Synthesis of Information Related to Airport Practices: 2013

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AIRPORT COOPERATIVE RESEARCH PROGRAM

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Research Results Digest 17

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, Donna L. Vlasak, 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 prepares

You can submit your recommendation at: **http://www.trb.org/Synthesis Programs/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 2013. 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."

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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 the ACRP Manager, Transportation Research Board, 500 Fifth Street, NW, Washington D.C. 20001.

Studies in Progress and Planned for 2013

Work is currently under way on the topics listed in Table 1. Topics selected for the 2013 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; Donna L. Vlasak, by e-mail at dvlasak@nas.edu

Table 1 ACRP SYNTHESIS STUDIES—In Progress as of December 2012

No.	Title
S12-01-05	Airport Organization
S12-01-06	How Airports Measure Customer Service Performance
S12-01-07	Conducting Airport Peer Reviews
S12-02-07	Integrating Environmental Sustainability into Airport Contracts
S12-02-08	Environmental Assessment of Air and High Speed Rail Corridors
S12-02-09	Airport Environmental Management System Development Processes
S12-04-09	Mutual Aid Agreements for Airports
S12-06-04	Adapting New Maintenance Hires to the Airport Environment
S12-09-05	Repairing and Maintaining Airport Parking Structure While in Use
S12-10-08	Conducting Aeronautical Special Events at Airports
S12-10-09	Airport Wildlife Population Management

Table 2 ACRP SYNTHESIS STUDIES— 2013 Projects

No.	Title
S13-01-08	Understanding the Use and Value of Social Media at Airports
S13-02-10	Outcomes of Green Initiatives at Airports
S13-03-07	Integrating Airport GIS Data into County Geographic Information Systems
S13-03-08	Backcountry Airport Preservation
S13-04-10	A Survey of Safety Reporting Systems at U.S. Airports
S13-04-11	How Airports Interface with Local Emergency Management Agencies for Regional Disaster Preparedness
S13-07-01	Planning, Design, and Operation of Airports for Aging Airport Travelers
S13-10-10	Wildlife Deterrents Using Habitat Modification at Airports
S13-10-11	Electric Vehicle Charging Stations at Airports
S13-10-12	Airport Response to Regional Special Events

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and 202/334-2974; or the Synthesis Study Manager, 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. 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 741494, Atlanta, GA 30374-1494, or fax to: 202/334-2519. All ACRP reports are available as online publications (http://www.trb.org/Publications/PubsACRPSynthesisReports.aspx).

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. Cur-

rent 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.

Table 3 PUBLISHED ACRP SYNTHESES

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

(continued)

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Table 3 (Continued)

No.	Title/Pages
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
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 p., $42.00 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

Table 4 ACRP SYNTHESIS OVERSIGHT PROJECT PANEL A11-03

	Name	Affiliation
Chair	Julie Kenfield	Jacobs Engineering, Inc.
Member	Randall P. Burdette	Virginia Department of Aviation
Member	Kevin C. Dolliole	Unison Consulting, Inc.
Member	Linda Howard	Bastrop, Texas
Member	Arlyn Purcell	Port Authority of New York & New Jersey
Member	Burr Stewart	Burrst
Liaison	Paul Devoti	Federal Aviation Administration
Liaison	John L. Collins	Aircraft Owners and Pilots Association
TRB Liaison	Christine Gerencher	Transportation Research Board
ACRP Synthesis Staff	Gail R. Staba	Transportation Research Board
ACRP Staff	Michael R. Salamone	Transportation Research Board

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.

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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