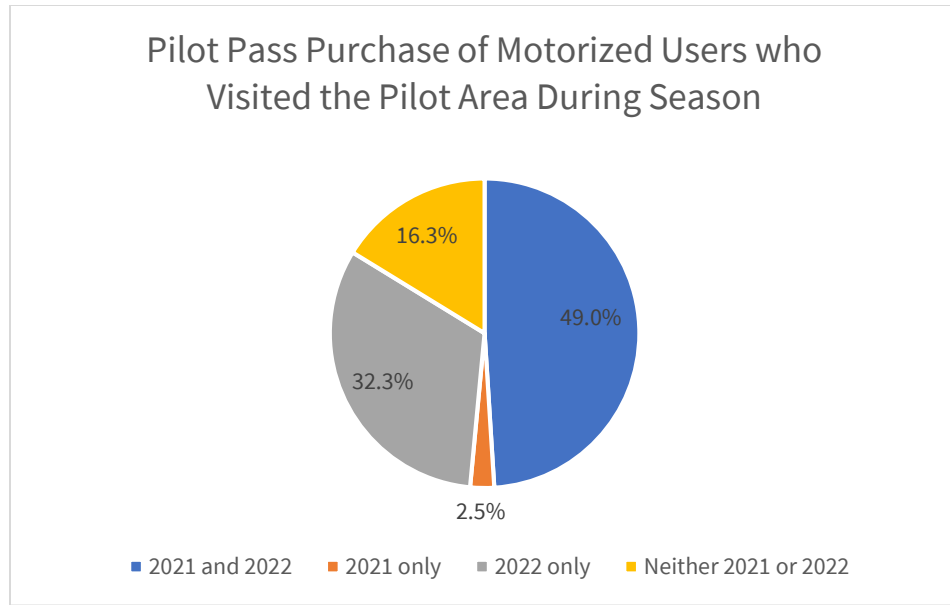


Figure 6. Years survey respondent's that identified as motorized users visited the ATV Regional Connector Pilot region purchased Pilot Passes.

Respondents who indicated that they had purchased a Pilot Pass in 2021 and 2022 were asked to rate their experience of the pilot in 2022 as compared to their experience in 2021. Most (70%) said that their experience was better, indicating a level of perceived improvement for responding Pilot Pass holders. Less than 6% of respondents stated that their experiences were worse (Figure 7).

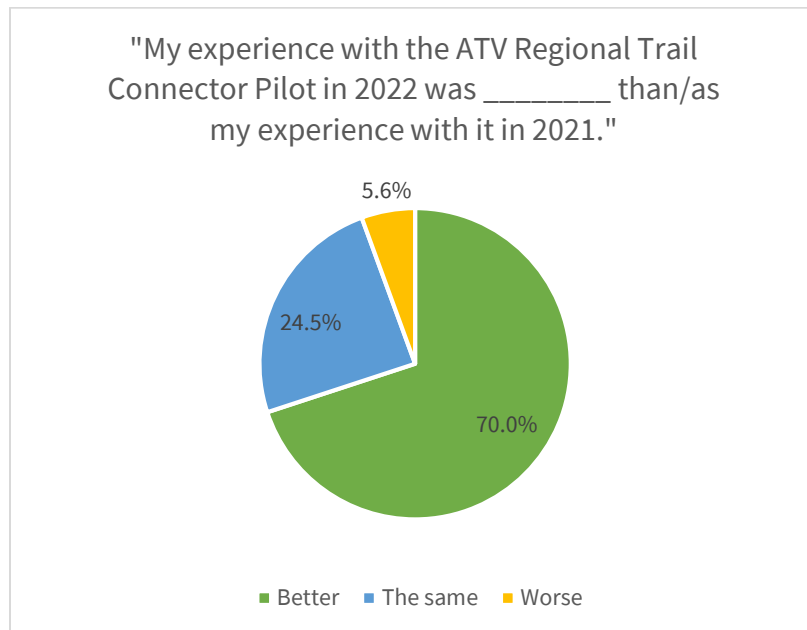


Figure 7. ATV Regional Trail Connector Pilot Experience of respondents who purchased a Pilot Pass in 2021 and 2022.

Satisfaction with the ATV Regional Trail Connector Pilot: Respondents that Visited the Area

Survey respondents who had visited the pilot area during the riding season were asked to identify all activities they participated in and their level of satisfaction with the ATV Regional Trail Connector Pilot. 62% of survey respondents who visited the pilot area during the season rode off-road vehicles, 47% viewed natural scenery, plants, or wildlife, and 37% drove for pleasure or scenery while in the area. (Note that participants were asked to select all activities they participated in while visiting the pilot area; therefore, percentages do not add to 100). Satisfaction results suggest that:

- Satisfaction by Use Type:
 - 71% of *non-motorized user* respondents were dissatisfied with the Pilot. 48% of those identified as completely dissatisfied.
 - 12% of *motorized user* respondents were mostly or completely dissatisfied. 79% of motorized user respondents were satisfied with the Pilot. 30% of those identified as completely satisfied and 37% as mostly satisfied.
- Satisfaction by Primary Residence:
 - *Out of state* respondents indicated the greatest satisfaction with the pilot (69%). *Non-local in state* respondents were also satisfied (58%). *Local* respondents, however, identified split satisfaction in the pilot; 46% were dissatisfied, 49% were satisfied, and 5% were neutral.
 - *Local* respondents experienced greatest dissatisfaction with the pilot (46%), and 28% of those identified as being completely dissatisfied.
 - *Out of state* respondents demonstrated the least dissatisfaction (28%). This makes sense when we consider that local residents likely experience a myriad of externalities due to proximity to pilot, as compared to someone who does not reside in the state at all. In the surveys, many local residents expressed concerns and dissatisfaction related to noise and safety impacts in their communities.

Opinion of the ATV Regional Trail Connector Pilot: Respondents that did not Visit the Area

Survey respondents who had not visited the pilot area during the riding season were asked to share their opinion of the ATV Regional Trail Connector Pilot. Results suggest:

- Opinion by Use Type:
 - 66% of *non-motorized user* respondents had a negative opinion of the Pilot. 38% of those identified as having a completely negative opinion. Expanding on this, these respondents shared their concerns for potential negative impacts to forests, vegetation, and wildlife, their perceptions of the stewardship ethic of motorized users and the impact this will have on the maintenance of “wild” experiences, and their concern for safety not only of other users but of people traveling roads where ATVs are permitted.
 - Less than 5% of *motorized user* respondents had a negative opinion of the Pilot. 89% of motorized user respondents had a positive opinion of the Pilot. 59% of those identified as completely positive and 24% as mostly positive.
- Opinion by Primary Residence:
 - Opinion by residence follows a very similar trend as satisfaction by residence. *Out of state* respondents held the highest opinion of the pilot (67% positive). *Non-local in state*

respondents also felt positively (55%). *Local resident* respondents, again, identified split opinion in the pilot; 49% had a positive opinion of the pilot and 5% had no opinion.

- *Local resident* respondents expressed the most negativity toward the pilot (46%), and 26% of those identified as having a completely negative opinion. *Out of state resident* respondents demonstrated the least negativity toward the pilot (28%). Like with satisfaction, this makes sense when we consider that local residents likely experience a myriad of externalities – that inform their opinion – due to proximity to the Pilot, as compared to someone who does not reside in the state.

Influence of Respondents Recreation Decisions

All survey respondents, those who visited the pilot area and those who did not, were asked to indicate how the presence of the Pilot influenced their recreation decisions during the pilot season. Results reveal that a minority of respondents (22%) chose to avoid the pilot area during the riding season because of the pilot program.

- Influence on Decision by Use Type:
 - 19% of *non-motorized user* respondents chose to avoid recreating near the Pilot while it was open, 62% indicated that the Pilot did not influence their state forest recreation decisions, and 19% chose to recreate in the local state forests because of the Pilot's presence.
 - Only 3% of *motorized user* respondents chose to avoid recreating near the Pilot. 26% indicated that the Pilot did not influence their state forest recreation decisions. 71% of *motorized user* respondents chose to recreate in the local state forests because of the Pilot's presence.
- Influence on Decision by Primary Residence:
 - The majority of all residence categories chose to recreate in the local state forests because of the Pilot's presence; 64% of *out of state* respondents, 53% of *non-local in state* respondents, and 48% of *local* respondents.
 - 43% of *local residents* indicated that the Pilot did not influence their state forest recreation decisions, over 10% more than *out of state residents* and 5% more than *non-local in state residents*.
 - 9% of both *local* and *non-local in state resident* respondents chose to avoid recreating near the Pilot while it was open, while only 4% of *out of state resident* respondents chose to avoid the area.

Forest District Office Comment Logs

During the riding seasons, ATV Regional Connector Pilot Passes were sold in-person at the Forest District Offices. During these transactions, purchasers made comments about the connector that were recorded by administrative staff. In addition, there were also comments submitted by phone and e-mail to the Forest District Offices. These comments were documented and circulated for consideration. During the 2021 riding season, 30 comments were received and 77 were received in 2022. Comments were from the general public that were identified as ATV Riders (46%), Residents (21%), Law Enforcement (15%), Municipalities (11%), Camp Owners (4%), Other Recreation Users (2%), and Businesses (1%).

The type of comment was categorized into one of four types found in Figure 8. Most comments were considered General/Neutral that included suggestions for additional signage, suggestions for additional riding destinations, and additional potential connections. Thirty-one percent of comments were complaints that included dust issues, the number and group size of riders, noise pollution, and safety concerns. Complimentary comments included gratitude for increasing riding opportunities and drawing recreationists to this region of the state (Figure 8).

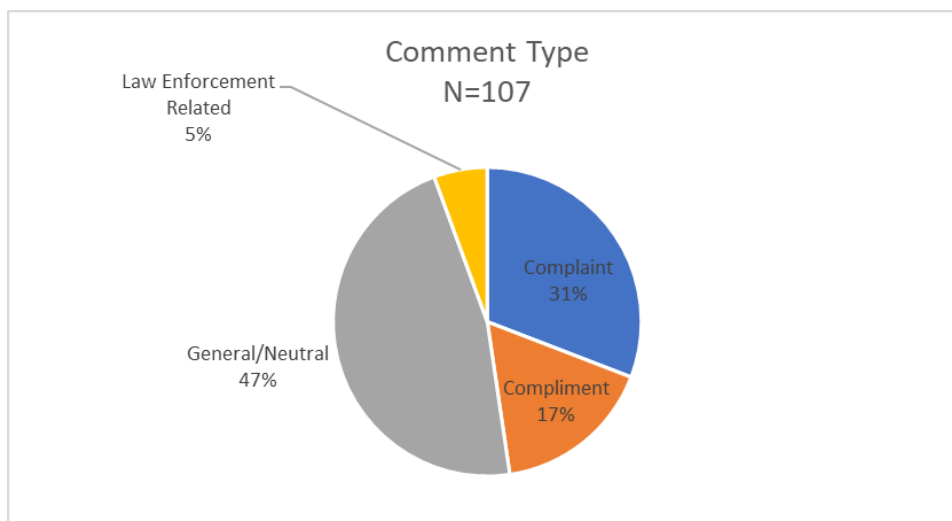


Figure 8. Type of comments received by Forest District Offices.

Public Meetings

During the three-year ATV Regional Connector Pilot program, the bureau conducted numerous public outreach meetings and webinars to solicit input and comments. Prior to each riding season, stakeholder meetings with local townships, ATV groups, PennDOT and the public were conducted to present proposed routes for transparency of process, soliciting feedback, and identifying potential challenges. In addition, post riding season meetings were also held with stakeholders to conduct after action reviews of the riding season.

DCNR engaged heavily with the Potter county ATV Task Force, coordinated by the Potter county GIS/Planning Director, to gather feedback on the pilot. The Potter county ATV Task Force includes representation from Potter and Tioga county planners, Pennsylvania State Police, local municipality officials, local law enforcement, residents, businesses, ATV clubs, and Emergency Medical Associations (EMA).

In 2021, two public meetings were held on June 10 and June 15 at the Coudersport High School. Two public webinars were conducted on July 7 and July 14 prior to the opening of the Pilot on July 16. Additionally, a post riding season public meeting was held on October 26.

In 2022, a public meeting was held at the Lumber Museum in Coudersport on March 2. A post riding season public meeting was held on October 25. Also, an internal review meeting was conducted on November 3 to discuss the results of the riding season.

In 2023, a meeting was held once again with the local townships and municipalities on March 2. On March 9, DCNR and PennDOT finalized the 2023 Pilot route after approved review from the townships. On November 14, preliminary report review and feedback sessions were held for both local municipalities and invited county commissioners in two separate sessions.

The primary concerns resulting from these meetings included:

- Dust – This was the primary concern expressed. Specifically, how to minimize the impacts of dust to residents. In response, DCNR developed a reimbursement dust suppression program for townships that had segments on the preferred route. The dust suppression program was active for all 3 years of the pilot (for more details, see the dust suppression program under the Economics section of this report).
- Law enforcement presence – DCNR Rangers have served as a visual presence on forestry, municipal, and state roadways within the limits of their jurisdiction. This was a highly prioritized objective of the DCNR to meet community expressed concerns. Additionally, Pennsylvania State Police (PSP) served as an additional presence when needed for municipalities and townships that have no local law enforcement. This is most of the area presently involved in the pilot and nearly everything north of Route 6. There is a clear desire to have increased law enforcement presence during the riding season.
- General concerns – Sanitation, unauthorized youth operators, trespassing, noise, and reckless driving were also of concern. In response, sanitation stations were provided in some areas along the route.

ATV and Trail Counters

Usage of the Regional ATV Trail Connector Pilot was assessed by strategically deploying various types of traffic and hiker counting devices on state forest land along the preferred route. The purpose was to identify peak riding times and determine if ATVs are affecting non-motorized trail usage near the route. The deployed locations of the counters are illustrated in Table 2.

Table 2. Counter locations by year.

Riding Season	ATV Route Counter Locations	Hiking Trail Counter Locations
2021	Billy Lewis Road (Susquehannock State Forest) Deadman Hollow Road (Tioga State Forest) Susquehannock ATV Trail (Susquehannock State Forest)	STS Hiking Trail (Susquehannock State Forest) West Rim Trail (Tioga State Forest) Deadman Hollow Road (Tioga State Forest)
2022	Colton Point ATV Trail (Tioga State Forest) Susquehannock ATV Trail (Susquehannock State Forest) Rt. 44 Snowmobile Trail (Tiadaghton State Forest)	STS Hiking Trail (Susquehannock State Forest) Colton Point Foot Trail (Tioga State Forest) West Rim Trail (Tioga State Forest)
2023	Haneyville ATV Trail Connector (Tiadaghton State Forest) Rt. 44 Snowmobile Trail (Tiadaghton State Forest) Pfoutz Valley Trail (Sproul State Forest)	

The traffic counters indicate that weekends are the peak days for riding with the opening weekend of the riding season and holiday weekends having the most riders (see Figure 9). Table 3 shows the percentage of counts averaged by day of the week.

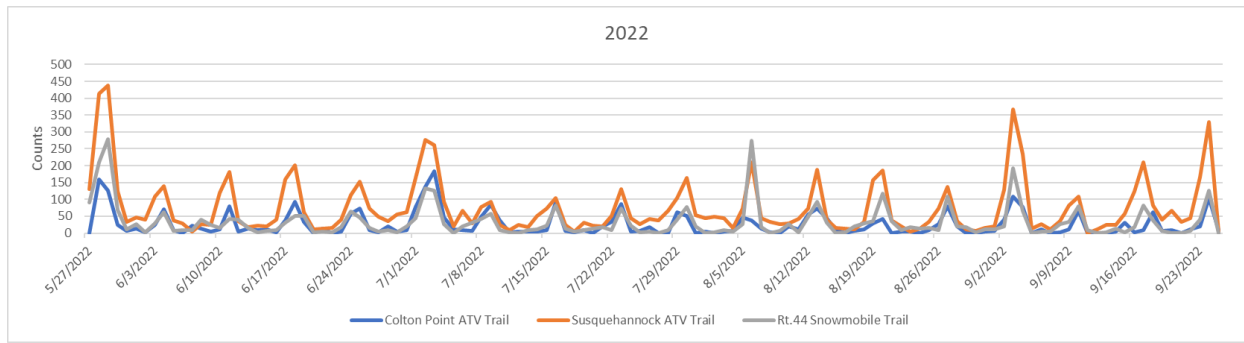


Figure 9. Cleaned raw traffic counts from the 2022 riding season counter locations.

Table 3. Percentage of riding by year and day of the week.

Day of Week	Percentage of Traffic		
	2021	2022	2023
Sunday	14.2%	18.0%	20.7%
Monday	9.4%	5.1%	5.0%
Tuesday	10.2%	4.1%	4.0%
Wednesday	9.1%	4.9%	4.6%
Thursday	10.4%	6.3%	5.8%
Friday	17.6%	19.4%	17.8%
Saturday	29.1%	42.2%	42.2%

By averaging the counts from all counter locations by day of the week and hour, a pattern of the times of day when riding occurs can be determined. Figure 10 illustrates the average Saturday time of day riding pattern during the 2021 riding season. The figure shows riding occurs during daylight hours with the heaviest traffic between the hours of 10AM to 4PM, with approximately 10 to 14 passes per hour.

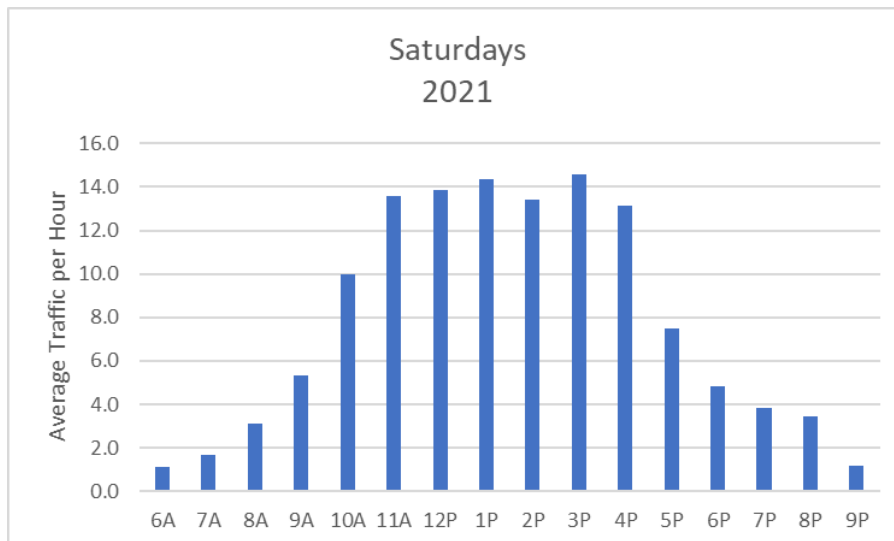


Figure 10. Hourly average Saturday riding pattern during the 2021 riding season from all counter locations.

The data from trail counters deployed along the STS and West Rim Trail hiking trails do not suggest that hiking patterns were affected by the ATV riding season. Counters were deployed several weeks prior to the start of the riding season and retrieved several weeks after the riding season closed. User patterns are similar to ATV riding patterns in that weekends and holiday weekends show the greatest volume (Figure 11).

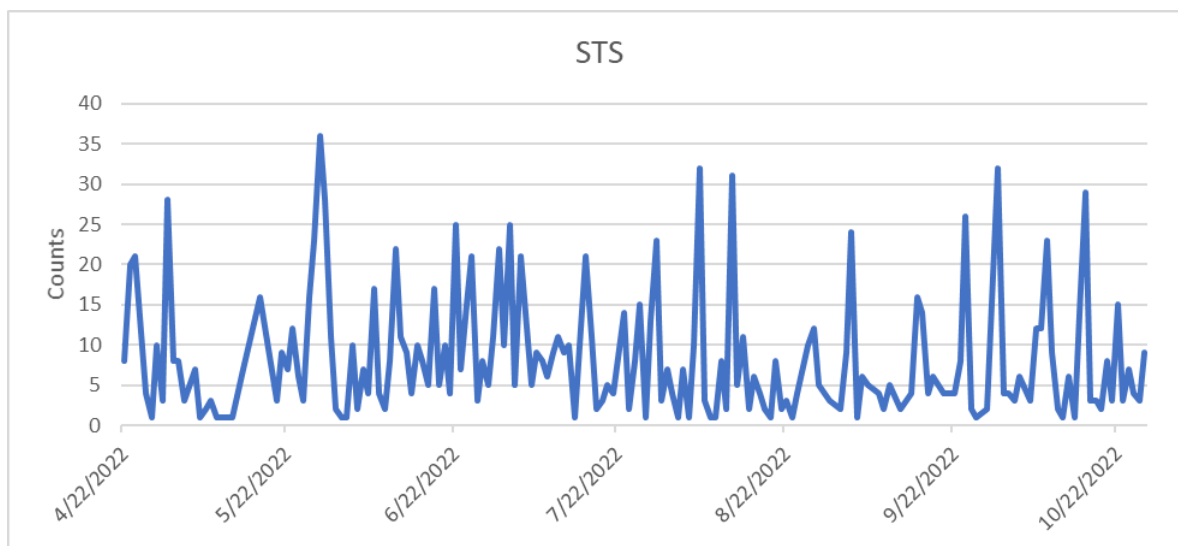


Figure 11. STS hiking trail use patterns in 2022.

A destination of the preferred ATV route is Colton Point State Park in Tioga county. To minimize potential conflicts at the Colton Point Vista, the ATV route ended at the park boundary on Deadman Hollow Road. A parking area was constructed, and the road was gated to through-traffic into the park using this road. Access to the vista during the 2021 riding season was by foot on the gated portion of Deadman Hollow Road. In 2022, an ATV trail was constructed from the parking area into Colton Point State Park to allow riders closer access to the vista. A parking area at the end of the ATV trail, along with a foot path to the vista, were also constructed. Counters were deployed to determine usage of these segments.

The 2021 riding season was shorter than the season in 2022, but the counter data suggest that visitation to Colton Point Vista using the 2022 improvements increased. Table 4 shows monthly foot traffic counts using the accesses available in each year.

Table 4. Monthly foot traffic to Colton Point Vista using the available access each year.

Month	2021	2022
	Deadman Hollow Road	Colton Point Foot Path
May		289
June		443
July	354	639
August	220	391
September	325	495
Total	898	2,255

Law Enforcement

Over the 2021, 2022, and 2023 riding seasons, a total of 633 warnings and 157 citations were issued by DCNR Forest Rangers related to the ATV Regional Connection Pilot (Table 5).

Table 5. Number of law enforcement actions by type.

Enforcement Action	2021	2022	2023	Total
Warnings	94	311	228	633
Citations	34	65	58	157

Of these enforcement actions, most were related to Registration, Operation in an Unsafe Manner, Safety Lighting, and Operations in Undesignated/Closed Areas. A total of 120 enforcement actions were for Registration violations. This included a lack of registration or incomplete registration materials. A total of 79 enforcement actions were for Operation in an Unsafe Manner. Most of these actions were attributed to not wearing appropriate safety helmets while operating or riding in ATVs. A total of 176 enforcement actions were related to Safety Lighting violations (111) and Operation in Undesignated/Closed Areas (65).

Reported Accidents

The DCNR has oversight of ATV Registration, Education, and Enforcement Programs on state forest lands. In addition, the DCNR is also tasked with tracking ATV and snowmobile accidents reported on a statewide basis. The DCNR does this in several ways including, but not limited to, monthly PennDOT crash reports, State Police crash reports, local police, and individuals who are involved in these types of accidents. The DCNR also subscribes to a service that provides news reports for all ATV and snowmobile accidents occurring in the state.

Over the course of the 2021 riding season, there was only one reported ATV accident associated with the ATV Regional Connector Pilot area. This accident was at Pirate Rock in Tioga county and can be attributed to high speeds and illegal riding. Local EMS responded and required the ATV rider to be transported via helicopter to receive emergency medical treatment.

During the 2022 riding season, a total of three accidents were reported in the ATV Regional Connector Pilot area. The most severe accident occurred on Short Run Road in Potter county and was attributed to visibility issues associated with dust. A helicopter evacuation was requested by local EMS but was unsuccessful due to the lack of an appropriate landing location. The other two accidents were less severe and were handled by local EMS.

During the 2023 riding season, there was only one reported accident associated with the ATV Regional Connector Pilot area. This accident occurred on Rausch Road in Potter county and was attributed to visibility issues associated with dust. An operator pulled over to the side of the road to allow an oncoming side by side room to pass. In the process, the operator ran into a downed tree, jumped off the ATV and tumbled down an embankment ninety-one feet. EMTs were on site and the operator was transported by ambulance to Williamsport Hospital.

For context, a total of nine snowmobile accidents occurred in the ATV Regional Pilot Connector Pilot area during 2021 through 2023.

Although not comprehensively quantified, anecdotally there has been concerns raised by first responders and emergency officials about added demands on already stressed local volunteer EMS organizations related to the ATV Regional Connector Pilot program. ATV accidents, when they occur often are often traumatic and exceed the capabilities of local emergency rooms and require life flights or other long-distance transports. There are also concerns beyond response to ATV accidents that extend to an increase in overall incidents from increased tourism. These include other medical needs that arise where people are congregating (e.g., cardiac emergencies, acute illness, etc.) and search and rescue calls. This has also been corroborated anecdotally by Potter county EMS and Tioga county 911 dispatch.

Penn State Sound and Social Monitoring

To gauge public sentiment regarding the ATV Regional Connector Pilot, DCNR partnered with Penn State Department of Recreation, Park, and Tourism Management to assist with the design and implementation of recreationist and resident surveys.

Recreationist Survey

Researchers collected data at two locations near Colton Point State Park: Colton Point Overlook and the intersection of West Rim Trail and Deadman Hollow Road. Sampling was distributed across each site over a 10-week period during the summer of 2022. Researchers used visitor intercept surveys to randomly sample visitors at these two locations.

All participating visitors were asked to complete an on-site survey and a short listening exercise. The surveyor first administered a pre-survey, asking the respondent to follow along using a paper copy while the technician recorded their answers electronically via electronic tablet. Following the completion of the pre-survey, participants proceeded with a listening exercise. Participants were asked to close their eyes and relax while keeping track of each individual sound they heard for a period of three minutes. Each time a sound was heard, the participant would identify the sound and report it to the survey administrator. After three minutes, participants then provided ratings of the sounds they heard. They rated the acceptability of each sound as well as how pleasing each sound heard was to them. Upon completion of the listening exercises, the post-survey was then administered.

Penn State researchers intercepted 538 visitors during the sampling period. A total of 406 visitors completed the entire survey (350 at Colton Point and 56 at Deadman Hollow).

During the listening exercise, participants were asked to identify the sounds they heard during a three-minute period. The sounds recorded most frequently at Colton Point were Bird Song/Chatter (60.9%), Car or Truck Sounds (44%), and Insects (43.4%). The sounds recorded most frequently at Deadman Hollow were Bird Song/Chatter (67.9%), Insects (51.8%), and Wind (39.3%). Interestingly, ATV sounds were heard rather infrequently (i.e., Colton Point: 0.6%, Deadman Hollow: 10.7%).

Participants were asked to rate the *acceptability* of the sounds they heard. At both locations, bird chatter, wind, insects, and animal sounds were rated as most acceptable. At Colton Point, Cell Phone noise was ranked as the most unacceptable sound (2.0). Although heard infrequently, ATV sounds were rated just below neutral at both locations.

Participants were asked to rate how *pleasing or annoying* the sounds they heard were. Again, natural sounds (bird chatter, winds, insects, and animals) were rated as more pleasing, while man-made sounds

(cars and trucks, cameras, voices, people walking) were rated neutral, and cell phone noise was rated as annoying. Although heard infrequently, at both locations participants rated the ATV sounds to be annoying.

During the listening exercise, only eight individuals heard ATV sounds. In the survey, those who heard ATV sounds were asked about the frequency that they could hear these sounds. The average for the six respondents was 1.83 per hour (two respondents indicated they would prefer to never hear ATV sounds). They were then asked to rate the acceptability of the sounds they heard should they occur for different durations. Responses dipped below the neutral point of the scale at nine minutes per hour and longer.

For the eight individuals who heard ATV sounds, they also rated the acceptability of the sounds they heard should they occur for various times throughout the day. Acceptability dropped below the neutral point for ten times per day and more.

Finally, the participants who heard ATV sounds during the listening exercise were asked about how these sounds might impact future visitation. The average respondent indicated they could tolerate hearing them “sometimes” before they would stop visiting the location.

Regardless of whether they heard ATV sounds during the listening exercise, all participants were asked if they heard ATVs at any point during their visit. Most participants did not hear ATVs (92%). Additionally, participants were asked questions about if any of their behavior was changed because of ATVs. Most respondents reported they *did not* change their direction of travel (98.1%), create more distance between themselves and ATV users (95.5%), travel to a different area of the park that had less motorized use (98.7%), end activity earlier than planned (100.0%), leave and come back at an alternate time (99.2%), or switch activity type (99.5%).

In conjunction with the intercept surveys, sound meters were positioned to record sound clips and measure volume levels. The sound clips were acoustically post processed to calculate decibels relative to full scale (dBFS) to provide levels representative of the true dB (decibel). These data suggest that the rate of ATV detections compared to other classifications of vehicle sources was very low. Automotive detections represented 42% of the significant acoustic events where ATVs only accounted for 5%. The average dBFS value for each vehicle type at both Colton Point and Deadman Hollow were within 7 dBFS relative to each other. The max range being motorcycles (loudest) and Automotive (quietest). ATVs were within this range. The acoustic data does not indicate ATVs significant impact on the Colton Point soundscape once you take all the various classifications of vehicle borne noise into consideration.

Resident Survey

PSU researchers adapted the recreationist survey to be applicable for use with resident and camp lease holders in Potter county, the western half of Tioga county, Chapman and Leidy townships in Clinton county, and Brown township in Lycoming county. A mailed postcard was distributed to the 9,995 resident and seasonal addresses which were provided by GIS specialists in each of the four counties for these locations. Responses were cleaned to remove blank surveys, surveys with no zip code provided, as well as surveys with zip codes outside of the list provided by the county GIS specialists. This resulted in a sample of 431 respondents (Table 6).

Table 6. Respondent demographics by property ownership.

Ownership	Number of Responses	Percentage of Responses
Privately owned or leased camp	102	23.7%
State forest camp lease	8	1.9%
Resident	303	70.3%
Other	18	4.2%
Total	431	100%

55.1% of respondents indicated they never used an ATV and 52.1% indicated they are not interested in using an ATV.

Study respondents were asked how supportive they were of the ATV Regional Connector Pilot. On average, responses to this question were neutral. Additionally, respondents were asked about the factors that might impact their support. The highest mean belonged to the increase of law enforcement presence (Table 7).

Table 7. What affects level of support for ATV Regional Trail Connector Pilot.

Considerations for Level of Support	Number of Responses	Average	Std. Dev.
Dust	414	2.98	1.51
Noise	419	3.38	1.61
Traffic	416	3.28	1.59
Trash/Litter	413	3.52	1.42
Use Volume	415	3.38	1.52
Water Quality	405	3.02	1.59
Economic Benefits	411	2.82	1.59
Tourism	410	2.74	1.57
Recreation Benefits	412	2.9	1.64
Opportunities to Connect	409	2.58	1.64
Law Enforcement	411	3.62	1.42
EMS Impacts	399	3.2	1.46
Recreation Displacement	397	3.24	1.53
Other	148	3.16	1.89

Scale: 1 = Not at all influential, 3 = Somewhat influential, 5 = Extremely influential

Respondents were asked about their motivations for living or recreating in the area. The highest mean value belonged to viewing natural scenery (Table 8). The acceptability of ATV sounds at various intervals per day was also assessed. The only interval with an acceptable rating was one time per day.

Table 8. Motivations to recreate in the region.

Motivations to Recreate in Region	Number of Responses	Average	Std. Dev.
Experience a sense of adventure or challenge	409	3.26	1.47
View the natural scenery	420	4.51	0.82
Enjoy the natural quiet or sounds of nature	420	4.25	1.11
Appreciate the history and cultural significance of the site	418	3.75	1.22
Experience a feeling of calmness, peace, or tranquility	421	4.26	1.09
Other	138	3.57	1.76

Scale: 1 = Not at all influential, 3 = Somewhat influential, 5 = Extremely influential

Of the respondents, 87.9% indicated they have heard ATVs at their camp or residence. When asked how much the noise from ATVs annoy them, on average participants indicated moderate annoyance. When asked at what frequency of passes per hour would they no longer live or recreate there, responses indicate a median of 50 per hour. Additionally, 204 respondents indicated they would prefer to never hear ATV sounds.

Economic Effects

Key Findings



- 10,799 ATV Pilot Passes were sold over the three-year pilot.
- \$429,702 in revenue generated in Pilot Pass sales over the three-year pilot.
- \$2.4 million in expenses incurred by DCNR over the three-year pilot.
- A survey of Pilot Pass holders indicated each respondent made nine trips to region, spending on average three nights per trip, with 62% indicating they stayed at privately owned camps, and 76% indicating the ATV Pilot was their primary motivation for coming to the area.
- An IMPLAN analysis suggests total economic impact of \$8.2 million in 2022 and \$11.7 million in 2023 for Potter and Tioga Counties. Economic impact was greatest in the lodging sector (17.8%).
- 18% of Pilot Pass holders indicated they had not visited Potter or Tioga Counties for recreation purposes prior to the ATV Pilot.
- A survey of local businesses suggests that 28% of their business during the riding season is from ATV riders and their average spending per rider per visit to their business was approximately \$124.

An assertion supporting the creation of the ATV Regional Connector Pilot was that it will provide economic benefit to local communities in the region through increased tourism and recreation. To assess this, the DCNR implemented several processes to evaluate this assertion.

ATV Pilot Pass sales

A total of 1,894 Pilot Passes were sold during the 2021 riding season. Most Pilot Passes were sold to residents of Pennsylvania (1,617) and 277 Pilot Passes were sold to riders from out-of-state. Of the Pennsylvania resident Pilot Pass sales, 129 Pilot Passes were sold to residents in the ATV Regional Connector Pilot area. The remaining 1,488 Pennsylvania resident Pilot Pass sales were to residents outside of the ATV Regional Connector Pilot area indicating these Pilot Pass holders would have to travel

During the 2022 riding season, 3,650 Pilot Passes were sold, nearly twice the number sold during the abbreviated 2021 riding season. Like 2021, most Pilot Passes were issued to Pennsylvania residents (3,186). 234 Pilot Passes were sold to PA residents within the ATV Regional Connector Pilot area and 2,952 were sold to PA residents outside of the region. 464 Pilot Passes were sold to out-of-state riders from New York, Ohio, Maryland, New Jersey, Delaware, Florida, Virginia, Massachusetts, Georgia, Indiana, and Texas (Figure 12).


**Permits Issued for
ATV Regional Trail Connector Pilot
2021-2023**




During the three-year ATV Regional Connector Pilot, the program generated \$429,702 in revenue from Pilot Pass sales (Table 9). Pilot Passes were \$40 for machines registered in PA and \$60 for machines registered outside of PA. Since the 2021 riding season was condensed, Pilot Passes were prorated to \$20

for machines registered in PA and \$40 for machines registered outside of PA. Cash sales of Pilot Passes were transmitted to the Department of Revenue through money orders with the cost of the money orders being deducted from the transmitted cash revenues. All revenue from Pilot Passes was deposited into the ATV Restricted Fund account and was made available for funding Pilot expenses.

Table 9. Revenues.

Fiscal Year	Revenue
FY 2020	\$0
FY 2021	\$134,265
FY 2022	\$159,040
FY 2023	\$136,397
Total	\$429,702

Pilot Passes did not go on sale until after July 1, 2021 – which is why there is no revenue figures shown (there were expenses) for FY2020. Revenues for FY21 reflect those Pilot Passes sold between July 1, 2021, and June 30, 2022, which include the entirety of the 2021 riding season and the Pilot Passes for the 2022 riding season sold through June 30, 2022. Revenues for FY22 reflect those Pilot Passes from the 2022 riding season sold after July 1, 2022, and those for the 2023 riding season sold through June 30, 2023. Revenues for FY23 reflect those Pilot Passes from the 2023 riding season sold after July 1, 2023.

Expenses to stand up the ATV Regional Connector Pilot, maintain, administer, and monitor it over the three-year period cost DCNR approximately \$1.9 million (Table 10) through the end of the first quarter of 2023. The largest expense (\$1,385,453.65) was in start-up costs to develop the ATV Regional Connector Pilot, e.g. constructing and armoring existing trails for ATV usage. The second largest expense (\$306,762.15) is attributed to the dust suppressant reimbursement program the DCNR developed with the local municipalities.

Table 10. Expenses.

Expense Category	FY 2020	FY 2021	FY 2022	FY 2023 (First Quarter)	Total
Dust Suppressants		\$35,986.14	\$169,671.32	\$101,104.69	\$306,762.15
Materials/Specialized Services - Maintenance		\$9,633.18	\$27,648.16	\$1,490.03	\$38,771.37
Materials/Specialized Services - Start-up	\$432,645.18	\$441,452.12	\$511,356.35		\$1,385,453.65
Monitoring Outside Costs		\$1,371.83	\$60,901.19		\$62,273.02
Monitoring Equipment	\$12,655.72	\$219.13			\$12,874.85
Permits/Postage/Printing	\$6,177.13	\$10,920.45	\$18,121.61		\$35,219.19
Signs		\$39,771.80	\$16,721.27	\$401.96	\$56,895.03
Total	\$451,478.03	\$539,354.65	\$804,419.90	\$102,996.68	\$1,898,249.26

In addition to the expenses associated with materials to stand up and maintain the ATV Regional Connector Pilot, DCNR also incurred expenses related to staff time in construction, maintenance, and patrolling of state forest land on the pilot route. DCNR spent 17,107 hours that resulted in \$494,919.18 over the three-year pilot (Table 11).

Table 11. Staff hours and wages.

Time Category	FY 2020		FY 2021		FY 2022		FY 2023 (First Quarter)		Total	
	Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount
Regular time	144.75	\$3,781.18	3,006.00	\$69,994.41	6,418.50	\$144,999.11	1,659.75	\$25,814.57	11,229.00	\$244,589.27
Over time	37.75	\$1,510.25	1,852.25	\$76,316.11	2,331.50	\$98,531.70	1,656.50	\$73,971.85	5,878.00	\$250,329.91
Total	182.50	\$5,291.43	4,858.25	\$146,310.52	8,750.00	\$243,530.81	3,316.25	\$99,786.42	17,107.00	\$494,919.18

Dust Suppressant Reimbursement Program

Prior to the start of the ATV Regional Connector Pilot in 2021, it was known that fugitive dust from traffic on dirt and gravel roads would likely be a concern. Fugitive dust from dirt and gravel roads is well documented in the literature to be a safety concern in terms of limiting visibility, increasing sedimentation in adjacent streams, degrading air quality from suspended particulates, and creating a nuisance to residences along gravel and dirt roads. To address these concerns, the DCNR developed a dust suppression reimbursement program to aid local municipalities in minimizing dust issues.

During the 2021 riding season, a reimbursement program was developed to allow townships along the preferred ATV Regional Connector Pilot route to submit receipts for a maximum of \$10,000 to offset the costs of applying dust suppressants on these dirt and gravel roads. A total of \$35,986.14 was reimbursed to townships during the 2021 riding season.

Prior to the 2022 riding season, an Intergovernmental Agreement (IGA) was developed to efficiently facilitate reimbursement. The IGA set standardized guidance for acceptable dust suppressant products, qualifying criteria for road segment eligibility, and processes for reimbursement submission. A total of \$169,671.32 was reimbursed to townships during the 2022 riding season.

The 2023 program saw 18 IGAs submitted by townships prior to the start of the riding season. Potentially, the IGAs for 2023 include reimbursement to townships for road maintenance and deploying portable restroom facilities. \$500,000 was allocated from ATV funds to support the dust suppression program in 2023. \$101,104.69 of these funds had been reimbursed as of September 30, 2023.

Some reimbursement expenses remain outstanding following the end of the first quarter of 2023. The total cost of dust suppressants purchased through the entirety of the pilot as of the end of the first quarter of 2023 is \$306,762.15.

Effects on Forest District Operations

The ATV Regional Connector Pilot required Forest Districts to adjust annual work plans before and during the pilot regarding efforts to prepare for and maintain this route. Road maintenance projects (Dirt and Gravel Road projects, grading, brushing, leaf blowing, etc.) not associated with the pilot corridor were postponed to address the needs associated with preparing and maintaining the pilot preferred route on state forest land. For example, the Tiadaghton State Forest estimates they redirected approximately 150 hours of Forest Technician and intern time to brush the Route 44 snowmobile trail in preparation for the stone project. This resulted in a reduction of their time in conducting deer fence maintenance, invasive plant treatments, and timber tallying. In addition, maintenance staff were reallocated from road grading and maintenance tasks to administer the stone project along the connector. They estimate approximately 25 miles of routine road maintenance was not completed. Other districts in the region also experienced similar reallocations of efforts from scheduled projects to accommodate the needs of the pilot.

To accommodate in-person Pilot Pass sales, increased public visitation to district office locations, preparing for riding seasons, and administering the ATV Regional Pilot program, adjustments to DCNR priorities and staffing assignments were required. Additional evening and weekend shifts were assigned to staff to accommodate the increased public service needs resulting from the program and increased management staff time was diverted from typical forest operations to planning and administration efforts to facilitate the implementation of the pilot. This effort extended beyond forest district personnel to include numerous central office program area staff and Penn Nursery staff.

To enhance public safety during the pilot riding season, Forest Ranger patrols were increased along the pilot route. This affected the frequency of patrols in other parts of the district leaving these areas without a routine presence during the riding season. In addition, Forest Rangers from other districts were brought in to assist with pilot corridor patrols resulting in decreased patrols and coverage in their home district.

During the three-year ATV Pilot, it does not appear that timber sale operations have been disrupted in Potter or Tioga Counties. Both the Susquehannock and Tioga State Forests have remained on track with their 10-year harvest targets (Figure 13). There were no reported conflicts with ATV or timber contractors related to the pilot.

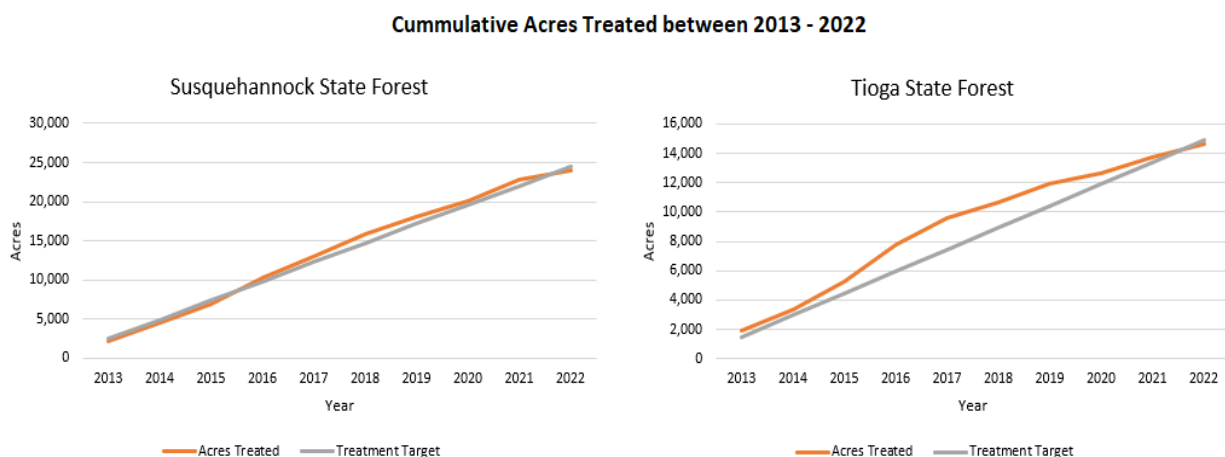


Figure 13: Cumulative actual and target harvest levels between 2013 and 2022.

ATV Regional Trail Connector Pilot Economic Impact Analysis

Beginning in 2022, the DCNR partnered with Penn State to facilitate a two-year (2022-2023) study of the economic impact of the ATV Regional Trail Connector Pilot program. The study's focus is on how ATV use in the region has changed because of the pilot, and subsequently, how this change impacted spending and other economic factors. The study triangulates three methods employed across the 2022 and 2023 riding seasons and preliminary results from the 2022 season. Each method is described below.

In-Season Non-Local Pilot Pass Holder Survey

To capture economic impact of money entering Potter and Tioga counties from outside of the region, an online Pilot Pass holder survey was conducted. Each month, a portion of the total non-resident ATV Pilot Pass holders (i.e., ATV pilot users with primary residence outside of Potter and Tioga counties) were randomly selected to participate in the survey. Each Pilot Pass holder was selected only once across the Pilot season random selections. This survey was conducted in 2022 and repeated in 2023. The survey

had a 46% response rate in 2022 and a 38% response rate in 2023. In general, the distribution of respondents is reflective of primary residence of Pilot Pass holders.

Responses from this survey indicate:

- Most non-resident Pilot Pass holders are from southeastern Pennsylvania and counties neighboring the pilot region to the south.
- On average, each respondent made nine trips to the region during the 2022 riding season. 76% of these reported trips were made primarily for the ATV pilot. In 2023, this increased to an average of 11 trips, with 82% being primarily for the ATV pilot.
- When respondents made these trips, on average, they spent 3 days in the region with a group of four people in both 2022 and 2023. The estimated total number of people (including respondents and their group members) visiting in the season, during these trips, was 75,312 in 2022 and 125,584 in 2023. This number is not unique, which means if one person made multiple visits, they are counted for each visit. Considering the number of trips, duration of trips, and average people accompanying a respondent per trip, the total individual visit days to the region during the riding season was 237,743 in 2022 and 406,698 in 2023. This number captures the total opportunities for each respondent and their group members, on one day visiting to contribute economically to the area. The increase in estimated number of people visiting and estimated visit days is due to the increase in Pilot Pass holders and reported increase in number of trips. In 2022, 81% respondents stayed overnight in Potter and Tioga Counties when making trips to the region. Of those staying overnight, most were spent at privately owned cabins or camps (62.3%), some were spent at a private local campground (21.2%), and a few were spent at a local hotel or motel (6.5%).
- In 2023, respondents staying overnight in Potter and Tioga Counties decreased to 77%. However, less people were staying at privately owned camps (57%) and more were staying at hotels or motels (8.3%). Air BNB and bed and breakfast stays also increased.
- Of those who stayed at a privately owned cabin or camp, over 70% came from southeast Pennsylvania in 2022 and 60% in 2023.
- Survey respondents were asked to indicate on a map which regions they visited a local business and spent most of their time riding. The most popular regions in both 2022 and 2023 were the sections from Coudersport to Lyman Run State Park and from Germania to Colton Point.

Impact Analysis for Planning (IMPLAN)

From the non-local Pilot Pass holder survey participants, an IMPLAN economic analysis was conducted to identify economic impacts from the ATV Pilot Program.

Economic impact is the overall effect of new dollars spent by visitors from outside the region who came to the counties to use the ATV Pilot. These new dollars and subsequent spending in the counties would not have occurred if the ATV Pilot had not existed. In this study, the region consists of Potter and Tioga Counties because they contained most of the ATV Pilot during the 2022-2023 period.

Visitor spending data associated with the ATV pilot was collected by an email-based survey. The survey consisted of questions about the number of visits, group size, length of visits, and expenditures at various types of businesses.

The visitor spending data were analyzed using the economic model IMPLAN, which is an economic impact model commonly used to estimate the economic impact of events, new businesses, and other changes. IMPLAN estimates the total economic impact of an event, including direct, indirect, and induced effects. Unlike an estimate of original expenditures (*direct effects*), economic impact also looks at the indirect and induced effects on gross sales and income as the money recirculates through the economy. *Indirect effects* are the spending made by the original industries in the local economy, because of additional profits. For example, a visitor's direct spending at a local restaurant will result in the indirect economic effects as the restaurant purchases more materials to make more food, such as from a local grocery store or local wholesale provider. *Induced effects* are the impacts resulting from added local spending by employees of these businesses, such as employees spending more locally due to their earnings indirectly related to the ATV pilot. The IMPLAN software uses multipliers calculated for the specified region based on the local resources and industries that are available.

Survey Results

Table 12 displays the estimated total spending associated with the ATV pilot in Potter and Tioga Counties by non-local visitors during the 2022 and 2023 ATV pilot riding seasons. The most money was spent on restaurants and meals, with an estimated \$2,210,471 in 2022 and \$3,691,295 in 2023 respectively. This was followed by total lodging, which was \$1,985,788 in 2022 and \$3,092,557 in 2023. Gasoline and auto-related services were the next highest expenditure of non-local visitors, at \$1,982,942 in 2022 and \$2,726,504 in 2023.

Table 12. Estimated total spending in Potter and Tioga Counties by non-local ATV Pilot participants.

Estimated Total Spending in Potter and Tioga Counties by nonlocal ATV pilot participants <i>By nonlocal ATV pilot participants, as a result of the DCNR Regional ATV Pilot Connector during the 2022-2023 Riding Seasons</i>		
Spending Type	Estimated total spending	
	2022	2023
Lodging (total)	\$ 1,985,788	\$ 3,092,557
Hotels or motels	\$ 342,481	\$ 665,729
Campgrounds (private and state)	\$ 738,977	\$ 957,261
AirBNB or Bed and Breakfast	\$ 595,814	\$ 1,079,098
Other lodging	\$ 308,517	\$ 390,469
Restaurants/meals	\$ 2,210,471	\$ 3,691,295
Food & beverages from a store	\$ 1,086,251	\$ 1,886,472
Gas & auto services	\$ 1,982,942	\$ 2,726,504
ATV rental	\$ 12,281	\$ 122,994
ATV equipment, supplies, services	\$ 2,396,086	\$ 618,761
Other spending	\$ 788,314	\$ 973,447
Total	\$ 10,462,133	\$ 13,112,029
<i>*Numbers are expressed in August 2023 dollars.</i>		

The biggest difference in spending between the two years was a decrease in ATV equipment, supplies and services and an increase in ATV rentals. This is likely because more people were buying new ATVs in

2022 and did not need to buy again in 2023. The expenses in 2022 were much higher, and several survey results showed expenses equaling the approximate price of new ATVs. Also, in 2023, one of the ATV dealerships in the region had its inventory sold and put its property for sale. In 2023, campground close to the border of Clinton and Potter county started offering ATV rentals, as a result of the ATV pilot. While this campground is in Clinton county, it is possible some of the survey participants thought it was in Potter county.

The estimated total spent in Potter and Tioga counties by non-local visitors to the counties due to the ATV pilot was \$10,462,133 in 2022 and \$13,112,029 in 2023. However, these numbers do not account for how much spending remained in the local economy and do not include the indirect and induced effects on Potter and Tioga Counties. These total spending estimates were added to IMPLAN by sector to calculate the economic impact.

Economic Impact Results

The IMPLAN software estimated a total economic impact of \$8,249,002 in 2022 and \$11,739,639 in 2023 (Table 13). The total economic impact can be interpreted as money added to Potter and Tioga Counties, which would not be spent if the ATV pilot were not in existence. The economic impact is less than the total spent because some of the money did not remain in the local economy (“leakage”), such as money spent on ATV equipment or non-locally produced items. However, both years saw indirect and induced effects between \$1.2 million and \$2.6 million. The induced effects were likely higher than the indirect effects because they capture money spent on Air B&B, which goes directly to the households rather than an official business.

Table 13. Total Economic Impact in Potter and Tioga Counties – Total Sales.

Total Economic Impact in Potter and Tioga Counties - Total Sales*					
As a result of the DCNR Regional ATV Pilot Connector during the 2022-2023 Riding Seasons					
Potter and Tioga Counties, all sectors	Year	Direct	Indirect	Induced	Total
	2022	\$ 5,185,485	\$ 1,282,474	\$ 1,781,044	\$ 8,249,002
	2023	\$ 7,307,548	\$ 1,815,436	\$ 2,616,655	\$ 11,739,639
*Numbers are expressed in August 2023 dollars. Data generated with IMPLAN software					

Similarly, Table 14 shows the estimated number of jobs associated with the ATV pilot. A total of 100 full time equivalent jobs were supported by the pilot in 2022 and 145 in 2023. This includes 7.8 and 11 jobs supported in other businesses in the counties due to indirect effects in 2022 and 2023, respectively, and 12.9 and 18.9 jobs supported from increased spending by local households earning more due to the ATV pilot in 2022 and 2023, respectively.

Table 14. Total Economic Impact in Potter and Tioga Counties – Added Employment.

Total Economic Impact in Potter and Tioga Counties - Added Employment*					
<i>As a result of the DCNR Regional ATV Pilot Connector during the 2022-2023 Riding Seasons</i>					
Potter and Tioga Counties, all sectors	Year	Direct	Indirect	Induced	Total
	2022	79.5	7.8	12.9	100.2
	2023	115.8	11.0	18.9	145.7
<i>*Full time equivalent jobs</i>					

Table 15 shows the top sectors impacted by the ATV pilot. As seen in the total expenditures reported in the survey, restaurants in Potter and Tioga Counties saw the greatest increase in revenue and jobs both years -63 jobs and \$3.7 million in 2023. That is 43% of the estimated added jobs and 32% of the added revenue. The second most popular sector was “other lodging,” which includes private campgrounds and bed and breakfasts. Though lower in total number of jobs and revenue, hotels and motels saw the greatest percentage increase (94%) from 2022 to 2023. Food and beverage stores also saw a significant increase (72%).

Table 15. Economic Impact in Potter and Tioga Counties – Top 7 Sectors.

Economic Impact in Potter and Tioga Counties - Top 7 Sectors						
<i>As a result of the DCNR Regional ATV Pilot Connector during the 2022-2023 Riding Seasons</i>						
Sectors	2022			2023		
	Jobs	Revenue	% Total Revenue	Jobs	Revenue	% Total Revenue
Total	100.2	\$ 8,249,002		145.7	\$ 11,739,639	
Restaurants	37.6	\$ 2,257,096	7.2%	62.6	\$ 3,759,952	12.1%
Private Campgrounds, Bed and Breakfast, and Other Lodging	12.0	\$ 741,347	17.8%	14.8	\$ 908,095	21.8%
Misc stores	11.4	\$ 457,024	2.9%	14.1	\$ 569,188	3.6%
Food and beverage stores	6.2	\$ 391,987	1.6%	10.6	\$ 672,969	2.8%
ATV rental, equipment, and dealerships	5.4	\$ 638,072	3.0%	1.9	\$ 223,986	1.1%
Gas stations	4.8	\$ 451,193	1.7%	6.6	\$ 621,571	2.4%
Hotels and Motels	4.0	\$ 342,485	2.7%	7.9	\$ 665,734	5.3%
<i>*Revenue is expressed in 2023 dollars and jobs are full time equivalent. The numbers depicted here do not add up to the total because other sectors are impacted that are not shown. Data is from IMPLAN, Copyright 2023 Minnesota IMPLAN Group, INC.</i>						

To put these numbers into perspective, the “% Total Revenue” column of Table 4 shows the percentage of the total revenue for each sector. For example, the 2023 revenue from the ATV pilot is 21.8% of the estimated total revenue for private campgrounds, bed and breakfasts, and other lodging. The ATV pilot also provided 12.1% of the restaurants’ total revenue in 2023. This is significant, considering the ATV trail is only open for four months out of the year (IMPLAN Estimate of Potter/Tioga Spending, 2023).

From the IMPLAN analysis, the ATV Pilot has shown a promising economic impact to Potter and Tioga Counties in 2022 and 2023. This study is only an estimate and depends on individual spending and whether businesses truly recirculate their money within the local economy. Similarly, this study cannot be used to predict the future success of the event and only shows the event’s impact on the local economy at the time that the study was conducted.

End-of-Season Local and Non-Local Pilot Pass Holder Survey

In November of 2022, all Pilot Pass holders, both local and non-local residents, were queried via an online survey. From this survey, 108 local resident (Potter and Tioga county residents) and 765 non-local resident Pilot Pass holders responded.

Responses from this survey indicate:

- Eighteen percent of the non-local resident respondents indicated that they had not traveled to Potter or Tioga counties for recreation purposes before the ATV Regional Connector Pilot opened in 2021.
- The majority of local and non-local resident Pilot Pass holders indicate that they used the pilot more frequently in 2022 season than in the 2021 season and over 95% of respondents identified that they are satisfied with their pilot experience in 2022.
- Pilot Pass holders were asked to rank their degree of satisfaction regarding various features of the ATV pilot using a 7-point Likert scale.
 - Related to physical trail features and amenities:
 - The majority of respondents were satisfied to some degree with:
 - The trail going where riders want to go (89%).
 - Maintenance of the roads and trails on the pilot (94%).
 - Trail and road surface (93%).
 - Safety of riding areas (97%).
 - Enforcement of rules and regulations (87%).
 - Loading and parking areas (71%).
 - Information about rules and hazards (83%).
 - Trail signs and markers (88%).
 - Maps and directions (86%).
 - Related to community and local amenities:
 - The majority of respondents expressed some degree of satisfaction with the:
 - Campgrounds near trailheads (65%).
 - Gas stations (78%).
 - Restaurants and food (87%).
 - Stores (78%).
 - Restrooms (69%).
 - Respondents expressed a neutral level of satisfaction regarding:
 - Nightlife and entertainment (47%).
 - Hotels and motels along the preferred pilot route (50% were satisfied, 46% were neutral).
 - This is logical considering that most respondents are staying overnight at private camps/cabins and are not seeking out hotels, and not likely seeking out nightlife and nightly entertainment.

Local Business Owner Interviews

In 2022 and 2023, local businesses were interviewed about their perceived change to business and customer base because of the pilot, as well as their support of the pilot program. A portion of business

are located directly on the preferred pilot route. Findings from the 2022 and 2023 riding seasons suggest:

- Eighty-eight percent of the businesses felt they would receive value in terms of sales and customers if they were adjacent to the preferred pilot route and reasons for support of the pilot included added business, development of the area, and increased customer satisfaction. Of the two that were not supportive, one business was indifferent because they target different types of customers. The other business was concerned about the pilot affecting its primary customers (hikers); however, they expressed that they had not experienced any negative effects as of 2023.
- Forty-four percent of businesses indicated they had not made any changes to their business as a result of the ATV pilot.
- Of the businesses who reported making changes, 25% expanded parking to provide for ATV trailers and 19% expanded their business opportunities. Other changes included increased advertising (13%), partnership with a local ATV club (13%), providing information for ATV riders (13%), hiring more staff (6%), collaborating with other businesses (6%), and creating a petition to open more roads for ATV riders (6%).
- Businesses estimated that an average of 35% or one-third of their customer base in the summer months during the 2021-2023 pilot seasons were visiting the area primarily for the ATV pilot.
 - Businesses also indicated that approximately 28% of their summer revenue over the past three years of the ATV Regional Connector Pilot was attributed to ATV riders. One business reported that as much as 80% of their revenue came from ATV riders using the ATV pilot.
 - Average spending per rider per visit to their business was approximately \$124.
- Businesses did not report losses in other types of customers during the years of the ATV pilot, other than possible increases from all user groups.

Summary of Monitoring the ATV Regional Connector Pilot

Monitoring results suggest the three-year ATV Regional Connector Pilot resulted in some issues, but overall, relatively minor in scope. This is primarily due to DCNR's thoughtful planning of the preferred routes, PennDOT's invaluable assistance in assessing and recommending routes, the active involvement of township supervisors across the region, the frequent engagement with stakeholders, the assistance of ATV Clubs in placing provided signage and communications, proactive patrolling of the route, and addressing issues in a timely manner.

Environmental issues related to the ATV Regional Connector Pilot were identified and addressed proactively. Pre-monitoring of the routes identified areas where issues may occur and enable DCNR to closely monitor these areas during the riding season. Rogue trails were the primary environmental effects experienced during the pilot and they were addressed in a timely manner through closures and signage.

Social monitoring identified that overall, the public was mostly satisfied with the pilot. Monitoring results suggest that motorized recreationists were most satisfied and in support of this ATV riding opportunity, while non-motorized recreationists were least satisfied. Demographically, non-local survey

respondents were more satisfied than local respondents. Concerns from local residents raised included increased traffic, safety concerns, and dust. DCNR addressed these concerns through increased law enforcement patrolling of the area and the dust suppressant reimbursement program for affected municipalities.

Economic monitoring efforts indicate the ATV Regional Connector Pilot provided positive economic impacts to the region through tourism but came at a considerable cost to DCNR. Most businesses in the region were supportive of the pilot and saw increased revenues during the riding seasons. Although the sale of ATV Regional Connector Pilot Passes was a revenue source for the department, the costs of creating and administering the program far exceeded the revenue generated.

Recommendations Resulting from the Commonwealth's Northcentral ATV Regional Connector Pilot

DCNR has had long-standing experience with administering ATV programs since inception in 1985, and the department has held a leadership role in the statewide riding program that continues through the present.

With the 2021 Northcentral Regional Connector Pilot project, targeted monitoring methodologies were implemented within the pilot footprint, which was relatively limited at the onset of the program. Future expansion of riding opportunities will potentially bring that footprint into areas where targeting monitoring methodologies have not been employed, where there may not be any baseline inventory for monitoring metrics, and/ or where historic problems have existed.

With the goal of implementing sustainable, equitable, and future-oriented recreation programs, the scope of recommendations below draws both from information beyond that which was collected solely from monitoring the three-year pilot and that learned throughout DCNR's extensive experience in administering statewide ATV programs. The recommendations in many cases may also apply beyond the spatial bounds of the Pilot program that was operated from 2021 through 2023. They articulate logistical considerations, recommended adaptations of programmatic duties, and changes to the ATV Code necessary to modernize Pennsylvania's motorized recreation initiatives and carry them sustainably into the future.

Administering statewide ATV programs has touchpoints with legal entities beyond the DCNR. Those touchpoints include multiple stakeholders, ranging from all levels of government, non-profits, public and private enterprises, and commercial entities. The next phase of implementing recommended program developments is to identify the touchpoints for each recommendation and ensure that a reasonable level of agreement has been attained before proceeding.

Regional Authority

Key Findings

- DCNR is not currently equipped with the staffing, budget, or expertise to effectively address the challenges of a multi-jurisdictional system.
- The northcentral ATV riding system in present and potential future conditions occurs across multiple local authorities (e.g., DCNR, PennDOT, municipalities, and private lands). Each entity carries its own respective jurisdictional sovereignty, rules, and policies. Administration over the entire system requires extensive coordination.
- The DCNR lacks explicit authority to act as a local authority for the purpose of coordinating the establishment of a multi-jurisdictional, recreational/ transportation system and for collecting fees.
- Long-term planning across multiple jurisdictions must address complaints by residents about the number of machines.
- Non-uniform administration of the corridor has resulted in management challenges that include:
 - Inefficient approval and waiver process for opening new segments.
 - Insufficient law enforcement coverage.
 - Non-uniform requirements for machine operation.
 - Non-uniform signage and communication strategies.
 - Inconsistent trail management objectives.
 - Burden on DCNR and non-DCNR work units.

Throughout its three-year duration, the Northcentral Regional ATV Pilot connector route expanded from 154 miles of designated roads and trails in two counties to 374 miles of designated roads and trails involving four counties. During this time the planning of the route involved coordination from single-digit numbers of townships in 2021 to nearly 20 in 2023. In 2023, the DCNR-managed portion of the designated route accounted for 44% of the mileage, and much of that percentage is off-road trail mileage within its Susquehannock, Haneyville and Whiskey Springs ATV Trails. While additional designation of the route on DCNR lands is likely as the regional trail system would expand in the future - especially as the trail links to the Bloody Skillet Trail in northern Centre county – the reality is the majority of the connector route is and will continue to be township roads for which DCNR has no jurisdictional authority, even more so as the additional mileage of associated township roads open to ATV use through local ordinances is considered.

Because of this reality and the need to support townships and their citizens who bear the brunt of the impacts associated with the regional trail, it is imperative long-term governance of the trail system provides for the representation and active input of these various municipalities. DCNR, PennDOT and other state agencies of jurisdictional authority should also be involved in this model. Of utmost importance in future operations of the regional trail system is supporting the townships involved through funding for law enforcement presence, dust mitigation and trail-associated maintenance to their roads; as well as addressing those impacts to citizens which can be mitigated.

Recommendations:

1. A regional authority should be established to run the Northcentral ATV riding system to allow for full local engagement and improved regional collaboration. The rationale for the incorporation of this new structure is that increased efficiency and service delivery can be achieved by the creation of a new regional authority.
 - a. The Regional authority must be sustainably staffed and funded.
 - b. The Regional Authority must have its own “charter,” “bylaws,” and legal structure.
2. The Regional Authority should be advised and work closely with a board of stakeholders representing the many citizen, environmental, safety/emergency response and economic interests affected by expanded ATV recreation.
3. The responsibility of the Regional Authority should address the following:
 - a. Access: Local land managers retain ultimate authority for lands under their respective jurisdictions. Regional Authority should work to secure access for connected riding opportunities in cooperation with local land managers.
 - i. Secure landowner agreements, rights-of-way, easements.
 - ii. Coordinate and plan expansions, contractions, and adaptations to the Regional Trail route with counties and townships.
 - iii. Submit official requests to DCNR and other administrators to operate ATVs on roads, bridges, and trails under their respective jurisdictions.
 - iv. Manage written requests from persons applying for permission to establish highway trail crossings or highway connectors for ATV events.
 - b. Capacity Controls: Set and adjust annual capacities for riding permits and events, based on local risks and tolerances.
 - c. Revenue and Fiscal Management: Coordinate permit sales and recommend adjustments.
 - d. Support Services:
 - i. Enter into agreements to coordinate service programs.
 - Maintenance:
 - Dust suppression programs.
 - Infrastructure improvements.
 - Scheduled and deferred maintenance needs.
 - Law enforcement:
 - Authorized to make payments to state and local police departments, especially to reimburse for overtime patrols.
 - Emergency response:
 - Authorized to make payments to local fire departments and EMS services.
 - Planning:
 - Advise townships of considerations for drafting or modifying ATV ordinances.
 - Establish process for annual route planning and adoption.
 - ii. Establish rules and educational resources that clearly communicate expectations for riders.
 - iii. Maintain regional inventory of public riding opportunities.

- iv. Support and coordinate maintenance on private trails with ATV clubs and private landowners.
- v. Support landowners in minimizing trespass and transgression issues on private lands.
- vi. Support trainings facilitated by local clubs and volunteer ATV instructors.
- e. Communications and Outreach:
 - i. Maintain website and social media for the regional riding network.
 - ii. Facilitate public engagement, inter-agency communications, and municipal outreach.
 - iii. Monitor and evaluate customer service and social acceptability.
- f. User Engagement:
 - i. Establish volunteer networks that help support maintenance and overall needs of trail systems.
 - ii. Develop educational materials that promote safety, stewardship, trail etiquette, etc.
- g. Tourism Promotion:
 - i. Support research and information gathering on economic benefits.
 - ii. Work with key partners to promote tourism.
 - iii. Coordinate route branding, signage, and continuity of experience.

Potential Future Development and Interim Planning

Key Findings

- Local ordinances that allow or disallow ATVs on municipal roadways were inconsistent through time, even during the limited monitoring period.
- ATV pilot project in operation was generally received favorably by municipalities; although, traffic volume and dust issues arose from residents along the pilot route.
- ATV pilot project was generally received favorably by local businesses.
- The pilot generally commenced with minimal safety impacts along PennDOT administered highways.

The nature of the Northcentral Region of the state lent itself well to the ATV Pilot concept. Key factors behind this include the presence of large blocks of state forest; the relative inventory of township roads designated for ATV use; relatively low traffic counts of most PennDOT-managed roads and a widely dispersed, and overall low citizen population. While Pennsylvania is a largely rural state, finding this mix of variables in large geographic areas in the remainder of the Commonwealth is difficult to envision. This is not to say more limited areas could not be established and do very well – in fact, some are, especially in the coal regions. However, the prospect of achieving long-distance riding opportunities across multiple jurisdictions and ownerships are hard to envision in the rest of the state.

As the Northcentral appears to be the primary opportunity for a long-distance, community-linking trail system capable of attracting significant in-state and out-of-state tourism, it is imperative growth to the Regional Trail System be considered carefully and transparently. Thus far, planning of the annual route has been based upon opportunities available in the landscape to stand up the pilot along with expressed interest of neighboring communities, municipalities, and businesses. This would be the eventual domain

of the Regional Authority described previously. However, given expressed community interest and growing demand, regional-level planning should continue in the interim.

Recommendations:

1. DCNR, per its 2020 ATV Policy should continue to consider strategic connectors that connect state forest trail systems to other legal riding opportunities, such as in the event of the Northcentral Regional Trail expansion.
 - a. DCNR should proceed with planning, permitting and construction of a connector from Renovo to the Bloody Skillet ATV Trail system. Bloody Skillet is the sole remaining Northcentral ATV Trail yet to be connected to the Regional Trail. This connection would also facilitate connection to Philipsburg via the Snow Shoe Rails to Trails.
 - b. Other opportunities within forest districts should be considered as they arise under the criteria established in the 2020 ATV Trail Policy.
 - c. DCNR has previously been pursuing a connection through to Roulette township in Potter County and should implement this when the final pieces of a legally designated route are resolved.
 - d. Adaptations to existing routes to better suit the needs of citizens or communities currently participating in the regional trail system should be considered.
 - e. Otherwise, DCNR planning and implementation towards further expansion of the Regional Trail system beyond the 2023 identified route should be halted until a regional authority is assembled and operational.
2. The most promising areas for future growth lay to the west into McKean, Elk, Forest, and Warren Counties, primarily along township roads and potentially involving large tracts of private land. DCNR has relatively little land ownership through this area, though portions of the Moshannon and Elk state forest may come into play. There is also potential to connect further in the Tioga State Forest
3. An inclusive regional feasibility study should be undertaken to assess potential for additional new riding opportunities in the region. Since the last assessment was completed in 2020, new developments, closures, and independent feasibility studies may have occurred. DCNR should work with PennDOT, other public and private land managers and county-level planners to assess risk and opportunities for establishing future connections.
4. Where feasible, consideration should be given to public-private partnerships to enhance riding opportunities. A strategy should be developed to approach cooperative landowners about placing easements that permit public riding opportunities, especially where doing so could mitigate community or citizen concerns or provide riders access to amenities through local businesses. User groups and local authorities should partner in this search for private recreational land easement opportunities.
 - a. A reasonable compensation incentive (e.g., tax incentive, grants-in-aid, liability coverage, etc.) for the easement should be developed as it is a critical component of the strategy.
5. New lands to be acquired or eased specifically for hosting motorized recreation while advancing conservation goals as described in the 2020 DCNR ATV Policy should be identified and prioritized.

Code Adaptations

The following sections pertain specifically to changes in the ATV Code and rationale for them. These various changes address the changes in the activity over the past several decades.

Definitions (see 75 Pa. 7702, and State Forest Rules and Regulations)

Key Findings

- Current ATV definition does not place upper size limitation on Class II ATVs. This is inconsistent with DCNR policy and fosters an inconsistent riding experience throughout the riding system and does not afford local managers the controls required to manage impacts to infrastructure.
- Rise of the “UTV” allows for requirements of safety features.

The advent and growth of popularity of Utility Terrain Vehicles (UTVs), commonly known as “side by sides” (SXS) has occurred largely since the last significant revision to the Pennsylvania ATV Code (Chapter 75). At the time the code was written, ATVs were primarily operated by individuals operating from a saddle seat using handlebars. As these machines continue to evolve, ever-larger models which are not appropriate for trail use become more prevalent. Changes to the law which could address this are outlined below. These begin with updating basic definitions.

Recommendations:

1. Amend 75 Pa. 7702, i.e., “definitions,” and DCNR rules and regulations to include the following language:
 - “All terrain vehicle (ATV)” means any motor-driven vehicle which is designed or adapted for travel over surfaces other than maintained roads with one or more tires, having capacity for passengers or other payloads, being equipped with handlebars, not being equipped with rollover protection, not to exceed unladen dry weight of 1,000 pounds, and not to exceed 50 inches in width. For the purposes of this chapter, all vehicles within this definition shall be classified as off highway recreational vehicles.
 - “Utility terrain vehicle (UTV)” means any mechanically propelled vehicle which is designed or adapted for travel over surfaces other than maintained roads with four or more tires or tracks equipped with a rollover protection system and/or safety belts, having capacity for passengers or other payloads, not in excess of 2,000 pounds unladen dry weight, and not to exceed 65 inches in overall width, excluding side mirrors. For purposes of this chapter, “utility terrain vehicle” shall include but not be limited to side-by-side, ROV, gator, buggy, and OHV and abbreviated as UTV. All vehicles within this definition shall be classified as off highway recreational vehicles. This is meant to replace “Class II ATVs” as defined currently.
 - “Off highway recreational vehicle (OHV)” means any mechanically propelled vehicle used for pleasure or recreational purposes running on rubber tires, tracks, or cushion of air and dependent on the ground or surface for travel, or other unimproved terrain whether covered by ice or snow or not, where the operator sits in or on the vehicle. For purposes of this chapter “off highway recreational vehicle” shall be abbreviated as OHRV. OHRVs shall include any pedaled vehicle equipped with a motor that is not

included in the definition of electric bicycle and utility terrain vehicles but shall not include snowmobiles as defined in 75 Pa. 7702.

UTVs are most often designed for multiple passengers and increasingly include features more associated with licensed, inspected passenger vehicles. Having UTVs co-located upon the same roadways as licensed, inspected motor vehicles carries with it the need to more adequately provide for the safety of both UTV and licensed motor vehicle operators and passengers. Many of the standard features and requirements taken for granted with motor vehicles are not considered in UTV design and manufacture. This is understandable as they are designed for off-road use. As they increasingly operate upon roadways at least the basic safety staples (seat restraints, lighting, child safety seats, etc.) it should be considered whether to mandate these safety features upon machines of a design which allow for them.

2. Subchapter C, "Operation"; Section 7726 (Operation in a Safe Manner). Following are several issues and potential fixes associates with this section. It may be more effective to include a new section pertaining to passengers on ATVs.
 - Safety Restraints – Should be addressed to be consistent with other sections of the vehicle code. Operators and all passengers should be required to wear a seat safety belt on all ATVs that were originally equipped with seat safety belts.
 - Child Safety Restraints – Should be clearly addressed as they are for Motor Vehicles in Title 75, Chapter 45 of the Vehicle Code. In Class I ATVs as presently defined and where restraint systems are not possible, children under 8 should not be in the UTV. In Class II ATVs as presently defined children from 4-8 years of age should have some sort of restraint system appropriate for their size in the machine, or not be in them. Children under four years of age should not be in or upon machines utilizing public roadways.
 - Helmets – Currently, the operator of the ATV is responsible for the passenger wearing a helmet. This works well for juvenile passengers. Adult passengers should also be held individually accountable for their decision not to wear a helmet. Either a new section or subsection should be added to this effect.
 - Eye Protection – Eye protection is not required. It should be consistent with Section 3525 Protective equipment for motorcycle riders that requires eye protection. Amend this section or add a new subsection that requires eye protection be worn unless the machine has a windshield.
 - Passenger Capacity – During the pilot, DCNR Rangers encountered examples of all of the following: (1) more passengers than the vehicle was designed for; (2) aftermarket or home-made seating devices; (3) passengers hanging onto or riding machines in ways not intended. Amend this section to include wording similar to Section 3522 (Riding on Motorcycles) requiring that operators and passengers only ride on the permanent and regular seats attached to the ATV; the operators should not carry more passengers than the ATV is designed for; the passengers should ride only upon permanent and regular seating firmly affixed to the ATV; and, under no circumstances should anyone ride in front of the operator on any ATV.
 - Passengers in Beds of UTVs – Passengers in open trucks are only permitted under certain circumstances (refer to section 3719). The heads of the passengers riding in the beds are oftentimes above the roof of the ATV. The weight distribution and center of

gravity for the machine is changed. Amend this section to prohibit anyone from riding in the bed of an ATV.

Subchapter D, "Equipment" – The following equipment presently required for motor vehicles under Title 75, Chapters 43 and 45 should be provided for in this subchapter of Title 75, Chapter 77 relative to UTVs which can support them. Currently, none of these devices are defined to be applicable to ATVs, which is understandable as UTVs (as a subclass of ATVs, which they are presently) were not nearly as prevalent the last time most of this Subchapter was updated in 1985. (It should be noted Section 7743 related to mufflers and noise control was updated more recently, in 2018)

Arguments can be made for requiring some, any or all these equipment items. The ambiguity lies in the fact the requirement of these devices has yet to be defined in code for UTVs. Consultation with district attorneys in the pilot region by DCNR Rangers indicated if UTVs are operating in public roadways, they should have traffic control devices if the machine is adapted to support them. Some other states with long distance regional trails where UTVs share the road with vehicles, such as New Hampshire, already require these equipment items.

A list of the sections of Title 75, Chapters 43 and 45 featuring various safety and traffic signaling devices include for consideration of addition into Chapter 77 include:

3. Required equipment:

- 4303 – a (headlamp) b (rear light / license plate lamp); c (turn signals / hazard warning lights) - turn signals should be required for ATVs that have an enclosed cab. Often the cab blocks clear view of someone trying to hand signal. Also, if the windows are closed the operator must open the door to signal. The door can also obscure the hand signal; f (off-road lighting turned off and covered) - Off-road lighting should still be required to be off and covered. The LED lights are extremely bright even in daylight hours.
- 4307 – a (illuminated figures – ornamental lighting, including whip lights).
- 4523 – a, b, c, and d (muffler restrictions).
- 4524 – a, b and c (windshield obstructions); d (windshield wiper system -provided the ATV has a windshield).
- 4525 – a (tires – DOT certified).
- 4526 – a (safety glass).
- 4534 – at least one mirror- operators of the ATVs may be unable to hear the sirens, horns, etc. over the sound of their ATV. ATVs which do not have mirrors may have no idea what is behind them.
- 4535 – a (horn).
- 4581 – all (restraint systems).

Code Adaptations - Registration, Permit, and Fees

Key Findings

- It is not feasible to track legal compliance under 75 Pa. 7711.1(f)(4), regarding reciprocity of vehicle registration across state jurisdictions.
- Requirement for “riding permit” not articulated.
 - “riding permit” is not applicable statewide.
- ATV registration fees not adequate to support program costs.
- Ineffective statutory mechanisms to support equitable revenue generation from non-residents.

The concept of registration reciprocity as currently defined under Title 75, Chapter 77, Section 7711.1(f)4 allows riders from states with registration requirements determined similar to Pennsylvania to ride under their home states’ registration while in the Commonwealth. This practice is somewhat antiquated and should be eliminated. In part due to ATV tourism growing across the country, some states that have traditionally observed reciprocity with other states have dropped reciprocity to establish registration fees for out of state riders. These and other such changes to reciprocity designations are made arbitrarily without any notification requirement; therefore, keeping reciprocity lists current is a challenge and no longer administratively tenable.

Additionally, the present language in Section 7711(b) allows out of state residents to purchase Pennsylvania ATV Registration. This results in the present situation where an out-of-state operator purchases the same registration at the same price as Pennsylvania residents, essentially permitting the machine, not the operator. This is not equitable to Pennsylvania residents who pay local and state taxes to reside in the Commonwealth, contribute towards emergency services in their communities, and otherwise contribute to life in the Commonwealth outside of what they pay for in a registration fee.

Recommendations:

1. The language of Section 7711.1(f)(4) regarding exemptions from Pennsylvania ATV registrations should be changed to the following: “The owner of the snowmobile or ATV is not a resident of this Commonwealth. Nonresidents are subject to any permitting requirements and associated fees consistent with § 7715.2 to operate a snowmobile or ATV in accordance with the provisions of Subchapter C “Operation” in Pennsylvania.
2. The language of Section 7711.1(b) regarding exemptions from Pennsylvania ATV registration should be changed to the following: “**Issuance.** --Upon receipt of an application therefor upon a form prescribed and furnished by the department which shall contain information reasonably required by the department and which shall be accompanied by the required fee, the department shall issue **only** to the owner of a snowmobile or ATV **with residency in the Commonwealth.**”

The 2020 Fiscal Code afforded DCNR the authority to establish tag fees; and further stipulated fee collections shall be deposited into the restricted funds account, which supports ATV activities, enforcement, and maintenance activities on DCNR lands. A similar authority should be conferred upon approved regional authorities for regional networks encompassing DCNR or other public lands. The ability to set fees relative to covering the administrative and operating costs of a Regional Trail system is

both critical and dynamic, and should lie with the governing authority and should not require legislative action. Costs are dynamic and Regional Trails should, at minimum pay for themselves.

The use of other funding sources, such as the ATV Restricted Fund or the Liquid Fuels Tax could be considered as ways to augment receipts towards the requirement of self-sufficiency; but these funds have uses well beyond supporting regional networks and are to be used for the benefit of all ATV users, not the relatively few utilizing the regional networks.

Regulation and monitoring/managing other uses:

3. Riding permits:

- The Commonwealth should authorize regional authorities to issue riding permits for public land riding opportunities. This in no way will supersede legislatively established jurisdictional authority of these agencies, but rather serve as a mechanism for allowing the effective distribution of permits scaled to the size of the regional trail. A riding permit allows a machine access to a specific public trail system as defined by the issuing regional authority (and authorized by the participating state and local jurisdictions). A permit system is currently in place at Rock Run and Anthracite Outdoor Adventure Area where the entire riding area is under the control of the riding authority.
- A regional authority should be authorized to set fees for the permit to cover administrative and operational costs of the regional network without requiring legislative action.
- The riding permit must be enforceable within the constraints of the regional network.
- All ATVs that access a network within a regional authority should display a unique, numbered riding permit additional to general ATV registration.
- The riding season throughout the regional footprint should coincide with DCNR's summer season.
- There may be instances within a given region where multiple riding fees could apply. (Consider an example whereby connections provide access to an ATV park). The Regional Authority should work with all parties to ensure adequate compensation for all parties and strive for a seamless experience under a single permit.
 - Any private or non-profit operated "ATV Parks" which are integral to the connectivity of the larger regional network should provide through-access to the public as a condition of being connected.
- A short, web-based safety and educational course should be a requirement for the riding permit application. DCNR may partner with Tread Lightly for development.

Revenue

Key Findings

- Cost v. revenue analysis of operating the pilot revealed a cost deficit. Revenue from Pilot Pass sales did not cover operational costs.
- The current funding mechanisms for motorized recreation needs updates. Both the fixed amount from the liquid fuels refund program and registration fees have not changed in more than 20 years.
- The DCNR's survey instruments for ascertaining liquid fuels consumption by recreational vehicles are outdated and are likely providing inaccurate information.
- Motorized recreational vehicles may be generating more revenue to the Liquid Fuels account than is currently realized.

Among the more significant findings from the ATV Pilot was the income derived by the regional trail did not cover the costs of operating the trail. Some of this can be rationalized by the “start-up” costs of preparing trails (\$1.4 million of the \$2.4 million total cost) on DCNR lands for all-season use.

Additionally, the cost of DCNR personnel will decrease, especially as the regional authority is established and the required support of maintenance, administration and enforcement becomes more operational in nature rather than being novel as part of a “pilot” approach. However, maintenance costs of the trail system, including those necessary off DCNR lands (township roads), were very low for the pilot but sure to increase over time; as will the expense for dust mitigation and supplemental law enforcement.

Recommendations:

1. Permit revenue should be sufficient to fund most regional network related administrative and operational costs, including staffing.
2. Revenue from permit sales should contribute partially to statewide ATV programs, but most revenue should be retained within the specific regional trail that generated it.
 - Revenue from permit sales should follow this deposit schedule:
 - i. Eighty percent into Regional Authority account/ treasury to fund regional operations.
 - ii. Twenty percent into the restricted account per 75 Pa. 7706.
3. Liquid Fuels
 - Revisit the current gasoline tax funding mechanism defined in the Liquid Fuels and Fuels Tax Act. The current structure inadequately refunds a flat \$1,000,000 annually, as a line item in the budget, to the Snowmobile/ATV Restricted Receipts account. Based on the September 2018 full and limited registration numbers captured by DCNR there are 318,917 ATVs and Snowmobiles registered with the Department. The current Pennsylvania Gasoline Tax is \$0.77 per gallon.
 - Revise the procedures for ascertaining the liquid fuels amount consumed by motorized recreation vehicles required by 75 Pa. 9017(d.1)(2).
 - Derive an equitable formula to return refunded money to the user group for trail development. The Federal Recreational Trails Program (RTP) is based on a similar model and provides benefits to all trail user groups (motorized and non-motorized). A similar program is used by the Pennsylvania Fish and Boat Commission (PFBC) for marine

purposes. The “\$1M maximum” should be modified to reflect an amount that is proportional with liquid fuels consumption by motorized recreational vehicles.

4. The distribution schedule from 7706 funds specifically for grants-in-aid and law enforcement/emergency response should be commensurate with access and cost accounting by local authorities. As a result, this would provide strong support for municipal and non-DCNR support services.

Capacity, Riding Season, and Community Tolerance

Key Findings

- Numerous complaints were received about crowding and dust issues on Memorial Day weekend.
- DCNR’s summer riding season de-conflicts many other uses and accounts for managing community tolerance to ATVs.
- Permit issuance is a key tool for regulating levels of use.
- Dust mitigation is a critically necessary program feature.
- Both directly and indirectly associated polling indicate increasing the degree of ATV use of public lands is not favored by most respondents who did not identify as motorized recreationalists.
- Nearly half of residents polled indicated at least partial dissatisfaction with the pilot.

The ATV Regional Pilot strongly revealed the administration of the activity and establishing a reasonable level of use is key to preserving the goodwill of local communities and residents towards the continued use. The regional connector approach to motorized recreation, when implemented intentionally and collaboratively, sets the stage for dispersed and controlled use that results in minimal conflicts with other recreational users, residents, and camp owners; improved safety conditions; minimal environmental impacts; and optimized economic benefits through strategic connections to local businesses.

During the first season when the route was its shortest (154 miles) of the pilot, complaints received towards the end of the season suggested there may be too many machines with issued Pilot Passes. In the second and third years, Pilot Pass sales had nearly doubled, then tripled the initial years’ sales, respectively. At the same time, the primary route had grown to 230 miles in year two and 374 miles in year three. There is no question the growth of the route in subsequent years, along with the public’s continued acclimation to it, was key.

One weekend that consistently defied this was Memorial Day weekend, the season opener. Levels of use across the regional pilot soared and created by far the largest number of expressed complaints of the entire season. It should be acknowledged that Pilot Pass holders only represent a portion of the individuals riding through the holiday weekend; designated township roads of themselves are legal to ride and do not require a Pilot Pass. This can be offset, to an extent, by limiting the amount of Pilot Passes issued prior to the season opener when background (non-regional trail associated) use is at its highest level.

Among the in-process adaptations established by DCNR through the course of the pilot, few if any had more of a positive impact than reimbursement for dust suppressants. Dust was identified as one of the

major irritants to residents and visitors alike, and townships generally did not have funds for ATV-specific applications of suppressants.

Finally, a key reality of the regional trail systems which should always be of foremost consideration in planning and operations is the security of the routes is tenuous and based upon maintaining the satisfaction level of local residents and municipalities. Significant portions of the pilot route could become inaccessible with the withdrawal of even one township.

Recommendations:

1. Decouple special activities such as organized group events over holiday weekends such as, Memorial Day, Independence Day, and Labor Day. This will lessen the impacts to local residents during those times.
2. Regional authorities should remain engaged regarding activity tolerance levels with communities and consider limits on the numbers of tags sold if necessary. This may vary depending upon the size of the regional network – the larger the network grows the more diluted the use becomes.
3. Early riding season use (Memorial Day weekend) should be limited by the numbers of permits sold. Additional tags can be sold throughout the season.
4. Continued provision of dust suppressant funding through regional permit sales and limited auxiliary funds is critical.
5. Continued polling of local residents through the regional authority to gauge satisfaction with the regional trail networks and identify ways to mitigate problem areas where possible should be incorporated as a standard operating procedure.

Law Enforcement

Key Findings

- There is a dearth of law enforcement capacity throughout the Commonwealth to enforce ATV laws, especially off DCNR lands.
- There is a lack of knowledge and uniformity pertaining to interpretation and enforcement of ATV laws throughout the Commonwealth on the parts of local police departments and Magisterial District Judges.

The most commonly disclosed reservation about the pilot beyond dust and noise was the potential for illegal operation and the lack of sufficient law enforcement resources to address it. Local law enforcement is largely non-existent through the pilot area. DCNR Rangers are limited in their authority and jurisdiction to DCNR lands or township roads that pass through DCNR lands. The Pennsylvania State Police (PSP) provide additional coverage throughout the region, but the large area involved and competing priorities given the scope of the services PSP provides the public make response to ATV-related incidents difficult. There were also instances where one municipality would contract law enforcement services from a neighboring police department.

The provision and maintenance of a local police force is an expensive endeavor and would not be supported or justified solely through a four-month long recreational activity. However, any assistance

that can be provided through regional trail revenues or other grant sources should be considered to assist.

Recommendations:

1. Ensure portions of fines from ATV registrations are returned to the jurisdictional authority that filed the complaint.
2. Make significant investments to incentivize ATV patrols and response to ATV-related incidents and to perform outreach to municipal police departments, Pennsylvania Game Commission (PGC), and Pennsylvania Fish and Boat Commission (PFBC) to increase understanding, cooperation, and more seamless treatment of ATV laws and public contact.
3. Review 75 Pa. 7706(a)(3). Ensure that at least a fair percentage of revenue from fines cited under chapter 77 are appropriated to the local police department that filed the complaint/citation.
4. Develop a training course for Magisterial District Judges that reinforce the rationale behind effective ATV enforcement and upholding penalties (e.g., public safety, resource protection, etc.).

Accident Reporting

Key Findings

- ATV crash reporting is not performed in a consistent or efficient way.
- Most crashes entered into the DCNR database originate from news headlines; meaning that most ATV riders involved in crashes are in violation of 75 Pa. 7728, 3746.
- October 16, 2018 MOU between PennDOT, DCNR, and OA transfers from DCNR to PennDOT all of DCNR administrative responsibilities under the Snowmobile and ATV Law except DCNR's responsibilities related to the restricted revenue accounts. While the MOU details specific responsibilities, e.g., titling, registering, etc., it does not mention the accident reporting requirement by 75 Pa. Chapter 77.

Accident reporting through the duration of the pilot was relatively low, with five known serious accidents occurring. While this is a positive result, it is a possible that that the number is low due to inconsistent accident reporting. Anecdotally, members of local emergency response organizations indicated they felt the numbers were higher than this, though they could not provide specific data to substantiate this. Through DCNR's monitoring efforts, several attempts were made to gather accident reports through county and individual emergency response agencies to document accidents as thoroughly as possible. However, there was a reluctance on the part of these entities to provide the information due to concerns around individual privacy, especially in medically related incidents, as well as a general reluctance to provide county emergency communication records for analysis.

Recommendations:

1. Develop a universal form and process for reporting ATV crashes that is shared with all law enforcement agencies.
2. Perform a technical review of online reporting forms and processing: Snowmobile/ ATV Accident Report · Starter Portal (powerappsportals.us)
 - a. This official form should be the only source by which crash data comes to the DCNR.

- b. Outreach may be necessary to educate law enforcement agencies about the use and submission of this form.
3. Examine the accident reporting requirement, i.e., 75 Pa. 7728, and consider transferring this function to PennDOT along with other administrative duties per the 2018 Memorandum of Understanding between the agencies.

Penalties

Key Findings

- Current penalty levels are not adequate to deter illegal use. DCNR staff report direct communication from ATV riders inquiring “how much they’ll get fined” if they perform illegal riding behavior, implying that current penalties are not adequate to deter riders from illegal, reckless, and irresponsible riding behavior.
- Spatial footprint of the pilot has been too limited to adequately monitor and detect illegal, off-trail riding.
- Historically, illegal riding and associated impacts have been cited as the primary challenge with administering the ATV program on state forest lands. The current spatial footprint of the pilot has not included outstanding problem areas (e.g., Kato Road, Orviston Road near Bloody Skillet ATV Trail). There is concern about connecting these areas to other parts of the state forest system.

A consistent observation among nearly all DCNR staff involved with the ATV pilot in the field was the general demonstration of safe, respectful, and appropriate behavior by most all ATV operators they encountered, with few exceptions. This is of great credit to the ATV community and bodes well for the future of the activity. Without question, the most effective policing of any illegal activity comes from the user group itself, and both the Potter county and Central Mountains ATV Clubs were extremely gracious and helpful in proactively reinforcing the need for proper trail etiquette among their membership through social media.

However, and as stated previously, well less than half of the area the pilot encompassed is under the direct jurisdiction of DCNR, which likely had the greatest number of consistently patrolling law enforcement officers. The great majority of pilot road mileage occurs in municipalities lacking local police departments. This is even more pronounced of a challenge along township roads adjacent to the pilot route but not part of the “official” route.

This general condition suggests increased penalties related to ATV operation should be developed and available to law enforcement as additional deterrent to the activity. Such action would address some of the expressed concerns of the significant percentage of residents not in favor of the pilot as well as several of the municipalities DCNR cooperated with during the pilot and ATV clubs and advocates who are concerned their pastime is being sullied by the actions of a relatively small percentage of overall operators. Additionally, further protection of state forest and other public resources would benefit from having more significant deterrence to illegal use.

Recommendations:

1. No person should operate an ATV if the person's driver's license has been suspended or revoked.
2. ATV operator and/or owner should be legally accountable, similar to Title 18, Section 3309 to the owner of any lands where monetary damages to trees, shrubs, other personal property occur.
3. Penalties for any person who, while operating or in charge of an ATV, refuses to provide personal information when requested to any police officer authorized to make criminal arrest should be consistent to those for motor vehicle operators.
4. Any ATV operated by a minor in violation of applicable ATV laws may be seized by a law enforcement officer.
5. Police officers may seize an ATV if there is reason to believe:
 - The ATV has been left unattended.
 - The ATV has been reported stolen, is without proper registration, or is unsafe to be driven or ridden.
 - The owner and/or operator is under arrest or incapacitated.
 - The ATV has been used in connection with a criminal offense.
 - The ATV has resulted in damage to public or private property.
6. If competent evidence demonstrates that a machine is permitted to operate on a road, street, highway, or trail pursuant to the code was in a collision on a roadway with another machine that is not registered under the code, the operator of the non-permitted machine should be considered prima facie reckless.

Emergency Response

Key Findings

- Government entities, general public, and motorized user groups are concerned about the impacts of increased motorized recreation on medical services and law enforcement at the local level.
- Increased ATV activity, which can contribute to local tourism revenue, has increased health and emergency incidents. While these are not all serious incidents, e.g., crashes, etc., the increased use increases stress upon limited emergency and public health infrastructure.
- Although not comprehensively quantified, anecdotally there has been concern raised about added demands on local volunteer EMS organizations related to the ATV Regional Connector Pilot program. As noted by representatives from local and community emergency management organizations, the concern is not just in responding to crashes, but rather, it is the increase in responses that are made to address other medical needs that arise where people are congregating (e.g., cardiac emergencies, acute illness, etc.).
- Emergency response agencies not listed as eligible grant-in-aid recipients under 75 Pa. 7706.
- Lack of cell coverage and absence of mile markers or other location reference system makes it difficult to communicate incident locations effectively.

Volunteer emergency response agencies across the Commonwealth are extremely taxed. This is especially true in northcentral Pennsylvania, where members of volunteer fire companies and ambulance services often count their members in single digits of dedicated individuals. Regrettably, it is not unheard of for some response stations to close due to inability to retain and recruit members and perform the many hours of training required of them. All Pennsylvanians owe a huge debt of gratitude to the men and women who comprise this core of volunteers.

Because of this reality, the communities of the northcentral region are more vulnerable to delayed response than most in the Commonwealth. There is no question that the increased traffic of ATVs being drawn to the region will increase demands on local response. Tools should be developed to assist these organizations in order they can perform a higher degree of service.

Recommendations:

1. Emergency response agencies and public health infrastructure should have access to the shared revenues of the regional ATV initiatives and/or associated tourism benefits. DCNR is willing to cooperate with local departments, county governments, Pennsylvania Emergency Management Agency (PEMA), Department of Community and Economic Development (DCED), and others to facilitate this.
2. Establish a regional identification grid in cooperation with county emergency management services based upon road intersections to direct law enforcement and emergency services as well as provide directional reference to riders.
 - What3words gives callers a precise way to communicate exactly where assistance is needed, saving precious time. What3words addresses can be shared easily over text, radio or digitally, minimizing the room for error when locations are passed between teams and agencies. [What3Words App Helps First Responders Locate Lost People - YouTube](#). [About us | what3words](#)

Personal Responsibilities and Release of Landowner Liability

Key Findings

- Limited understanding of ATV operator responsibilities.
- Private landowners allowing access for riding by the public are not currently indemnified from liability regardless of whether they are being compensated.

Many of the critical connections through the Northcentral ATV Pilot were made possible due to the proportionately large blocks of public lands available to the use. This is not the case in much of the rest of the Commonwealth, where private lands are more prevalent and/or public agencies through either the management imperatives of their mission or their legislated authority do not host ATV recreation.

Even within the pilot footprint there are large tracts of private lands which offer additional opportunities for riders along with smaller tracts of private lands which offer critical strategic connections. For the advent of regional trail systems to flourish, greater relief from liability for landowners is a key advancement.

Recommendations:

1. Each person who drives or rides an ATV accepts, as a matter of law, the dangers inherent in the recreational activity and shall not maintain any action against an owner, occupant, or lessee of land for any injuries which result from such risks or dangers. Parts of the intent of this language are discussed in 75 Pa. 7729, but stronger articulation of rider responsibility and release of liability by landowners is necessary to implement ATV regional networks.
2. Amendments are needed to the Recreational Use of Land and Water Act (RULWA) to increase liability protections for landowners who are allowing full public access to the trail or property regardless of if they are accepting monetary payment for opening their land to the public.
3. Each person who participates in the sport of off highway recreational vehicle (OHRV) riding of any type accepts the risks associated with that sport insofar as the dangers are inherent. Those risks include, but are not limited to, injuries to persons or property that can result from variations in terrain; defects in traffic lanes; surface or subsurface snow or ice conditions; bare spots; rocks, trees, and other forms of natural growth or debris; and collisions with fill material, decks, bridges, signs, fences, trail maintenance equipment, or other machines. These risks do not include injuries to persons or property that result from the use of an OHRV by another person in a careless or negligent manner likely to endanger person or property. When these recreational vehicles are operated in the vicinity of a railroad right-of-way, each person who participates in the sport of OHRV riding additionally assumes risks including, but not limited to, entanglement with railroad tracks, switches, and ties and collisions with trains and train-related equipment and facilities.
4. Commonwealth, any local authority, and/or any local unit of government should be immune from tort liability for injuries or damages sustained by any person arising in any way out of the operation or use, on the maintained portion or unmaintained portion of a highway, road, or street, of an OHRV that is not registered under 75 Pa. or that is registered under the code but is operated contrary to provisions of 75 Pa.

Additional Youth Safety and Machine Recommendations

Key Findings

- No certified testing has been done on child safety equipment for off highway recreational vehicles.
- Safety requirements for ATVs are not covered in the inspection code.
- Inspections for safety and emissions is not required for off highway recreational vehicles.

The safety of riders is of utmost importance to DCNR. To further ensure the safety of machines and those enjoying them, including youth, the following are additional recommendations:

Recommendations:

1. Eye Safety: Recommend front windshield for UTVs or helmet with face shield or goggles for ATV/UTV operation.
2. Child Safety.
 - Children between the age of 0 and 8 years old shall not ride on an ATV.
 - Children between the age of 0 and 4 years old shall not ride on an UTV.

- Children between the age of 4 and 8 years old may ride on an UTV:
 - When the child is securely fastened with the manufacturer’s seat belt system.
 - When UTV has a full roll cage that encompasses the entire driver/passenger.
 - When using a securely fastened booster seat or if the child is of a size greater than 40” tall and 40 lbs.
 - Children older than 8 years old shall only ride on an ATV or UTV.
 - When wearing a DOT approved helmet.
 - Child must have the approved DCNR youth safety training certificate.
3. Machine Safety:
- Must have functional headlights and taillights.
 - Must have functional turn signals or operator must use hand signals when turning.
 - Must have a spark arrestor on the exhaust system.
 - Must have a muffler that keeps noise level below 99 decibels.
 - Must have covers installed on overhead and/or ornamental lighting while operating on trails, joint-use roads, streets, and highways.

Continuation and Future Monitoring Efforts

Key Findings

- Lion polls indicate limited favorability for more ATV development on state forest lands (Figures 1 and 2).
- Pilot operation sampling period was not lengthy enough to detect invasive species populations or other environmental impacts. We received comments from Penn State about concerns over spreading of invasive species populations, specifically Japanese stiltgrass.
- Pilot monitoring found minimal transgression issues on state forest lands, but some illegal riding did occur.
- Historic problem areas, e.g., the Litke purchase and Kato/Orviston road, with rampant illegal use that occur outside of pilot footprint that could become connected via future development were not included in monitoring scope.
- Portions of revenue for ATV programs is directly generated from carbon emissions, which is costly to statewide public trust assets that support biodiversity, air quality, watershed protection, and carbon sequestration capacity.

DCNR is committed to monitoring ATV riding routes to provide objective and credible information for managing this activity and communicating with the public. The three years of monitoring that provided the content of this report covered environmental, social, and economic effects. For some effects to be expressed, specifically environmental effects like the spread of invasive plants, a longer time-period is required. Below are recommendations for the continuation of the existing monitoring program and future monitoring efforts.

Recommendations:

1. Continue the implementation of invasive plant surveys along the preferred routes on state forest land.

2. Continue soliciting public feedback related to attitudes toward ATV riding on state forest land and desire for providing additional opportunities.
3. Continue monitoring of environmental effects on state forest land roads and trails open to ATV riding.
4. Continue monitoring of illegal riding and rogue trails.
5. Develop approaches to monitoring effects of ATV riding on stream water quality and wildlife.
6. Develop approaches to quantifying carbon emissions from ATVs.
7. Identify funding sources to sustainably implement current monitoring efforts by DCNR staff and fund additional research needs related to social, soundscape, and economic impact analysis.