Michigan Journal of Environmental & Administrative Law

Volume 8 2018-2019

Editor in Chief
ALEXANDRA NOLL

Managing Editor
EMILY VAN DAM

Managing Production Editor
TOMMY LA VOY

Managing Articles Editor
GRANT SNYDER

Managing Notes Editor
TIMOTHY FEATHERSTON

Managing Executive Editor
JOSHUA M. LEVASSEUR

Articles Editors
VICTORIA ALLEN
NASH HALL
JOHN MINODEE PETOSKEY
MEGAN STAMM

Notes Editors
ERIC ASHBY II
ALLY BEASLEY
ASHLEY YUILL
SIMONE PRINCE-EICHER

Executive Editors
ERICA CHRISTIANSON
IRMA CRUZ
ADAM GEREK
HALLIE LIPSEY

Senior Editor
JOAN CAMPBELL

Junior Editor Coordinators
AUDREY ACKERMAN
ANGELICA LI
GRACE SMITH
KEVIN TODD
DAVID TREADAWAY
HENRY ZURN

Associate Editors
DESTINEE N. ANDREWS
ALAN D. BALDRIDGE
PARKS J. BARROS
T. ALEX B. FOLKERTH

CONTRIBUTING EDITORS
DANIELLE DE OLIVEIRA NUNES
DANIELLE ROCHA GABRIEL

JUNIOR EDITORS
CHRISTOPHER J. BLITHE
CONOR BRADLEY
WOENHO CHUNG
JONATHAN COUMES
MARIELLE COUTRIX
PHILLIP GASPARIETTI
JACQUELINE GUZMAN
SCOTT HAECK

CHIJIOKE IGOTE
NWAMAKA IKENZE
KEITH KETOLA
BENJAMIN LEMPERT
JARED LOOPER
EMMA MACFARLANE
JEFFREY MAY
EVAN NEUSTATER
JACK POWERS

WILLIAM QUISH
NATHAN SANTOSCOOY
EVERETT SECOR
KAMDEN SEWARR
PHILLIP WASHBURN
SAMUEL WHITE
BRADY R. WILSON
UNIVERSITY OF MICHIGAN LAW SCHOOL

Administrative Officers

Mark Schlissel, B.A., M.D., Ph.D., President of the University
Martin A. Philbert, B.Sc., Ph.D., Provost and Executive Vice President for Academic Affairs
Mark D. West, B.A., J.D., Nippon Life Professor of Law, Dean
Bridgette Carr, B.A., J.D., Clinical Professor of Law, Associate Dean for Strategic Initiatives
Daniel Halberstam, B.A., J.D., Eric Stein Collegiate Professor of Law, Associate Dean for Faculty and Research, Director of European Legal Studies Program
Debra Chopp, B.A., J.D., Clinical Professor of Law, Associate Dean for Experiential Education
David Santacroce, B.A., J.D., LL.M., Clinical Professor of Law, Associate Dean for Experiential Education
Gil Seinfeld, A.B., J.D., Professor of Law, Associate Dean for Academic Programming
Michael Dubin, B.S., M.A., Assistant Dean for Development and Alumni Relations
Theresa Kaiser-Jarvis, B.A., B.S.J., Ed.M, J.D., Assistant Dean for International Affairs
Ramji Kaul, B.A., J.D., Assistant Dean for Career Planning
Bayrex Marti, B.A., J.D., Assistant Dean for Student Life
Lindsey Stetson, B.A., J.D., Assistant Dean for Financial Aid
Sarah C. Zearfoss, B.A., J.D., Senior Assistant Dean for Admissions, Financial Aid, and Career Planning

Layman E. Allen, A.B., M.P.A., LL.B.
David L. Chambers, A.B., LL.B., Wade H. McCree, Jr. Collegiate Professor of Law
Edward H. Cooper, A.B., LL.B., Thomas M. Cooley Professor of Law
Donald N. Duquette, B.A., J.D., Clinical Professor of Law
Philip M. Frost, B.A., J.D., Clinical Professor of Law
Thomas A. Green, B.A., Ph.D., J.D., John Philip Dawson Collegiate Professor of Law
Samuel R. Gross, A.B., J.D., Thomas G. and Mabel Long Professor of Law
Jerold H. Israel, B.B.A., LL.B., Aline and Allan F. Smith Professor of Law
Douglas A. Kahn, B.A., J.D., Paul G. Kauper Professor of Law
Yale Kamisar, A.B., LL.B., LL.D., Clarence Darrow Distinguished University Professor of Law
Thomas E. Kauper, A.B., J.D., Henry M. Buxtel Professor of Law

Kate Andrias, B.A., J.D.
Reuven S. Avi-Yonah, B.A., A.M., Ph.D., J.D., Irwin I. Cohn Professor of Law
Samuel Bagenstos, B.A., J.D.
Frank G. Millard Professor of Law
Nicholas Bagley, B.A., J.D.
Michael S. Barr, B.A., M.Phil., J.D., Roy F. and Jean Humphrey Proffitt Professor of Law
Laura N. Beny, B.A., M.A., J.D., Ph.D.
Evan H. Caminker, B.A., J.D.
Branch Rickey Collegiate Professor of Law
Sherman J. Clark, B.S., J.D., Kirkland and Ellis Professor of Law
Daniel Crane, B.A., J.D., Frederick Paul Furth, Sr. Professor of Law
Steven P. Croley, A.B., J.D., M.A., Ph.D., Harry Burns Hutchins Collegiate Professor of Law
Kristina Daugirdas, A.B., J.D.
Rebecca S. Eisenberg, B.A., J.D., Robert and Barbara Luciano Professor of Law

Richard O. Lempert, A.B., J.D., Ph.D., Eric Stein Distinguished University Professor of Law and Sociology
Sallyanne Payton, B.A., LL.B., William W. Cook Professor of Law
Margaret Jane Radin, A.B., M.F.A., J.D., LL.D., Henry King Ransom Professor of Law
Terrance Sandalow, A.B., J.D., Edson R. Sunderland Professor of Law
E. Philip Soper, B.A., M.A., Ph.D., James V. Campbell Professor of Law
Theodore J. St. Antoine, A.B., J.D., James E. and Sarah A. Degan Professor of Law
Joseph Vining, B.A., M.A., J.D., Harry Burns Hutchins Collegiate Professor of Law
Lawrence W. Waggoner, B.B.A., J.D., D.Phil., Lewis M. Simes Professor of Law
Peter K. Westen, B.A., J.D., Frank G. Millard Professor of Law
James Boyd White, A.B., A.M., LL.B., L. Hart Wright Collegiate Professor of Law
James J. White, B.A., J.D., Robert A. Sullivan Professor of Law

Phoebe C. Ellsworth, A.B., Ph.D., Frank Murphy Distinguished Professor of Law and Psychology
Richard D. Friedman, B.A., J.D., D.Phil., Aline and Allan F. Smith Professor of Law
Bruce W. Frier, B.A., Ph.D., John and Teresa D’Arms Distinguished University Professor of Classics and Roman Law
Monica R. Hakimi, B.A., J.D.
Daniel Halberstam, B.A., J.D., Eric Stein Collegiate Professor of Law
James C. Hathaway, LL.B., LL.M., J.S.D., James E. and Sarah A. Degan Professor of Law
Scott Hershovitz, A.B., M.A., D.Phil., J.D.
Donald J. Herzog, A.B., A.M., Ph.D., Edson R. Sunderland Professor of Law
James Hines Jr., B.A., M.A., Ph.D., L. Hart Wright Collegiate Professor of Law
Nicholas C. Howson, B.A., J.D.
Ellen D. Katz, B.A., J.D., Ralph W. Aigler Professor of Law
Vikramaditya S. Khanna, B.C.A., LL.B., S.J.D., William W. Cook Professor of Law
James E. Krier, B.S., J.D.,
Earl Warren DeLano Professor of Law
Jessica D. Litman, B.A., M.F.A., J.D.,
John F. Nickoll Professor of Law
Kyle D. Logue, B.A., J.D.,
Wade H. and Doris M. McCree Collegiate Professor of Law
Catharine A. MacKinnon, B.A., J.D., Ph.D.,
Elizabeth A. Long Professor of Law
Nina A. Mendelson, A.B., J.D.,
Joseph L. Six Collegiate Professor of Law
Gabriel Mendlow, A.B., Ph.D., J.D.
William I. Miller, B.A., Ph.D., J.D.,
William G. Long Professor of Law
Julian Davis Mortenson, A.B., J.D.
John A.E. Pottow, A.B., J.D.
James J. Prescott, A.B., J.D., Ph.D.
John Philip Dawson Collegiate Professor of Law
Eve Brensike Primus, B.A., J.D.
Richard A. Primus, A.B., D.Phil., J.D.
Theodore J. St. Antoine Collegiate Professor of Law
Adam C. Pritchard, B.A., M.P.P., J.D.
Frances and George Skestos Professor of Law
Steven R. Ratner, A.B., M.A., J.D.,
Bruno Simma Collegiate Professor of Law
Donald H. Regan, A.B., LL.B., B.Phil., Ph.D.,
William W. Bishop, Jr. Collegiate Professor of Law
Mathias W. Reimann, Dr.Iur., LL.M.,
Hessel E. Yntema Professor of Law
Veronica Santarosa, LL.B., B.A., M.A., LL.M., Ph.D
Margo Schlanger, B.A., J.D.,
Henry M. Butzel Professor of Law
Carl E. Schneider, A.B., J.D.,
Chaucer Stillman Professorship for Ethics, Morality, and the Practice of Law
Rebecca J. Scott, A.B., M.Phil., Ph.D.,
Charles Gibson Distinguished University Professor of History
Gil Seinfeld, A.B., J.D.
Bruno Simma, Doctorate of Law
Sonja B. Starr, A.B., J.D.
Christina B. Whitman, A.B., M.A., J.D.,
Francis A. Allen Collegiate Professor of Law
Maureen Carroll, B.S., J.D.
Nicolas Cornell, A.B., Ph.D., J.D.
Edward Fox, B.A., J.D., Ph.D.

Assistant Professors of Law
W. Nicholson Price, II, A.B., J.D., Ph.D.

Clinical Professors of Law
Vivek Sankaran, B.A., J.D.
Sueylin Scamechla, B.A., J.D.
Kimberly A. Thomas, B.S., J.D.
Dana Thompson, B.S., J.D.
Frank E. Vandervort, B.A., J.D.
Nancy Vettrotello, B.A., M.I.P., J.D.
Beth H. Wilensky, B.A., J.D.

Clinical Assistant Professors of Law
Joshua Kay, B.A., M.A., Ph.D., J.D.
Sammy Mansour, B.A., J.D.
Timothy Pinto, B.A., J.D.
Oday Salim, B.A., J.D., LL.M.
Amy Sankaran, B.A., J.D.
Imran Syed, A.B., J.D.

Professors from Practice
Barbara McQuade, B.A., J.D.
Leonard Niehoff, A.B., J.D.
David Uhlmann, B.A., J.D.,
Jeffrey F. Liss Faculty Development Professor from Practice, Director of Environmental Law and Policy Program
William W. Cook Global Law Professors
Susanne Baer, LL.M.
Paul Brand, B.A., M.A., D.Phil
Christine Chinkin, LL.B., LL.M., Ph.D.
John G. H. Hudson, M.A., D.Phil
Haw-Jin Kim, B.S., Dr. Jur., LL.M.
J. Christopher McCredden, LL.B., LL.M., D.Phil
Anne Peters, LL.M.
# TABLE OF CONTENTS

## ARTICLES

- **Life Cycle Costing and Food Systems: Concepts, Trends, and Challenges of Impact Valuation** .................................................... 1  
  – Katherine Fiedler, Steven Lord & Jason J. Czarnezki

- **Applying the Pennsylvania Environmental Rights Amendment Meaningfully to Climate Disruption** ............................................. 49  
  – Robert B. McKinstry, Jr. and John C. Dernbach

- **Abandoned but Not Forgotten: Improperly Plugged and Orphaned Wells May Pose Serious Concerns for Shale Development** ............ 115  
  – Bret Wells and Tracy Hester

- **Beyond Localism: Harnessing State Adaptation Lawmaking to Facilitate Local Climate Resilience** ............................................. 185  
  – Sarah J. Adams-Schoen

## NOTES

- **How Safe Is Too Safe? Exemption 7(F) and the Withholding of Critical Documents** ................................................................. 245  
  – Grant Snyder

- **Presidential Permitting for Pipelines: Constitutionality and Reviewability** ................................................................. 273  
  – Joan Campau