

LASTING OR SHORT-LIVED

Bike and Pedestrian Volumes on Trails in Arlington County, Before, During, and After the COVID pandemic

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Travel Forecasting Subcommittee
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Background

- In the months that followed the arrival of the pandemic, trails and parks provided relief to residents living under stay-at-home orders. Gyms were closed and there was heightened anxiety about the use of public transportation.
- Rails to Trails' 31 trail counters distributed across the country report a 73 percent year-over-year increase in volume in Spring 2020 (<https://www.railstotrails.org/COVID19/#trailcount>)
- Respondents to a nationwide travel survey expected to walk and bike more after the pandemic (COVID-19 and the Future Survey, Arizona State University-University of Illinois at Chicago (ASU-UIC))
- Today, questions remain about longer-term impact of the pandemic on walking and biking, including on the use of trails.



Project Approach

- To learn about longer term impacts on trail use from the pandemic, TPB staff assessed data from Arlington's automatic counters.
- As of January 2023, there are around 40 automatic bicycle and pedestrian counting stations available in Arlington County.
- Obtained raw data from Arlington; assessed and cleansed raw data.
- Analyzed data from stations with historical data, complete 2020 data, and complete 2020 to 2022 data.
- TPB staff also examined data from counters located in other jurisdictions in the region.



Trail Group Assignment

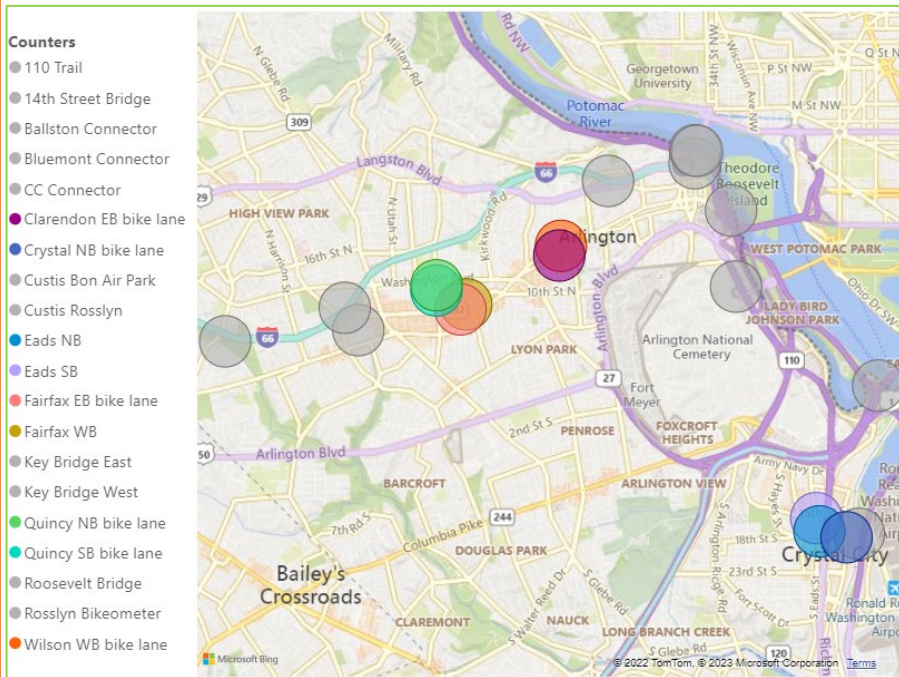
- Trails were showing different usage patterns before and during COVID.
- TPB staff assigned counters to two trail groups: primary peak group (20 stations) or primary off-peak group (13 stations) based on the key trail characteristics, including: weekday and weekend volume comparison, and time of day volume distribution.

Trail Group	Hourly Volume Distribution	Weekday Weekend Volume Comparison
Peak Group	Clear AM peak period and PM peak period during weekdays	Weekdays volume much higher than weekends
Off-peak Group	Hourly volume more evenly distributed during weekdays	Weekends volume higher than weekdays

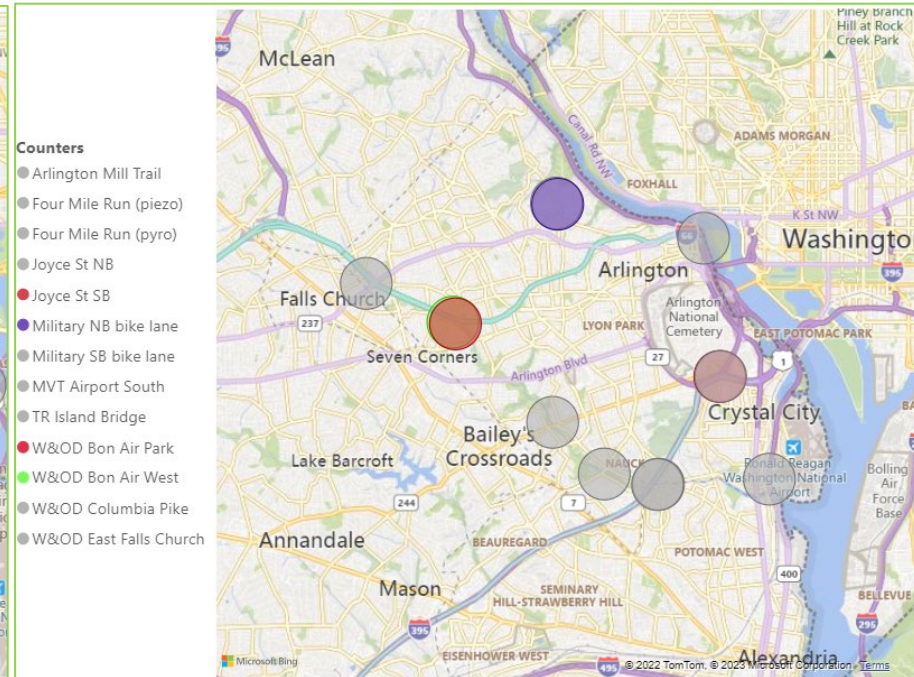


Overview of Arlington Bicycle and Pedestrian Counters

Locations of all the counters by trail group



Peak Group

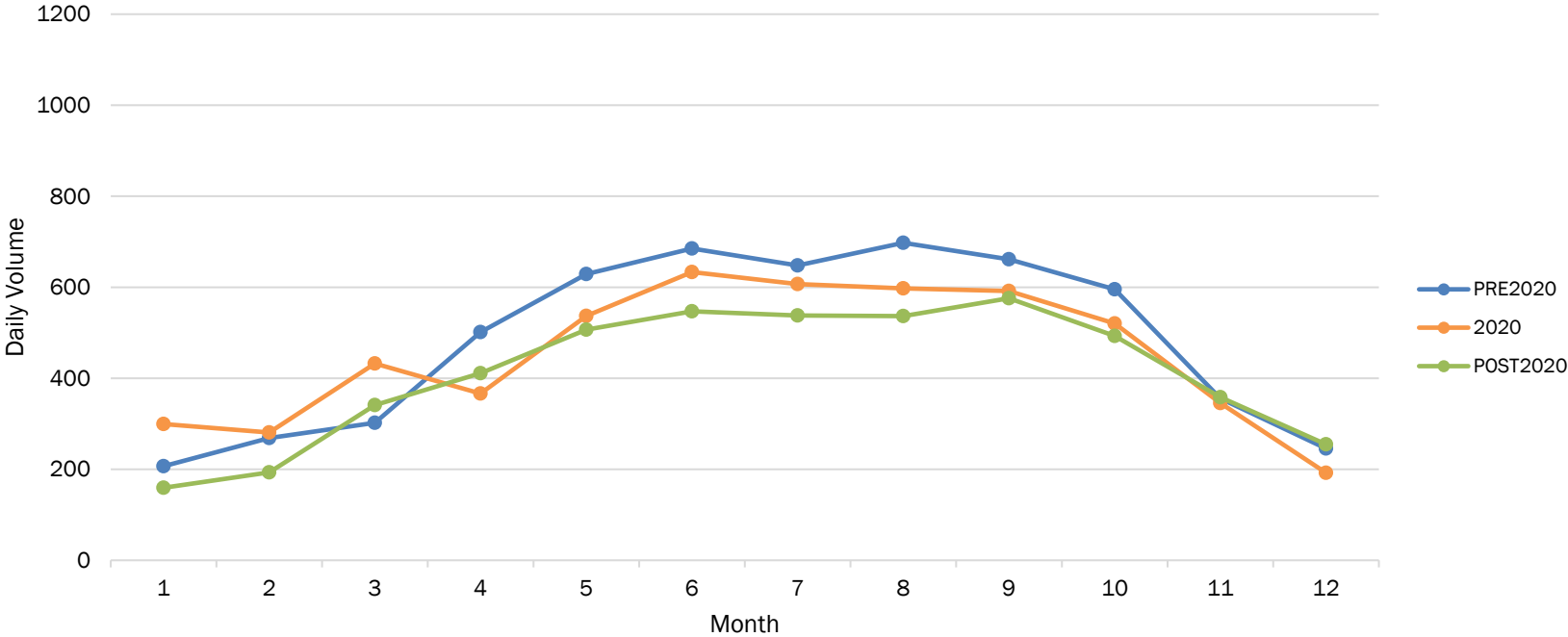


Off-Peak Group



Peak Group Daily Volume by Month Pre-2020 to Post-2020, Weekdays

Weekday Volume Comparison by Month for Trails in Peak Group: Pre-2020 to Post-2020

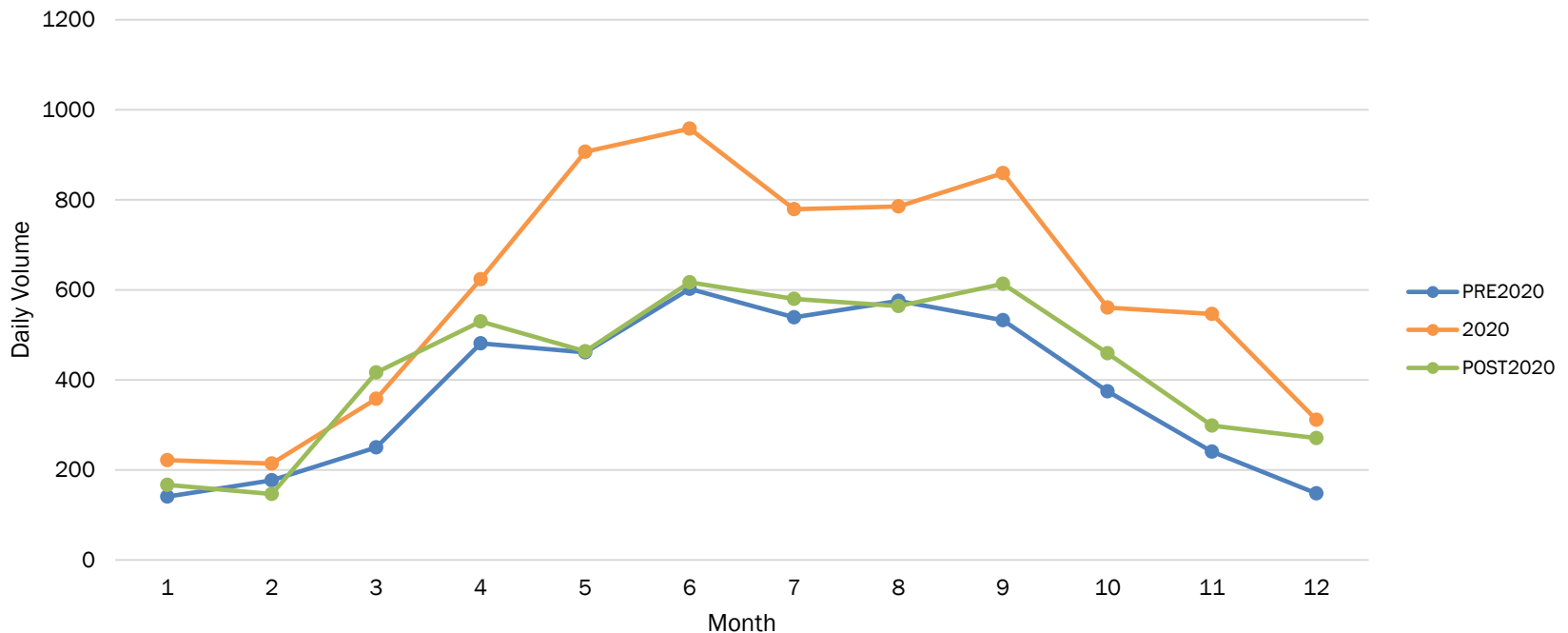


- The decline in Peak Group trail usage on weekdays aligns with a reduction in trips during the peak period across all modes triggered by stay-at home-orders in 2020 and increased telework due to COVID-19 from March 2020 until today.



Peak Group Daily Volume by Month Pre-2020 to Post-2020, Weekends

Weekend Volume Comparison by Month for Trails in Peak Group: Pre-2020 to Post-2020

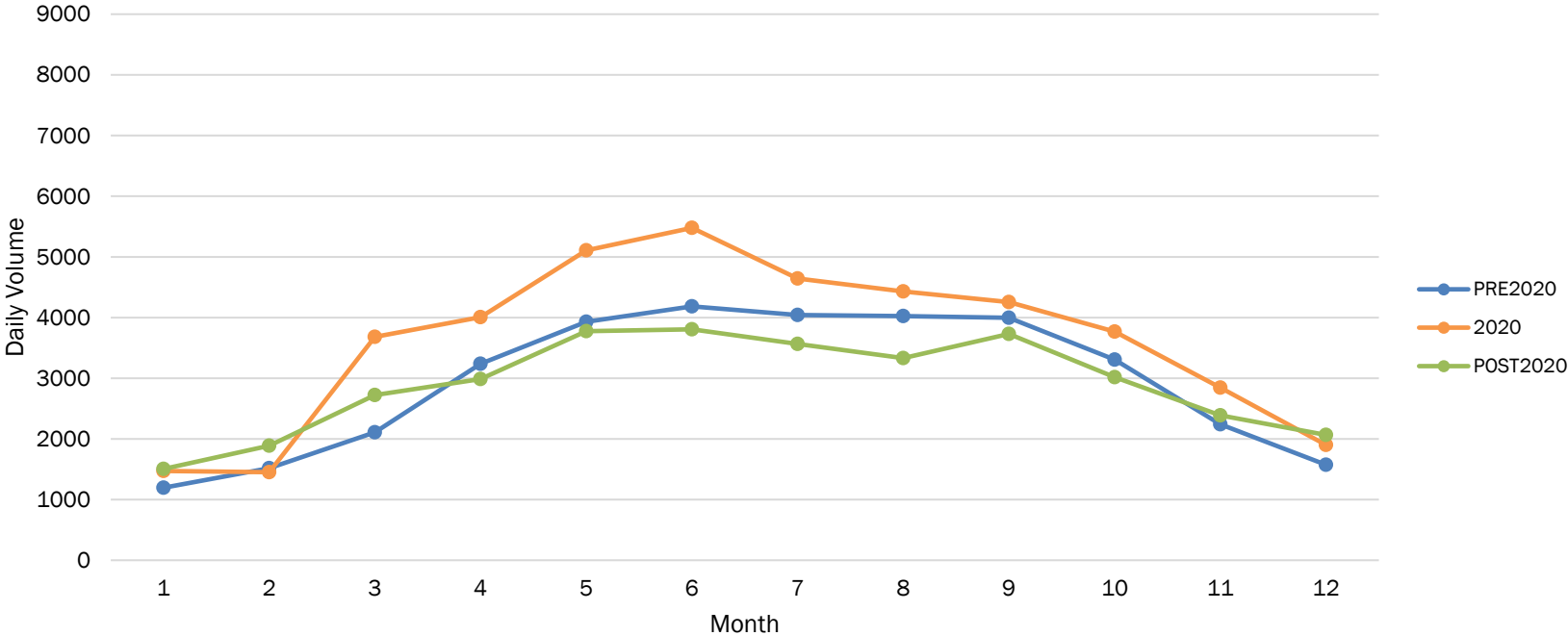


- While this data represents the Peak Group, the kind and types of trips that occur on weekends are different. A large increase in use occurred in 2020, however, after the first year of the pandemic use returned to pre-pandemic levels.



Off-peak Group Daily Volume by Month Pre-2020 to Post-2020, Weekdays

Weekday Volume Comparison by Month for Trails in Off-peak Group: Pre-2020 to Post-2020

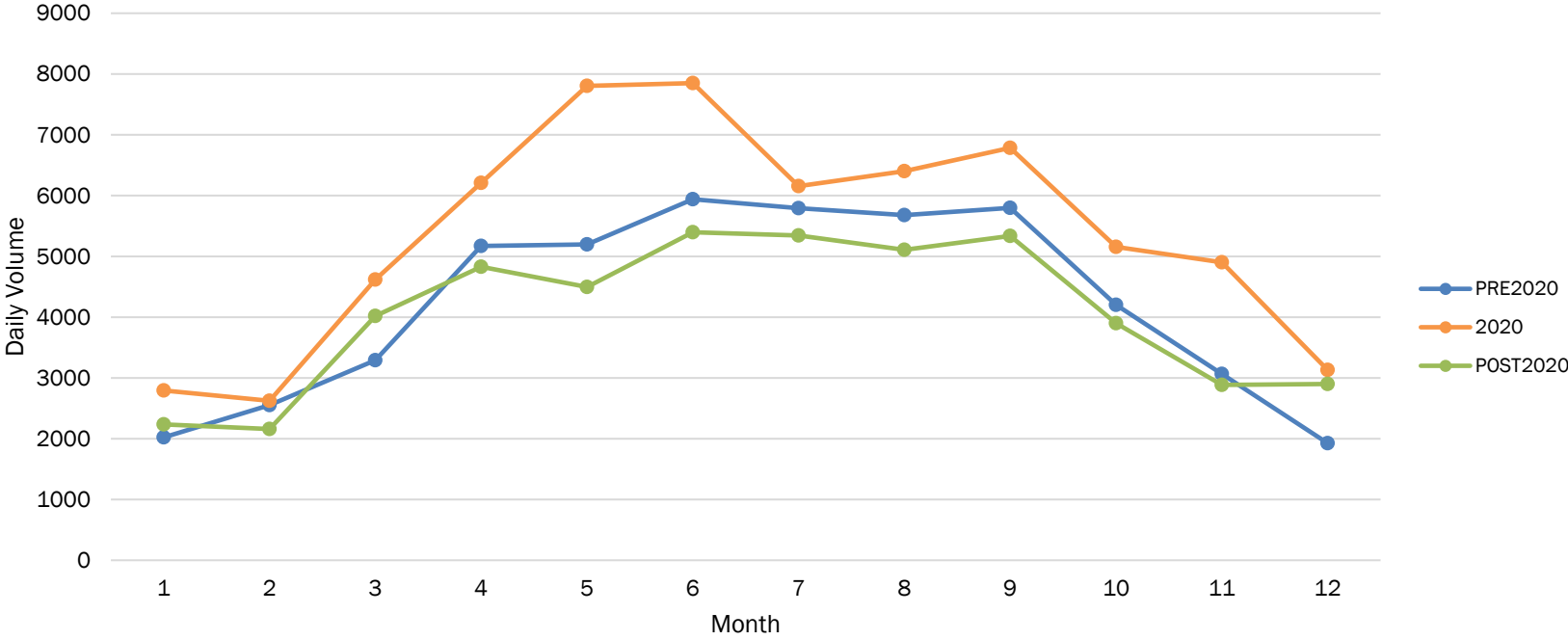


- While there was an increase in trips on the Off-peak Group of trails in 2020, after the first year of the pandemic, trips returned to pre-pandemic levels.



Off-peak Group Daily Volume by Month Pre-2020 to Post-2020, Weekends

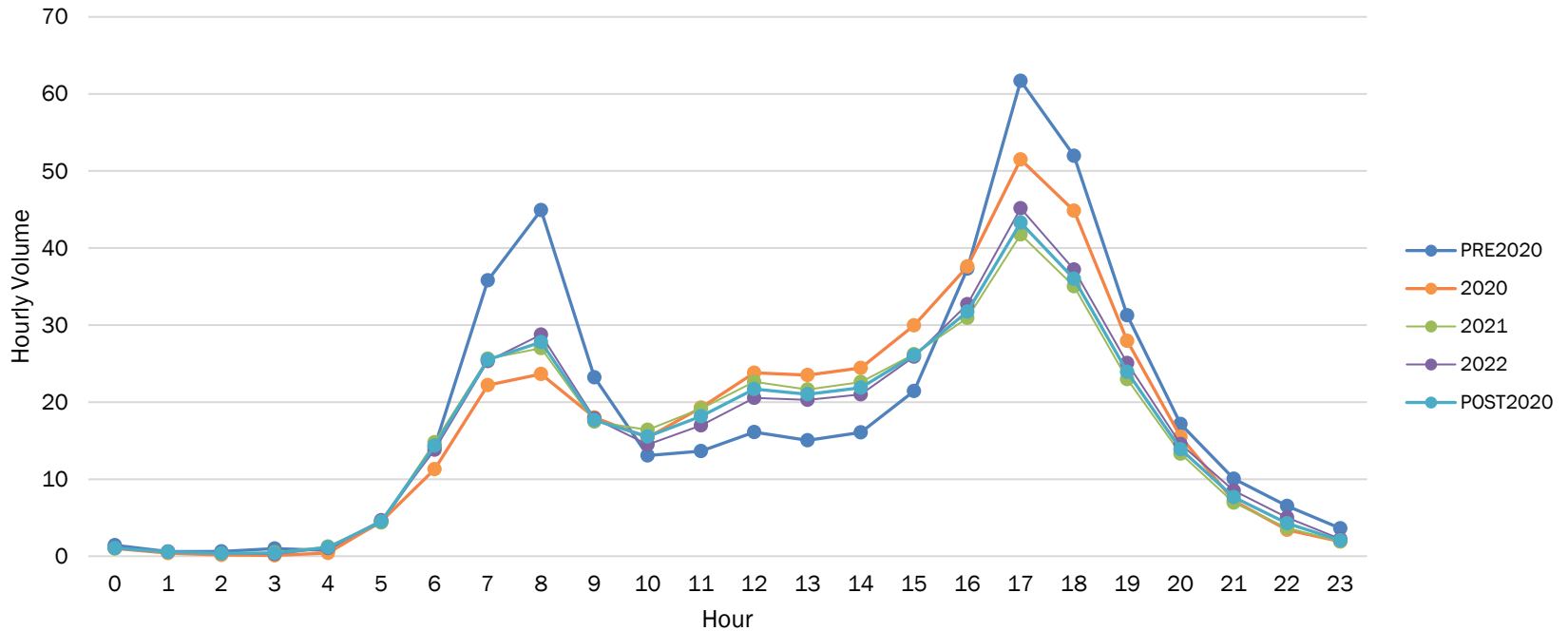
Weekend Volume Comparison by Month for Trails in Off-peak Group: Pre-2020 to Post-2020



- While there was an increase in 2020 for weekends, after the first year of the pandemic, trips returned to pre-pandemic, similar to the observation of weekdays.

Peak Group Hourly Volume Pre-2020 to Post-2020, Weekdays

Weekday Hourly Volume Comparison for Trails in Peak Group: Pre-2020 to Post-2020

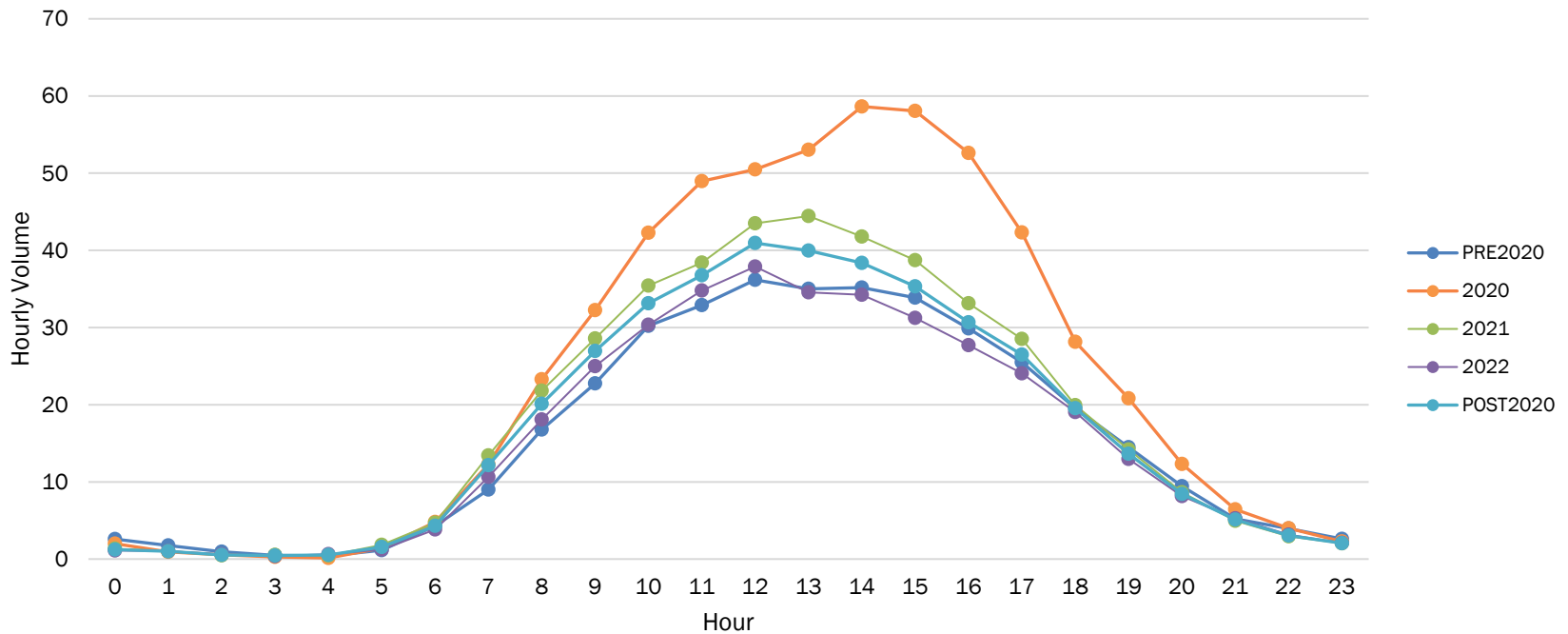


- Fewer people used these trails during peak period, and more people used these trails for mid-day travel on weekdays beginning in 2020.



Peak Group Hourly Volume Pre-2020 to Post-2020, Weekends

Weekend Hourly Volume Comparison for Trails in Peak Group: Pre-2020 to Post-2020

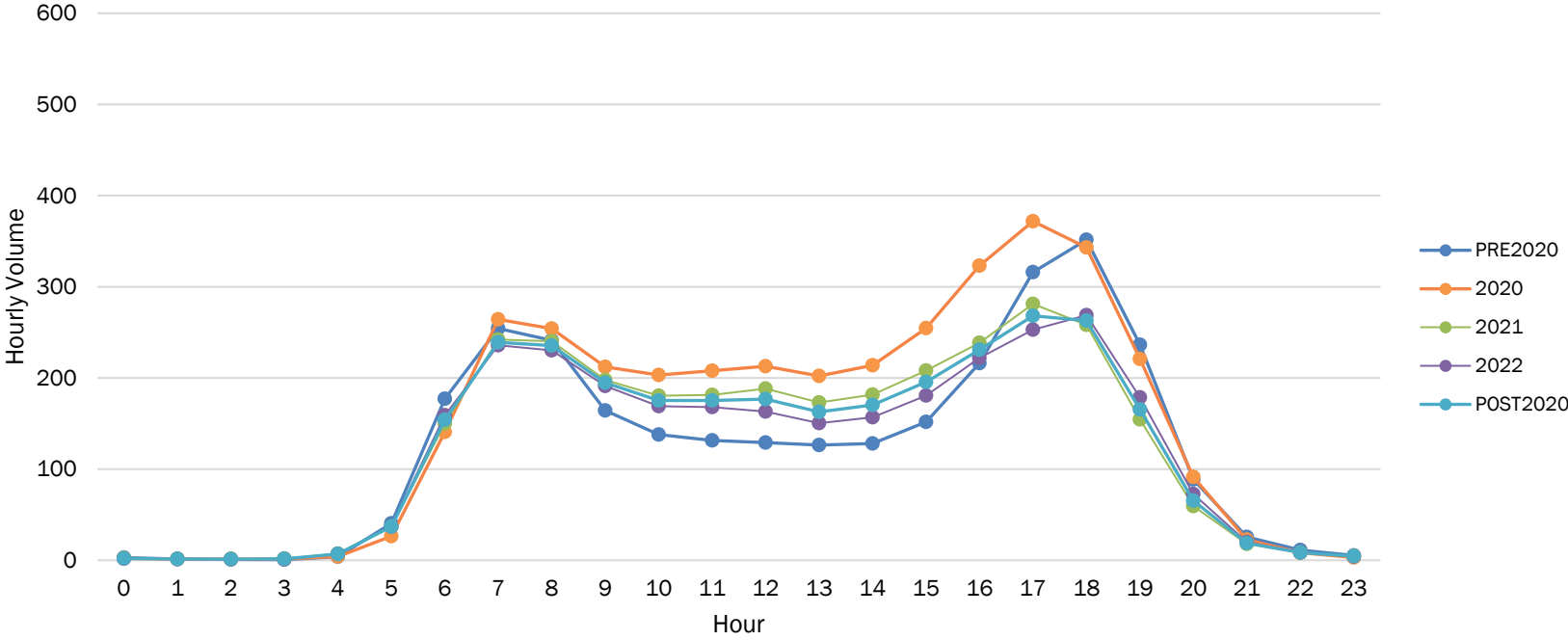


- While this data represents the Peak Group, travel on weekends is often different than weekdays. A large increase in use occurred in 2020 for all hours, however, after the first year of the pandemic use returned to pre-pandemic levels.



Off-peak Group Hourly Volume Pre-2020 to Post-2020, Weekdays

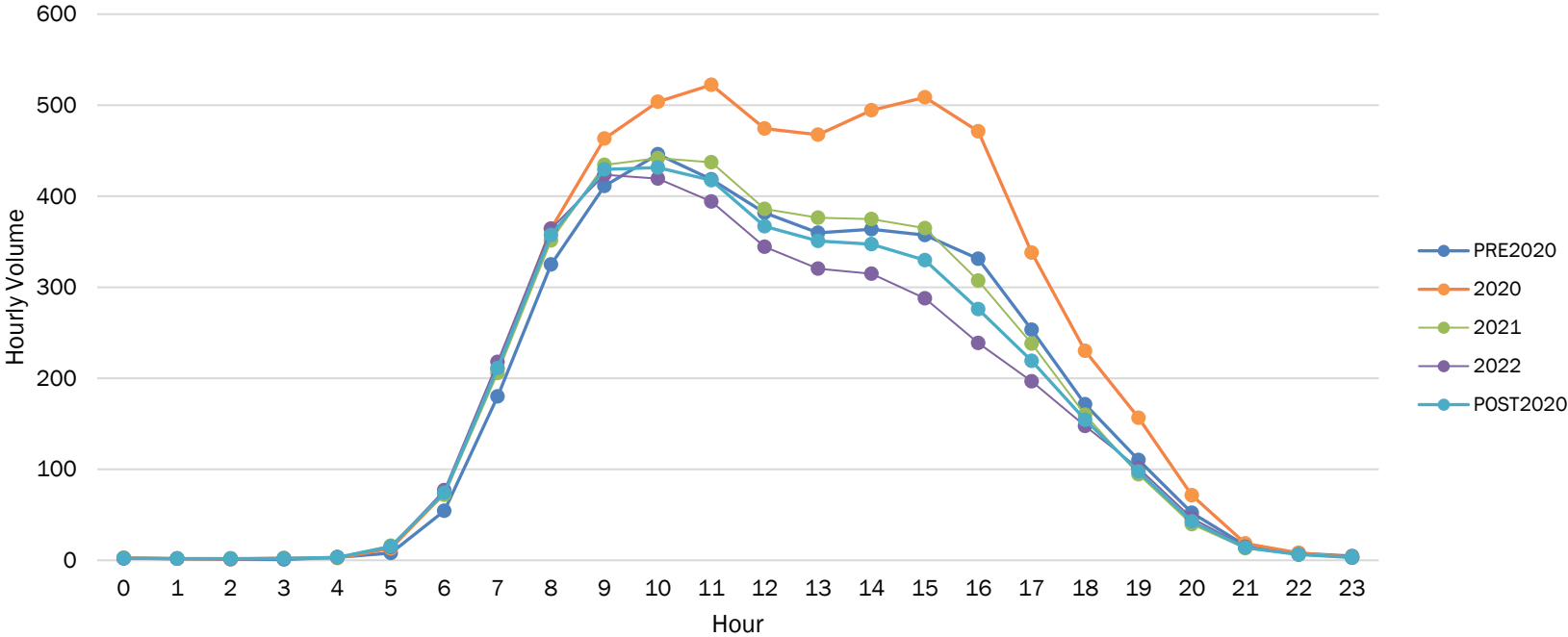
Weekday Hourly Volume Comparison for Trails in Off-peak Group: Pre-2020 to Post-2020



- Hourly usage of the trails in Off-peak Group during weekdays gradually became more evenly distributed since the beginning of the pandemic.

Off-peak Group Hourly Volume Pre-2020 to Post-2020, Weekends

Weekend Hourly Volume Comparison for Trails in Off-peak Group: Pre-2020 to Post-2020

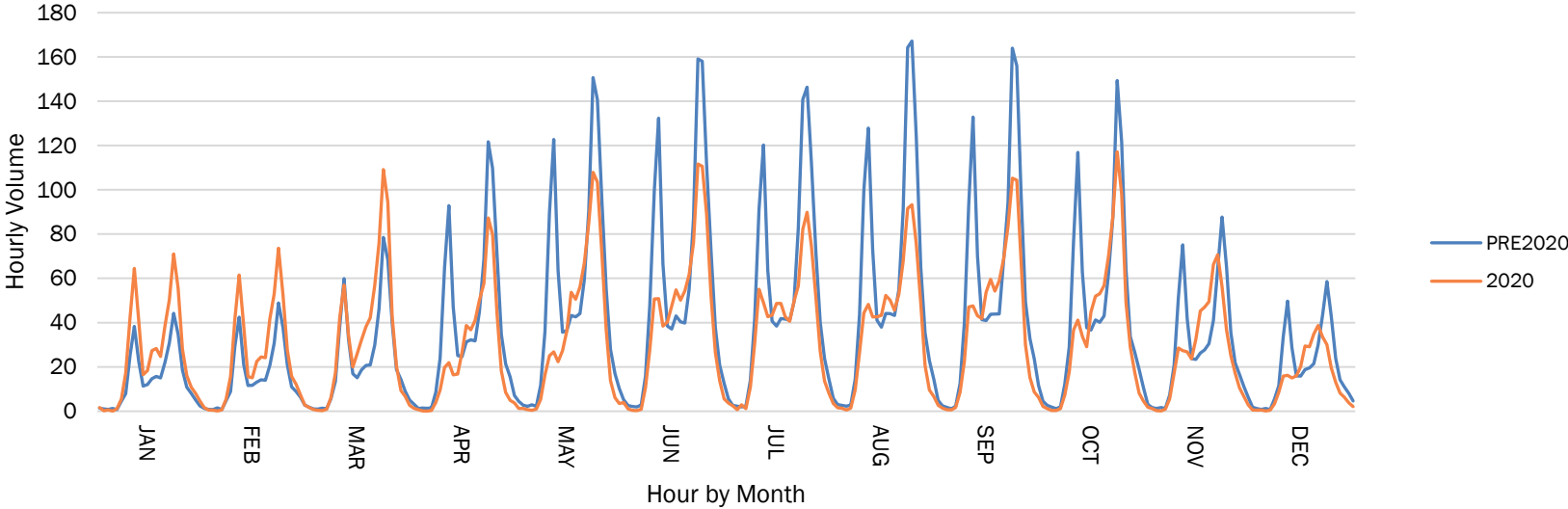


- While there was an increase in the use of the Off-peak Group in 2020 for all hours, after the first year of the pandemic, use returned to pre-pandemic levels.



Peak Group Hourly Volume by Month Pre-2020 vs 2020, Weekdays

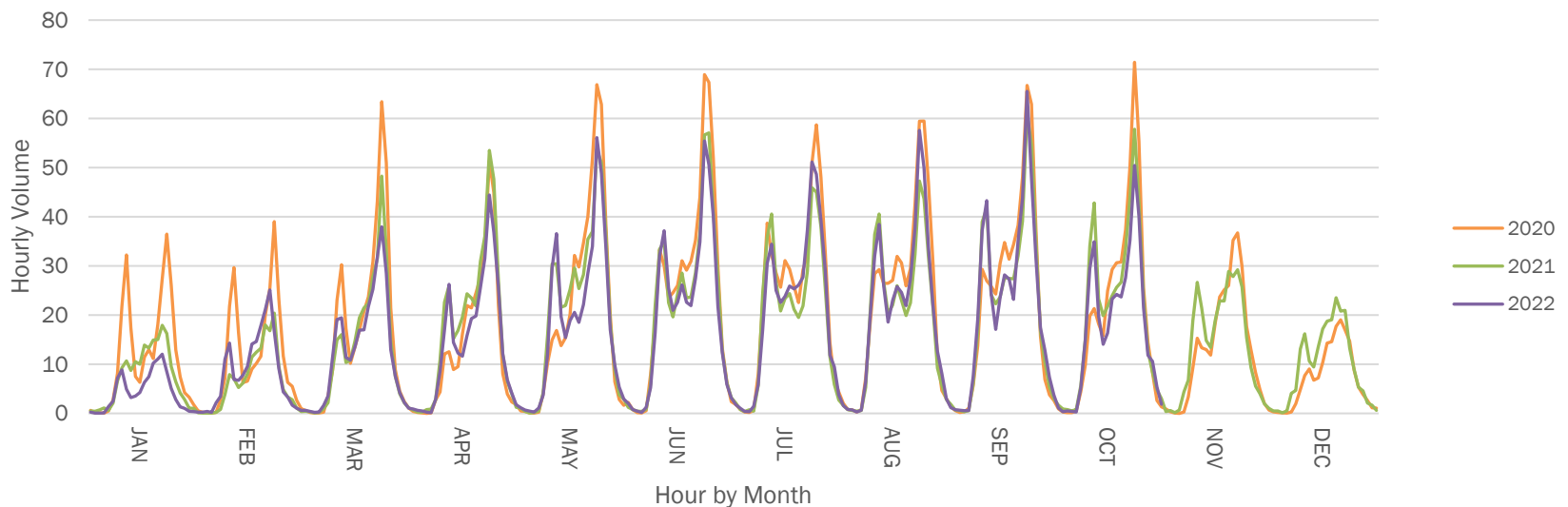
Weekday Hourly Volume Comparison for Trails in Peak Group by Month of Year: Pre-2020 vs 2020



- The travel pattern change after April 2020 reflects fewer people using these trails during the peak period (lower peak volumes) and more people using these trails during the mid-day during the pandemic.

Peak Group Hourly Volume by Month: 2020 vs Post-2020, Weekday

Weekday Hourly Volume Comparison for Trails in Peak Group by Month of Year: 2020 vs Post-2020

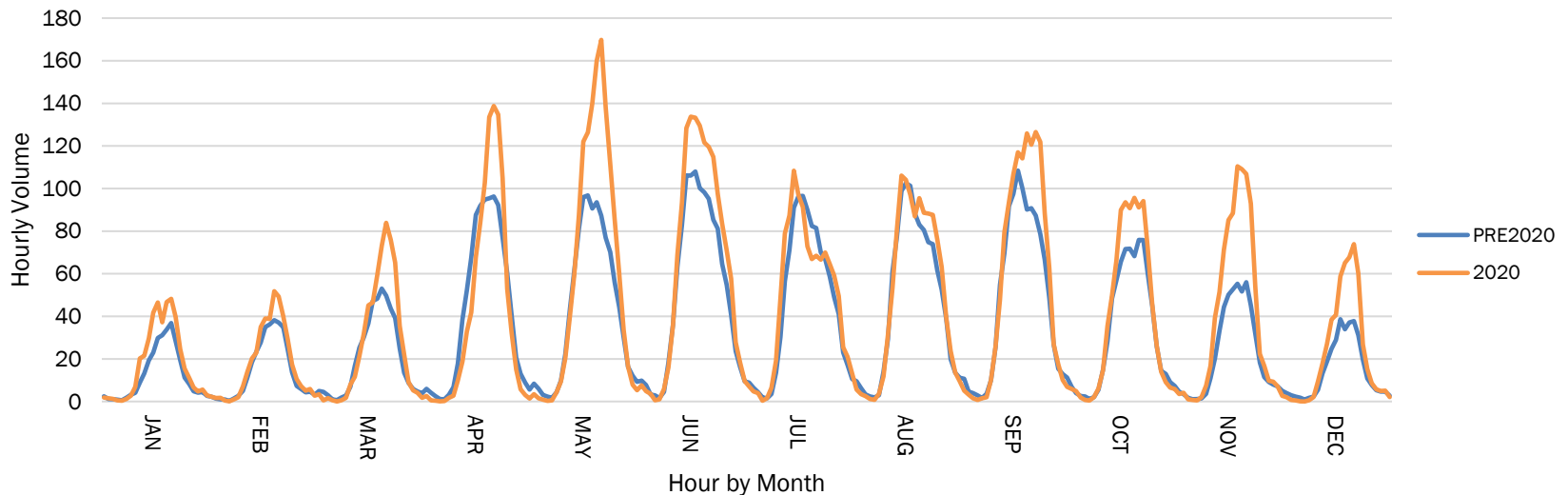


- Pre-COVID pattern before April 2020
- In 2020 fewer people used these trails during peak period and more people used these trails during non-peak period
- In 2021/2022 more people used these trails in AM peak hours compared to 2020 and the travel pattern in 2021 and 2022 are similar.



Peak Group Hourly Volume by Month Pre-2020 vs 2020, Weekends

Weekend Hourly Volume Comparison for Trails in Peak Group by Month of Year: Pre-2020 vs 2020

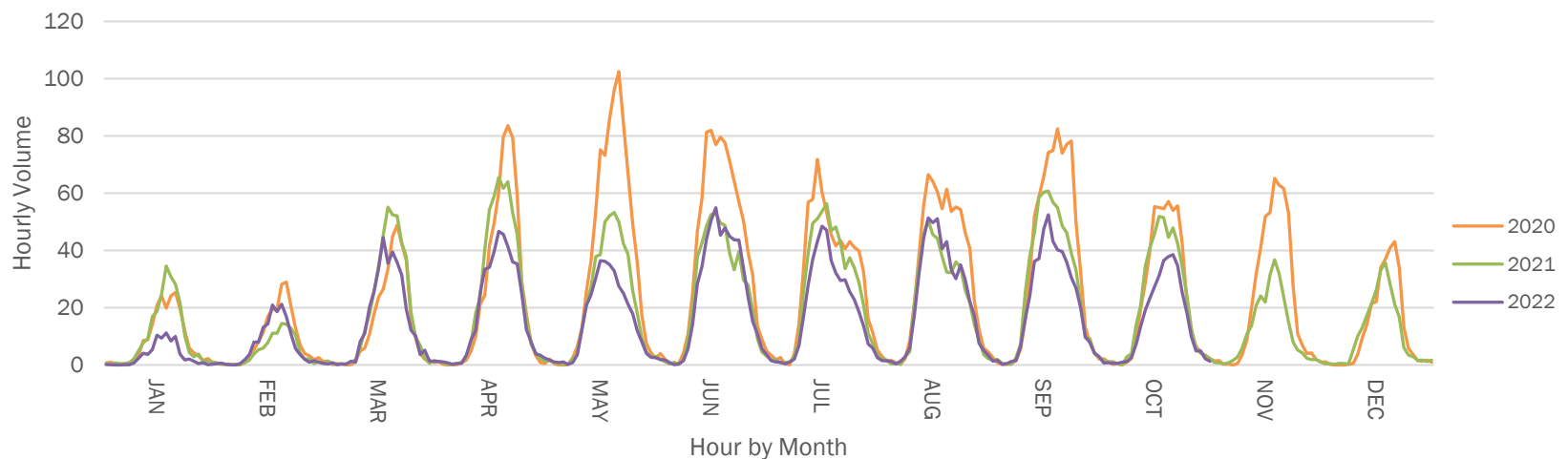


- While this data represents the trails in Peak Group, travel on weekends is often different than weekdays. A large increase in use occurred in 2020 for most hours, especially from April.



Peak Group Hourly Volume by Month 2020 vs Post-2020, Weekend

Weekend Hourly Volume Comparison for Trails in Peak Group by Month of Year: 2020 vs Post-2020

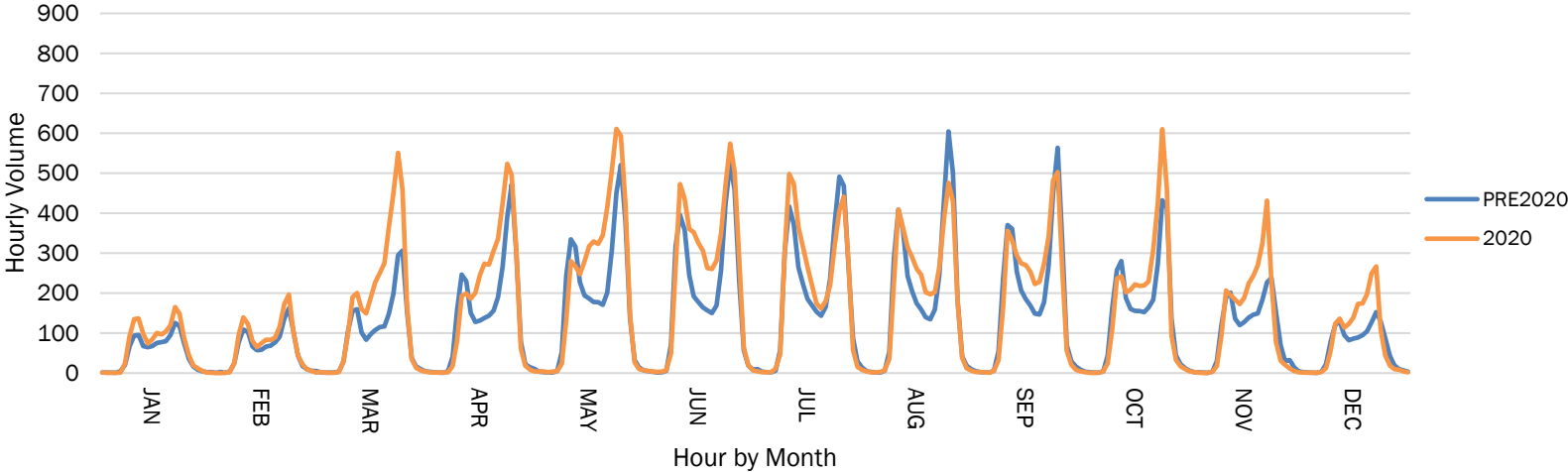


- While this data represents the trails in Peak Group, travel on weekends is often different than weekdays. A large increase in use occurred from 2020 April, however, after the first year of the pandemic use returned to pre-pandemic levels in 2021 and 2022 for all the hours.



Off-peak Group Hourly Volume by Month Pre-2020 vs 2020, Weekdays

Weekday Hourly Volume Comparison for Trails in Off-peak Group by Month of Year: Pre-2020 vs 2020

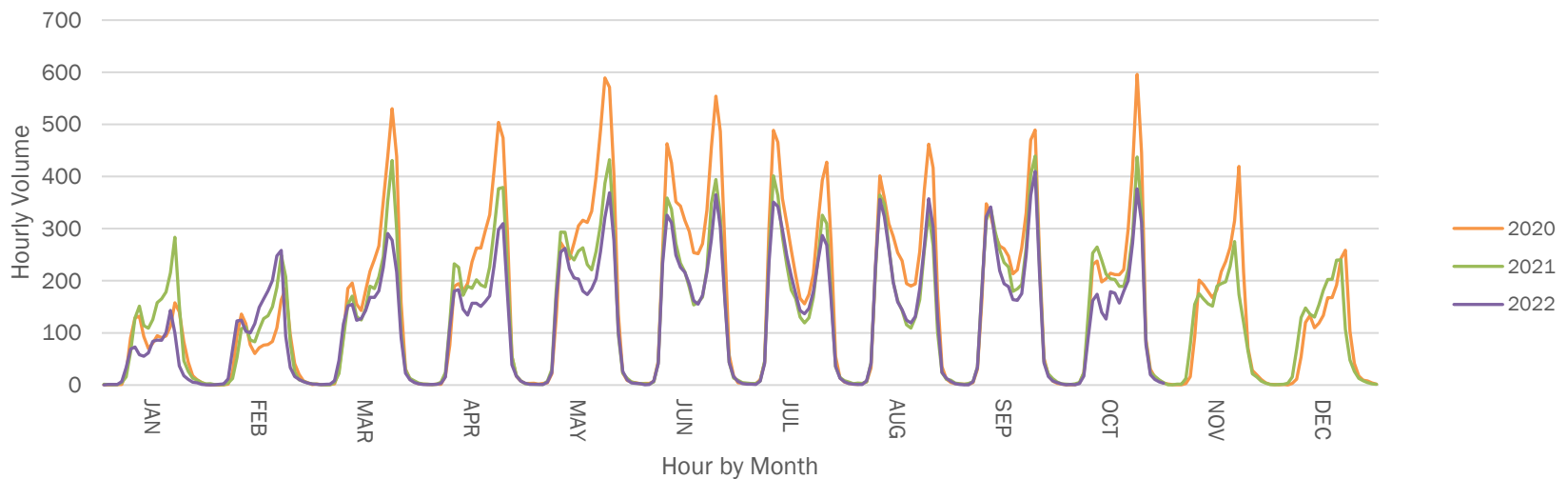


- There was an increase in Off-peak Group trips in 2020 from March during weekdays for most hours.



Off-peak Group Hourly Volume by Month 2020 vs Post-2020, Weekdays

Weekday Hourly Volume Comparison for Trails in Off-peak Group by Month of Year: 2020 vs Post-2020

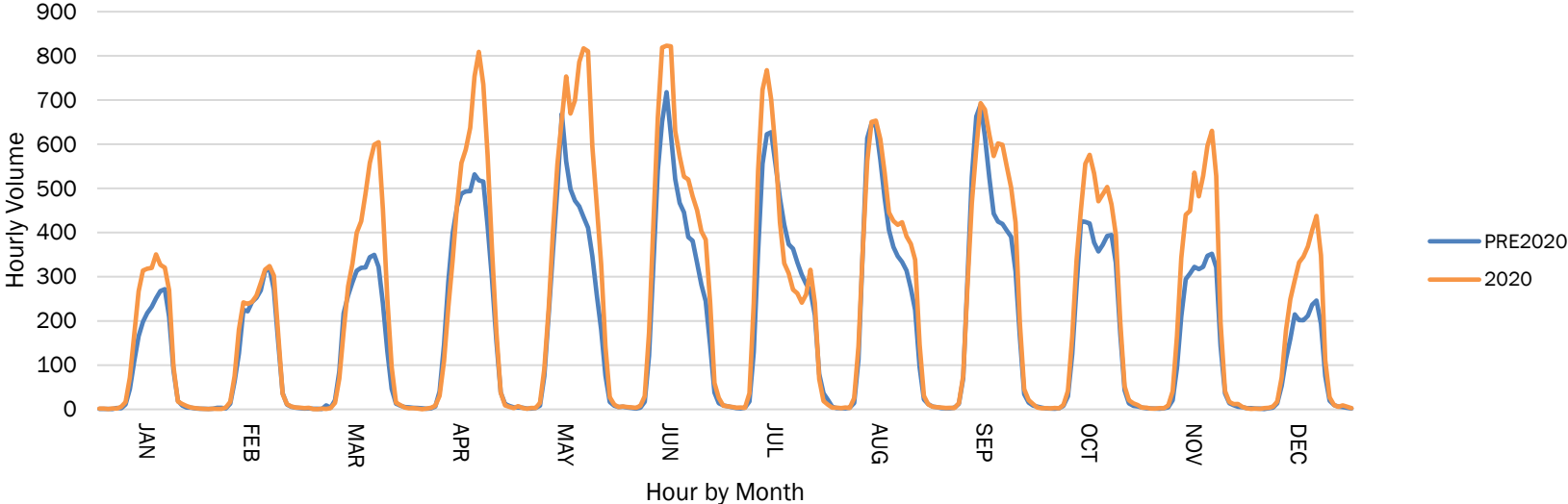


- While there was an increase in trips of Off-peak Group from 2020 March, after the first year of the pandemic, trips returned to pre-pandemic levels in 2021 and 2022 for all time of day.



Off-peak Group Hourly Volume by Month Pre-2020 vs 2020, Weekends

Weekend Hourly Volume Comparison for Trails in Off-peak Group by Month of Year: Pre-2020 vs 2020

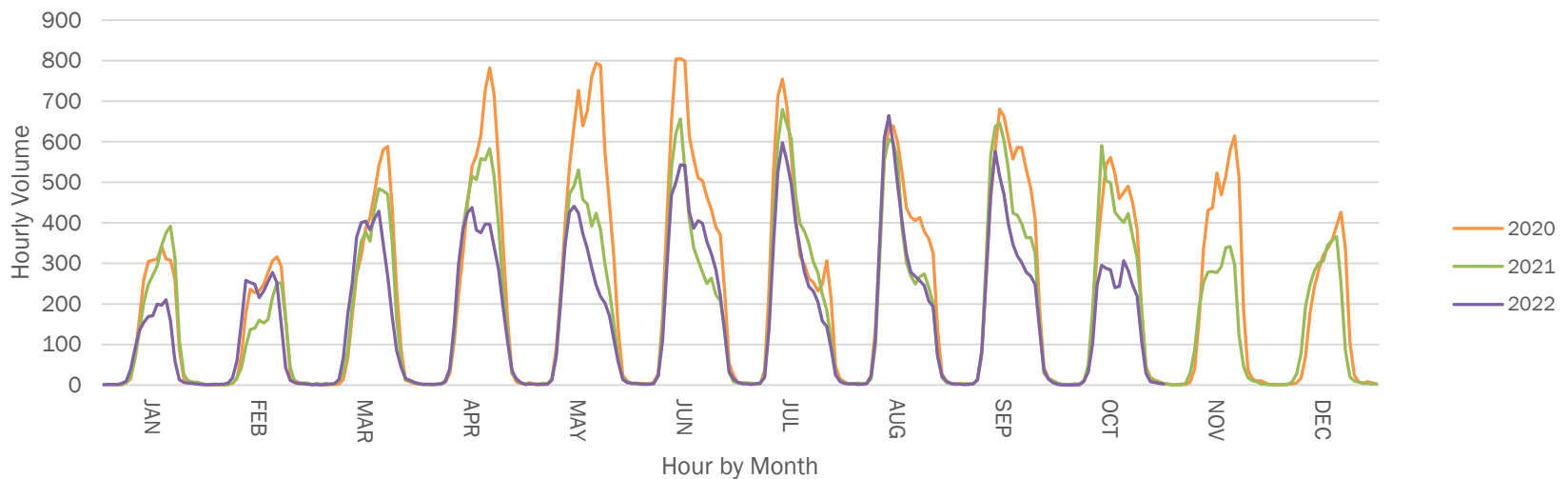


- There was an increase in Off-peak Group weekend trips in 2020 for most hours, especially after March.



Off-peak Group Hourly Volume by Month 2020 vs Post-2020, Weekends

Weekend Hourly Volume Comparison for Trails in Off-peak Group by Month of Year: 2020 vs Post-2020



- There was an increase in trips for the Off-peak Group, especially for the initial year (2020 after March) for almost all hours. The usage gradually returned to pre-pandemic levels in 2021 and 2022.



Regional Connections

What are the travel patterns for other trails in the region?

State	Location	Trail Group	Volume Trend	Similarity to Arlington
DC	Maine Ave Cycle Track	Peak	2020 and 2021 weekday/weekend volume are similar and much lower than pre-2020, however, 2022 volume bounced back to pre-2020 level.	Partially for Peak Group for weekdays, especially before 2022.
DC	14th St NW	Peak	Post-2020 weekday/weekend volume are similar to 2020 level and are lower than pre-2020.	Yes, for Peak Group for weekdays.
MD	C&O Canal Trail	Off-peak	2020 volume is higher than both pre-2020 and post-2020, and the post-2020 volume returned to pre-2020 levels for both weekday and weekend.	Yes, for Off-peak Group for both weekdays and weekends.
MD	Rock Creek Trail	Off-peak	2020 volume is higher than both pre-2020 and post-2020, and the post-2020 volume returned to pre-2020 levels for both weekday and weekend.	Yes, for Off-peak Group for both weekdays and weekends.
MD	Capital Crescent Trail	Hybrid	2020 volume is higher than both pre-2020 and post-2020, and the post-2020 volume returned to pre-2020 levels for both weekday and weekend.	Yes, for Off-peak Group for both weekdays and weekends.
VA	Potomac Yard Trail	Hybrid	2020 and post-2020 weekday volume is much higher than pre-2020, and the 2020 weekend volume is higher than both pre-2020 and post-2020.	Yes, for Off-peak Group, especially for weekends.



Takeaways

- Lasting or Short-lived: the impact of the pandemic on the use of trails?
 - Primary Peak Trail Group
 - Weekday use declined in 2020 and remains lower.
 - Weekend use initially increased in 2020 before returning to pre-pandemic levels.
 - Weekday hourly volume is more evenly distributed since 2020.
 - Weekend hourly volume in 2020 is higher than pre-2020 and post-2020 for most hours.
 - Primary Off-peak Trail Group
 - Weekday and weekend use both increased in 2020 before returning to pre-pandemic levels.
 - Weekday hourly volumes of post-2020 are more evenly distributed than pre-2020 and 2020.
 - Weekend hourly volume of 2020 is higher than pre-2020 and post-2020 for most hours.
- Importance of counting equipment maintenance.



Acknowledgements

- Nicole McCall, DTP, Manager, Planning Research and Assistance
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