

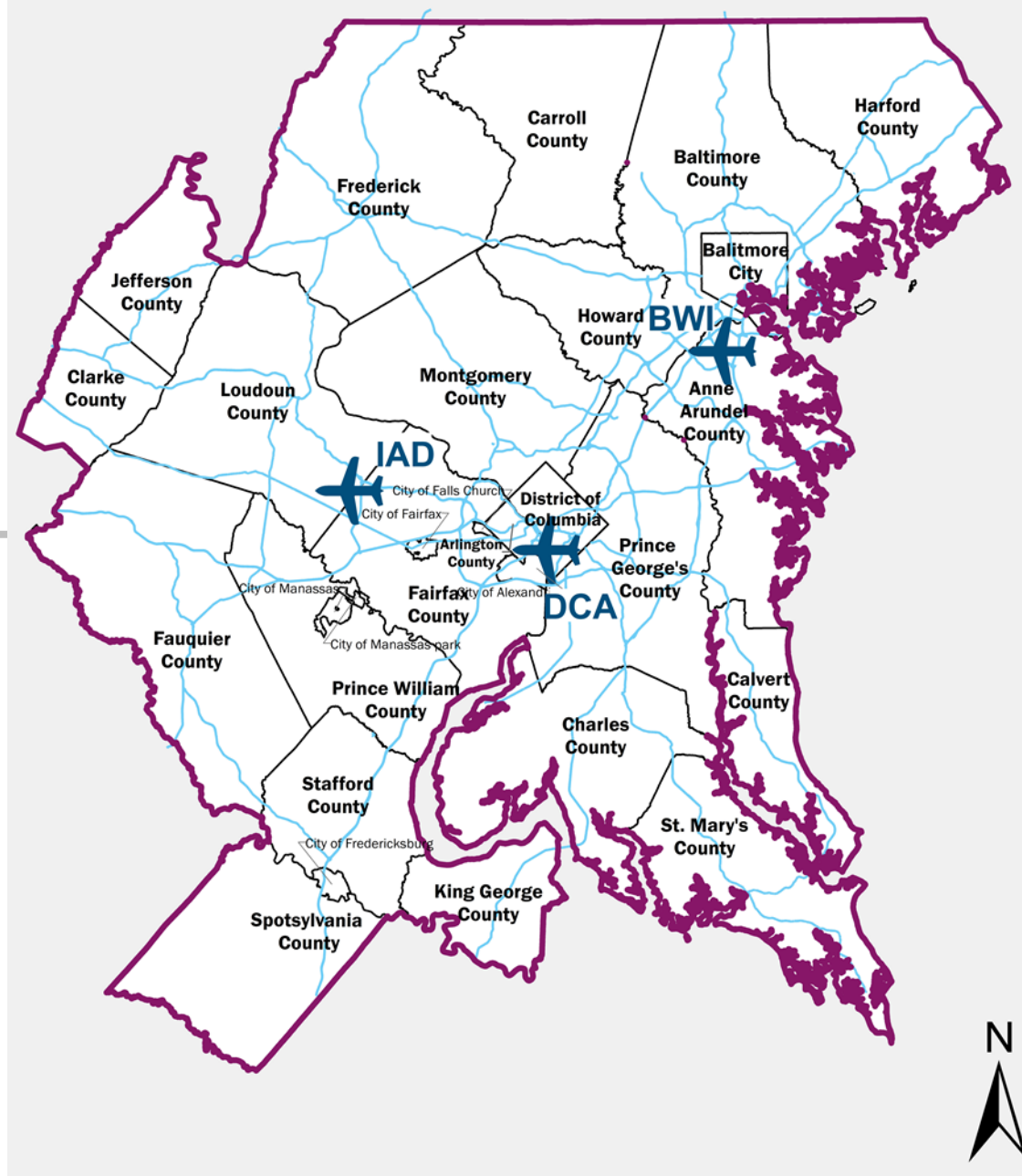
CONTINUOUS AIRPORT SYSTEMS PLANNING PROGRAM UPDATE

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TPB Technical Committee
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Washington-Baltimore Air Systems Region at a Glance

The Washington-Baltimore Air System Planning Region (ASPR) stretches from the Pennsylvania border to the north to Spotsylvania County, VA, to the south, and from the Chesapeake Bay in the east to the Shenandoah Valley to the west



Regional Airport Systems Planning

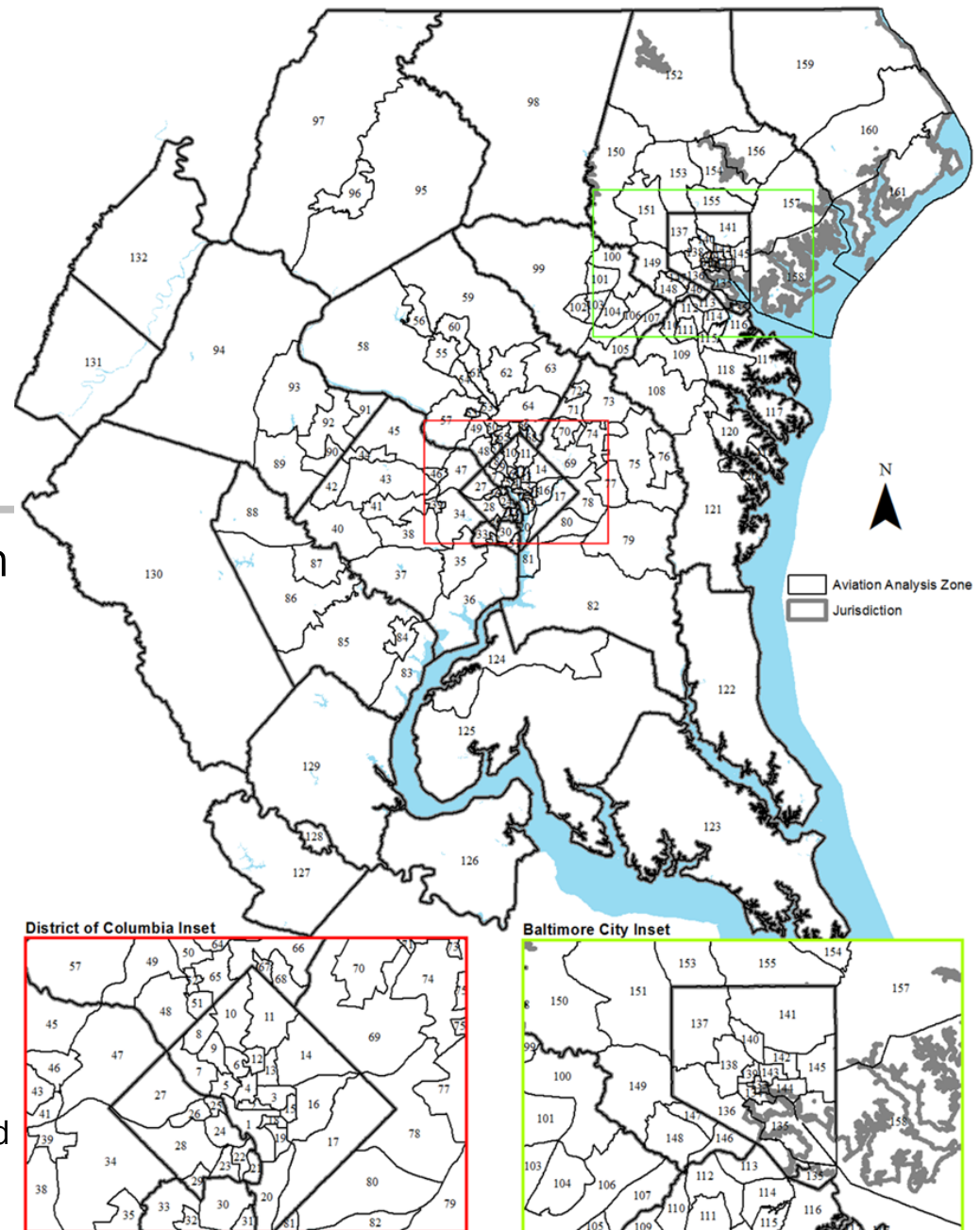
- Carried out in the National Capital Region by COG/TPB for 40 years
- The **Continuous Airport System Planning Program (CASP)** provides a regional process that supports planning, development and operation of airport and airport-serving facilities in a systematic framework for the Washington region
- The TPB Aviation Technical Subcommittee develops, implements, and monitors CASP program activities. Members include:
 - Federal Aviation Administration (FAA)
 - Maryland Aviation Administration (MAA)
 - Virginia Department of Aviation (VDOA)
 - District of Columbia Office of Planning (DCOP)
 - District Department of Transportation (DDOT)
 - Metropolitan Washington Airports Authority (MWAA)
 - Staff from the Baltimore Metropolitan Council (BMC)



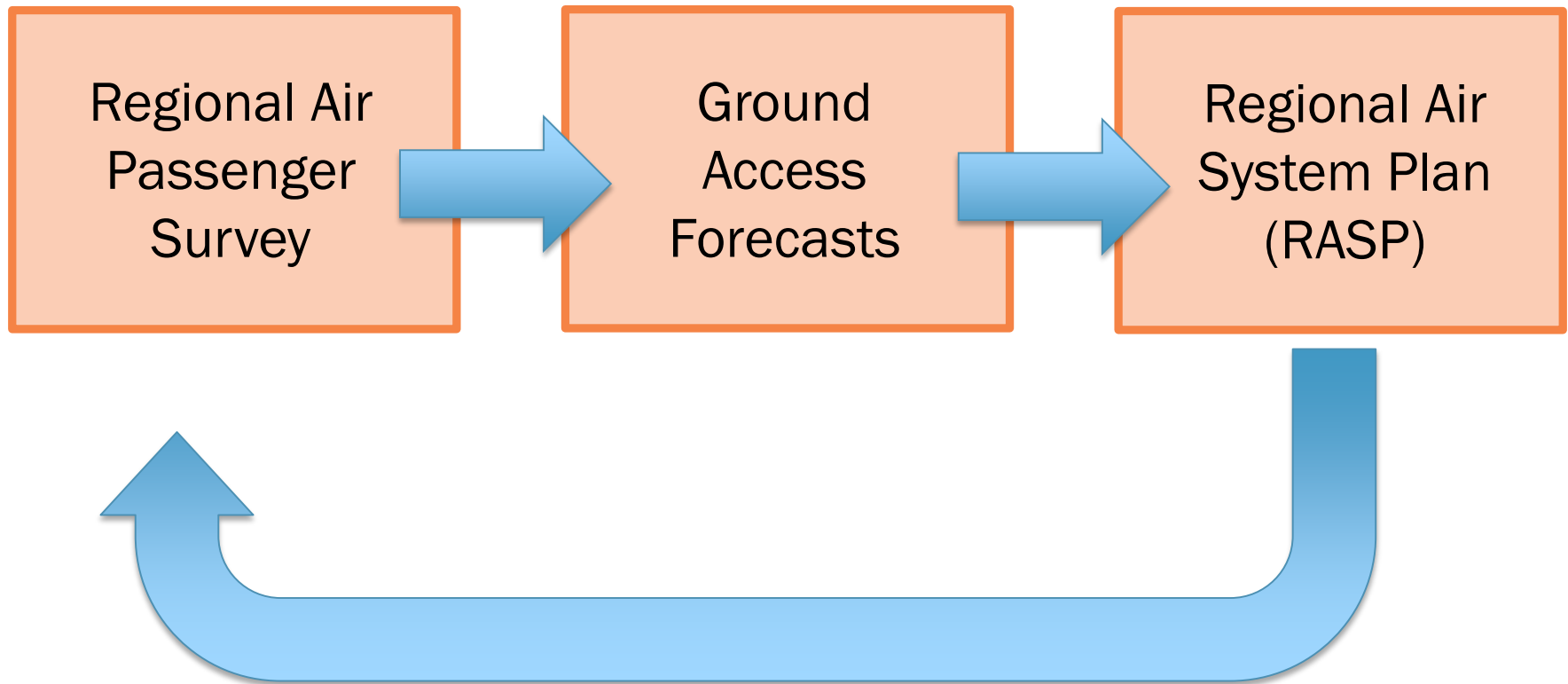
The Region is Divided into 161 Aviation Analysis Zones (AAZs)

- 25 jurisdictions, 161 Aviation Analysis Zones (AAZs) and 2,604 Transportation Analysis Zones (TAZs)
- AAZs are composed of aggregated TAZs from TPB and Baltimore regional models

Note: TAZs from TPB model are used to define AAZs for Anne Arundel, Carroll, and Howard counties



CASP Planning Cycle

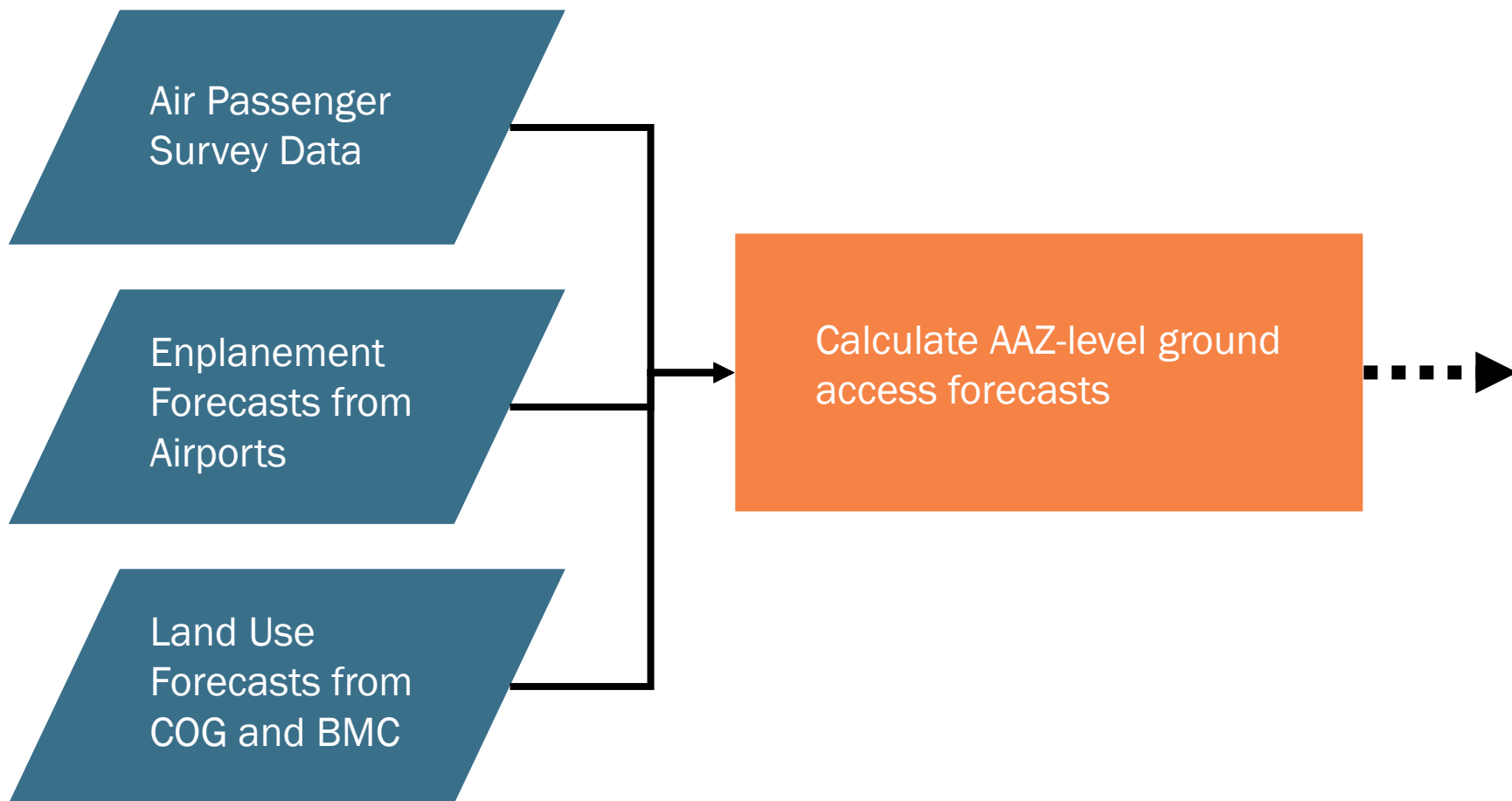


Regional Airport System Plan

- Most recently completed in late 2020
- Ground Access Element
 - Demand Analysis (forecasts, airport development needs)
 - Supply Analysis (planned projects that support airport ground access)
 - Needs Assessment
 - Air Service: Terminal Development Elements, Airfield Improvements
 - Cargo Operations
 - Ground Access & Landside Support Facilities
 - Curbside Access
 - Parking
 - General Aviation



Three (3) input datasets used to develop ground access forecasts



Three (3) principal input datasets

- Air Passenger Survey
 - % local originating trips
 - % local originating internal trips
 - % home and non-home local originating trips
- Enplanement forecasts through 2045 for BWI, DCA and IAD provided by airports
- Latest COG and BMC forecasts of households and employment by TAZ through 2045

Air Passenger
Survey Data

Enplanement
Forecasts from
Airports

Land Use
Forecasts from
COG and BMC



Regional Air Passenger Survey Overview

- TPB has conducted a regional air passenger survey at the three Baltimore-Washington area airports (BWI, DCA, IAD) since 1973, and conducted approximately every two years since 2001 (last survey was in 2019)
- Provides critical data on air passenger characteristics, ground access information, and factors that influence airport choice
- Key source of observed data for regional air systems planning and informs long-range regional transportation planning
- Survey conducted as a paper-based intercept survey at boarding gates using a stratified sampling approach



Comprehensive Evaluation of the APS

- In recent APS efforts, TPB observed a decline in the overall response rate and the quality of survey responses
 - Partially completed or incomplete surveys
 - Respondents are less willing to provide origin information
 - Length of the questionnaire and survey response burden
- There were also challenges to fielding the APS, including the lengthy process to receive ID badges, shortened training schedule for field staff, and interviewing late arriving passengers
- In response to these methodological concerns, ICF was contracted by TPB to conduct a comprehensive evaluation of the APS

List of Recommendations

- Based on the evaluation, ICF provided 25 actionable recommendations for the TPB to consider in future APS surveys
- Broad groups of recommendations include overall approach, survey design and mode, sampling, questionnaire, training, discussion of an employee-inclusive survey, and big data sources
- TPB staff evaluated which recommendations would be feasible for implementation in the next APS



APS Evaluation Methodology

- 5 recommendations were presented to the Aviation Technical Subcommittee Meeting in 2021
 1. Conduct experiments on all new methods
 2. Transition to electronic data collection
 3. Offer incentives to participants
 4. Reduce item nonresponse
 5. Include airport employees in the survey
- The Subcommittee approved 4 of the 5 recommendations, electing to not survey airport employees directly and instead consider other data sources to analyze and understand employee travel behavior and needs



Conduct Experiments on All New Methods

- Conduct experimental and non-experimental pre-tests on new methods
- Experimental pre-tests would require a pilot test using a randomized experiment in which the current methods are tested against new methods, with both fielding occurring at the same time (i.e., factorial randomized control experiments)
- Non-experimental pre-tests would be non-randomized field pilots that would be conducted before or simultaneously with full-scale data collection



Transition to Electronic Data Collection

- Use the web as the primary mode of data collection
- Design questionnaire to be viewed on tablets and mobile phones
- Respondents provided with the option to complete the survey on a shared tablet or their own mobile device



Offer Incentives to Participants

- Incentives are often used in surveys to increase participation
- Incentives can be offered in the form of a cash payment or a gift card (e.g., Amazon, Visa Gift Card)
- Incentives may be given to every participant or randomly selected participants



Reduce Item Nonresponse

- Item nonresponse is problematic in surveys because it may introduce bias
- Item nonresponse is often observed in survey questions that respondents perceive to be invasive or sensitive
- Previous APS efforts showed a high level of item nonresponse for trip and origin questions

2. What is the address of the place you started your trip today?

Street Number	Street Name	City Quadrant (e.g., SW, NE)
City	State	Zip Code
Hotel/Motel or Business Name		

4. How many people live in your household, including yourself?

_____ Person(s) (Write '1' if you live alone)

B. ABOUT YOUR GROUND TRIP TO RONALD REAGAN WASHINGTON NATIONAL AIRPORT:

1. Where did you start your ground trip to this airport (DCA)? (Check ONE answer)

01 Private residence

02 Hotel/Motel

03 Short term rental (e.g., Airbnb, VRBO)

04 My regular place of employment

05 Another place of business

06 Other: _____

1. If you live locally, how many nights will you be away?

_____ Night(s) (Write '0' if you will return today)



Summary of TPB Recommendations

- Conduct a pre-test before full-scale data collection
- Discontinue the paper survey and replace with a web survey that can be taken on a tablet or a mobile device
- Offer a participation incentive in the form of a raffle or drawing
- Include stronger language for privacy and confidentiality in the survey and drop sensitive trip origin questions
- Zone-based sample design to replace gate-place design



2022-2023 Washington-Baltimore Regional Air Passenger Survey

- First survey since 2019 due to significant disruptions to air travel resulting from impacts of the pandemic
- Will implement survey recommendations, including pre-test to be conducted fall 2022
- Results of pre-test will be evaluated, and lessons learned will be incorporated into the full survey conducted in spring 2023
- RFP 22-015 *Regional Air Passenger Surveys* for consultant support for the survey is currently open and will close June 9, 2022

Future CASP Activities

- Air Cargo Element Update
 - In coordination with Regional Freight Plan Update
- Ground Access Travel Time Study, which had been delayed due to COVID-19 impacts on ground and air travel
- Currently recruiting for Planner II/III (DOQ) to lead CASP planning studies and coordinate Aviation Technical Subcommittee



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