

**Committee on Energy and Commerce**  
**U.S. House of Representatives**  
Witness Disclosure Requirement - "Truth in Testimony"  
Required by House Rule XI, Clause 2(g)(5)

1. Your Name: <u>JARED L. COHEN</u>		
2. Your Title: <u>CO-CHAIR OF CRENEL</u> <u>PRESIDENT EMERITUS AND PROFESSOR, CARNEGIE MELLON UNIVERSITY</u>		
3. The Entity(ies) You are Representing: <u>ENERGY LABS</u> <u>COMMISSION TO REVIEW THE EFFECTIVENESS OF THE NATIONAL</u>		
4. Are you testifying on behalf of the Federal, or a State or local government entity?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
5. Please list any Federal grants or contracts, or contracts or payments originating with a foreign government, that you or the entity(ies) you represent have received on or after January 1, 2013. Only grants, contracts, or payments related to the subject matter of the hearing must be listed. <u>THE WORK OF CRENEL WAS FUNDED FROM</u> <u>A CONGRESSIONAL APPROPRIATION FOR THIS PURPOSE</u>		
6. Please attach your curriculum vitae to your completed disclosure form.		

Signature: 

Date: 2/19/16

**JARED LEIGH COHON**

**CURRICULUM VITAE**

Carnegie Mellon University

[Redacted]  
[Redacted]  
[Redacted]  
[Redacted]  
[Redacted]  
[Redacted]

[Redacted]  
[Redacted]  
[Redacted]

**Position** Carnegie Mellon University  
University Professor of Civil and Environmental Engineering  
University Professor of Engineering and Public Policy  
Director of the Wilton E. Scott Institute for Energy Innovation  
President Emeritus

**Professional Registration** Professional Engineer, Maryland Registration No. 11196  
Date registered, 07/13/78

Diplomate, Water Resources Engineer, American Academy  
of Water Resources Engineers, 2010

**Education** B.S. (Civil Engineering) University of Pennsylvania, 1969  
M.S. (Civil Engineering) Massachusetts Institute of Technology, 1972  
Ph.D. (Civil Engineering) Massachusetts Institute of Technology, 1973

**Non-Profit and Government Board Memberships**

Bilkent University (Turkey) Chair of Advisory Board  
Carnegie Corporation  
Center for Sustainable Shale Gas Development, Chair  
Health Effects Institute  
Heinz Endowments  
National Academy of Engineering  
2015 - Finance Committee  
National Research Council  
2015 - Board on Energy and Environmental Systems

**Corporate Boards**

Ingersoll Rand  
Lexmark International  
Unisys

**Honors and Awards**

Hugo Otto Wolf Award, University of Pennsylvania, 1969  
NSF Fellowship, Massachusetts Institute of Technology, 1969-1970  
Resources for the Future Natural Resources Fellowship, Massachusetts Institute of Technology, 1972-73  
Tau Beta Pi, The National Engineering Honor Society  
Joan Hodges Queneau Palladium Medal given jointly by The National Audubon Society and the American Association of Engineering Societies, 1996  
Edgeworth-Pareto Award, Multiple Criteria Decision Making Society, 1998  
William Metcalf Award, Engineers' Society of Western Pennsylvania, 2006  
American Society of Civil Engineers Distinguished Member, 2009  
Society of Scholars, Johns Hopkins University, 2010  
National Engineering Award, American Association of Engineering Societies, 2011  
National Academy of Engineering, 2012  
American Academy of Arts and Sciences, 2012

**Honorary Degrees**

Korean Advanced Institute for Science and Technology, 2012  
University of Pittsburgh, 2013  
Carnegie Mellon University, 2013

**Previous Positions**

1968	Construction Inspector, E.I. Conwell and Company, Philadelphia, Pennsylvania
1969	Engineering Assistant, Philadelphia Water Department, Philadelphia, Pennsylvania
1970-1973	Graduate Research Assistant, Department of Civil Engineering, Massachusetts Institute of Technology
1973-1992	The Johns Hopkins University, Department of Geography and Environmental Engineering
	Assistant Professor 1973-1977
	Associate Professor 1977-1981
	Professor 1981-1992
	Assistant Dean of Engineering 1981-1983
	Associate Dean of Engineering 1983-1986
	Vice Provost for Research 1986-1992
1977-1978	Legislative Assistant for Energy and Environment, Honorable Daniel P. Moynihan, U.S. Senator from New York (on leave from Johns Hopkins)
1992-1997	Dean and Professor of Environmental Systems Analysis, Yale University, School of Forestry and Environmental Studies

1997-2013 President, Carnegie Mellon University

**Professional Society Memberships**

American Association for the Advancement of Science (Fellow)  
American Society of Civil Engineers (Distinguished Member)  
American Water Resources Association  
Multiple Criteria Decision Making Society

**Previous Corporate Board Directorships**

American Standard/Trane, 2000-2008 (when Trane was acquired by Ingersoll Rand)  
Freemarkets, Inc. 2003-2004 (when Freemarkets was acquired by Ariba)  
Mellon Bank 1998-2007 (when Mellon merged with Bank of New York)

**Previous Non-Profit Board Memberships and Professional Activities**

Allegheny Conference on Community Development 1997-2013  
American Geophysical Union  
    1977-1984 Congressional Science Fellow Selection Committee (Chair, 1978-1980)  
    1977-1984 Subcommittee on Government and Legislative Affairs (Chair, 1978-1980)  
    1978-1980 Public Affairs Committee  
    1982-1984 Public Affairs Committee  
    1978-1982 Water Resources and Environmental Management Committee  
    1984-1986 Executive Committee, Hydrology Section  
    1984-1986 Budget and Finance Committee  
American Society of Civil Engineers  
    1983-1985 Executive Committee of the Energy Division (Chair, 1985)  
Association of American Universities 1997-2013 (Chair, 2011-2012)  
Center for Indoor Air Research  
    1988-1991 Science Advisory Board, Chair  
Connecticut Academy of Sciences  
    1996-1997 President  
Council on Competitiveness 2000-2013  
Dietrich Foundation 2011-2014  
H. John Heinz, III Center for Science, Economics and the Environment  
Homeland Security Advisory Council (Presidential Appointment) 2000-2013  
Internet2 2009-2011  
IUCN, Commission on Environmental Strategy and Planning 1994-1997  
Karlsruhe Institute of Technology International Advisory Board 2008-2010  
Maryland Society of Professional Engineers  
    1988-1989 Vice President, Baltimore Chapter  
    1989-1990 President, Baltimore Chapter  
    1990-1991 State Secretary  
The Mountain Institute 1994-1997  
National Academy of Engineering

2013-2015     Gordon Prize Selection Committee  
National Research Council  
1986-1987     Chair, Committee on Probabilities of Extreme Floods  
1987-1992     Review Panel for Transportation Research Centers  
1991-1993     Government-University-Industry Research Roundtable: Task Force on  
                  Intellectual Property Rights  
1993-1995     Chair, Committee on Measuring and Improving Infrastructure Performance  
2008-2009     Chair, Committee on Health, Environmental and Other External Costs and  
                  Benefits of Energy Production and Consumption  
2009-2012     Board on Global Science and Technology  
2012-2015     Chair, Committee on Fuel Economy of Light Duty Vehicles, Phase 2  
2013-2015     Board on Higher Education and Workforce  
National Security Higher Education Advisory Board  
Nuclear Waste Technical Review Board  
1995-2002     Member (Presidential Appointment)  
1997-2002     Chairman (Presidential Appointment)  
Pinchot Institute for Conservation 1994-1997  
Pittsburgh Cultural Trust 2001-2010  
Pittsburgh Life Science Greenhouse, Co-Chair, 2000-2009  
Pittsburgh Symphony Orchestra  
Pittsburgh Technology Council  
River City Brass Band  
The Technology Collaborative, Co-Chair 2001-2012  
Team PA Foundation 2011-2013  
Universities Research Association 2010-2013  
University of Pennsylvania  
1988-1995     Chair, Department of Systems Engineering Advisory Council  
University of Pittsburgh, Institute of Politics  
2006-2009     Regional Water Task Force, Chair  
2011-2013     Roundtable, Marcellus Shale Gas, Co-Chair  
U.S. Environmental Protection Agency: Baltimore Integrated Environmental Management Project  
1984-1987     Chair, Technical Advisory Committee  
U.S. Department of Energy  
2014-2015     Commission to Review the Effectiveness of the National Energy Laboratories,  
                  Co-Chair  
Urban League of Pittsburgh  
World Affairs Council of Pittsburgh

**Editorial Positions**

1977-1979     Associate Editor, *Water Resources Research*  
1979-1983     Co-editor, *Water Resources Research*  
1983-1987     International Editorial Board, *Civil Engineering Systems*  
1988-1996     Editorial Board, *Hazardous Waste and Hazardous Materials*

## **Publications**

### ***Book***

Cohon, J.L. 1978. *Multiobjective Programming and Planning*. Mathematics in Science and Engineering Series. Academic Press, New York. (Republished in 2003 by Dover Publications).

### ***Articles in Refereed Journals***

Cohon, J.L. and D.H. Marks. 1973. Multiobjective screening models and water resource investment. *Water Resource Research* 9(4):826-836.

Cohon, J.L. and D.H. Marks. 1975. A review and evaluation of multiobjective programming techniques. *Water Resources Research* 11(2)

Hirsch, R., J.L. Cohon and C.S. ReVelle. 1977. Gains from joint operation of multiple reservoir systems. *Water Resource Research* 13(2):234-246.

Cohon, J.L. and D.H. Marks. 1977. Reply to a comment on "A Review and Evaluation of Multiobjective Programming Techniques." *Water Resources Research* 13(2):693-694.

ReVelle, C.S., D. Bigman, D.A. Schilling, J.L. Cohon and R. Church. 1977. Facility location: a review of context-free and EMS models. *Health Services Research (Summer)*:129-146.

Houck, M.H. and J.L. Cohon. 1978. Sequential explicitly stochastic linear programming models for design and management of multipurpose multiple reservoir systems. *Water Resources Research* 14(2):161-169.

Schilling, D.A., D.J. Elzinga, J.L. Cohon, R. Church and C.S. ReVelle. 1979. The TEAM/FLEET models for simultaneous facility and equipment siting. *Transportation Science (May)*:163-175.

Cohon, J.L., R. Church and D. Sheer. 1979. Generating multiobjective tradeoffs: an algorithm for bicriterion problems. *Water Resources Research (October)*:1001-1010.

Houck, M.H., J.L. Cohon and C.S. ReVelle. 1980. Linear decision rule: 6. Incorporation of economic efficiency benefits and hydroelectric energy generation. *Water Resources Research (February)*:196-200.

Cohon, J.L., C.S. ReVelle, T. Eagles, J.R. Current, R. Eberhart and R. Church. 1980. Application of a multiobjective facility location model to power plant siting in a six-state region of the U.S. *Computers and Operations Research* 7(1&2):107-123.

Schilling, D.A., C.S. ReVelle, J.L. Cohon and D.J. Elzinga. 1980. Some models for fire protection locational decisions. *European Journal of Operational Research Vol. 5*:1-7.

ReVelle, C.S., J.L. Cohon and D. Shobrys. 1981. Multiple objective facility location. *Systemi Urbani Vol. 3*:319-343.

Palmer, R.N., J.A. Smith, J.L. Cohon and C.S. ReVelle. 1982. Reservoir management in the Potomac River Basin. *Journal of the Water Resources Planning and Management Division ASCE*

- 108(WR1):47-66.
- Wright, J., C.S. ReVelle and J.L. Cohon. 1983. A multiobjective integer programming model of the land acquisition problem. *Regional Science and Urban Economics Vol. 13:31-53*.
- Schilling, D.A., C.S. ReVelle and J.L. Cohon. 1983. An approach to the display and analysis of multiobjective problems. *Socio-Economic Planning Sciences 17(2):57-63*.
- McGarity, A., C.S. ReVelle and J.L. Cohon. 1983. Analytical simulation models for solar heating system design. *Solar Energy 32(1) (December)*.
- Current, J.R., C.S. ReVelle and J.L. Cohon. 1984. The shortest covering path problem: an application of locational constraints to network design. *Journal of Regional Science 24(2):161-183*.
- Current, J.R., C.S. ReVelle and J.L. Cohon. 1984. The application of location models to the multiobjective design of transportation networks. *Regional Science Review Vol. 14:1-23*.
- Current, J.R., C.S. ReVelle and J.L. Cohon. 1985. The maximum covering/shortest path problem: a multiobjective network design and routing formulation. *European Journal of Operational Research Vol. 21:189-199*.
- Moy, W.S., J.L. Cohon and C.S. ReVelle. 1986. A programming model for analysis of the reliability, resilience and vulnerability of a water supply reservoir. *Water Resources Research 22(4):489-498*.
- Current, J.R., C.S. ReVelle and J.L. Cohon. 1986. The hierarchical network design problem. *European Journal of Operational Research Vol. 27:57-66*.
- Wiesner, M.R., C.R. O'Melia and J.L. Cohon. 1987. Optimal water treatment plant design. *Journal of Environmental Engineering ASCE 113(3):567-584*.
- Nafday, A.M., R.B. Corotis and J.L. Cohon. 1987. Failure mode identification for structural frames. *Journal of Structural Engineering ASCE 113(7):1415-1432*.
- Current, J.R., C.S. ReVelle and J.L. Cohon. 1987. The median shortest path problem: a multiobjective approach to analyze cost vs. accessibility in the design of transportation networks. *Transportation Science 21(3):188-197*.
- Nafday, A.M., R.B. Corotis and J.L. Cohon. 1988. Near-optimality analysis for linear models. *Journal of Computing in Civil Engineering ASCE 2(1):91-95*.
- Nafday, A.M., R.B. Corotis and J.L. Cohon. 1988. Multiparametric limit analysis of frames: part I-model. *Journal of Engineering Mechanics ASCE 114(3):377-386*.
- Nafday, A.M., R.B. Corotis and J.L. Cohon. 1988. Multiparametric limit analysis of frames: part II-computations. *Journal of Engineering Mechanics ASCE 114(3):387-403*.
- Current, J.R., C.S. ReVelle and J.L. Cohon. 1988. The minimum-covering/shortest-path problem. *Decision Sciences 19(3):490-503*.
- Solanki, R.S. and J.L. Cohon. 1989. Approximating the noninferior set in linear bioobjective programs using multiparametric decomposition. *European Journal of Operational Research 41(3):355-366*.
- Heller, M., J.L. Cohon and C.S. ReVelle. 1989. The use of simulation in validating a multiobjective EMS location model. *Annals of Operations Research Vol. 18:303-322*.
- Current, J.R., C.S. ReVelle and J.L. Cohon. 1990. An interactive approach to identify the best compromise solution for two objective shortest path problems. *Computers & Operations Research 17(2):187-198*.
- Gorti, S.R., R.G. Morris, J.H. Ellis and J.L. Cohon. 1990. A graphical surface navigation technique for multiobjective programming. *Civil Engineering Systems:178-184*.
- Klimberg, R., C.S. ReVelle and J.L. Cohon. 1991. A multiobjective approach to evaluating and planning the allocation of inspection resources. *European Journal of Operational Research*

52(1):55-64.

ReVelle, C.S., J.L. Cohon and D. Shobrys. 1992. Simultaneous siting and routing in the disposal of hazardous wastes. *Transportation Science* 25(2):138-145.

Klimberg, R., C.S. ReVelle and J.L. Cohon. 1992. Improving the effectiveness of FDA drug inspection. *Operations Research* 40(5):845-855.

Solanki, R.S., P.A. Appino and J.L. Cohon. 1993. Approximating the noninferior set in multiobjective linear programming problems. *European Journal of Operational Research* 68(3):356-373.

Rothley, K.D., O.J. Schmitz and J.L. Cohon. 1997. Foraging to balance conflicting demands: novel insights from grasshoppers under predation risk. *Behavioral Ecology* 8 (5) :551-559

Schmitz, O.J., J.L. Cohon, K.D. Rothley and A.P. Beckerman. 1998. Reconciling variability and optimal behavior using multiple criteria in optimization models. *Evolutionary Ecology* 12 (1):73-94.

### **Peer-reviewed and Published Reports**

Committee on Estimating Probabilities of Extreme Floods. 1988. *Estimating Probability of Extreme Floods: Methods and Recommended Research*. National Academy Press. (J.L. Cohon, Chairman)

Committee on Measuring and Improving Infrastructure Performance. 1995. *Measuring and Improving Infrastructure Performance*. National Academy Press. (J.L. Cohon, Chairman)

Committee on Health, Environmental, and Other External Costs and Benefits of Energy Production and Consumption. 2009. *Hidden Costs of Energy; Unpriced Consequences of Energy Production and Use*. National Academy Press, (J.L. Cohon, Chairman)

Committee on the Assessment of Technologies for Improving Fuel Economy of Light-Duty Vehicles, Phase 2. 2015. *Cost, Effectiveness, and Deployment of Fuel Economy Technologies for Light-Duty Vehicles*. The National Academies Press, (J.L. Cohon, Chairman)

### **Book Reviews**

Cohon, J.L. 1976. A review of 'multiobjective optimization in water resources systems' by Haines, et al., *EOS, Transactions of the American Geophysical Union* 57(6):454.

Cohon, J.L. 1977. A review of 'multiobjective optimization in water resources systems' by Haines, et al., *Earth Science Reviews* 12(4):439-440.

### **Articles in Books and Proceedings**

Marks, D.H. and J.L. Cohon. 1971. Routing for municipal services. *Proceedings, Computers and Urban Society*, New York, October.

Cohon, J.L. and D.H. Marks. 1974. Multiobjective analysis in water resource planning. In: R. de Neufville and D.H. Marks, eds., *Systems Planning and Design*. Prentice-Hall, Englewood Cliffs, New Jersey.

Cohon, J.L. and D.H. Marks. 1974. Multiobjectives in water resources planning. *Proceedings of the Systems, Man and Cybernetics Conference*. Dallas, Texas, October.

Marks, D.H. and J.L. Cohon. 1975. An application of linear programming to the preliminary analysis of river basin planning alternatives. In: H.M. Salkin and J. Saha, eds., *Studies in Linear*



- Programming*. North Holland-American Elsevier.
- Cohon, J.L. and D.H. Marks. 1975. Computational and formulation considerations in multiobjective analysis in water resource planning. *Proceedings of the Sixth Triennial/World Congress*. International Federation of Automatic Control, Boston.
- Cohon, J.L. 1976. Applications of multiple objectives to water resource problems. In: M. Zeleny, ed., *Multiple Criteria Decision Making, Kyoto, 1975*. Springer-Verlag, Berlin.
- Eaton, D.J., W.S. Steele, J.L. Cohon and C.S. ReVelle. 1976. A method to size world grain reserves: initial results. In: D.J. Eaton and W.S. Steele, eds., *Analysis of Grain Reserves*. U.S. Department of Agriculture, Washington, D.C.
- Eaton, D.J., W.S. Steele, J.L. Cohon, C.S. ReVelle and K. Potter. 1976. Grain reserve sizing: a multiobjective and probabilistic analysis. *Proceedings of the 1976 IEEE Conference on Decision and Control*. McGregor and Werner Inc., Washington, D.C., December, pp. 728-734.
- Cohon, J.L. 1976. Co-author of four chapters in D.C. Major and R. Lenton, eds., *Applied Water Resource Systems Planning*. Prentice-Hall, Englewood Cliffs, New Jersey.
- Church, R., J.L. Cohon and C.S. ReVelle. 1978. Energy facility siting by multiobjective location analysis. In: W.G. Vogt and M.H. Mickle, eds., *Modeling and Simulation, Vol. 9*. Instrument Society of America, Pittsburgh.
- Eagles, T.W., T.S. Margulies, J.L. Cohon and C.S. ReVelle. 1979. Multiobjective regional energy location model: cost versus population proximity tradeoffs. *Proceedings, American Nuclear Society*. San Francisco, November.
- Schilling, D., D.J. Elzinga, J.L. Cohon and C.S. ReVelle. 1980. Design and analysis of location and relocation alternatives in a fire protection system. In: W.G. Vogt and M.H. Mickle, eds., *Modeling and Simulation, Vol. 11*. Instrument Society of America, Pittsburgh.
- Engberg, D.J., J.L. Cohon and C.S. ReVelle. 1980. Multiobjective siting model of a natural gas pipeline system. In: W.G. Vogt and M.H. Mickle, eds., *Modeling and Simulation, Vol. 11*. Instrument Society of America, Pittsburgh.
- Cohon, J.L., C.S. ReVelle, S. Ratick and R. Palmer. 1980. Approaches and techniques for resolution of conflict situations in regional water management. *Proceedings of the Conference on Criteria, Conflicts, Uncertainty and Institutions in Regional Water Management*. International Institute for Applied Systems Analysis, Laxenberg, Austria, October.
- Engberg, D.J., J.L., Cohon and C.S. ReVelle. 1980. A multiobjective location model for offshore natural gas transport systems. In: *Coastal Zone 80, Second Symposium on Coastal and Ocean Management*. Hollywood, Florida, November.
- Cohon, J.L., C.S. ReVelle and R.N. Palmer. 1981. Multiobjective generating techniques for risk/benefit analysis. In: Y. Haimes, ed., *Risk/Benefit Analysis in Water Resources Planning and Management*. Plenum Press, New York, pp. 123-134.
- ReVelle, C.S., J.L. Cohon and D. E. Shobrys. 1981. Multiple objectives in facility location: a review. In: J.N. Morse, ed., *Organizations: Multiple Agents with Multiple Criteria*. Springer-Verlag, Berlin, pp. 320-337.
- McGarity, A., C.S. ReVelle and J.L. Cohon. 1981. Solar heating system performance: continuous and finite difference solutions for hourly and daily data. In: *Solar Rising*, the Proceedings of the 1981 Annual Meeting of the International Solar Engineering Society. Philadelphia, May.
- McGarity, A., C.S. ReVelle and J.L. Cohon. 1981. Solar heating design with a performance requirement. In: *Solar Rising*, the Proceedings of the 1981 Annual Meeting of the International Solar Engineering Society. Philadelphia, May.
- Ratick, S., J.L. Cohon and C.S. ReVelle. 1981. Multiobjective programming solutions to N-person

- bargaining games. In: J.N. Morse, ed., *Organizations: Multiple Agents with Multiple Criteria*. Springer-Verlag, Berlin, pp. 296-319.
- Cohon, J.L., C.S. ReVelle, D.E. Shobry, T.S. Margulies, L.G. Hereford and T.W. Eagles. 1982. Location systems analysis of away-from-reactor spent fuel storage facilities. In: *Transactions of the American Nuclear Society, Vol. 40*.
- Cohon, J.L., T.W. Eagles, T.S. Margulies and C.S. ReVelle. 1983. Analysis of nuclear reactor siting policy using multiobjective programming. In: P. Hansen, ed., *Essays and Surveys on Multiple Criteria Decision Making*. Springer-Verlag, Berlin.
- Current, J.R., C.S. ReVelle and J.L. Cohon. 1983. The maximum covering/shortest path problem: a multiobjective network design and routing formulation. In: *Proceedings of the Fourteenth Annual Pittsburgh Conference on Modeling and Simulation, Vol. 14:1373-1381*.
- Cohon, J.L. 1985. Multicriteria programming: brief review and application. In: J. Gero, ed., *Design Optimization*. Academic Press.
- Wiesner, M.R., J.L. Cohon and C.R. O'Melia. 1986. The cost of contact filtration as a function of the raw water particle size distribution. In: R. Vanbrabant, J. Hermia and R.A. Weiler, eds., *Proceedings of the 4th World Filtration Congress, Part II*, Section of Mechanical Separation and Particle Technology of the Royal Flemish Society of Engineers, Antwerp, and the Flemish Chapter of the Belgium Filtration Society. London, pp. 10.43-10.48.
- Cohon, J.L., G. Scavone and R. Solanki. 1988. Multicriterion optimization in resources planning. In: W. Stadler, ed., *Multicriteria Optimization in Engineering and in the Sciences*. Plenum Press, New York.
- Klimberg, R.K., C.S. ReVelle and J.L. Cohon. 1989. NMIS: a national model for inspection selection with limited resources. In: A.G. Lockett and G. Islei, eds., *Improving Decision Making in Organizations*. Springer-Verlag, pp. 244-253.
- Klimberg, R.K., C.S. ReVelle and J.L. Cohon. 1990. A decision support system for the regulatory surveillance of the pharmaceutical industry. In: L. Volonimo, ed., *DSS-90 Transactions*. TIMS, pp. 101-116.
- Cohon, J.L. 1997. MCDM and sustainable development: the case of water resources planning in India. In: M.H. Karwan, J. Spronk, and J. Wallenius, eds., *Essays in Decision Making*, Springer, pp. 294-312.
- Cohon, J.L. 1997. MCDM trends in natural resources and environmental management. In: J. Climaco, ed., *Multicriteria Analysis: Proceedings of the XIth International Conference on MCDM*. Springer, pp. 569-573.
- Cohon, J.L. and K. Rothley. 1997. Multi-objective methods. In: C. ReVelle, and A. McGarity, eds., *Design and Operations of Civil and Environmental Engineering Systems*. Wiley-Interscience, pp. 513-566.
- Guile, B. and J.L. Cohon. 1997. Sorting out a service based economy. In: M. Chertow and D. Esty, eds., *Thinking Ecologically: The Next Generation of Environmental Policy*. Yale University Press, New Haven, pp. 76-90.
- Cohon, J., M. Cropper, D. Greenbaum and R. Wassel, "Hidden Costs of Energy," *The Environmental Forum*, Vol. 27, No. 2, pp. 26-30, March, April, 2010.
- Cohon, J.L. 2012. Global Sustainability and the Responsibilities of Universities. In: Weber, L.E. and Duderstadt, J.J., eds., *Value and Valuation for Sustainability*, Economica, Ltd, France, Chapter 2, pp 15-22.
- Cohon, J.L. 2012. Two Big Issues for Water Resource Systems: Advances in Educational

Technology and Changes in Valuation. In: W.M. Grayman, D.P. Loucks and L. Saito, eds., *Toward a Sustainable Water Future: Visions for 2050*. American Society of Civil Engineers, pp. 207-216.

### **Reports**

- Cohon, J.L. and D.H. Marks. 1971. Cambridge Municipal Services Study. Department of Civil Engineering, Systems Laboratory, Report R7-15, M.I.T. Cambridge, Massachusetts, January.
- Cohon, J.L. 1972. Multiple Objective Screening of Water Resource Investment Alternatives. S.M. Thesis, Department of Civil Engineering, M.I.T. Cambridge, Massachusetts, January.
- Cohon, J.L. 1973. An Assessment of Multiobjective Solution Techniques for River Basin Planning Problems. Ph.D. Thesis, Department of Civil Engineering, M.I.T. Cambridge, Massachusetts, August.
- Cohon, J.L., T.B. Facet, A.H. Haan and D.H. Marks. 1973. Mathematical Programming Models and Methodological Approaches for River Basin Planning. Technical Report, Civil Engineering Systems Laboratory, M.I.T. Cambridge, Massachusetts, October.
- Major, D.C., J.L. Cohon and E. Frydl. 1974. Project Evaluation in Water Resources: Budget Constraints. Technical Report No. 188, Ralph M. Parsons Laboratory for Water Resources Hydrodynamics, M.I.T. Cambridge, Massachusetts, September.
- Cohon, J.L., R. Hirsch, K. Potter, M.H. Houck, D.A. Schilling and R. Smith. 1975. Report to the Interstate Commission on the Potomac River Basin on the Analysis of Tributaries of the Potomac River. Department of Geography and Environmental Engineering, The Johns Hopkins University.
- Houck, M.H. and J.L. Cohon. 1976. Optimal Design and Operation of Multi-Reservoir Systems: Volume I, Explicitly Stochastic Models. National Technical Information Service, Washington, D.C.
- Houck, M.H. and J.L. Cohon. 1976. Optimal Design and Operation of Multi-Reservoir Systems: Volume II, Alternative Optimization Models for the Lehigh River Basin. National Technical Information Service, Washington, D.C.
- Church, R.L. and J.L. Cohon. 1976. Multiobjective Location Analysis of Regional Energy Facility Siting Problems. Brookhaven National Laboratory, Upton, New York.
- Elzinga, D.J., J.L. Cohon, C.S. ReVelle and D.A. Schilling. 1976. The Design and Analysis of Location and Relocation Alternatives for the Baltimore City, Maryland, Fire Protection System. Vol. I (Executive Summary) and Vol. II (Components of the Study).
- Eagles, T.W., J.R. Current, C.S. ReVelle and J.L. Cohon. 1977. Probable Distribution of Effluent Sources from Energy Supply and Conversion. Applied Physics Laboratory, The Johns Hopkins University, December.
- Eagles, T.W., J.L. Cohon and C.S. ReVelle. 1979. Modeling Future Power Plant Location Patterns. Final Report to the Electric Power Research Institute, The Johns Hopkins University, April.
- Eagles, T.W., J.L. Cohon, C.S. ReVelle and J.R. Current. 1979. Multiobjective Programming in Power Plant Location Planning. Report FWS/OBS-78/55, Fish and Wildlife Service, U.S. Department of the Interior, Washington, D.C, September.
- Eagles, T.W., J.L. Cohon and C.S. ReVelle. 1980. Modeling Plant Location Patterns: Applications. Report EA-1375, Electric Power Research Institute, Palo Alto, California, February.
- Palmer, R.M., J.R. Wright, J.A. Smith, J.L. Cohon and C.S. ReVelle. 1980. Policy Analysis of Reservoir Operation in the Potomac River Basin. Water Resources Research Center, University of

- Maryland. Three Volumes.
- Engberg, D.J., J.L. Cohon and C.S. ReVelle. 1980. Multiobjective Location Analysis of Facilities Associated with Offshore Natural Gas Production in the Baltimore Canyon: Phase I. Office of Planning and Policy Analysis, New Jersey Department of Energy, Newark.
- Cohon, J.L., et al., 1980. Location Systems Analysis of Away from Reactor Spent Fuel Storage Facilities in the Eastern United States. Spent Fuel Project Office, U.S. Department of Energy, Washington, D.C.
- Heller, M., K. Hogan, P. Appino, J.L. Cohon and C.S. ReVelle. 1983. Analysis of the Baltimore City Ambulance System. Report to the Baltimore City Fire Department by The Johns Hopkins University. Three Volumes.
- Cohon, J.L., C.S. ReVelle, J.H. Ellis, G. Scavone, R. Solanki and J. Caldwell. 1986. Station Ship Requirements for Naval Battle Groups. Phase I, Applied Physics Laboratory, The Johns Hopkins University. September.
- Cohon, J.L., C.S. ReVelle, J.H. Ellis, G. Scavone, R. Solanki and J. Caldwell. 1987. Station Ship Requirements for Naval Battle Groups. Phase II, Applied Physics Laboratory, The Johns Hopkins University, October.
- Cohon, J.L., C.S. ReVelle, J.H. Ellis, J.S. Shih, T. Watanabe and V. Marianov. 1988. Station Ship Requirements for Naval Battle Groups. Phase III, Applied Physics Laboratory, The Johns Hopkins University, September.

### **Funded Research Activities**

- 1972-1973     Vector Optimization, Multiobjective Planning, Massachusetts Institute of Technology, Resources for the Future Natural Resources Fellowship (Doctoral Dissertation Research)
- 1973-1974     Economic Considerations in Power Plant Siting in the Chesapeake Bay Region, The Johns Hopkins University, Contract with Maryland Department of Natural Resources (Participant)
- 1974-1976     Incorporation of Optimal Operating Policy Model into Multi-Model Approaches to River Basin Planning, Research Initiation Grant from the National Science Foundation (Principal Investigator)
- 1975-1976     Design and Analysis of Consolidation and Location Alternatives for the Baltimore, Maryland, Fire Protection System, City of Baltimore (Co-Principal Investigator)
- 1977-1981     Policy Analysis of Reservoir Operation in the Potomac River Basin, Supported by the Office of Water Research and Technology (U.S. Department of Interior), State of Maryland and the Commonwealth of Virginia (Co-Principal Investigator)
- 1979-1980     Multiobjective Location Analysis of Facilities Associated with Offshore Natural Gas Production in the Baltimore Canyon, New Jersey Department of Energy (Co-Principal Investigator)
- 1980-1981     Location Systems Analysis of Away from Reactor Spent Fuel Storage in the Eastern United States, U.S. Department of Energy in Collaboration with the Applied Physics

- 1982 Laboratory (Co-Principal Investigator)  
Analysis of the Baltimore City Ambulance System, City of Baltimore (Co-Principal Investigator)
- 1983-1984 Computer Graphics and Multiobjective Programming, IBM (Principal Investigator)
- 1985-1989 Optimization of Station Ship Requirements for Naval Battle Groups, U.S. Navy in Collaboration with the Applied Physics Laboratory

**Consulting**

- 1970-1971 Coordinated Municipal Service Systems, Model Cities, Cambridge, Massachusetts.
- 1972 Solid Waste Management, Urban Systems Inc., Cambridge, Massachusetts.
- 1972 Water Resource Impacts of Proposed Toms River, New Jersey, Turnpike Extension, Environmental Research and Technology, Lexington, Massachusetts, for the New Jersey Turnpike Authority.
- 1974 Review of Water Quality Models, National Commission on Water Quality.
- 1974 Analysis of Mass Transit Routes, Office of the City Council President, Baltimore, Maryland.
- 1975 Water Quality Modeling of the Potomac River Basin, Interstate Commission on the Potomac River Basin.
- 1975-1976 Energy Facility Siting and Regional Planning for the Northeast United States, Brookhaven National Laboratory.
- 1976-1978 Probable Distribution of Effluent Sources from Energy Supply and Conversion, Electric Power Research Institute and the U.S. Department of the Interior.
- 1977-1983 Executive Secretary, Maryland Power Plant Siting Advisory Committee.
- 1978-1980 Advisor for Energy and Environment to Honorable Daniel P. Moynihan, U.S. Senator from New York.
- 1979-1980 Central Maryland Health Systems Agency.
- 1980 Review of Water Resources Models, Office of Technology Assessment, U.S. Congress.
- 1980-1981 Committee on Environment and Public Works, U.S. Senate.
- 1982 New Jersey Department of Energy.
- 1982 Committee on Washington Metropolitan Area Water Supply, National Academy of Sciences/National Academy of Engineering.
- 1983-1985 United Nations Project on Water Resource Systems Analysis, Central Water Commission, India.
- 1994 National Defense Center for Environmental Excellence.
- 1997 Mission Leader for the Review of Environmental Research in China, World Bank.