New books, articles and reports in your library this month

New resources this month include Margaret Cook’s book on the Brisbane River floods, a post-event review of the 2016 Canadian Fort McMurray, the latest issue of Air Attack - the aviation firefighting online magazine, new audio books The Rip Curl story and The man who climbs trees, AFAC’s new guideline to managing tree hazards, the classic book for panic attack sufferers “Living with it” and recently published articles and reports on the NT bushfires’ volunteer strategy, the variability of Australian fire weather over the past 40 years, Australia’s attitudes to climate change since 2007, and a new Gel-like fluid designed to prevent wildfires…plus so much more.

Contact your librarian Katie to borrow any of the books and DVDs or to request articles at rfs.library@rfs.nsw.gov.au

Did you know that all NSW RFS members have access to a number of health and fitness magazines online - Good Health, Men’s Journal and Women’s Health. This month you could be reading on everything from the latest in off-road gravel bikes, the hidden causes of fatigue, workouts that benefit muscular balance, shoulder fixes, diets for your body types, and 7 minutes core exercises.

You can view the magazines through your Internet browser, or you can use the Flipster app to download and read digital magazines offline. Contact the library for the password embedded link for our online magazine collection.

Want more on health and fitness – our book collection is listed here and available for loan to all members.

FIRE INCIDENTS – AUSTRALIAN

Outback bushfire miracle recovery (Book)
Richard Harvey, 2019
This book is about the farmer and author, Richard Harvey, who was severely burnt in a bushfire in outback Australia. It is about the place where this bush fire occurred, in South Australia in 1990 on the Narrung Peninsula, and his extensive treatment in the aftermath.

Please contact the library to request a loan of this book.

A river with a city problem (Book)
Margaret Cook, 2019
When floods devastated South East Queensland in 2011, who was to blame? Despite the inherent risk of living on a floodplain, most residents had pinned their hopes on Wivenhoe Dam to protect them, and when it failed to do so, dam operators were blamed. This book is a compelling history of floods in the Brisbane River catchment, especially those in 1893, 1974 and 2011.

Please contact the library to request a loan of this book.

EMERGENCY MANAGEMENT

A river with a city problem (Book)
Margaret Cook, 2019
When floods devastated South East Queensland in 2011, who was to blame? Despite the inherent risk of living on a floodplain, most residents had pinned their hopes on Wivenhoe Dam to protect them, and when it failed to do so, dam operators were blamed. This book is a compelling history of floods in the Brisbane River catchment, especially those in 1893, 1974 and 2011.

Please contact the library to request a loan of this book.

The winner of this year’s Australian Professional Photographer of the Year was Hobart-based Matt Palmer, whose portfolio “Ash” of Tasmanian
wilderness contained many images of a landscape ravaged by bushfire. The gallery of these images can be viewed on his website.

FIRE INCIDENTS – INTERNATIONAL

Fort McMurray Wildfire: Learning from Canada’s costliest disaster (Report) Zurich & Institute for Catastrophic Loss Reduction, September 2019

A post-event review of the 2016 Fort McMurray wildfire was conducted by Zurich Insurance and the Institute for Catastrophic Loss Reduction to assess resilience actions taken before, during and after the fire. The goal is to provide actionable recommendations for building resilience. The report arrived at four key recommendations to improve wildfire resilience that fire-prone communities around the world can adapt to their environment and populations. Those recommendations include Learn to live with fire and invest in resilience and risk reduction. Use this Zurich link to read the summary article and download the report.

We built an app to detect areas most vulnerable to life-threatening haze (News article) The Conversation, 10 September 2019

Forest and land-use fires are ravaging Indonesia’s Sumatra and Kalimantan islands. Based on research, smoke exposure would lead to about 36,000 premature deaths per year on average across Indonesia, Singapore and Malaysia over the next few decades if current trends continued. To prevent premature deaths from toxic haze, the authors developed a new online tool to provide decision-makers with information to protect people living downwind from the fires. Use this The Conversation link to read the news article online.

If you are interested in reading the research article, it is available through open access in GeoHealth journal here.

Catastrophic Multiple-Death Fires and Explosions in the United States in 2018 (Journal article) NFPA Journal, Sept-Oct 2019

Last year, 29 of these incidents resulted in 215 fatalities, topped by the deadliest wildfire in California history. This is the second consecutive year where a wildland/urban interface fire topped the list of catastrophic multiple-death fires.
Use this NFPA link to read the article online.

**FIREFIGHTING**

Managing tree hazards *(YouTube Webinar)*
Centre of Excellence for Prescribed Burning, 2019
Falling trees, limbs and branches pose a potential health and safety risk for personnel undertaking prescribed burning activities. AFAC have developed safe work guidelines to inform organisations when developing agency specific doctrine with consideration to a uniform approach to managing tree hazard. John Trott and Rory McKenzie from Department of Environment, Land, Water and Planning present on the development of the guidelines and Peter Leeson from Queensland National Parks presents a case study on the use of the guidelines. Please use this YouTube link to watch the webinar online.
Please contact the library to request a copy of the AFAC Safe Work guideline ‘Managing Tree Hazards’.

Prepare to burn *(ABC Radio: 53 minutes)*
ABC RN Background Briefing, 6 October 2019
It’s been the most devastating September for bushfires in this country on record. Experts are warning of more unprecedented weather events than ever before, and they’re calling for urgent national leadership. In this special collaboration with ABC Regional and Landline, Background Briefing asks if we’re prepared to fight the fires of the future. Please use this ABC Radio link to listen to the briefing online.

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**COMMUNITY RESILIENCE**

High wildfire damage in interface communities in California *(Journal article)*
International Journal of Wildland Fire, Vol 28 No 9 2019
The wildland urban interface (WUI) can be subdivided into interface WUI - with many homes but relatively low amounts of wildland vegetation, and intermix WUI - where homes occur at lower densities within a wildland matrix. Of all buildings destroyed by California wildfires, half were in the interface WUI, while a third were in intermix WUI, highlighting the importance of models, mitigation and regulations that are tailored for the interface WUI. Please contact the library to request a copy of this article.

Rethinking resilience to wildfire *(Journal article)*
Nature Sustainability Vol 2, 2019
Promoting social–ecological resilience in rapidly changing, fire-susceptible landscapes requires adoption of multiple perspectives of resilience, extending beyond ‘basic resilience’ (or bouncing back to a similar state) to include ‘adaptive resilience’ and ‘transformative resilience’, which require substantial and explicit changes to social– ecological systems. Clarifying these different perspectives and identifying where they will be most effective helps prioritise efforts to better coexist with wildfire. Please use this Nature link to read the article online.

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**METEOROLOGY AND CLIMATOLOGY**

Understanding the variability of Australian fire weather between 1973 and 2017 *(Journal article)*
PLoS One, September 2019

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Fire protection, detection, and suppression systems *(Book)*
IFSTA, 2016
The purpose of this new edition is to familiarise the US fire service and others with the components, design, maintenance, operation, testing, and inspection of common fire protection, detection, and suppression systems. This manual is also a valuable resource for fire inspectors and for people who design, maintain, and inspect fire protection systems. What is an automatic fire sprinkler system and how does it operate? Is a heat detector different than a smoke detector? Is that stand pipe installed properly? Please contact the library to request a loan of this book.

Gel-like fluid designed to prevent wildfires *(ScienceDaily News article)*
Stanford University, 30 September 2019
Scientists and engineers worked with state and local agencies to develop and test a long-lasting, environmentally benign fire-retarding material. If used on high-risk areas, the simple, affordable treatment could dramatically cut the number of fires that occur each year. Applied to ignition-prone areas, these materials retain their ability to prevent fires throughout the peak fire season, even after weathering that would sweep away conventional fire retardants.

Use this ScienceDaily link to read the news article online

Leaching and bioavailability of selected perfluoroalkyl acids (PFAAs) from soil contaminated by firefighting activities (Journal article)
Science of the Total Environment, Volume 646, 1 January 2019
Historical usage of aqueous film-forming foam (AFFF) at firefighting training grounds (FTGs) is a potential source of perfluoroalkyl acids (PFAAs) to the surrounding environment. In this study the leaching of PFAAs from field contaminated soil and their uptake into biota was investigated.

Please contact the library to request a copy of this article

FIRE BEHAVIOUR

Coal and peat fires: a global perspective. Volume 4, Peat - geology, combustion, and case studies (Book)
Elsevier Science, 2015
Magnificent illustrations of fires and research findings from countries around the world are featured in this volume. The book examines in detail peat fires chronicled in several countries in addition to the geology of peat, peat megafires, infrared analysis of fires, and the mathematical modelling of fire hazards.

Please contact the library to request a loan of this book.

FIRE MANAGEMENT

Machine learning used to help tell which wildfires will burn out of control (ScienceDaily News article)
University of California, 17 September 2019
An interdisciplinary team of scientists at the University of California, Irvine has developed a new technique for predicting the final size of a wildfire from the moment of ignition. Built around a machine learning algorithm, the model can help in forecasting whether a blaze is going to be small, medium or large by the time it has run its course.

Australian fire weather shows spatiotemporal variability on interannual and multi-decadal time scales. We investigate the climate factors that drive this variability using 39 station-based historical time series of the seasonal 90th-percentile of the McArthur Forest Fire Danger Index (FFDI) extending from 1973 through 2017. Using correlation analyses, we examine the relationship of these time series to the El Niño Southern Oscillation (ENSO), the Southern Annular Mode (SAM) and the Indian Ocean Dipole (IOD), considering both concurrent and time-lagged relationships.

Please use this PLOS ONE link to read the article online.

Satellite data record shows climate change’s impact on fires (ScienceDaily News article)
NASA/Goddard Space Flight Center, 10 September 2019
Since 1880, the world has warmed by 1.9 degrees Fahrenheit, with the five warmest years on record occurring in the last five years. Since the 1980s, the wildfire season has lengthened across a quarter of the world’s vegetated surface. Over the past several decades, as the world has increasingly warmed, so has its potential to burn. Whether started naturally or by people, fires worldwide and the resulting smoke emissions and burned areas have been observed by NASA satellites from space for two decades.

Use this ScienceDaily link to read the news article online.

Climate of the nation 2019 (Online report)
The Australia Institute, September 2019
Climate of the Nation has tracked Australian attitudes to climate change since 2007. This is the second instalment of Australia’s longest running attitudinal research on climate change and to continue the legacy of the Climate Institute.

Please use this TAI link to read the report online.

The danger of heat and cold across Australia (Online news blog)
Crisis Response, 12 Sept 2019
Cold temperatures are not nearly as deadly as heat, with around two per cent of all deaths in Australia related to the latter, according to new research from the University of Technology Sydney (UTS), writes Leilah Schubert.

Please use this Crisis Response link to read the blog online.

MENTAL HEALTH & INCIDENT STRESS
Use this ScienceDaily link to read the news article online. The published journal article “Machine learning to predict final fire size at the time of ignition” can be requested by contacting the library.

New wildfire models to predict how wildfires will burn in next 20 minutes (ScienceDaily News article)
Brigham Young University, 6 September 2019
While it’s impossible to predict just where the next wildfire will start, new Department of Defense-sponsored research from Brigham Young University’s Fire Research Lab is getting into the microscopic details of how fires initiate to provide more insight into how wildfires burn through wildland fuels. "We are working on a small scale and hopefully that gives us some insight into what happens on a large scale," said fire expert Thomas H. Fletcher, BYU professor of chemical engineering.

TOPOFIRE: A Topographically Resolved Wildfire Danger and Drought Monitoring System for the Conterminous United States. (US Journal article)
Bulletin of the American Meteorological Society. Sep 2019
Patterns of energy and available moisture can vary over small (<1 km) distances in mountainous terrain. Information on fuel and soil moisture conditions that resolves this variation could help to inform fire and drought management decisions. The authors describe the development of TOPOFIRE, a web-based mapping system designed to provide finely resolved information on soil water balance, drought, and wildfire danger information for the contiguous United States.

Please contact the library to request a copy of this article
NSW RFS Staff may use this EBSCO link to access the article at work

LEADERSHIP AND MANAGEMENT

Measure what matters: how Google, Bono, and the Gates Foundation rock the world with OKRs (Book)
John Doerr, 2018
Venture capitalist John Doerr reveals how the goal-setting system of Objectives and Key Results (OKRs) has helped tech giants from Intel to Google achieve explosive growth—and how it can help any organization thrive.

Please contact the library to request a loan of this book.

Critical knowledge transfer: tools for managing your company’s deep smarts (Book)
Dorothy Leonard, 2015
Addressing the critical issue of knowledge transfer within an organisation, this book offers practical advice on how to structure the transition of documented information and the even more valuable non-documented knowledge that outgoing staffers have before it leaves with them. Whether a result of a retirement, an acquisition, promotions, transfers, or layoffs—all organisations have lost what these authors call "deep smarts" when workers leave.

Please contact the library to request a loan of this book.

AVIATION AND DRONES

Air Attack issue 5 has just been published online. Articles cover water enhancers in firefighting, understanding risk and culture in aviation and the firefighting life of American Ralph Johnston.

The issue can be read online here.

VOLUNTEER MANAGEMENT

Instruction to deliver: fighting to transform Britain’s public services (Book)
Michael Barber, 2008
An inside account of the Michael Barber’s time as head of UK’s Prime Minister’s, Tony Blair’s, Delivery Unit. It provides revealing pictures of major players in New Labour, especially Tony Blair, and offers a
Bushfires NT: volunteer strategy 2019-2022
(Online report)
Bushfires NT, Sept 2019
The Bushfires NT volunteer strategy 2019-2022 seeks to develop and enhance volunteer programs, align goals and provide future direction for Bushfires NT and volunteer bushfire brigades. Please use this DENR-NT link to read the report online.

unique insight into the messy reality of getting things done in government.
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