

Watershed Program - Recent Publications (2015 to 2019)

*Work completed while a member of the Watershed Program

2019/In Press

- Bellmore, R., **G. R. Pess**, J. J. Duda, J. O'Connor, A. E. East, M. M. Foley, A. Wilcox, J. Major, P. Shafroth, C. Magirl, C. Anderson, J. Evans, C. Torgersen, L. Craig, and **S. A. Morley**. 2019. Conceptualizing ecological responses to dam removal: If you remove it, what's to come? *Bioscience* 69: 29-36.
- Bond, M. H.**, T. G. Nodine*, **T. J. Beechie**, and R. W. Zabel. 2019. Estimating the benefits of widespread floodplain reconnection for Columbia River Chinook salmon. *Canadian Journal of Fisheries and Aquatic Sciences* 76(7):1212-1226
- Brophy L. S., **C. M. Greene**, V. C. Hare B. Holycross, A. Lanier, W. N. Heady, et al. 2019. Insights into estuary habitat loss in the western United States using a new method for mapping maximum extent of tidal wetlands. *PLoS ONE* 14(8): e0218558.
<https://DOI.org/10.1371/journal.pone.0218558>
- Crozier, L. G., M. M. McClure, **T. J. Beechie**, S. J. Bograd, D. A. Boughton, M. I. Carr, T. D. Cooney, J. B. Dunham, **C. M. Greene**, et al. 2019. Climate vulnerability assessment for Pacific salmon and steelhead in the California Current Large Marine Ecosystem. *PLoS ONE* 14(7).
- Duda, J.J., J. H. Anderson, M. M. Beirne, S. J. Brenkman, P. Crain, J. Mahan, M. McHenry, **G. Pess**, R. Peters, and B. Winter. 2019. Complexities, context, and new information about the Elwha River." *Frontiers in Ecology and the Environment* 17(1):10-11.
- Duguid, W .D. P, J. L. Boldt, L. Chalifour, **C. M. Greene**, M. Galbraith, D. Hay, D. Lowry, S. McKinnell, C. M. Neville, J. Qualley, T. Sandell, M. Thompson, M. Trudel, K. Young, and F. Juanes. 2019. Historical fluctuations and recent observations of Northern Anchovy *Engraulis mordax* in the Salish Sea. *Deep Sea Research II* 159:22-41.
- King, J., J. Boldt, B. Burke, **C. Greene**, J. Moss and C. Neville. 2019. Northeast Pacific Juvenile Salmon Summer Surveys in 2018. *PICES Press* 27(1):19-26
- Munsch, S. H.**, **C. M. Greene**, R. C. Johnson, W. H. Satterthwaite, H. Imaki, and P. L. Brandes. 2019. Warm, dry winters truncate timing and size distribution of seaward-migrating salmon across a large, regulated watershed. *Ecological Applications* 29(4):e01880.

Pess, G., M. McHenry, W. J. Ehinger, T. **Bennett**, **K. Hanson** and **M. Liermann**. 2019. Strait of Juan de Fuca Intensively Monitored Watersheds. 2018 Annual Report. Prepared for the Salmon Recovery Funding Board.

Satterthwaite. W. H., K. S. Andrews, B. J. Burke, J. L. Gosselin, **C. M. Greene**, C. J. Harvey, **S. H. Munsch**, M. R. O'Farrell, J. F. Samhour, **K. L. Sobocinski***. In press. Ecological thresholds in forecast performance for key United States West Coast Chinook salmon stocks. ICES Journal of Marine Science.

Shelton, A. O., R. P. Kelly, J. L. O'Donnell, L. K. Park, P. L. Schwenke, **C. M. Greene**, R. Henderson, and E. M. Beamer. 2019. Environmental DNA provides quantitative estimates of a threatened salmon species. *Biological Conservation* 237:383-391.

Steel, E. A., **M. Liermann** and P. Guttorp. 2019. Beyond Calculations: A Course in Statistical Thinking, *The American Statistician* 73(sup1), 392-401, DOI:10.1080/00031305.2018.1505657

Stefankiv, O., **T. J. Beechie**, J. E. Hall*, **G. R. Pess**, and **B. Timpane-Padgham**. 2019. Influences of valley form and land use on large river and floodplain habitats in Puget Sound. *River Research and Applications* 35(2):133-145.

Stefankiv, O., J. Hall*, **B. Timpane-Padgham**, **C. Nicol**, **C. Fogel**, **T. J. Beechie**, and **G. R. Pess**. 2019. Salmon Habitat Status and Trends: Monitoring Protocols. U.S. Dept. of Commerce, NOAA Processed Report, NMFS-NWFSC-PR-2019-03, 44 p.

Wathen, G., J. E. Allgeier, N. Bouwes, **M. M. Pollock**, D. E. Schindler, and C. E. Jordan. 2019. Beaver activity increases habitat complexity and spatial partitioning by steelhead trout. *Canadian Journal of Fisheries and Aquatic Sciences*, 76(7):1086-1095. DOI:https://DOI.org/10.1139/cjfas-2018-0171

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Bond, R. M., **C. L. Nicol**, J. D. Kiernan, and B. C. Spence. 2018. Occurrence, fate, and confounding influence of ghost PIT tags in an intensively monitored watershed. *Canadian Journal of Fisheries and Aquatic Sciences* 76(2). DOI: 10.1139/cjfas-2017-0409
(Work completed at a previous position)

- Chamberlin, J. W.**, M. Gamble, K. Connelly, J. Gardner, R. Barsh, M. O’Connell, J. Keister, D. Beauchamp, M. Schmidt, B. Beckman, and K. Warheit. 2017. Assessing early marine growth in juvenile Chinook salmon: factors affecting variability in individual growth in northern Puget Sound. Final Report to Washington State Recreation and Conservation Office, Salmon Recovery Funding Board.
- Dittbrenner, B. J., **M. M. Pollock**, J. W. Schilling, J. D. Olden, J. J. Lawler, and C. E. Torgersen. 2018. Modeling intrinsic potential for beaver (*Castor canadensis*) habitat to inform restoration and climate change adaptation. PLoS One 13(2), p.e0192538.
<https://DOI.org/10.1371/journal.pone.0192538>
- Duda, J. J., J. Anderson, M. Bierne, S. Brenkman, P. Cain, J. Mahan, M. McHenry, **G. Pess**, R. Peters, and B. Winters. Accepted. Complexities, historical context, and emerging information about the Elwha River dam removal project. Frontiers in Ecology and the Environment (write back letters).
- Gamble, M. M., K. A. Connelly, J. R. Gardner, **J. W. Chamberlin**, K. I. Warheit, and D. A. Beauchamp. 2018. Size, growth, and size-selective mortality of subyearling Chinook salmon during early marine residence in Puget Sound. Transactions of the American Fisheries Society 147:370-389. DOI:10.1002/tafs.10032.
- Hall*, J., M. McHenry, W. J. Ehinger, **T. Bennett, K. Hanson, M. Liermann** and **G. Pess**. 2018. Intensively Monitored Watersheds 2017 Synthesis Report. Prepared for the Salmon Recovery Funding Board.
- Hall*, J. E., **C. M. Greene, O. Stefankiv**, J. Anderson, **B. Timpone-Padgham, T. J. Beechie**, and **G. R. Pess**. 2018. Large river habitat complexity and productivity of Chinook salmon in Puget Sound Rivers. PLoS One 13(11):e:025127..
- Hall*, J. E., T. Khangaonkar, C. A. Rice*, **J. W. Chamberlin**, T. Zackey, F. E. Leonetti, M. Rustay, K. L. Fresh, A. N. Kagley, and M. Rowse. 2018. Characterization of salinity and temperature patterns in a large river delta to support tidal wetland habitat restoration. Northwest Science 92(1):36-52.
- Hanson, K.** and **T. Bennett**. 2018. Large Scale and Long Term: The Strait of Juan de Fuca Intensively Monitored Watersheds. The Learning Forest Issue 4 (Fall 2018).
https://www.dnr.wa.gov/publications/lm_oesf_nov_2018_newsletter.pdf?n4qjmw2vs4i

- Harrison L. R., A. E. East, D. P. Smith, J. B. Logan, R. M. Bond, **C. L. Nicol**, T. H. Williams, D. A. Boughton, K. Chow, and L. Luna. 2018. River response to large-dam removal in a Mediterranean hydroclimatic setting: Carmel River, California, USA. *Earth Surface Processes and Landforms*. Doi: 10.1002/esp.4464 (**Work completed at a previous position**).
- Harvey, C. and many others including **S. H. Munsch** and **C. M. Greene**. 2018. Ecosystem Status Report of the California Current for 2018: A Summary of Ecosystem Indicators Compiled by the California Current Integrated Ecosystem Assessment Team (CCEIA). U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-145.
- Kiffney, P. M.**, B. Cram, P. Faulds, K. Burton, M. E. Koehler, and T. P. Quinn. 2018. Spatiotemporal patterns of mountain whitefish (*Prosopium williamsoni*) in response to a restoration of longitudinal connectivity. *Ecology of Freshwater Fish* 27:1037–1053. <https://DOI.org/10.1111/eff.12413>
- Kiffney, P.**, S. Naman, J. Cram, **M. Liermann**, and D. Burrows. 2018. Multiple pathways of carbon and nitrogen incorporation by consumers across an experimental gradient of salmon carcass inputs. *Ecosphere* 9(4):e02197. <https://DOI.org/10.1002/ecs2.2197>
- McClure, M., J. Anderson, **G. Pess**, T. Cooney, R. Carmichael, C. Baldwin, J. Hesse, L. Weitkamp, D. Holzer, M. Sheer, and S. Lindley. 2018. Anadromous Salmonid Reintroductions: General Planning Principles for Long-Term Viability and Recovery. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-141.
- Naman, S. M., J. S. Rosenfeld, **P. M. Kiffney**, J. S. Richardson. 2018. The energetic consequences of habitat structure for forest stream salmonids. *Journal of Animal Ecology* 87:1383–1394. DOI:<https://besjournals.onlinelibrary.wiley.com/DOI/10.1111/1365-2656.12845>
- Ohlberger, J., S. J. Brenkman, P. Crain, **G. R. Pess**, J. J. Duda, T. W. Buehrens, T. P. Quinn, and R. Hilborn. 2018. A Bayesian life-cycle model to estimate escapement at MSY in salmon based on limited information. *Canadian Journal of Fisheries and Aquatic Sciences* 76(2): 299–307. <https://doi.org/10.1139/cjfas-2017-0382>
- Peters, R., A. R. Marshak, M. M. Brady, S. K. Brown, K. Osgood, **C. Greene**, et al. 2018. Habitat Science is a Fundamental in an Ecosystem-Based Fisheries Management Framework: An Update to the Marine Fisheries Habitat Assessment Improvement Plan. U.S. Dept. of Commerce, NOAA. NOAA Technical Memorandum NMFS-F/SPO-181, 29 p.

- Pulver, S., N. Ulibarri, K. L. Sobocinski*, S. M. Alexander, M. L. Johnson, P. F. McCord, and J. Dell'Angelo. 2018. Frontiers in socio-environmental research: components, connections, scale, and context. *Ecology and Society* 23(3):23. **(Work completed at a previous position).**
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- Ritchie, A. C., J. A. Warrick, A. E. East, C. S. Magirl, A. W. Stevens, J. A. Bountry, T. J. Randle, C. A. Curran, R. C. Hildale, J. J. Duda, G. R. Gelfenbaum, I. M. Miller, **G. R. Pess**, M. M. Foley, R. McCoy, and A. S. Ogston. 2018. Morphodynamic evolution following sediment release from the world's largest dam removal. *Nature: Scientific Reports* 8(1):13279. DOI:10.1038/s41598-018-30817-8.
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- Seixas*, G. B., **T. J. Beechie**, **C. Fogel**, and **P. M. Kiffney**. 2018. Historical and future stream temperature change predicted by a lidar-based assessment of riparian conditions and channel width. *Journal of the American Water Resources Association* 54(4):974-991. DOI.org/10.1111/1752-1688.12655.
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- Sobocinski*, K. L., L. Ciannelli, W. W. Wakefield, M. E. Yergey, and A. Johnson-Colegrove. 2018. Distribution and abundance of juvenile demersal fishes in relation to summer hypoxia and other environmental variables in coastal Oregon, USA. *Estuarine, Coastal and Shelf Science* 205:75-90. **(Work completed at a previous position).**
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Beechie, T. J., O. Stefankiv, B. Timpone-Padgham, J. Hall*, G. Pess, M. Liermann, M. Rowse, K. Fresh, and M. Ford. 2017. Monitoring habitat status and trends in Puget Sound: development of sample designs, monitoring metrics, and sampling protocols for nearshore, delta, large river, and floodplain environments. NOAA Technical Memorandum-137.

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Cram, J., C. E. Torgersen, R. Klett, **G. R. Pess**, D. May, T. N. Pearsons, A. H. Dittman. 2017. Spatial variability of Chinook salmon spawning site fidelity and habitat preferences. *Transactions of the American Fisheries Society* 146(2):206-221. DOI:[http://dx.Doi.org/10.1080/00028487.2016.1254112](http://dx.doi.org/10.1080/00028487.2016.1254112)

East, A. E., K. J. Jenkins, P. J. Happe, J. A. Bountry, **T. J. Beechie**, M. C. Mastin, J. B. Sankey, and T. J. Randle. 2017. Channel-planform evolution in four rivers of Olympic National Park, Washington, U.S.A.: The roles of physical drivers and trophic cascades. *Earth Surface Processes and Landforms* 42:1011–1032. DOI: 10.1002/esp.4048

Foley, M. M., J.R. Bellmore, J. E. O'Connor, J. J. Duda, A. E. East, G. E. Grant, C. W. Anderson, J. A. Bountry, M. J. Collins, P. J. Connolly, L. S. Craig, J. E. Evans, S. L. Greene, F. J. Magilligan, C. S. Magirl, J. J. Major, **G. R. Pess**, T. J. Randle, P. B. Shafroth, C. E. Torgersen, D. Tullos, and A. C. Wilcox. 2017. Dam removal: Listening in. *Water Resources Research* 53(7):5229-5246.

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