# City of Seattle Boards & Commissions Notice of Appointment

Appointee Name: Julia L. Michalak				
Board/Commission Name: Urban Forestry Commission		<b>Position Title:</b> <i>Wildlife Biologist</i>		
Appointment <i>OR</i> Reappointment	City Council Confirmation required?			
<ul> <li>Appointing Authority:</li> <li>City Council</li> <li>Mayor</li> <li>Other: <i>Fill in appointing authority</i></li> </ul>	Term of Pos 4/1/2020 to 3/31/2023	<b>ition: *</b> maining term of a vacant position		
Residential Neighborhood: West Woodland	<b>Zip Code:</b> 98107	<b>Contact Phone No.:</b> Business phone # - NOT personal phone #		

#### Background:

Julia is a research scientist at the Landscape Ecology and Conservation Lab of the University of Washington. She has a bachelor's degree in biology, and masters in sustainable development and conservation biology, and a PhD in interdisciplinary urban planning and design.

Her areas of expertise include landscape planning to protect ecological resilience and biodiversity, climate change vulnerability and adaptation planning, and biodiversity conservation in urban environments.

Julia's current research includes developing novel approaches for mapping wildlife connectivity corridors, identifying climate-change refugia for wildlife, and developing methods to quantify and map climate-change vulnerability.

Her expertise in conservation biology and urban ecology would be an asset to the Urban Forestry Commission. Especially as Seattle strives to enhance and protect urban forests while also facing increasing development and pressure to mitigate and adapt to climate change.

She is being appointed for a term ending March 31, 2023.

Authorizing Signature (original signature):	Appointing Signatory:
	Councilmember Daniel Strauss
Dan Stranss	City Council Member
Date Signed (appointed): 8/12/20	

\*Term begin and end date is fixed and tied to the position and not the appointment date.

### Curriculum Vitae Julia L. Michalak

#### PERSONAL DATA

Office	University of Washington School of Environment and Forest Sciences 4000 15th Avenue NE, Box 352100
	Seattle, WA 98195-5740
Home	

#### **EDUCATION**

- 2013 Ph. D. Interdisciplinary Urban Planning and Design University of Washington, Seattle, WA Dissertation: Implications of urbanization and climate change for Oregon white oak (*Quercus garryana*) regeneration, planning and management in the Pacific Northwest. Committee Chair: Dr. Marina Alberti
- **2006 M. S.** Sustainable Development and Conservation Biology University of Maryland, College Park, MD
- 2000 B. A. Biology, Carleton College, Northfield, MN, magna cum laude

#### **RESEARCH INTERESTS**

Climate change adaptation planning, conservation planning, landscape ecology, urban ecology

Methods to integrate climate change into spatial ecological planning

Effects of urban patterns on ecological structure and function

Ecological land use planning policy and process

#### **RESEARCH EXPERIENCE**

2017-Present **Research Scientist**, *Landscape Ecology and Conservation Lab, UW* Climate Refugia and Resilience Atlas: Identifying Priority Areas for Conserving Species of Concern in a Changing Climate. Funded by Northwest Climate Science Center.

- Advancing the Public Connections of the North Coast and Cascades Research Learning Center. Funded by the National Parks Service.
- Identifying and evaluating refugia from drought and climate change in the Pacific Northwest. Funded by Northwest Climate Science Center.
- Strategic Approaches for Climate Change Vulnerability Assessment across the National Park System. Funded by the National Parks Service.
- Measuring Habitat Outcomes of State Acquisitions and Regulations. Funded by the Joint Legislative Audit and Review Committee, Washington State Legislature.
- 2013-2017 **Post-doctoral Research Associate**, Landscape Ecology and Conservation Lab, UW
- AdaptWest: a spatial database and synthesis of methods for conservation planning aimed at enhancing resilience and adaptation potential of natural systems under climate change. Funded by The Wilburforce Foundation.
- Climate-Change Vulnerability in the Pacific Northwest: A comparison of three approaches. Funded by the Northwest Climate Science Center.
- Creating practitioner-driven, science-based plans for connectivity conservation in a changing climate: a collaborative assessment of climate-connectivity needs in the Washington-British Columbia transboundary region. Funded by the Northwest Climate Science Center.

#### 2007-2013 **Dissertation Research**, University of Washington

Implications of urbanization and climate change for Oregon white oak (*Quercus garryana*) regeneration, planning and management in the Pacific Northwest.

2012 – 2013 **Graduate Research Assistant,** *Landscape Ecology and Conservation Lab, UW* Pacific Northwest Climate Change Vulnerability Assessment Project (PNWCCVA).

## 2011 **Graduate Research Assistant**, *Landscape Ecology and Conservation Lab, UW* Protecting the ecological stage: applying and testing a land-facet-based approach to conservation planning in a changing climate.

## 2009 – 2010 **Graduate Research Assistant,** *Urban Ecology Research Lab, UW* The effects of land use and effectiveness of regulations in rural watersheds of King County, WA: an assessment framework and five-year study.

#### PUBLICATIONS, REPORTS AND PRESENTATIONS

#### **Peer-Reviewed Publications**

Morelli<sup>,</sup> T.L., C. Barrows, A. Ramirez, J. Cartwright<sup>,</sup>, D.D. Ackerly, T. Eaves, J. Ebersole, M. Krawchuk, B. Letcher, M. Mahalovich<sup>,</sup>, G.W. Meigs, **J. L. Michalak**, C. Millar, R. M. Quiñones<sup>,</sup>, D. Stralberg<sup>,</sup>, J.H. Thorne. *In press*. Biodiversity Change in the Slow Lane: Advances in Refugia Thinking. *Frontiers in Ecology and the Environment*.

Michalak, J. L., D. Stralberg, J. M. Cartwright, J. J. Lawler. *In press*. Combining climatic, environmental, and species-specific metrics improves refugia identification across diverse regions. *Frontiers in Ecology and the Environment*.

Lawler, J. J., D. S. Rinnan, **J. L. Michalak**, J. C. Withey, C. Randels, H. Possingham. 2020. Planning for climate change in a national protected area network: implications for cost and configuration. *Proceedings of the Royal Society Series B* 375: 20190117. http://dx.doi.org/10.1098/rstb.2019.0117

Littlefield, C. M. Krosby, **J. L. Michalak**, J. J. Lawler. 2019. Climate connectivity for species on the move. *Frontiers in Ecology and the Environment* 17: 270-278. https://doi.org/10.1002/fee.2043

**Michalak, J. L.**, D.R. Roberts, J. J. Lawler, C. Carroll. 2018. Distribution and protection of climatic refugia in North America. *Conservation Biology*. 32: 1414-1425. https://doi.org/10.1111/cobi.13130.

Belote, T. R., C. Carroll, S. Martinuzzi, **J. L. Michalak**, J. W. Williams, M. A. Williamson, and G. H. Aplet. 2018. Assessing agreement among alternative climate change projections to inform conservation recommendations. *Scientific Reports* 8:9441. https://doi.org/10.1093/biosci/bix028.

**Michalak, J. L.,** J. C. Withey, J. J. Lawler, M. J. Case. 2017. Future climate vulnerability – evaluating multiple lines of evidence. *Frontiers in Ecology and the Environment* 15:367-376. doi: 10.1002/fee.1516.

Littlefield, C., B. H. McRae, J. L. Michalak, J. J. Lawler, C. Carroll. 2017. Connecting today's climates to future analogs to facilitate species movement under climate change. *Conservation Biology* 31:1397-1408. DOI: 10.1111/cobi.12938.

Carroll, C., D.R. Roberts, **J. L. Michalak**, J. J., Lawler, S. Nielson, D. Strahlberg, A. Hamann, B. H. McRae, T. Wang. 2017. Scale-dependent complementarity of climatic velocity and environmental diversity for identifying priority areas for conservation under climate change. *Global Change Biology* 23:4508-4520.

McKone, M. J., J. W. Moore, C. W. Harbison, I. C. Holmen, H. C. Lyons, **J. Michalak**, M. Neiman, J. Nicol, G. R. Wheeler. 2014. Rapid collapse of a population of *Dieffenbachia*, a plant used for tadpole-rearing by poison-dart frogs (*Oophaga pumilio*) in Costa Rican rain forest. Journal of Tropical Ecology 30:615-619.

**Michalak, J. L.** 2011. Effects of habitat and landscape structure on Oregon white oak (*Quercus garryana*) regeneration across an urban gradient. Northwest Science 85:182-193.

#### **Peer-Reviewed Publications in Preparation**

Cartwright, J. M., C. Littlefield, **J. L. Michalak**, J. J. Lawler, S. Dobrowski. *In review*. Regional patterns of drought sensitivity in forests and shrublands of the Pacific Northwest, USA. Target journal: *Scientific Reports*.

**Michalak, J. L.,** J. Gross, J. Lawler, C. Littlefield, P. Gonzalez, D. Lawrence, G. Schuurman, C. Hawkins Hoffman. *In preparation*. A strategic analysis of climate vulnerability of National Park resources and values. Target journal: *Environmental Research Letters*.

**Michalak, J.** L., J. J. Lawler, M. Agne, R. Emmet, H. Hsu, V. Griffey. *In prep*. A review of vulnerability assessments conducted for the natural resources of the U.S. National Parks. Target Journal: *Conservation Science and Practice*.

Michalak, J. L., M. J. Case, and J. J. Lawler. *In preparation*. Sensitivity, exposure, and vulnerability of species to climate change. Target journal: *Conservation Biology*.

**Michalak, J. L.**, M. J. Case, J. G. R. Langdon, D. S. Rinnan, and J. J. Lawler. *In preparation*. Comparing three approaches to assessing species vulnerability to climate change. Target journal: *Global Change Biology*.

**Michalak, J. L.** *In preparation.* Effects of urban development and landscape structure on Oregon white oak (*Quercus garryana*) dispersal and early regeneration patterns and processes. Target journal: *Landscape Ecology*.

#### **Book Chapters**

Lawler, J. J. and **J. L. Michalak**. 2017. Planning for climate change without climate projections? In Karieva, P., Sillman, B. and M. Marvier (Eds.). Effective Conservation Science: Data Not Dogma. Oxford University Press.

#### **Professional Reports**

**Michalak, J. L.,** J. Gross, J. Lawler, C. Littlefield, P. Gonzalez, D. Lawrence, G. Schuurman, C. Hawkins Hoffman. *In prep.* Prioritizing National Parks for climate vulnerability assessment. National Parks Service, Ft. Collins, Co.

**Michalak, J. L.,** Lawler, J. J., M. Agne, R. Emmet, H. Hsu, V. Griffey. 2019. A review of vulnerability assessments conducted for the natural resources of the U.S. National Parks. National Parks Service, Ft. Collins, Co.

Krosby, M., **Michalak, J. L.**, Morgan, H., Norheim, R., Mauger, G., and T. Murdock. 2016. The Washington-British Columbia Transboundary Climate-Connectivity Project: Identifying climate impacts and adaptation actions for wildlife habitat connectivity in the transboundary region of Washington and British Columbia. Climate Impacts Group, University of Washington.

**Michalak, J. L.** J. C. Withey, J. L. Lawler, S. Hall, and T. Nogeire. 2013. Climate Vulnerability and Adaptation in the Columbia Plateau. School of Environment and Forest Sciences, University of Washington, Seattle.

J.C. Withey, **J. L. Michalak**, and J.J. Lawler. 2013. Pioneer-Mountains Craters of the Moon Climate Adaptation Report. School of Environment and Forest Sciences, University of Washington, Seattle.

**Michalak, J. L.**, J.C. Withey, and J.J. Lawler. 2013. Willamette Valley Climate Change Adaptation Workshop Report. School of Environment and Forest Sciences, University of Washington, Seattle.

**Michalak, J. L.**, J.C. Withey, and J.J. Lawler. 2013. Climate Adaptation Planning for British Columbia Provincial Parks: A guide to conducting a rapid assessment of climate impacts on park management objectives. School of Environment and Forest Sciences, University of Washington, Seattle.

White, P., **J. Michalak,** and J. Lerner. 2007. Linking Conservation and Transportation Planning: Using the State Wildlife Plans to protect wildlife from road impacts. Defenders of Wildlife, Washington DC.

**Michalak, J.** and J. Lerner. 2007. Linking Conservation and Land Use Planning: Using the State Wildlife Action Plans to protect wildlife from urbanization. Defenders of Wildlife, Washington DC.

Lerner, J, B. Cochran, and **J. Michalak**. 2006. Conservation across the landscape: A review of the State Wildlife Action Plans. Defenders of Wildlife, Washington DC.

#### **Selected Paper Presentations**

**Michalak, J. L.**, J.J. Lawler, C. Littlefield, J. Gross, P. Gonzalez, G. Shuurmann, D. Lawrence, and C. Hawkins. "Prioritizing vulnerability assessment planning across the National Parks Service." July 2018. North American Congress for Conservation Biology, Toronto, Ontario, CA.

**Michalak, J. L.**, J. J. Lawler, D. R. Roberts, C. Carroll. "Climate refuges and disappearing climates in the protected areas of North America." July 2016. Society for Conservation Biology: North American Congress for Conservation Biology, Madison, WI.

Lawler, J. J., C. Littlefield, **J. L. Michalak**, B. McRae. "Anticipating climate connectivity needs for species in a changing climate." July 2015. International Association of Landscape Ecology (US-IALE) World Congress. Portland, OR.

**Michalak, J. L.** "Land facets as a basis for conservation prioritization." July 2014. Society for Conservation Biology: North American Congress for Conservation Biology, Missoula, MT.

**Michalak, J. L.** "Evaluating Climate Change Vulnerability in the Pacific Northwest: Integrated Assessments of Potential Ecological Change in Three Case Study Landscapes." September 2014. Pacific Northwest Climate Conference, Seattle, WA.

**Michalak, J. L.** "Effects of urban development and forest cover patterns on Garry oak (*Quercus garryana*) acorn dispersal processes." August 2011. Ecological Society of America Annual Meeting, Austin, TX.

**Michalak, J. L.** "Developing the Historical Context for Understanding Present Day Land Use-Water Quality Relationships." February 2010. Water Center Annual Review of Research, Seattle, WA.

**Michalak, J. L.**, White, P., J. Feinberg, and J. Lerner. "Unanimous! What the State Wildlife Action Plans have to say about transportation and wildlife." May 2007, International Conference on Ecology and Transportation (ICOET), Little Rock, AR.

**Michalak, J. L.** and J. Lerner. "State Wildlife Action Plans: exploring a new conservation resource for land use planners." April 2007. American Planning Association National Planning Conference, Philadelphia, PA.

#### TEACHING INTERESTS

Climate Change, Climate Adaptation Planning, Ecological Planning, Urban Ecology, Geographic Information Systems, Landscape Ecology, Conservation Planning, Sustainability

#### TEACHING EXPERIENCE

- Winter 2012, Lecturer, University of Washington
- 2013, 2014 CEP 302: Environmental Response
  - Required undergraduate course for Community, Environment, and Planning (CEP) program focusing on knowledge of and response to environmental issues in planning

- Course focus on climate change adaptation planning as a case study
- Fully responsible for all aspects of course development and implementation
- Developed and presented lectures and GIS exercises
- Spring 2012Invited Guest Lecture, University of WashingtonBIOL 497A: Urban Ecology: Conducting and Communicating Science in the City
- Spring 2011 **Graduate Teaching Assistant,** *University of Washington* UDP 422: Urban and Regional Geospatial Analysis
- Spring 2011Invited Guest Lecturer, University of WashingtonSEFS 520: Geographic Information Systems
- Winter 2011Associate Instructor, University of WashingtonUDP 598p: Ecological Land Use Planning
  - Interdisciplinary Master's level course integrating urban ecology, ecological planning and land use planning.
  - Fully responsible for all aspects of course development with mentorship from Dr. Joshua Lawler (UW, School of Forest Resources)
  - Developed and presented five lectures and GIS lab exercise materials
  - Managed class project to develop a wildlife connectivity plan for King County, WA in coordination with King County Natural Resources Department
- Fall 2010 Huckabay Teaching Fellow, University of Washington
- 2005-2006 **Graduate Teaching Assistant**, *University of Maryland* Plant Biology for Non-Science Majors
- Fall 2004Graduate Teaching Assistant, University of Maryland<br/>Introductory Biology
- Winter 2004Teaching assistant, Carleton CollegeBiology Study Abroad Australia/New Zealand/Cook Islands

#### PROFESSIONAL EXPERIENCE

2006-2007	<b>Conservation Planning Associate,</b> <i>Defenders of Wildlife, Washington DC</i>
Fall 2005	Consultant, Worcester County Planning Department, MD
2005-2006	Conservation Planning Intern, Defenders of Wildlife, Washington DC
2001-2003	Seasonal Wildlife Rehabilitator, PAWS Wildlife Center, Lynnwood, WA

#### 2001-2001 Stream Ecologist, Tulalip Tribes Department of the Environment, WA

FELLOWSHIPS AND AWARDS

7/2011	Urban Ecosystem Ecology Section Travel Award, to attend the Ecological Society of America 2011 annual meeting.
7/2011	Graduate School Fund for Excellence and Innovation Graduate Student Travel Award (University of Washington).
2010	Huckabay Teaching Fellow (University of Washington).
2009-2010	Urban Design and Planning Outstanding PhD Student Award (University of Washington) – One award granted per year.
9/2010	Graduate School Fund for Excellence and Innovation Graduate Student Travel Award (University of Washington).
2/2010	Graduate School Fund for Excellence and Innovation Graduate Student Travel Award (University of Washington).
2/2010	Emerging Issues along Urban-Rural Interfaces Conference Travel Grant.
5/2009	National Science Foundation Graduate Research Fellowship, Honorable Mention.
2007-08	Hall Ammerer-WRF Graduate Fellow (University of Washington).
2004-05	Tati Sugardjito Graduate Fellow (University of Maryland).

#### ADVISORY POSITIONS AND OTHER SERVICE

Cascadia spatial priorities tool, Science advisory committee member, 2019

Yakama Nation, Assessing Climate Change Impacts on Tribally Important Plants using Traditional and Expert-Based Knowledge, Spatial modeling advisory committee member, 2019

Peer review for: Nature Climate Change, Global Change Biology, Conservation Science and Practice, Methods in Ecology and Evolution, Environmental Research Letters, Ecography, Urban Ecology, Scientific Reports, Regional Environmental Change

#### TECHNICAL SKILLS

Expert in ArcGIS including proficiency in Python scripting.

Expert in R including spatial analysis packages such as "raster" and "sp", data manipulation, statistical analysis, and programming for automation of analysis.

Quantitative analysis including: principle component analysis, linear, mixed-effects, and generalized additive models, boosted regression trees, cluster analysis, integrated ecological risk assessment.

#### INTERESTS OUTSIDE ACADEMIA

Hiking, rock climbing, cooking, family biking, birding and general nature exploration

#### Urban Forestry Commission 5-20-20

13 Members: Pursuant to SMC 3.14.920, all members subject to City Council confirmation, 3-year terms:

- 6 **City Council-appointed**
- 6 Mayor-appointed
- 1 **Commission-appointed**

#### **Roster:**

*D	**G	RD	Position No.	Position Title	Name	Term Begin Date	Term End Date	Term #	Appointed By
6	F		1.	Wildlife Biologist	Julia L. Michalak	4/1/20	3/31/23	1	Council
					Elby Jones (pending				
6	NB		2.	Urban Ecologist	Council confirmation)	4/1/20	3/31/23	1	Mayor
				Natural Resource Agency or University					
6	М		3.	Representative	Weston Brinkley	12/1/15	3/31/19	1	Council
6	F		4.	Hydrologist or Similar Professional	Sarah Rehder	4/1/18	3/31/21	2	Mayor
6	М		5.	Arborist	Stuart Niven	4/1/18	3/31/21	1	Council
6	М		6.	Landscape Architect	Michael Walton	4/1/18	3/31/21	1	Mayor
6	М		7.	NGO Representative	Joshua N. Morris	4/1/19	3/31/22	1	Council
			8.	Development Community or Utility Representative	Vacant	4/1/19	3/31/22	1	Mayor
6	М		9.	Economist, Financial Analyst, Realtor, or Similar Professional	Blake Voorhees (pending Council confirmation)	4/1/20	3/31/23	1	Commission
9	F		10.	Get Engaged Member	Neeyati Johnson	9/1/18	8/31/19	1	Mayor
6	М		11.	Environmental Justice Rep.	Whitman Bouton	4/1/18	3/31/21	1	Council
6	F		12	Public Health Rep.	Jessica Jones	4/1/18	3/31/21	1	Mayor
2	F		13	Community/Neighbo rhood Rep.	Shari Selch	4/1/18	3/31/21	1	Council

#### SELF-IDENTIFIED DIVERSITY CHART

SELF-I	DENT	IFIED [	DIVERSITY	CHART	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Men	Women	Transgender	Unknown	Asian	Black/ African American	Hispanic/ Latino	American Indian/ Alaska Native	Other	Caucasian/ Non- Hispanic	Pacific Islander	Middle Eastern	Multiracial
Mayor	1	3		Non- Binary						4			1
Council	4	2				1				5			
Other	1									1			
Total	6	5		1		1				10			1

Key:

**\*D** List the corresponding *Diversity Chart* number (1 through 9)

\*\*G List gender, M= Male, F= Female, T= Transgender, NB= Non-Binary O= Other U= Unknown

RD Residential Council District number 1 through 7 or N/A

Diversity information is self-identified and is voluntary.