



Synthesis of Information Related to Airport Practices: 2015

DETAILS

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AIRPORT COOPERATIVE RESEARCH PROGRAM

Sponsored by the Federal Aviation Administration

Responsible Senior Program Officer: Michael R. Salamone

Research Results Digest 22

SYNTHESIS OF INFORMATION RELATED TO AIRPORT PRACTICES

This is a staff digest of the progress and status of ACRP Project A11-03, "Synthesis of Information Related to Airport Practices," for which the Transportation Research Board is the agency conducting the research. Individual studies for the project are managed by Gail R. Staba, Senior Program Officer, and Jon M. Williams, Program Director, Synthesis Studies, serving under the Studies and Special Programs Division of the Transportation Research Board, Stephen R. Godwin, Director.

INTRODUCTION

Airport administrators, planners, engineers, and researchers often face problems for which information already exists, either in documented form or as undocumented experience and practice. This information may be fragmented, scattered, and unevaluated. As a consequence, full knowledge of what has been learned about a problem may not be brought to bear on its solution. Costly research findings may go unused, valuable experience may be overlooked, and due consideration may not be given to recommended practices for solving or alleviating the problem.

There is information on nearly every subject of concern to the airport industry. Much of it derives from research or from the work of practitioners faced with problems in their day-to-day work. To provide a systematic means for assembling and evaluating such useful information and making it available to the entire airport community, the Airport Cooperative Research Program authorized the Transportation Research Board to undertake a continuing study. This study, ACRP Project A11-03, "Synthesis of Information Related to Airport Practices," searches out and synthesizes useful knowledge from all available sources and

You can submit your topic proposals at: <http://www.trb.org/SynthesisPrograms/Suggest.aspx> under "Synthesis Topic Submittals." Topics suggested must be accompanied by a brief (one or two paragraphs) scope statement, including a discussion of the problem. A title (preferably 10 words or less) and the name and affiliation of the submitter are also necessary. Suggestions for updates of published syntheses are also welcome. The ACRP Project Panel meets once each year to make the final selections. To be considered at the next annual meeting, all submissions should be received by October 2015. If a topic is not selected, the problem statement must be resubmitted the following year to be reconsidered.

Interested in writing a synthesis? For details, see the Synthesis homepage (address above) under "New Topics." (<http://www.trb.org/SynthesisPrograms/ACRPSynthesisNewStudies.aspx>).

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prepares concise, documented reports on specific topics. Reports from this endeavor constitute an ACRP report series, *Synthesis of Airport Practice*.

THE SYNTHESIS PROGRAM

This synthesis series reports on current knowledge and practice, in a compact format, without the detailed directions usually found in handbooks or design manuals. Each report in the series provides a compendium of the best knowledge available on those measures found to be most successful in resolving specific problems.

To develop these syntheses in a comprehensive manner and to ensure inclusion of significant knowledge, TRB employs a consultant to gather and analyze available information from numerous sources, including airport operations agencies. A panel of experts in the subject area is established to guide the consultant in organizing and evaluating the data collected on each topic and to review the synthesis report.

For each topic the project objectives are (1) to locate and assemble documented information; (2) to learn what practice has been used for solving or alleviating the problems; (3) to identify all ongoing research; (4) to learn what problems remain largely unsolved; (5) to organize, evaluate, and document the useful information that is acquired; and (6) to disseminate the synthesis information to all who might benefit from it.

Each synthesis is an immediately useful document that records practices that were acceptable within the limitations of the knowledge available at the time of its preparation. New knowledge can be expected to be added to that which is now at hand and eventually the synthesis may need to be updated or redone. The readers and users of the syntheses are in the best position to know when this has occurred. Whenever you believe that a synthesis should be updated, it would be appreciated if you would contact TRB and propose a synthesis update by contacting Michael R. Salamone, ACRP Manager, Transportation Research Board, 500 Fifth Street, NW, Washington D.C. 20001 by e-mail at msalamone@nas.edu.

Studies in Progress and Planned for 2015

Work is currently under way on the topics listed in Table 1. Topics selected for the 2014 program are listed in Table 2. Questions on these topics should be addressed to the project study manager, Gail R. Staba, by e-mail at gstaba@nas.edu, or by phone at 202/334-2442; or the Synthesis Study Director,

Table 1 ACRP SYNTHESIS STUDIES—Active as of December 2014

No.	Title
S14-01-09	Practices to Develop Effective Stakeholder Relationships at Smaller Airports
S14-01-10 S14-02-11	Strategies for Maintaining Air Service Lessons Learned from Airport Sustainable Plans
S14-03-09 S14-03-10	Cell Phone Lots at Airports Practices in Preserving and Developing Public-Use Seaplane Bases
S14-04-12	Airport Emergency Post-event Recovery Practices
S14-09-06	Airside Snow Removal Practices at Small Airports
S14-10-13	Issues with Airport Fueling System Operations
S14-10-14	Issues Related to Accommodating Animals Traveling through Airports

Jon M. Williams, by e-mail at jwilliams@nas.edu, or by phone at 202/334-3245.

Available Publications

The syntheses of airport practice that have been completed under this project are listed in Table 3.

Table 2 ACRP SYNTHESIS STUDIES—2015 Projects

No.	Title
S15-01-11	Continuity of Operations Planning for Small Airports
S15-02-12	Airport Sustainability Practices—Drivers and Outcomes of Green Initiatives for Small and General Aviation Airports
S15-02-13	Helicopter Noise Information for Airport Noise Managers
S15-02-14 S15-04-13	Airport Sustainability Practices Combining Mixed Use Flight Operations Safely at Airports
S15-04-14	Airport Safety Risk Management Panel Activities and Outcomes
S15-04-15	Flight Operations Advisories at Non-Towered Airports
S15-04-16	Emergency Communication Planning for Airports
S15-04-17	Table Top and Full-Scale Exercises for Small Airports
S15-09-07	Building Information Modeling for Airports

Table 3 PUBLISHED ACRP SYNTHESSES

All publications are free online at: <http://www.trb.org/Publications/PubsACRPSynthesisReports.aspx>
 Printed versions in black and white can be purchased at: <http://www.trb.org/Finance/Bookstore.aspx>.

No.	Title/Pages
1.	Innovative Finance and Alternative Sources of Revenue for Airports (2007) 43 pp., \$34 http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_001.pdf
2.	Airport Aviation Activity Forecasting (2007) 32 pp., \$34 http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_002.pdf
3.	General Aviation Safety and Security Practices (2007) 44 pp., \$44 http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_003.pdf
4.	Counting Aircraft Operations at Small and Non-towered Airports (2007) 33 pp., \$44 http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_004.pdf
5.	Airport Ground Access Mode Choice Models (2008) 104 pp., \$39 http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_005.pdf
6.	Impact of Airport Pavement Deicing Products on Aircraft and Airfield Infrastructure (2008) 58 pp., \$42 http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_006.pdf
7.	Airport Economic Impact Methods and Models (2008) 67 pp., \$45 http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_007.pdf
8.	Common Use Facilities and Equipment at Airports (2008) 121 pp., \$52 http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_008.pdf
9.	Effects of Aircraft Noise: Research Update on Select Topics (2008) 90 pp., \$50 http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_009.pdf
10.	Airport Sustainability Practices (2008) 112 pp., \$52 http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_010.pdf
11.	Impact of Airport Rubber Removal Techniques on Runways (2008) 108 pp., \$52 http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_011.pdf
12.	Preventing Aircraft–Vehicle Incidents During Winter Operations and Periods of Low Visibility (2008) 70 pp., \$45 http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_012.pdf
13.	Effective Practices for Preparing Airport Improvement Program Benefit-Cost Analysis (2009) 65 pp., \$43 http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_013.pdf
14.	Airport System Planning Practices (2009) 71 pp., \$41 http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_014.pdf
15.	Identification of the Requirements and Training to Obtain Driving Privileges on Airfields (2009) 43 pp., \$48 http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_015.pdf
16.	Compilation of Noise Programs in Areas Outside DNL 65 (2009) 104 pp., \$51 http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_016.pdf
17.	Approaches to Integrating Airport Development and Federal Environmental Review Processes (2009) 34 pp., \$38 http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_017.pdf
18.	Aviation Workforce Development Practices (2010) 36 pp., \$39 http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_018.pdf
19.	Airport Revenue Diversification (2010) 55 pp., \$41 http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_019.pdf
20.	Airport Terminal Facility Activation Techniques (2010) 127 pp., \$58 http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_020.pdf
21.	Airport Energy Efficiency and Cost Reduction (2010) 73 pp., \$47 http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_021.pdf
22.	Common Airport Pavement Maintenance Practices (2011) 103 pp., \$54 http://www.trb.org/Publications/Blurbs/165167.aspx
23.	Bird Harassment, Repellent, and Deterrent Techniques for Use on and Near Airports (2011) 32 pp., \$41 http://www.trb.org/Publications/Blurbs/165829.aspx
24.	Strategies and Financing Opportunities for Airport Environmental Programs (2011) 218 pp., \$70 http://www.trb.org/Publications/Blurbs/165852.aspx

(continued)

Table 3 (Continued)

No.	Title/Pages
25.	Strategies for Reuse of Underutilized or Vacant Airport Facilities (2011) 62 pp., \$42 http://www.trb.org/Publications/Blurbs/166101.aspx
26.	Current Airport Inspection Practices Regarding FOD (Foreign Object Debris/Damage) (2011) 86 pp., \$54 http://www.trb.org/Publications/Blurbs/165911.aspx
27.	Airport Self-Inspection Practices (2011) 111 pp., \$54 http://www.trb.org/Publications/Blurbs/166012.aspx
28.	Investigating Safety Impacts of Energy Technologies on Airports and Aviation (2011) 39 pp., \$41 http://www.trb.org/Publications/Blurbs/166099.aspx
29.	Ramp Safety Practices (2011) 59 pp., \$46 http://www.trb.org/Publications/Blurbs/166314.aspx
30.	Airport Insurance Coverage and Risk Management Practices (2011) 51 pp., \$43 http://www.trb.org/Publications/Blurbs/166472
31.	Airline and Airline–Airport Consortiums to Manage Terminals and Equipment (2011) 596 pp., \$98 http://www.trb.org/Publications/Blurbs/166364.aspx
32.	Managing Aerial Firefighting (2012) 44 pp., \$42 http://www.trb.org/Publications/Blurbs/167310.aspx
33.	Airport Climate Adaption and Resilience (2012) 87 pp., \$57 http://www.trb.org/Publications/Blurbs/167238.aspx
34.	Subsurface Utility Information for Airports (2012) 50 pp., \$46 http://www.trb.org/Publications/Blurbs/167502.aspx
35.	Issues with Use of Airfield LED Light Fixtures (2012) 35 pp., \$43 http://www.trb.org/Publications/Blurbs/167509.aspx
36.	Exploring Airport Employee Commute and Parking Strategies (2012) 70 pp., \$49 http://www.trb.org/Publications/Blurbs/167704.aspx
37.	Lessons Learned from Airport Safety Management Systems Pilot Studies (2012) 63 pp., \$46 http://www.trb.org/Publications/Blurbs/167600.aspx
38.	Expediting Aircraft Recovery at Airports (2012) 100 pp., \$57 http://www.trb.org/Main/Blurbs/168018.aspx
39.	Airport Wildlife Population Management (2013) 69 pp., \$52.00 http://www.trb.org/Publications/Blurbs/168836.aspx
40.	Issues with Airport Organization and Reorganization (2013) 32 pp., \$44.00 http://www.trb.org/Publications/Blurbs/169008.aspx
41.	Conducting Aeronautical Special Events at Airports (2013) 119 pp., \$61.00 http://www.trb.org/Publications/Blurbs/168988.aspx
42.	Integrating Environmental Sustainability into Airport Contracts (2013) 68 pp., \$52.00 http://www.trb.org/Publications/Blurbs/169023.aspx
43.	Environmental Assessment of Air and High-Speed Rail Corridors (2013) 36 pp., \$44.00 http://www.trb.org/Publications/Blurbs/169411.aspx
44.	Environmental Management System Development Process (2013) 50 pp., \$46.00 http://www.trb.org/Publications/Blurbs/168917.aspx
45.	Model Mutual Aid Agreements for Airports (2013) 56 pp., \$49.00 http://www.trb.org/Publications/Blurbs/169180.aspx
46.	Conducting Airport Peer Reviews (2013) 40 pp., \$44.00 http://www.trb.org/Publications/Blurbs/169124.aspx
47.	Repairing and Maintaining Airport Parking Structures While in Use (2013) 46 pp., \$46 http://www.trb.org/Publications/Blurbs/169084.aspx
48.	How Airports Measure Customer Service Performance (2013) 93 pp., \$58.00 http://www.trb.org/Publications/Blurbs/169468.aspx
49.	Helping New Maintenance Hires Adapt to the Airport Operating Environment (2013) 52 pp., \$46.00 http://www.trb.org/Publications/Blurbs/169521.aspx

Table 3 (Continued)

No.	Title/Pages
50	Effective Cooperation Among Airports and Local and Regional Emergency Management Agencies for Disaster Preparedness and Response (2014) 44 pp., \$44.00 http://www.trb.org/Publications/Blurbs/170368.aspx
51	Impacts of Aging Travelers on Airports (2014) 27 pp., \$44.00 http://www.trb.org/Publications/Blurbs/170493.aspx
52	Habitat Management to Deter Wildlife at Airports (2014) 75 pp., \$52.00 http://www.trb.org/Publications/Blurbs/170766.aspx
53	Outcomes of Green Initiatives: Large Airport Experience (2014) 63 pp., \$64.00 http://www.trb.org/Publications/Blurbs/170655.aspx
54	Electric Vehicle Charging Stations at Airport Parking Facilities (2014) 62 pp., \$49.00 http://www.trb.org/Publications/Blurbs/170689.aspx
55	Backcountry Airstrip Preservation (2014) 76 pp., \$55.00 http://www.trb.org/Publications/Blurbs/170879.aspx
56	Understanding the Value of Social Media at Airports for Customer Engagement (2014) 157 pp., \$68.00 http://www.trb.org/Publications/Blurbs/170977.aspx
57	Airport Response to Special Events (2014) 136 pp., \$64.00 http://www.trb.org/Publications/Blurbs/170872.aspx
58	Safety Reporting Systems at Airports (2014) 65 pp., \$49.00 http://www.trb.org/Publications/Blurbs/170978.aspx
59	Integrating Airport Geographic Information System (GIS) Data with Public Agency GIS (2014) 66 pp., \$52.00 http://www.trb.org/Publications/Blurbs/171387.aspx

All ACRP reports are available as online publications (<http://www.trb.org/Publications/PubsACRPSynthesisReports.aspx>). Printed black and white copies of these syntheses can be obtained from the Publications Office, Transportation Research Board, 500 Fifth Street, N.W., Washington, D.C., 20001; by calling 202/334-3213; and through the Internet at: <http://www.trb.org/bookstore>. Please send check orders to: TRB, PO Box 936135, Atlanta, GA 31193-6135, or fax to: 202/334-2519.

Selection of Topics

ACRP Synthesis Oversight Panel A11-03 meets each year to select topics for study using funds from the upcoming fiscal year. The membership of this committee is given in Table 4. Current funding allows for initiation of about six syntheses per year. These, plus some alternate topics, are selected by the committee at its annual project meeting.

The following factors are considered in the selection process for synthesis topics:

- The topic should address a problem that is widespread enough to generate broad interest in the synthesis.

- The topic should be timely and critical with respect to safety, economic, or social impact.
- The topic is appropriate if current practice is nonuniform or inconsistent from agency to agency, or if the validity of some practices appears to be questionable.
- The quality and quantity of useful available information should indicate a need to organize and compress that which has already been learned and written on the topic.
- The topic should not be one where ongoing research or other activities in progress might be expected to render the synthesis obsolete shortly after completion.

Each year more topics are suggested for the committee's consideration than can be programmed for study in Project A11-03. Nevertheless, the continued success of this project depends on a constant supply of worthy synthesis topics. The interest of those who have recommended topics is sincerely appreciated, and they are urged to continue. Candidate topics are suggested by members of the panel and by a variety of other sources, including airport, airline, and state aviation personnel; FAA and TRB committees; aviation organizations; and other practitioners and researchers.

Table 4 ACRP PROJECT PANEL A11-03

	Name	Affiliation
Chair	Julie Kenfield	Jacobsen/Daniels Associates
Member	Joshua Abramson	Tupelo Regional Airport
Member	Deborah Ale Flint	Port of Oakland
Member	Debbie A. Alke	Montana DOT
Member	Randall P. Burdette	Virginia Department of Aviation (rotating)
Member	Kevin C. Dolliole	Unison Consulting, Inc. (rotating)
Member	Linda Howard	Consultant, Bastrop, Texas
Member	David N. Edwards, Jr.	Greenville–Spartanburg Airport Commission
Member	Arlyn Purcell	Port Authority of New York & New Jersey
Member	R. Burr Stewart	Burrst (rotating)
Member	Christopher J. Willenborg	Massachusetts DOT
Liaison	Paul Devoti	Federal Aviation Administration
Liaison	John L. Collins	Aircraft Owners and Pilots Association
TRB Liaison	Christine Gerencher	Transportation Research Board
ACC Liaison	Matthew J. Griffin	Airports Consultants Council
ACI-NA Liaison	Liyang Gu	Airports Council International–North America
ACRP Synthesis Staff	Gail R. Staba	Transportation Research Board
ACRP Manager	Michael R. Salamone	Transportation Research Board

Conduct of the Studies

Following the Synthesis Oversight Panel’s selection of topics, studies are initiated in the order of priority assigned by the panel. A topic panel consisting of practitioners and researchers is formed for each topic. At its first meeting, this topic panel thoroughly discusses the topic, refines the scope, suggests sources of information, and identifies and selects potential topic consultants based on expressions of interest received in response to an industry-wide solicitation.

Following this meeting, a consultant is hired to gather information on the topic, synthesize it, and draft a report. Typically, the agreement covers a period of six to seven months. Information gathering and preparation of the first draft of the synthesis report

takes about four months. This draft is reviewed by the topic panel with the consultant, often at the second panel meeting. A revised draft is then prepared by the consultant. Subsequent drafts and meetings are scheduled, if needed, although this rarely occurs.

After the staff is substantially satisfied with the report, a final draft is sent to members of the topic panel for their last chance to review the report and then ACRP Synthesis Oversight Panel A11-03 for final approval. The report is subsequently published as an *ACRP Synthesis of Airport Practice*.

Index of Topic Studies

Table 5 is a key word index of published syntheses.

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