

## **Annotated Resource List**

**Barnes, B. V. (2009). *Tree Response to Ecosystem Change at the Landscape Level in Eastern North America. Forstarchiv, 80(3), 76-89.***

- Provides general overview of tree response to climate change
- Tree responses are examined in four regions across the United State → the section on the “Great Lakes Region” is recommended for local land managers
- Expected impacts on oak and red maple species are explored more in depth
- Assisted migration as a resiliency strategy is discussed

**Bell, R. ICLEI - Local Governments for Sustainability, (2006). *Talking trees: An urban forestry toolkit for local governments.* Retrieved from website:**

**[http://www.michigan.gov/documents/dnr/UrbanForestryToolkit\\_225691\\_7.pdf](http://www.michigan.gov/documents/dnr/UrbanForestryToolkit_225691_7.pdf)**

- Detailed urban forestry toolkit targeted at local government
- Not much information on how to manage for climate resilience but serves as a good guide for general urban forestry principles

**Brosius, M. City of Baltimore, Recreation & Parks. (2007). *Urban forest management plan.***

**Retrieved from website: <http://www.louisvilleky.gov/NR/rdonlyres/CB60DA78-EBC7-4D45-A280-264C9061C7EE/0/TreeBaltimoreUrbanForestManagementPlan.pdf>**

- Detailed urban forest management plan written for the city of Baltimore, MD
- Serves as a case study for writing management plans and describes anticipated challenges related to implementing proposed actions
- The ecology behind the plan is based on the city of Baltimore which has a different climate and whose forest resources are drastically different than those of the Huron River Watershed. However, basic principles can still be gleaned from this report

**City of Chicago. (2010). *Chicago climate action plan.* Retrieved from**

**<http://www.chicagoclimateaction.org/pages/adaptation/11.php>**

- Webpage dedicated to Chicago’s plans for climate change adaptation
- Of interest: Adaptation report pdf
- Of interest: “list of recommended trees” for Chicago’s changing climate

**Columbus Recreation & Parks Department. (2010). *Tree planting standards.* Retrieved from <http://parks.columbus.gov/content.aspx?id=32913>**

- Discusses tree planting guidelines for the city of Columbus, OH

**Cullington, J. British Columbia, Ministry of Community, Sport and Cultural Development. (2010). *Urban forests: A climate adaptation guide.* Retrieved from website:**

**[http://www.retooling.ca/\\_Library/docs/Urban\\_Forests\\_Guide.pdf](http://www.retooling.ca/_Library/docs/Urban_Forests_Guide.pdf)**

- Probably the most comprehensive climate adaptation guide we found specifically written for urban forests
- Some content is geographically specific to the Pacific Northwest, but most of the guide’s principles can be applied to the Huron River Watershed area

- Provides a good overview of both the benefits that can be provided by urban trees and general principles with which to increase climate resiliency

**D'Amato, A. W., Bradford, J. B., Fraver, S., & Palik, B. J. (2011). Forest management for mitigation and adaptation to climate change: insights from long-term silviculture experiments. *Forest Ecology and Management*, 262(5), 803-816.**

- Analyzes five long-term silvicultural experiments within the Upper Great Lakes region to examine how different forestry management techniques effect the relationship between carbon storage and climate resiliency potential
- Tradeoffs are observed between for each management strategy examined relating to carbon storage and climate resiliency
- Management strategies generally differed with respect to stand age, stocking level, and stand-level structural and compositional complexity

**DiSalvo, A. City of Portland, Parks & Recreation. (2011). *Street tree inventory report: Concordia neighborhood*. Retrieved from website: <http://www.portlandoregon.gov/parks/article/336601>**

- Local land managers should only read the brief section on “recommendations” in this report
- Recommendations section provides a few useful suggestions on urban tree care

**Heller, N. E., & Zavaleta, E. S. (2009). Biodiversity management in the face of climate change: a review of 22 years of recommendations. *Biological conservation*, 142(1), 14-32.**

- Comprehensive literature review written from more of an academic stance
- Provides a strong list of “recommendation categories” with reviewed papers grouped into these categories
- The recommendation categories are a mixture of both tangible and readily implementable management actions and categories that are more conceptual and don't readily equate to tangible management options

**Huron River Watershed Council. (2009, Winter). *Huron river report - climate change edition*. Retrieved from <http://www.hrwc.org/wp-content/uploads/2009/07/FINALWinter2009.pdf>**

- Provides an overview of many expected impacts from climate change within the Huron River Watershed

**Huron River Watershed Council. (2012). *Climate resilient communities: Review of climate impacts to tree species of the huron river watershed*. Retrieved from [http://www.hrwc.org/wp-content/uploads/2013/03/Natural Infastructure.pdf](http://www.hrwc.org/wp-content/uploads/2013/03/Natural%20Infrastructure.pdf)**

- The central report associated with this toolkit
- Provides an overview of expected impacts from climate change
- Provides a series of tree range models that demonstrate the expected shifts in species populations caused by climate change. Models are included for 13 key tree species for the Huron River Watershed. Ranges are illustrated for current conditions and projections for the year 2100.

**International Council for Local Environmental Initiatives. (2012). *Local governments, extreme weather, and climate change 2012*. Retrieved from <http://www.icleiusa.org/action-center/learn-from-others/local-governments-extreme-weather-and-climate-change-2012>**

- -Extensive fact sheet featuring 21 cities across the U.S., the climate change impacts being felt by these communities, and how the local governments are responding to the increasing frequency and intensity of the associated extreme weather
- -Great for generating ideas for climate resilience policy and projects

**Jenkins, V. S. (1994). *The lawn: a history of an american obsession*. Washington, DC: Smithsonian Institution Press.**

- Book discussing the landscaping preferences of Americans.

**Joyce, L., Aber, J., McNulty, S., Dale, V., Hansen, A., Irland, L., ... & Skog, K. (2001). Potential consequences of climate variability and change for the forests of the United States. *Climate Change Impacts on the United States*, 489-524.**

- Study provides an overview of how carbon storage in US forests is expected to be impacted by climate change (includes model projections)
- Study provides an economic analysis on the national effects of climate change for the timber industry and the outdoor recreation industry
- Study also touches on anticipated major shifts in tree communities (includes model projections)

**Kaufman, L. (2011, May 22). A city prepares for a warm long-term forecast. *The New York Times*. Retrieved from [http://www.nytimes.com/2011/05/23/science/earth/23adaptation.html?pagewanted=all&\\_r=3&](http://www.nytimes.com/2011/05/23/science/earth/23adaptation.html?pagewanted=all&_r=3&)**

- Newspaper article that provides case study of Chicago and its efforts to adapt to climate change
- Section titled “Reconsidering the Trees” might be of particular interest

**Keskitalo, E. C. H. (2011). How Can Forest Management Adapt to Climate Change? Possibilities in Different Forestry Systems. *Forests*, 2(1), 415-430.**

- This article focuses on the state of forest management adaptation to climate change in various European nations.
- Few consistent management strategies are identified across the variety of countries in the study, but the article is good for demonstrating different approaches being utilized for climate change adaptation across Europe

**Kliejunas, J. T., Geils, B. W., Glaeser, J. M., Goheen, E. M., Hennon, P., Kim, M. S., ... & Frankel, S. J. (2008). Climate and forest diseases of Western North America: a literature review. *PSW-GTR, USDA FS*, 44.**

- Literature review that discusses policy and management ideas for forest diseases as it relates to climate change
- Focused on Western U.S. forest diseases

**Leverington, F., Hockings, M., & Costa, K. L. (2008). *Management effectiveness evaluation in protected areas: a global study*. World Commission on Protected Areas.**

- Provides extensive guidance on choosing a methodology for management effectiveness in protected areas
- A selection of methodologies that have been used in different regions of the world are summarized
- One methodology presented of particular interest is Conservation Action Planning by The Nature Conservancy

**Michigan Department of Natural Resources, Forest Resources Division. (2012). *2012 forest health highlights*. Retrieved from website:**

**[http://www.michigan.gov/documents/dnr/ForestHH\\_409440\\_7.pdf](http://www.michigan.gov/documents/dnr/ForestHH_409440_7.pdf)**

- Report focusing on the major pests and diseases affecting the health of Michigan forests
- Report discusses progress being made in federal projects aimed at creating disease resistant tree cultivars (i.e. American Beech)

**National Climate Assessment and Development Advisory Committee. (2013, Jan 11). *Federal advisory committee draft climate assessment*. Retrieved from**

**<http://ncadac.globalchange.gov>**

- Webpage providing links to extremely thorough national climate assessment and development advisory report – 1100+ pages
- Chapter 7: Forestry might be of particular interest, but entire report may be useful

**National Wildlife Federation. (2013, May). *Forestry CPR guidebook*. Retrieved from**

**<http://www.nwf.org/What-We-Do/Energy-and-Climate/Climate-Smart-Conservation/Climate-Smart-Communities/NWF-Programs/King-County/Forestry-CPR-Guidebook.aspx>**

- Guidebook focused on urban forests
- Examines how climate change will impact urban trees and how to improve climate resiliency in these resources
- Provides recommendations on integrating anticipated climate change impacts into planning efforts
- Provides a case study on King County, WA

**National Wildlife Federation. (2013). *Forestry CPR online training course*. Retrieved from**

**<http://www.nwf.org/What-We-Do/Energy-and-Climate/Climate-Smart-Conservation/Climate-Smart-Communities/NWF-Programs/King-County/Forestry-CPR-Course.aspx>**

- Link to the Forestry CPR (Climate Preparedness and Response) online training course for improving climate resiliency for tree species in urban areas

**National Wildlife Federation. (2013). *Forestry CPR webinar*. Retrieved from**

**<http://www.screencast.com/t/s252oIVU>**

- Link to the Forestry CPR (Climate Preparedness and Response) webinar for improving climate resiliency for tree species in urban areas

**Nitschke, C. R., & Innes, J. L. (2008). Integrating climate change into forest management in South-Central British Columbia: an assessment of landscape vulnerability and development of a climate-smart framework. *Forest Ecology and Management*, 256(3), 313-327.**

- A comprehensive paper on developing climate resiliency in forests
- A solid management framework is outlined to help account for climate uncertainties in the planning process for “climate-smart” forests
- Many actions targeted at the reserve level are detailed
- Vulnerabilities are modeled for a large forest and results are analyzed to demonstrate a detailed management planning framework from which climate smart management techniques can be applied

**Nowack, D. United States Department of Agriculture, United States Forest Service. (2010). *Sustaining america's urban trees and forests*. Retrieved from website: [http://www.michigan.gov/documents/dnr/SustainingAmericas\\_333340\\_7.pdf](http://www.michigan.gov/documents/dnr/SustainingAmericas_333340_7.pdf)**

- The most valuable content in this paper lies in the section titled “Tools for Cost-Effective Management” where a variety of digital and web-based tools and resources are discussed
- Provides a brief overview of the state of urban forests in the U.S.
- Briefly discusses the benefits of urban forests and the types of challenges facing urban forest health (this includes factors both related to, and not related to, climate change)

**Palmer, M., & Peterson, C. (2008). Preliminary Review of Adaptation Options for Climate-Sensitive Ecosystems and Resources. *National Parks*, 1, 6.**

- Extensive, multi-chapter literature review for a variety of climate sensitive ecosystems
- Land managers should focus on Chapter 3: National Forests, which offers one of the best reads we found on managing for forest climate resiliency. Management strategies discussed range widely from long-term policy and planning to immediate on-the-ground management options.

**Singh, P. P. (2008). Exploring biodiversity and climate change benefits of community-based forest management. *Global Environmental Change*, 18(3), 468-478.**

- Paper discusses the potential role of community-based forest management in more remote areas of India
- Strategy may have limited applicability for community engagement in forest management in the Huron River Watershed

**Raupp, M. J., Cumming, A. B., & Raupp, E. C. (2006). Street tree diversity in eastern North America and its potential for tree loss to exotic borers.**

- Discusses the importance of diversifying urban trees species to combat high losses to pest insects

**Ramstad, K. Oregon Department of Forestry, Urban and Community Forestry Assistance Program. (2009). *Tree choices: Native? non-native? invasive? the terms can be relative..* Retrieved from Oregon Department of Forestry website: [http://www.oregon.gov/ODF/URBAN\\_FORESTS/docs/Natives\\_vs\\_Nonnatives.pdf](http://www.oregon.gov/ODF/URBAN_FORESTS/docs/Natives_vs_Nonnatives.pdf)**

- Elaborates on the philosophies behind choosing native vs. non-native trees in urban settings

**Sturrock, R. N., Frankel, S. J., Brown, A. V., Hennon, P. E., Kliejunas, J. T., Lewis, K. J., ... & Woods, A. J. (2011). Climate change and forest diseases. *Plant Pathology*, 60(1), 133-149.**

- Looks at the relationships between climate variables and forest diseases
- Discusses four types of disease and forest management tactics – monitoring, forecasting, planning, and mitigation

**Tubby, K. V., & Webber, J. F. (2010). Pests and diseases threatening urban trees under a changing climate. *Forestry*, 83(4), 451-459.**

- Review paper examines the relationships between climate change and forest pest insects/organisms and diseases
- Specifically focused on urban tree populations based in Britain

**United State Forest Service. (2012, August). *How to prune trees*. Retrieved from [http://na.fs.fed.us/spfo/pubs/howtos/ht\\_prune/htprune-rev-2012-screen.pdf](http://na.fs.fed.us/spfo/pubs/howtos/ht_prune/htprune-rev-2012-screen.pdf)**

- Guidebook on proper technique and sanitation practices for pruning trees.

**United States Forest Service, Climate Change Resource Center. (2010, May 13). *Urban forests and climate change*. Retrieved from <http://www.fs.fed.us/ccrc/topics/urban-forests/>**

- CCRC webpage that discusses urban forests and carbon sequestration for mitigating climate change
- Webpage provides links to an extensive list of publications on urban forest science, management strategies, inventory and monitoring techniques, and benefits