Benjamin L. Turner, Ph.D.

Curriculum Vitae

CURRENT ADDRESS CONTACT

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ResearchGate: https://www.researchgate.net/profile/Benjamin_Turner7

GoogleScholar: https://scholar.google.com/citations?user=a7iNNy8AAAAJ&hl=en

Ag and Food System Dynamics: http://www.agriculture-and-food.com/user/benjamin-turner/

EDUCATION

2012 – 2014	Doctor of	South Dakota State University
	Philosophy	Biological Sciences/Natural Resource Management
		<u>Dissertation</u> : To Plow or Not to Plow: Investigating Grassland to
		Cropland Conversion in the Northern Great Plains Using Systems
		Thinking and Dynamics
		Advisor: Dr. Roger Gates
2009 – 2011	Master of	Texas A&M University-Kingsville
	Science	Agribusiness (emphasis: Ranch Management)
		Graduate Project: Analyzing Past Ranch Financial Performance From
		Varying Marketing Scenarios For Cow Calf Production Using System
		Dynamics
		Advisors: Drs. Roger Hanagriff and Ryan Rhoades
2005 – 2009	Bachelor	Sam Houston State University
	of Science	Agriculture (Cum Laude)
		Advisor: Dr. Michael Lau

EMPLOYMENT

Sept. 2015 – present	Texas A&M University- Kingsville (Kingsville, TX)	Assistant Professor 1) 75% teaching, 25% research appointment 2) Teach and advise undergraduate and graduate students. 3) Obtain external funding for research and scholarly activities.
Sept. 2014 – Sept. 2015	New Mexico State University (Las Cruces, NM)	Post-doctoral researcher 1) System dynamics model development, evaluation, testing, and analysis of sociohydrological acequia systems. 2) Organized/aggregated disparate data from interdisciplinary research team members.

		3) Contributed to multiple high impact manuscripts and/or chapters
Aug. 2011 – May 2012	Oklahoma State University (Stillwater, OK)	Graduate Research Assistant 1) Literature review and writing for a livestock traceability study.
May 2011 – Aug. 2011	Texas AgFinance (Robstown, TX)	Pasture, Range, and Forage Insurance 1) Developed first generation ROI model for a producer decision support tool.
Jan. 2011 – May 2011	Texas A&M UnivKingsville, Title V Programs (Kingsville, TX)	Supplemental Instructor 1) Developed and taught alternative exercises for external group study sessions. 2) Met one-on-one with students in need to overcome deficiencies.
May 2010 – Aug. 2010	Hunt Oil Company (Dallas, TX)	Agricultural Operations 1) Feasibility analysis for organic farm establishment in south Texas operations. 2) Updated Ranching Strategic Plan
May 2009 – Jan. 2011	Ken Martin Ranch (Normangee, TX)	Laborer Day-to-day laborer for herd rotations, vaccinations, shipping and receiving
May 2009 – Aug. 2009	Double J Farms (Normangee, TX)	Laborer Day-to-day laborer for custom hay harvester.
Jan. 2009 – May 2009	Sam Houston State University (Huntsville, TX)	Lab Instructor Developed & taught labs for Forage Crops and Pasture Management (AGRI 4370).
Sept. 2007 – May 2008	Hauck Construction (Huntsville, TX)	Crew member Day-to-day laborer for construction foreman specializing in wood frame structures.
May 2005 – Oct. 2007	Don Eddy Basketball (San Antonio, TX)	Demonstrator and Coach Led camp in drills and coached individual campers throughout skills progression.
May 2000 – May 2005	JH Goodson (Normangee, TX)	Laborer Day-to-day laborer for custom hay harvester.

PUBLICATIONS

Peer-Reviewed Journal Articles (* denotes invited, \$ denotes student first author)

- ^{\$}Tinsley, T., Chumbley, S., Mathis, C., Machen, R., Turner, B. Managing cow herd dynamics in environments of limited forage productivity and livestock marketing channels: an application to semi-arid Pacific island beef production using system dynamics (*Agricultural Systems*, in review)
- Scale Approach for Estimating Erosion, Water Quantity, and Quality in Response to South Dakota Grassland Conversion (*Natural Resource Modeling*, **in review**)
- Turner, B.L., M. Wuellner, Malo, D., Herrick, J.E., Dunn, B., Gates, R. 2018. Ecosystem functions in mixed cropland-grassland systems influenced by soil legacies of past crop cultivation decisions. *Ecosphere* 9 (12), e02521.
- Wuellner, M.R., Gates, R.N., Turner, B.L., Menendez, H.M. 2018. Shaping Soil Watershed Stewardship Through Producer and Influencer Education: A Pilot. *Journal of Extension* 56(6), 6RIB7
- \$Eversole, C.B., Henke, S.B., Turner, B.L., Glasscock, S.N., Powell, R.L., Wester, D.B., Ballard, B.M. 2018. A theoretical population and harvest model for American alligators (Alligator mississippiensis). Herpetological Monographs 32(1): 22-33.
- Gunda, T., Turner, B.L., Tidwell, V. 2018. The Influential Role of Sociocultural Feedbacks on Community-Managed Irrigation System Behaviors During times of Water Stress. *Water Resources Research* 54(4): 2697-2714.
- SWayland, T., West, L., Mata, J., Turner, B. 2018. Why are proposed public land transfers a source of extreme conflict and resistance? *Rangelands* 40(2): 43-54, doi 10.1016/j.rala.2018.01.001.
- Turner, B.L., Fuhrer, J., Wuellner, M., Menendez, H., Dunn, B., Gates, R. 2018. Scientific case studies in land-use driven soil erosion in the central United States: why soil potential and risk concepts should be included in the principles of soil health. *International Soil and Water Conservation Research*, 6(1), March, 63-78. https://doi.org/10.1016/j.iswcr.2017.12.004.
- SBrewster, K., Henke, S.E., Ortega-S, A.J., Tomecek, J., Turner, B. 2017. Do You Hear What I Hear? Human Perception of Coyote Group Size. *Human-Wildlife Interactions* 11(2):167-174.
- Turner, B.L., Wuellner, M., Nichols, T., Gates, R., Tedeschi, L.O., and B. Dunn. 2017. A systems approach to forecast agricultural land transformation and soil environmental risk from economic, policy, and cultural scenarios in the north central United States (2012-2062). *International Journal of Agricultural Sustainability* 15(2):102-123. http://dx.doi.org/10.1080/14735903.2017.1288029.
- *Turner, B.L., Menendez, H.M., Gates, R., Tedeschi, L.O., Atzori, A.S. 2016. System dynamics modeling for agricultural and natural resource management issues: review of some past cases and forecasting future roles. *Resources* 5, 40; doi:10.3390/resources5040040
- Turner, B.L., Tidwell, V., Fernald, A., Rivera, J., Rodriguez, S., Guldan, S., Ochoa, C., Hurd, B., Boykin, K., Cibils, A. 2016. Modeling acequia irrigation systems using system dynamics: model development, evaluation, and sensitivity analyses to investigate effects of socio-economic and biophysical feedbacks. Sustainability 8(10), 1019.
- Turner, B.L., Wuellner, M., Nichols, T., Gates, R., Tedeschi, L.O., and B. Dunn. 2016. Development and evaluation of a system dynamics model for investigating agriculturally driven land transformation in the north central United States. *Natural Resource Modeling* 29(2):179-228; doi: 10.1111/nrm.12087
- Turner, B.L., Kim, H., and D.F Andersen. 2014. Improving Coding Procedures for Purposive Text Data: Researchable Questions for Qualitative System Dynamics Modeling. *System Dynamics Review*. 29(4): 253-263.

- Turner, B.L., Wuellner, M., Nichols, T., and R. Gates. 2014. Dueling Land Ethics: Uncovering Agricultural Stakeholder Mental Models to Better Understand Recent Land Use Conversion. Journal of Agricultural and Environmental Ethics. 27(5):831-856, doi: 10.1007/s10806-014-9494-y
- Turner, B.L., Rhoades, R.D., Tedeschi, L.O., Hanagriff, R.D., McCuistion, K.C., and B.H. Dunn. 2013.

 Analyzing Past Ranch Financial Performance From Varying Cow Sales and Heifer Replacement Scenarios For Cow Calf Production Using System Dynamics. *Agricultural Systems* 114: 6-14.
- Conference Proceedings (Papers Peer Reviewed, \$ denotes student as first author)
- ^{\$}Menendez, H., Wuellner, M., Gates, R., Turner, B., Dunn, B. 2017. Estimating Erosion, Water Quantity and Quality Changes in Response to South Dakota Grassland Conversion. System Dynamics Society International Conference, Cambridge, MA. July 16-20, 2017. Available at: https://www.systemdynamics.org/assets/conferences/2017/proceed/papers/P1438.pdf.
- Wuellner, M., Menendez, H., Dembkowski, D., Turner, B. 2017. Explaining and Predicting Recruitment of Yellow Perch in North American Inland Lakes. System Dynamics Society International Conference, Cambridge, MA. July 16-20, 2017. Available at: https://www.systemdynamics.org/assets/conferences/2017/proceed/papers/P1346.pdf.
- Turner, B.L., Goodman, M., Machen, R., Mathis, C., Rhoades, R., Dunn, B. 2017. Lessons from a long-term Beer Game dataset played by natural resource managers: reinforcing systems education across disciplines. System Dynamics Society International Conference, Cambridge, MA. July 16-20, 2017. Available at: https://www.systemdynamics.org/assets/conferences/2017/proceed/papers/P1075.pdf.
- Turner, B.L., Chumbley, S. 2017. Learning to Teach System Dynamics in Agricultural and Resource Management Before and After the Competence Development Framework. System Dynamics Society International Conference, Cambridge, MA. July 16-20, 2017. Available at: https://www.systemdynamics.org/assets/conferences/2017/proceed/papers/P1169.pdf.
- Turner, B. L. 2017. Development and evaluation of an ecohydrology soil-moisture model to aid in understanding semi-arid ecosystem dynamics. System Dynamics Society International Conference, Cambridge, MA. July 16-20, 2017. Available at: https://www.systemdynamics.org/assets/conferences/2017/proceed/papers/P1073.pdf.
- Turner, B.L. 2015. Grazing modeling: incorporating ecohydrology to complement predictions of ecosystem goods and services. 6th National Conference on Grazing Lands, Grapevine, TX, December 13-16th, 2015.
- Turner, B.L., and V.C. Tidwell. 2015. Model evaluation and sensitivity analyses of an acequia community irrigation system dynamics model. System Dynamics Society International Conference, Cambridge, MA. July 19-24, 2015. Available at: https://www.systemdynamics.org/assets/conferences/2015/proceed/papers/P1152.pdf.
- Turner, B.L., and V.C. Tidwell. 2015. Developing a System Dynamics model to investigate sustainability of traditional acequia communities of New Mexico. System Dynamics Society International Conference, Cambridge, MA. July 19-24, 2015. Available at: https://www.systemdynamics.org/assets/conferences/2015/proceed/papers/P1149.pdf.
- Turner, B.L., Gates, R., Nichols, T., Wuellner, M., Dunn, B.H., and L.O. Tedeschi. 2013. Investigation into Land Use Changes and Consequences in the Northern Great Plains Using Systems

 Thinking and Dynamics. System Dynamics Society International Conference, Cambridge, MA. July 21-25, 2013. Available at:

 https://www.systemdynamics.org/assets/conferences/2013/proceed/papers/P1185.pdf.
- Turner, B.L. 2013. Student Initiated System Dynamics in the Academic Setting: Opportunities, Challenges and Enjoying the Process. 2013 PhD Colloquium. System Dynamics Society

- International Conference, Cambridge, MA. July 21-25, 2013. Available at: https://tinyurl.com/y8vno2tz.
- Turner, B.L., Gates, R., Nichols, T., Wuellner, M., and L.O. Tedeschi. To Plow or Not to Plow: Investigating Grassland to Cropland Conversion in the Northern Great Plains Using Systems Dynamics. In America's Grasslands: The Future of Grasslands in a Changing Landscape. 2nd Biennial America's Grassland Conference. Manhattan, KS. August 12-14, 2013. Available at: https://tinyurl.com/ycqrw7cj.
- <u>Conference Proceedings (Abstracts; symbols denote *invited, *student first author, \$award winner)</u>
- *Weeda, C.E., Machen, R., Mathis, C., Turner, B., Drawe, D.L., Huegele, B., Perotto-Baldivieso, H.L. 2019. Using geospatial technologies to optimize brush management on a south Texas rangeland. Society for Range Management International Conference, Minneapolis, MN, February 10 -14.
- Gunda, T., Turner, B.L., Tidwell, V. 2018. Dynamic Sociocultural Feedbacks Influence Acequia Response During Water Scarcity. 63rd Annual New Mexico Water Conference, Las Cruces, NM, October 15-17, 2018.
- Hanagriff, R., Strong, R., Turner, B. 2018. Teaching Entrepreneurship Through Experiential Learning Activities: A Focus on Implementing Supervised Agricultural Entrepreneurship Experience (SAEE) Program. Conference on Innovation in Agricultural Education, Port au Prince, Haiti.
- *Eversole, C.B., Henke, S.E., Turner, B.L., Glasscock, S.N., Powell, R.L., Wester, D.B., Ballard, B.M. 2018.

 A theoretical population and harvest model for American alligators. Texas Chapter of The Wildlife Society Conference, February 9-11, 2018, Dallas, TX.
- *Brewster, R.K., Henke, S.E., Ortega-Santos, A., Turner, B.L., Tomecek, J.M. 2018. Survey of Rancher Perceptions of Livestock-Predator Conflicts in Texas. Texas Chapter of The Wildlife Society Conference, February 9-11, 2018, Dallas, TX.
- *Brewster, R.K., Henke, S.E., Ortega-Santos, A., Turner, B.L., Tomecek, J.M. 2018. Cost Analysis of Coyote Removal to Aid Cattle Production in Texas. Texas Chapter of The Wildlife Society Conference, February 9-11, 2018, Dallas, TX.
- Turner, B.L, and Nelson, S. 2017. Improving rangeland management models with ecohydrologic connectivity. American Water Resources Association & Water Research Center of Tel Aviv University's 2017 International Conference: Cutting Edge Solutions to Wicked Water Problems, September 10-11, 2017. Available at: http://www.awra.org/meetings/Israel2017/doc/final-program.pdf.
- Nelson, S., Simpson, C.R., Setamou, M., Turner, B.L, Gonzales, J., and Telagamsetty, S. 2017.

 Alternative On-Farm Orchard Designs in Citrus Irrigation Management that Improve Water Savings for Flood and Drip Irrigation Systems. American Water Resources Association & Water Research Center of Tel Aviv University's 2017 International Conference: Cutting Edge Solutions to Wicked Water Problems, September 10-11, 2017. Available at:

 http://www.awra.org/meetings/Israel2017/doc/final-program.pdf.
- *Menendez, H., Avila, L., Turner, B., Atzori, A. 2017. The first year of the Agriculture and Food SIG. System Dynamics Society International Conference, Cambridge, MA. July 16-20, 2017. Available at: https://tinyurl.com/yaqxfuac.
- Turner, B.L., Fuhrer, J., Wuellner, M., Menendez, H.M., Dunn, B., Gates, R. Soil and water externalities stemming from watershed- and regional-scale land use changes. 2017. Society for Range Management International Conference, St. George, UT, January 29-February 2.
- Turner, B.L. Development of a plant-soil-water (ecohydrology) model to aid in rangeland modeling using system dynamics. 2017. Society for Range Management International Conference, St. George, UT, January 29-February 2.

- *Tedeschi, L.O., White, R.R., Nicholson, C.F., Turner, B.L., Fonseca, M.A., Hanigan., M.D. 2016. Traditional versus Structure-based Model Development Strategies. J. Anim. Sci Vol. 94, E-Suppl. 5/J. Dairy Sci. Vol 99, E-Suppl. 1, 613.
- Turner, B.L. and V.C. Tidwell. 2015. Acequias and uncertainty: testing community resiliency to climate change using system dynamics models. American Water Resources Association Annual Conference, Denver, CO. November 16-19, 2015.
- Turner, B.L., Ducheneaux, K., Gates, R., Hoogenstraat, G. and A. Smart. 2014. Ranch management strategies to cope with impacts of watershed-scale externalities. National Science Foundation's Food, Energy, and Water NEXUS Workshop, Rapid City, SD, October 19, 2015.
- Turner, B.L. and R. Gates. 2014. Resource Conservation, Land Use Legacies, and Management Perspectives in Great Plains Agroecosystems. 69th Annual Soil and Water Conservation Society Annual Meeting, Lombard, IL, July 27-30, 2014.
- Turner, B.L., Gates, R., Hoogenstraat, G. and A. Smart. 2014. Ranch management strategies to cope with impacts of watershed-scale externalities. 69th Annual Soil and Water Conservation Society Annual Meeting, Lombard IL, July 27-30, 2014.
- Turner, B.L., Wuellner, M. and R. Gates. 2014. Linking Science and Practice: Applying Case Study Methodology to Investigate Resource Management in Complex Systems. 67th Annual Society for Range Management International Meeting, Technical Meeting and Trade Show. Orlando, FL.
- Turner, B.L., Wuellner, M., Nichols, T. and R. Gates. 2014. Development of a system dynamics model for assessing land use change in the Northern Great Plains. 67th Annual Society for Range Management International Meeting, Technical Meeting and Trade Show. Orlando, FL.
- Turner, B.L., Gates, R., Nichols, T., Wuellner, M. and L.O. Tedeschi. 2013. To Plow or Not to Plow: Investigating Grassland to Cropland Conversion in the Northern Great Plains Using Systems Dynamics. 66th Annual Society for Range Management International Meeting, Technical Training and Trade Show. Oklahoma City, OK.
- Turner, B.L., Gates, R., Nichols, T., Wuellner, M. and L.O. Tedeschi. 2013. To Plow or Not to Plow: Investigating Grassland to Cropland Conversion in the Northern Great Plains Using Systems Dynamics. Black Hills Botanist and Ecologist Workshop, Rapid City, South Dakota, March 7, 2013.
- Turner, B.L., Gates, R., Nichols, T., Wuellner, M. and L.O. Tedeschi. 2013. To Plow or Not to Plow: Investigating Grassland to Cropland Conversion in the Northern Great Plains Using Systems Dynamics. Society of Range Management Annual Meeting, Oklahoma City, OK.
- Turner, B.L., Gates, R., Nichols, T., Wuellner, M. and L.O. Tedeschi. 2012. To Plow or Not to Plow: Investigating Grassland to Cropland Conversion in the Northern Great Plains Using Systems Dynamics. Presented at Colorado Society of Range Management Symposium: Strategic Grazing Management for Complex Adaptive Systems, Fort Collins, Colorado. November 29-30, 2012.
- Turner, B.L., Tedeschi, L.O., Hanagriff, R.D. and R.D. Rhoades. 2011. A revised cow-calf model to evaluate the dynamics of different marketing strategies. Can. J. Anim. Sci. 91: 715-727.

 Presented at Animal Science Modelers Group Annual Meeting. July 9, 2011. New Orleans, LA.
- Turner, B.L., Tedeschi, L.O., Hanagriff, R.D. and R.D. Rhoades. 2010. A cow-calf model to evaluate the dynamics of different marketing strategies. Can. J. Anim. Sci., 90(4): 595-605. Presented at Animal Science Modelers Group Annual Meeting. July 10, 2010. Denver, CO.
- Rhoades, R.D., Dunn, B.H., Tedeschi, L.O., Hanagriff, R.D., Turner, B.L., Sawyer, J.E. and K.C. McCuistion. 2010. Analyzing Past and Forecasting Future Ranch Financial Performance From Production, Resource, and Financial Perspectives. Proceedings from the Annual Meetings of the Southern Journal of Agricultural Economics. Journal of Agriculture and Applied Economics

- 42(3):599. Presented at Southern Association of Agricultural Sciences (SAAS) Meeting, Orlando FL., February 6-9, 2010.
- Student presentations, posters, and abstracts (\$ denotes student placing in conference competition)
- Aderinto, R.F., Machen, R., Anoruo, A., Ortega-S, J.A., Turner, B. 2018. Managing cowherd dynamics in common-pool forage resource systems characterized by poor forage quality and productivity-application to small-holder herding in semi-arid Nigerian uplands. Texas Section Society for Range Management Annual Meeting, Lubbock, TX, October 10-12.
- Hill, K., Campbell, K., West, L., Turner, B.L. 2018. Adaptive management practices for maintaining forage quality during climate change. TAMUK 11th Annual Javelina Research Symposium, Kingsville, TX, April 2018.
- West, L., Burns, H., Hamaker, Z., Aderinto, R.F., Turner, B.L. 2018. Water Conservation: Perception and Reality Between Society At-Large and Scientific Managers. TAMUK 11th Annual Javelina Research Symposium, Kingsville, TX, April 2018.
- West, L., Burns, H., Hamaker, Z., Aderinto, R.F. 2018. Water Conservation: Perception and Reality Between Society At-Large and Scientific Managers. Presented at the 2018 Rangeland Cup Competition, Society for Range Management International Conference, Sparks, NV, January 29-February 1, 2018.
- ^{\$}Aderinto, R.F., Tinsley, T., Machen, R., Ortega-S, J.A., Turner, B. 2018. Managing cowherd dynamics in common-pool forage resource systems characterized by poor forage quality and productivity-application to small-holder herding in semi-arid Nigerian uplands. Society for Range Management International Conference, Sparks, NV, January 29-February 1, 2018. (*First place winner, M.S. poster division*)
- Tinsley, T., Aderinto, R.F., Machen, R., Turner, B. 2018. Managing cowherd dynamics in environments of limited forage productivity and livestock marketing channels applications to semi-arid island beef production systems. Society for Range Management International Conference, Sparks, NV, January 29-February 1, 2018.
- Zach Hamaker 2017. Economic, Policy, and Environmental Farm Management Issues in the Rio Grande Valley. Presented at the 9th Annual Javelina Research Symposium, Texas A&M University-Kingsville.
- Lisa West 2017. Using Systems Thinking in Agriculture to Integrate Concepts Promoted in Permaculture-systems to Facilitate Producer Adoption. Presented at the 9th Annual Javelina Research Symposium, Texas A&M University-Kingsville.
- ^{\$}Mata, J., Wayland, T., and West, L. 2017. Identifying Unintended Ecological and Socioeconomic Consequences of Proposed Public Land Transfers. Society for Range Management's Rangeland Cup Competition (*First Place High Team*)
- ^{\$}West, L., Turner, B. 2016. Using Systems Thinking in Agriculture to Integrate Concepts Promoted in Permaculture-systems to Facilitate Producer Adoption. 14th Annual Texas A&M University System Pathways Student Research Symposium, Prairie View A&M, Prairie View, TX, November 3-4, 2016. (*2nd place, Graduate Agriculture section*).
- Menendez, H., Wuellner, M., Gates, R., Turner, B., Dunn, B. 2016. Using System Dynamics to Estimate Erosion, Water Quantity and Quality Changes in Response to South Dakota Grassland Conversion. Eastern South Dakota Water Conference, Brookings SD, October 27, 2016. (1st place, Overall Graduate Student)
- West, L., Turner B. 2016. Using Systems Thinking in Agriculture to Integrate Concepts Promoted in Permaculture-systems to Facilitate Producer Adoption. 8th Annual Javelina Research Symposium, Texas A&M Univ.-Kingsville, October 26, 2016.

- West, L., Turner B. 2016. Using Systems Thinking in Agriculture to Integrate Concepts Promoted in Permaculture-systems to Facilitate Producer Adoption. Undergraduate Research Presentation Luncheon for Presidential and McNairs Scholars, Texas A&M Univ.-Kingsville, October 24, 2016.
- Menendez, H., Wuellner, M., Gates, R., Turner, B., Dunn, B. 2016. Water and Soil Impacts from Grassland Conversion. Soil Stewardship for Healthy Landscapes Workshop, South Dakota (June 14-16).
- Menendez, H., Wuellner, M., Gates, R., Turner, B., Dunn, B. 2016. A Framework for Estimating Erosion Changes in Response to South Dakota Grassland Conversion using System Dynamics Methodology. North Central Region Water Conference, Lincoln NE, March 21-23, 2016.
- Brennan, J., Menendez, H., Chowanski, K., Turner, B., Hendrix, M., Koehler, C. 2016. Vegetation recovery on South Dakota Mixed Grass Prairie after Prairie Dog Removal. Society for Range Management 2016 Annual Meeting, Corpus Christi, TX. (poster)
- Menendez, H., Wuellner, M., Gates, R., Turner, B., Dunn, B. 2016. Estimating Historical Erosion Changes in South Dakota Due to Grassland Conversion. Society for Range Management 2016 Annual Meeting, Corpus Christi, TX. (poster)
- Sabie, R., Cruz, J.J., Turner, B.L., Moreno, A.L. and I. Hewitt. 2015. Land use assessment of acequia irrigated valleys using multi-date aerial imagery. American Water Resources Association Annual Conference, Denver, CO. November 16-19, 2015. (presentation)
- Sabie, R., Fernald, A.G., Gay, M., Turner, B., Cruz-Chairez, J.J., Moreno, A.L., and I. Hewitt. 2015. Estimating land cover in acequia-irrigated valleys using historical imagery. 60th Annual New Mexico Water Conference, Coloring Outside the Lines: Can science help us be creative and innovative in managing our water?, Taos, NM. October 7-9, 2015. (poster and abstract)

Manuscripts in Development (as lead author)

- Turner, B.L., Gates, R., M. Wuellner, H. Menendez, J. Rivera. Why does it take so long for indigenous knowledge of local resource managers to become common knowledge for the researcher scientist? (target journal: *Journal of Extension* or *Ecology and Society*)
- Turner, B.L. Managing for sustainable plant-soil-water dynamics in agricultural production systems with varying climate, irrigation, and fertilization strategies (target journal: *Agricultural Systems*)
- Turner, B.L. Model laboratories: a quick-start quick for design of simulation experiments for dynamic systems models (target journal: *Ecological Modeling*)

Book chapters in development (as lead author)

Turner, B.L., Tidwell, V. Connection and Integration: Using System Dynamics Modeling to Explore Acequia System Resiliency. In Guldan, S. (ed). *Elements of Resilience in Community Based Irrigation Systems: Acequias of the Southwestern United States*, New Mexico Agricultural Experiment Station, forthcoming.

Popular Press, Extension, and/or Non-peer reviewed contributions

- Gates, R., Turner, B., Wuellner, M, Dunn, B. 2016. Forecasting Unintended Consequences of Grassland Conversion, in On Pasture; available at onpasture.com/2016/05/30/forecasting-unintended-consequences-of-grassland-conversion/
- Gates, R., M. Wuellner, B. Turner. 2016. Soil Stewardship for Healthy Landscapes. Accessible at http://igrow.org/livestock/beef/soil-stewardship-for-healthy-landscapes/
- Gates, R., B. Turner, M. Wuellner, B. Dunn. 2016. Forecasting Unintended Consequences of Grassland Conversion. Accessible at http://igrow.org/livestock/beef/forecasting-unintended-consequences-of-grassland-conversion/

Turner, B.L. and R. Gates. 2014. Grassland conservation should remain high priority. Grassroots Vol. 16 Issue 7. Accessible at

http://www.sdgrass.org/uploads/1/8/6/5/18654664/november_2014.pdf.

Turner, B.L. 2013. Systems Thinking Offers a New Approach to Agricultural Education and Research.

The Connector (iseesystems® quarterly newsletter), Spring 2013. Accessible at:

http://www.iseesystems.com/community/connector/Zine/2013_Spring/AgEduResearch.aspx

GRANTS AND MONETARY AWARDS

010/1141	571115 101011E171111 710711155	
2018-	USDA-NIFA Non Land Grant Colleges of Agriculture: Enhancing Agriculture	\$147,574
2020	Mechanics Education & Curriculum in Higher Education (Ag MECH Ed)	
	(S. Chumbley, PI; Co-PIs B.L. Turner and G. Schuster)	
2018-	USDA Higher Education Challenge. Curriculum Development for Wicked	\$297,353
2021	Problem Solving [PI, Co-PIs Steven Chumbley (TAMUK), Ryan Rhoades	(TAMUK
	(Colorado State), Erin Cortus (South Dakota State), Melissa Wuellner	\$146K)
	(University of Nebraska-Kearney)]	
2016	TAMUK Summer Research Development Support	\$3,000
2016	McNair's Undergraduate Scholar Faculty Sponsor- Ms. Lisa West	\$2,700
2016	TAMUK Undergraduate Research Grant: Assessment of Agricultural Curricula in	\$2,900
	Circulation in South Texas Homeschools	
2015	TAMUK College of Agriculture, Natural Resources, and Human Sciences Faculty	\$500
	Travel Support Award	

OTHER GRANTS AND MONETARY AWARDS PURSUED

2018	NSF CREST Center for Sustainable Water Use (CREST-SWU) (PI Lee Clapp, Co-PIs Tushar Sinha, Selahattin Ozcelik, Shad Nelson, Benjamin Turner)	\$5 million
2018	USDA-NIFA FACT: Assembling of a Dataset of Water Utilization by Beef Cattle and Development of a Decision-Support Tool to Assist with Sustainable Livestock Production in the United States (PI Luis Tedeschi, Texas A&M TAMUK Co-PI Benjamin Turner)	\$1.5 million (\$75K TAMUK)
2018	USDA-NIFA Sustainable Agriculture Systems (SAS) Improving root zone soil water and nutrient availability, farm economics, and regional policy for sustainable crop production in Gulf Coast States (PI Binyak Mohanty, Texas A&M lead; TAMUK co-PIs Tushar Sinha, Benjamin Turner)	\$5 million (\$500k TAMUK, \$172K TAMUK ag)
2018	NSF INFEWS A multidisciplinary modeling framework to enhance reliability and resiliency of Food-Energy-Water Systems in the corn production areas of Kansas and Texas High Plains (PI Tushar Sinha, Co-PI Benjamin Turner)	\$2.5 mil (\$500k TAMUK)
2018	USDA-NIFA Research and Extension Experiences for Undergraduates (REEU): Fostering the Next Generation of Agricultural Communicators and Educators through Research and Extension Experiences (PI K. Hall and T. Sorensen, Utah State; Co-PIs Chumbley and Turner, TAMUK)	\$200,727 (TAMUK \$71K)

2018	USDA-NIFA Sustainable Agriculture Systems (SAS), The Intermountain West Water Collaborative: a systems approach to increased agricultural productivity, ecosystem health and community adaptive capacity through coordinated landscape management [PI Sam Fernald, New Mexico State; Co-PIs McEvoy (MSU), Safeeq (UC-Merced), Turner (TAMUK), Paige (UW), Megdal (UA), Ochoa (OSU), Neilson (USU), Yoder (WSU), Kolok (UI), Harpold (UN), Tidwell (Sandia Nat. Labs) (denied)]	N/a
2018	Southern SARE- Defining Sustainable Ranching Using A Systems Approach: Integration of Soils, Plants, Animals, Financials, and People. (Principal Investigator, Co-PIs R. Machen and J.A. Ortega-S., <i>in review</i>)	\$275,000
2017	Southern SARE- Defining Sustainable Ranching Using A Systems Approach: Integration of Soils, Plants, Animals, Financials, and People. (Principal Investigator, Co-Pls R. Machen and J.A. Ortega-S., Application denied)	\$286,880
2017	USDA Water for Food Production Systems. Systems Environment Analyses for Sustainable Optimal Production (SEASON), Utah State PI; TAMUK PI Catherine Simpson, Co-PIs Turner, S. Nelson, L. Camacho (application denied)	\$5.4 mil (\$800k TAMUK)
2017	USDA NIFA Resilient Agroecosystem. An integrated approach for enhancing resilience of rangeland agroecosystems stressed by rapid juniper expansion in the western U.S. (Co-PI with PI Carlos Ochoa of Oregon State University, application denied).	\$1.2 mil (\$85K TAMUK)
2017	National Science Foundation's Center for Research Excellence in Science and Technology (CREST) Water-Energy-Food Sustainability (WEFS) Center at Texas A&M University-Kingsville (Co-PI with William Worek et al., Application denied)	\$5 million
2016	USDA Agriculture and Natural Resources Sciences for Climate Change and Variability Challenge Area. Management adoption of conservation practices to enhance resiliency to climate change in south Texas (Application denied)	\$150,000
2016	USDA Water for Agriculture Challenge. Identifying Barriers To Management Adoption Of Conservation Practices To Enhance Resiliency To Water Scarcity In South Texas (Principal Investigator; Application denied)	\$150,000
2016	Pre-proposal: Social and hydrologic CONections to promote Ecosystem and Community Thrivability along irrigated river systems; National Science Foundation Projects in Integrated Research and Education (PI Sam Fernald-New Mexico State; Full proposal NOT invited)	\$4.3 mil.
2016	TAMUK University Research Award: Grazing forage quality: when is good 'good enough'? Analysis of rancher mental models of forage quality in situ (PI, with Co-PI Alfonso Ortega)(Application denied)	\$12,500
2016	USDA/(NIFA)-HEC: Reaching Underrepresented Students in Agriculture Through Research Projects (Co-PI, with lead S. Chumbley, D. Ruppert, S. Nelson, T. Machado; Application denied)	\$192,974
2016	USDA/(NIFA)-HEC: Advancing Students Systems Thinking Skills (ASSYSTS) in Agriculture and Natural Resource Sciences (Lead PI, with Co-PIs R. Rhoades, D. Ruppert, G. Schuster, A. Anoruo, R. Stanko, S. Chumbley, S. Nelson; Application denied)	\$149,989

2016	USDA/(NIFA)-HSI: Improving Hispanic Undergraduate Retention by Preparing Parents as Advocates for College Success in Agricultural and Human Sciences Academic Disciplines (Co-PI with T. Machado, N. Bell, T. Oblad, W. Kuvlesky; Application denied)	\$275,000
2016	USDA/(NIFA)-HSI: CULTURe: Cultivating Underrepresented Leaders Through Undergraduate Refinement of Leadership Skills (Co-PI with S. Chumbley and R. Rhoades; Application denied)	\$274,454
2016	National Science Foundation-Innovations in Graduate Education: Training 'Wicked' Problem Solvers for Contemporary Natural Resource Issues (Co-PI with South Dakota State University, R. Gates and M. Wullner, and TAMUK, R. Rhoades and S. Chumbley; Application denied)	\$491,759
2015	USDA Water for Agriculture Challenge. Identifying Barriers To Management Adoption Of Conservation Practices To Enhance Resiliency To Water Scarcity In South Texas (Co-Principal Investigator, Co-PI Dr. Ryan Rhoades; Application denied)	\$149,465
2015	USDA-NIFA HSI Grant Program. Building a CULTURe of Leadership Skills (Collaborator, Dr. Ryan Rhoades (PD), S. Nelson, G. Schuster, D. Ruppert, T. Machado, K McCuistion (Co-PIs); application denied)	\$274,715
2015	USDA-NIFA HEC Grant. From Teaching to Learning: Using Systems Thinking to Improve Learning Outcomes in Natural Resource Sciences. (Co-Principal Investigator, Dr. Ryan Rhoades (PD), S. Nelson, G. Schuster, D. Ruppert, A. Anoruo, R. Stanko (Co-PIs); Application denied)	\$149,975
2013	Department of the Interior, U.S. Fish and Wildlife Service's Plains and Prairie Potholes LCC – Improving Resource Conservation in Northern Great Plains Grasslands: Estimating losses, measuring consequences, and engaging stakeholders. (Co-principal Investigator, Co-PI Dr. Roger Gates; Application denied)	\$101,844
2013 2012	Pheasants Forever Graduate Research Stipend (Application denied) National Aeronautics and Space Administration, South Dakota Space Grant Consortium Graduate Student Research Grant – Investigating grassland to cropland decisions in NGP (Application denied)	\$500 \$14,000

TEACHING EXPERIENCE

Courses Taught (current semester courses in bold)	<u>Role</u>	<u>Modality</u>
AGBU 2301 Principles of Agribusiness Management	Instructor of record	Web-enhanced
AGBU 2317 Intro. to Agricultural Economics	Instructor of record	Web-enhanced
AGRI 2330 Introduction to Systems Thinking for Ag	Instructor of record	Web-enhanced
AGBU 3310 Food and Agricultural Product Retailing	Instructor of record	Hybrid
AGRI 3330 Decision Support Tools for Ag Systems	Instructor of record	Web-enhanced
AGBU 3371 Farm and Ranch Business Management	Instructor of record	Face-to-face
AGBU 3380 Environmental Economics	Instructor of record	Online
AGBU 3390 Water Resource Management Issues	Instructor of record	Hybrid
AGBU 3390 Readings in Strategic Management	Instructor of record	Online
AGBU 3995 Internship	Instructor of record	Online
AGBU 4325 Rangeland Resource Economics	Instructor of record	Hybrid
AGBU 4360 Agricultural Price Analysis	Instructor of record	Face-to-face
AGBU 4395 Problems in Agribusiness	Instructor of record	Face-to-face

AGBU 5305 Graduate Research Project	Instructor of record	Face-to-face
AGBU 5306 Thesis	Instructor of record	Face-to-face
AGSC 5390 Advanced Agricultural Issues	Instructor of record	Online
AGBU 5390 Advanced Agriculture and Ecological Modeling	Instructor of record	Face-to-face
AGBU 5395 Advanced Problems in Agribusiness	Instructor of record	Face-to-face
RAMT 5351 A Systems Approach to Natural Resource	Instructor of record	Face-to-face
Problem Solving		

INVITED LECTURES, CO-TEACHING, OR WORKSHOPS

Course, institution, and date RWSC 3380 Rangeland Improvements; 10/25/2018 System Dynamics Society's Agriculture and Food Special Interest Group; 02/28/2017	Role Invited Lecture: Economic Analysis of Private Rangeland Improvements Invited Lecture: Soil-water modeling to feedback loop impact analysis	Faculty of Record Dr. Sandra Rideout-Hanzak Dr. Alberto Atzori, University of Sassari, Italy
James G. Teer Conservation Leadership Institute's Early Career Professional Program; Texas Chapter of the Wildlife Society; 09/15/2016	Invited Lecture: Conceptual system dynamics model development in Vensim™	Dr. Selma Glasscock
HON 383 The Wicked Problem of Land Conservation Past, Present, and Future, South Dakota State Univ. 09/12/2016	Invited Lecture: Alternative futures in a changing landscape: the NGP soil health challenge	Dr. Melissa Wuellner
ANSC 689 System Dynamics of Agriculture and Life Sciences, Texas A&M, 01/15/2016	Invited Lecture: Gettin' In and Stayin' In: Creating and Sustaining Systems Model and Analysis Research Opportunities	Dr. Luis Tedeschi
John B. Armstrong Lectureship in Systems Thinking / RAMT 5350 Systems Thinking for Natural Resource Problem Solving, 2015 & 2016	Invited Lecture: SD Modeling of Land Use Change in the Northern Great Plains: Economic, Policy, and Cultural Scenarios	Dr. Clay Mathis (with Michael Goodman, Innovation Associates)
GEOS 697 Interdisciplinary Modeling: Water-related issues and Climate change, NMSU, Nevada-Reno, and Idaho State EPSCoR, June 6-10, 2015	Lecturer and Project Leader: Acequia Irrigation Communities	Dr. Laurel Saito (Nevada-Reno) & Dr. Sam Fernald (NMSU)
ANSC Introduction to Ranch Management, November 2012	Invited Lecture: Interconnectedness of grazing and forage management decisions	Dr. Sandy Smart

GRADUATE STUDENT ADVISING (WITH TITLE AND YEAR COMPLETED OR ESTIMATED COMPLETION TIME) CHAIR OR CO-CHAIR

Jase Taylor, A System Dynamics Model For Determining The Feasibility of Early-Weaning Calves on First-Calve Heifers at Deseret Cattle and Citrus (M.S. thesis, TAMUK, cochair, completed)	2016
Ty Tinsley, Managing cowherd dynamics in environments of limited forage productivity and livestock marketing channels – applications to semi-arid island beef production systems (M.S. thesis, TAMUK, chair, completed)	2018
Rhoda Aderinto, Managing cowherd dynamics in common-pool forage resource systems characterized by poor forage quality and productivity- application to small-holder herding in semi-arid Nigerian uplands (M.S. thesis, TAMUK, chair, completed)	2018
Marlyn Saucado, Results of a survey to analyze rancher and consultant mental models related to rangeland monitoring and assessment practices (M.S. graduate project, TAMUK, chair, in progress)	2019
Mosunmola E Oyeleye, Economic evaluation of alternative crop management and irrigation strategies using a system dynamics soil-water-balance model (M.S. thesis, in progress)	2019
COMMITTEE SERVICE	
Kyle Brewster (RWSC), Cost:benefit analysis of coyote removal as a management option in Texas Cattle Ranching (M.S., TAMUK, completed, Dr. Scott Henke chair)	2017
Brandon Stoddard (PLSS), Standing forage effects of brush piles and exclosure, and seedback effects of turbine construction on shallow calciustolls of the western Edwards (M.S., TAMUK, completed, Dr. David Ruppert chair)	2017
Lee Creech (RAMT), Profit potential and economic feasibility of TA Ranch acquiring additional land leases (M.S., TAMUK, completed, Dr. Rick Machen chair)	2017
Hector Menendez (NRM), Estimating Erosion, Water Quantity and Quality Changes in Response to South Dakota Grassland Conversion (Ph.D., South Dakota State, completed, Dr. Melissa Wuellner chair)	2018
Hank Willemsma (RAMT), Economic and Logistical Comparison of Drought Mitigation Strategies as they Affect the Turner Ranch Market Herd (M.S., Completed, Dr. Rick Machen chair)	2018
Justin Staley (RAMT), Implications to Holistically Transition Deseret Cattle & Citrus from Rotational to an Intensive Grazing System (M.S., completed, Dr. Rick Machen chair)	2018
Benjamin Brown (AGSC), Educators Perceptions of Objectives Met Within Junior Agricultural Mechanics Show Projects (M.S., completed, Dr. Steven Chumbley chair)	2018
Candace Weeda (RAMT), Financial Evaluation and Management Implications of Pasture Renovation at Roche-Thomson Ranch: A Comprehensive Management Plan (M.S., completed, Dr. Rick Machen chair)	2018
Daniel Chase Carrol (AGSC) STEM Career Interest of High School Agriculture Students (M.S., completed, Dr. Steven Chumbley chair)	2018
Joe Glasscock (RAMT), TBD	2019
Chance Muelstein (RAMT), TBD	2019
John Olsen (RAMT), Calving Season Analysis for Deseret Cattle and Timber (M.S., in progress, Dr. Rick Machen, chair)	2019
Tony Falk (RWSC), (Ph.D., TAMUK, in progress, Dr. Bill Kuvlesky chair)	2019
Gerardo Bezanilla (RWSC) (Ph.D., TAMUK, in progress, Dr. Alfonso Ortega-S, chair)	2019

UNDERGRADUATE STUDENT ADVISING (CHAIR, WITH TITLE AND YEAR COMPLETED)

Sydnee Cissna (B.S., Marketing, Minor: Agribusiness), Water Resource Management

Issues: Characterization of the Nueces River Watershed (Honors College Thesis, completed).

Zachary Hamaker (B.S., Agribusiness), Investigating the Agricultural Sustainability of the
Rio Grande Valley of Texas (Honors College Thesis, in progress).

SERVICE, LEADERSHIP & DEVELOPMENT, AND PROFESSIONAL RECOGNITIONS

PROFESSIONAL OR PARTICIPATORY MEMBERSHIPS	Years
Soil and Water Conservation Society	2014-present
System Dynamics Society	2012-present
Agriculture and Food Special Interest Group	2016-present
Society for Range Management	2012-present
Texas section	2014-present
South Dakota section	2012-present
South Dakota Grasslands Coalition	2012-2014
International Society for Ecological Economics	2013-2016
American Water Resources Association	2015, 2017
Animal Science Modelers Group	2009-2012
National Agri-Marketing Association	2008-2011
Agricultural Business Club (Sam Houston State Univ.)	2007-2009
Delta Tau Alpha honor society (Sam Houston State Univ. chapter)	2007-2009
Chi Alpha Christian Fellowship	2006-2012

PROFESSIONAL & LEADERSHIP SERVICE

2016

PROFESSIONAL & LE	ADERSHIP SERVICE
<u>Internal Service</u>	
2019	TAMUK Soil Science Faculty Search Committee, Chair (department level)
2018-2020	TAMUK Faculty Senate
	Elections committee (2018)
2017-2019	TAMUK Faculty Developmental Leave Committee (University level)
2016-2018	Scholarship Committee; College of Agriculture, Natural Resources, and Human
	Sciences (College level)
2017	TAMUK AGBU Faculty Hiring Search Committee (department level)
2016	TAMUK AGBU Faculty Hiring Search Committee (department level)
2015	Library representative, Department of Agriculture, Agribusiness & Environmental
	Sciences
2015-2016	Faculty advisor, Kappa Chi (student organization)
External Service	
2013-present	Article reviewer, System Dynamics Society International Conference
2016-present	Society for Range Management, Texas section
2018	Awards Committee, Texas Section SRM
2016	Policy Committee, Texas Section SRM

Awards Committee, Texas Section SRM

2016 Society for Range Management, Conference Technical Session Rangeland Social Science II: Culture, Policy, and Ecosystems (session moderator), Corpus Christi, TX

Student Service

2014	Captain, Rangeland Cup Competition (SDSU), Society of Range Management
2009-2010	Student competition advisor, TAMUK National Agri-Marketing Association
	competition team
2008-2009	Agribusiness club (Sam Houston State Univ.) president
2008-2009	Captain, SHSU National Agri-Marketing Association competition team

PUBLIC SERVICE & VOLUNTEERING

TODERO DERIVICE OF T	OLO IVI ELIMINO
2018	Judge, 11th Annual Javelina Research Symposium
2017	TAMUK Office of Student Access Graduate School Roundtable, July 14 2017
2017	Texas FFA Agriscience Fair Judge, July 11, 2017, Corpus Christi, TX
2017	Judge, 9 th Annual Javelina Research Symposium
2016	Aided in AGSC/AGBU recruiting effort for students from TAMU Galveston (Aug. 17)
2016	Judge, 7 th Annual Javelina Research Symposium
2015	Panelist, Mentors Lounge, SDSU WL 792 Teaching Strategies
2013	Volunteer, South Dakota Society of Range Management's Range Camp, Sturgis SD
2013	Volunteer, Rangeland Days, Cottonwood Research Station, Philip SD
2012	Demonstrator, USDA Higher Education Challenge Grant, Range Management
	Monitoring and Assessment (video series)
2012	Volunteer, Bureau of Land Management/West River Ag Center (livestock research).
2009-2011	Volunteer, Chi Alpha, TAMUK Fall and Spring festivals
2011-2012	Student leadership, Oklahoma State Chi Alpha
2010	Volunteer, Hunt Oil Company Internship program events (Winston Solar Car;
	Reading Program)
2009	Volunteer, FFA competition judge (various events; regional and state meets)
2009-2011	Student leadership, TAMUK Chi Alpha
2008-2009	Student leadership, SHSU Chi Alpha

CONTINUING EDUCATION & PROFESSIONAL DEVELOPMENT

Summer READ Club in Distance Education, TAMUK Distance Learning and Instructional
Technology
Distance Education Certification, TAMUK Center for Teaching Effectiveness
Attended the 4 th Annual South Texas Student Success Conference, TAMUK
Graduate Research Seminar. South Dakota State University, January, 23, 2013
Introduction to GIS (summer short course), South Dakota School of Mines and Technology
(Instructor: Dr. MaryBeth Price)
Interpreting Indicators of Rangeland Health training. Hosted by USDA Bureau of Land
Management. Instructors: Dr. Jeff Herrick, Dr. Pat Sharver, Dr. Fee Busby, Dr. David Pyke.
July 17-20, 2012. Bell Fouche, SD.
Social and Behavioral Responsible Conduct of Research Course 1. CITI (Collaborative
Institutional Training Initiative. Completed 8-28-2011; updated 08/2013; 01/2016

2010-	Quarterly/Bi-annual research meeting with Mr. Corey Peck (Managing Director, Lexidyne
2014	LLC) covering system dynamics concepts, modeling considerations, and stakeholder/client
	engagement.
2009-	Monthly research meetings with Dr. Luis Tedeschi covering systems model development
2010	and evaluation procedures. College Station, TX.

HONORS AND AWARDS

2017	Texas A&M University's Distance Education and Instructional Technology <i>Innovator of</i>
	the Year Award in Teaching
2014	Society of Range Management's Rangeland Cup (1st Place High Team, South Dakota
	State University)
2014	The Nature Conservancy's J.E. Weaver Graduate Student Scholar (\$1,000)
2013	W.D. Farr Memorial Scholarship recipient (\$12,000) Sponsored by The National
	Cattlemen's Foundation
2013	Barry Richmond Award recipient (\$1,000) Sponsored by iSeeSystems, Inc.
2011-2012	Sitlington Enriched Graduate Scholarship, Department of Agricultural Economics
	(\$1,000) Oklahoma State University
2009-2010	Texas A&M-Kingsville Graduate Student of the Year (Agribusiness)
2008-2009	Sam Houston State University Agriculture Student of the Year (1 of 4 awarded)
2005-2009	The Normangee Livestock Board Student Scholarship (\$2,000)