

CURRICULUM VITAE

November 21, 2017

Richard A. Feely

Senior Research Scientist

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Academic Training

Ph.D., Oceanography, 1974. Texas A&M University, College Station, TX

M.S., Oceanography, 1971. Texas A&M University, College Station, TX

B.A., Chemistry, 1969. University of St. Thomas, St. Paul, MN

Professional Experience

Senior Research Scientist, Pacific Marine Environmental Laboratory, NOAA	2008–present
Supervisory Oceanographer, National Oceanic and Atmospheric Administration, Pacific Marine Environmental Laboratory	1984–2008
Affiliate Full Professor, University of Washington	2002–present
Affiliate Associate Professor, University of Washington	1986–2002
Affiliate Assistant Professor, University of Washington	1974–1985
Oceanographer, National Oceanic and Atmospheric Administration, Pacific Marine Environmental Laboratory	1974–1984
Research Associate, Oceanography, Texas A&M University	1973–1974
Research Assistant, Oceanography, Texas A&M University	1969–1973

Teaching Experience

Chemical Oceanography Laboratory, University of Washington	January 1979
Stable Isotope Geochemistry, University of Washington	January 1976
Introduction to Oceanography, Texas A&M University	June 1973

Research Activities

Responsible for development and implementation of chemical oceanographic research studies for several of NOAA's national research programs, including the NOAA Global Carbon Cycle Research Program, the NOAA Climate Observations Program, and the NOAA Ocean Acidification Program.

Committees

West Coast ocean Acidification and Hypoxia Panel	2014–present
Washington Ocean Acidification Center's Science Advisory Team	2014–present
International Ocean Carbon Coordination Project	2013–present
International Ocean Acidification Centre Scientific Advisory Board	2008–present
NOAA West Coast Ocean Acidification Task Force	2010–present
IPCC AR5 Working Group I	2010–present
U.S. Interagency Working Group on Ocean Acidification	2009–present
International IMBER-SOLAS Ocean Acidification Group	2009–present
PICES Section on Carbon and Climate	2005–present
Joint Institute for the Study of the Oceans and Atmosphere	1984–present
U.S. Carbon and Biogeochemistry Steering Committee	2006–2012

International IMBER-SOLAS Carbon Coordination Group	2005–2009
NSF/NOAA Repeat Hydrography Oversight Committee (Co-Chair)	2002–2015
U.S. Ocean Carbon and Climate Change Steering Committee	2004–2009
International CLIVAR Pacific Coordination Panel	2004–2009
DOE Biological Environmental Studies Program Committee of Visitors	2004
U.S. CCSP Interagency Ocean Carbon Science Group	2003–2009
PICES Working Group 17	2002–2005
NASA Carbon Cycle Initiative Science Advisory Committee	2001–2002
North American Carbon Program Advisory Committee	2001–2002
NSF/NOAA Repeat Hydrography Working Group	2001–2002
NOAA CO ₂ Measurements Advisory Committee	2000–2001
NSF/NOAA OCTET Working Group	1999–2000
PICES Working Group 13 on Carbon in the North Pacific (Co-Chair)	1998–2002
National Science Foundation, Committee of Visitors	1998–1999
Science Advisory Panel for Climate Change Data and Detection	1992–2000
U.S. JGOFS Steering Committee	1991–1996
DOE CO ₂ Survey Science Team	1990–1998
NOAA CO ₂ Science Advisory Panel (Co-Chair)	1990–1997
NOAA VENTS Council	1987–1991
EPA-WDOE Puget Sound Initiative Technical Advisory Committee	1985–1987
Scientific Committee on Ocean Research Working Group 75	1984–1988

Society Memberships

American Association for the Advancement of Science
 American Chemical Society
 American Geophysical Union, Secretary for Marine Geochemistry

Awards

Finalist Sevice to America Award - 2015
 NOAA Administrator's Award - 2014
 Finalist Presidential Rank Award - 2013
 Seattle Aquarium Research Conservation Award - 2013
 Heinz Family Foundation Environmental Award, Ocean Acidification – 2010
 Contributed to the Nobel Peace Prize (co-shared with Al Gore and other members of IPCC) - 2007
 Explorer Club Lowell Thomas Award - 2007
 Elected American Geophysical Union Fellow - 2007
 Department of Commerce Gold Award - 2006
 NOAA Administrator's Award - 2002
 Special Achievement Award PMEL/NOAA - 1999, 2001, and 2002
 Sustained Superior Performance Award, PMEL/NOAA – 1977, 1982, 1996, 1997
 Special Act/Service Award, PMEL/NOAA - 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, and 2009
 Certificate of Recognition, PMEL/NOAA - 1995
 Performance Award, PMEL/NOAA - 1983, 1984, 1985, 1987, 1988, 1990, 1995, 1996, 1997, 2007, 2008, 2009, and 2010
 Certificate of Recognition, ERL/NOAA - 1982
 Distinguished Authorship Award, PMEL/NOAA - 1980, 1985, 1988, 1989, 1990, 1999, 2000, 2003, 2005, and 2009

Distinguished Authorship Award, OAR/NOAA - 1980, 1985, 1990, 1999, 2001, 2004, 2006, and 2009
Unit Citation for Juan de Fuca Report, NOAA - 1979
Special Achievement Award, ERL/NOAA – 1977

Shipboard Experience

5 cruises in the Gulf of Mexico and Caribbean Sea (120 days at sea).
29 cruises in the North and South Pacific Ocean; 9 cruises as Chief Scientist (660 days at sea).
23 cruises in the estuarine and coastal waters of Washington, Oregon, California, and Alaska; 17
cruises as Chief Scientist (340 days at sea).

Recent Publications

2016

- Bednaršek, N., C.J. Harvey, I.C. Kaplan, R.A. Feely, and J. Mozina (2016): [Pteropods on the edge: Convergence of warming, deoxygenation and acidification impacts from a modeling perspective](#). *Prog. Oceanogr.*, 145, 1–24, doi: 10.1016/j.pocean.2016.04.002.
- Bednaršek, N., J. Johnson, and R.A. Feely (2016): [Comment on Peck et al.: Vulnerability of pteropod \(*Limacina helicina*\) to ocean acidification: Shell dissolution occurs despite an intact organic layer](#). *Deep-Sea Res. II*, 127, 53-56, doi: 10.1016/j.dsr2.2016.03.006.
- Carter, B.R., N.L. Williams, A.R. Gray, and R.A. Feely (2016): [Locally interpolated alkalinity regression for global alkalinity estimation](#). *Limnol. Oceanogr. Methods*, 14(4), 268–277, doi: 10.1002/lom3.10087.
- Chan, F., A.B. Boehm, J.A. Barth, E.A. Chornesky, A.G. Dickson, R.A. Feely, B. Hales, T.M. Hill, G. Hofmann, D. Ianson, T. Klinger, J. Largier, J. Newton, T.F. Pedersen, G.N. Somero, M. Sutula, W.W. Wakefield, G.G. Waldbusser, S.B. Weisberg, and E.A. Whiteman (2016): [The West Coast Ocean Acidification and Hypoxia Science Panel: Major Findings, Recommendations, and Actions](#). West Coast Ocean Acidification and Hypoxia Panel, California Ocean Science Trust, Oakland, California.
- Feely, R.A., R. Wanninkhof, B.R. Carter, J.N. Cross, J.T. Mathis, C.L. Sabine, C.E. Cosca, and J.A. Tirnanes (2016): [Global ocean carbon cycle](#). In *State of the Climate in 2015, Global Oceans*. *Bull. Am. Meteorol. Soc.*, 97(8), S89-S92.
- Hales, B., F. Chan, A.B. Boehm, J.A. Barth, E.A. Chornesky, A.G. Dickson, R.A. Feely, T.M. Hill, G. Hofmann, D. Ianson, T. Klinger, J. Largier, J. Newton, T.F. Pedersen, G.N. Somero, M. Sutula, W.W. Wakefield, G.G. Waldbusser, S.B. Weisberg, and E.A. Whiteman (2016): [Multiple Stressor Considerations: Ocean Acidification in a Deoxygenating Ocean and Warming Climate](#). West Coast Ocean Acidification and Hypoxia Panel, California Ocean Science Trust, Oakland, California.
- Klinger, T., S.B. Weisberg, J.A. Barth, A.B. Boehm, F. Chan, E.A. Chornesky, A.G. Dickson, R.A. Feely, B. Hales, T.M. Hill, G. Hofmann, D. Ianson, J. Largier, J. Newton, T.F. Pedersen, G.N. Somero, M. Sutula, W.W. Wakefield, G.G. Waldbusser, and E.A. Whiteman (2016): [Ocean Acidification and Hypoxia Research Priorities to Inform Decisions and Develop Solutions](#). West Coast Ocean Acidification and Hypoxia Panel, California Ocean Science Trust, Oakland, California.
- Newton, J., T.M. Hill, R.A. Feely, J.A. Barth, A.B. Boehm, F. Chan, E.A. Chornesky, A.G. Dickson, B. Hales, G. Hofmann, D. Ianson, T. Klinger, J. Largier, T.F. Pedersen, G.N. Somero, M. Sutula, W.W. Wakefield, G.G. Waldbusser, S.B. Weisberg, and E.A. Whiteman (2016): [Ocean Acidification and](#)

[Hypoxia Monitoring Network: Tracking the Impacts of Changing Ocean Chemistry to Inform Decisions](#). West Coast Ocean Acidification and Hypoxia Panel, California Ocean Science Trust, Oakland, California.

- Reum, J.C.P., S.R. Alin, C.J. Harvey, N. Bednaršek, W. Evans, R.A. Feely, B. Hales, N. Lucey, J.T. Mathis, P. McElhany, J. Newton, and C.L. Sabine (2016): [Interpretation and design of ocean acidification experiments in upwelling systems in the context of carbonate chemistry co-variation with temperature and oxygen](#). *ICES J. Mar. Sci.*, 73, 582-595, doi: 10.1093/icesjms/fsu231.
- Siedlecki, S., E. Bjorkstedt, R. Feely, A. Sutton, J. Cross, and J. Newton (2016): [Impact of the Blob on the northeast Pacific Ocean biogeochemistry and ecosystems](#). *U.S. CLIVAR Variations*, 14(2), 7-12.
- Siedlecki, S.A., I.C. Kaplan, A.J. Hermann, T.T. Nguyen, N.A. Bond, J.A. Newton, G.D. Williams, W.T. Peterson, S. Alin, and R.A. Feely (2016): [Experiments with seasonal forecasts of ocean conditions for the northern region of the California Current upwelling system](#). *Scientific Reports*, 6, 27203, doi: 10.1038/srep27203
- Sutton, A.J., C.L. Sabine, R.A. Feely, W.-J. Cai, J.E. Corredor, M.F. Cronin, M.J. McPhaden, J.A. Newton, J.-H. Noh, S.R. Ólafsdóttir, J.E. Salisbury, U. Send, D. Vandemark, and R.A. Weller (2016): [Using present-day observations to detect when anthropogenic change forces surface ocean carbonate chemistry outside pre-industrial bounds](#). *Biogeosciences Disc.*, doi: 10.5194/bg-2016-104.
- Sutula, M., J.A. Barth, J. Largier, A.B. Boehm, F. Chan, E.A. Chornesky, A.G. Dickson, R.A. Feely, B. Hales, T.M. Hill, G. Hofmann, D. Ianson, T. Klinger, J. Newton, T.F. Pedersen, G.N. Somero, W.W. Wakefield, G.G. Waldbusser, S.B. Weisberg, and E.A. Whiteman (2016): [Modeling Tools: Summary of Needs to Enhance Understanding of Ocean Acidification and Hypoxia in Coastal Oceans](#). West Coast Ocean Acidification and Hypoxia Panel, California Ocean Science Trust, Oakland, California.
- Talley, L.D., R.A. Feely, B.M. Sloyan, R. Wanninkhof, M.O. Baringer, J.L. Bullister, C.A. Carlson, S.C. Doney, R.A. Fine, E. Firing, N. Gruber, D.A. Hansell, M. Ishii, G.C. Johnson, K. Katsumata, R.M. Key, M. Kramp, C. Langdon, A.M. Macdonald, J.T. Mathis, E.L. McDonagh, S. Mecking, F.J. Millero, C.W. Mordy, T. Nakano, C.L. Sabine, W.M. Smethie, J.H. Swift, T. Tanhua, A.M. Thurnherr, M.J. Warner, and J.-Z. Zhang (2016): [Changes in ocean heat, carbon content, and ventilation: A review of the first decade of GO-SHIP global repeat hydrography](#). *Annu. Rev. Mar. Sci.*, 8(1), 185–215, doi: 10.1146/annurev-marine-052915-100829.
- Weisberg, S.B., N. Bednaršek, R.A. Feely, F. Chan, A.B. Boehm, M. Sutula, J.L. Ruesink, B. Hales, J.L. Largier, and J.A. Newton (2016): [Water quality criteria for an acidifying ocean: Challenges and opportunities](#). *Ocean Coastal Manage.*, 126, 31–41, doi: 10.1016/j.ocecoaman.2016.03.010.
- Williams, N.L., L.W. Juranek, K.S. Johnson, R.A. Feely, S.C. Riser, L.D. Talley, J.L. Russell, J.L. Sarmiento, and R. Wanninkhof (2016): [Empirical algorithms to estimate water column pH in the Southern Ocean](#). *Geophys. Res. Lett.*, 43(7), 3415–3422, doi: 10.1002/2016GL068539.

2015

- Barton, A., G.G. Waldbusser, R.A. Feely, S.B. Weisberg, J.A. Newton, B. Hales, S. Cudd, B. Eudeline, C.J. Langdon, I. Jefferds, T. King, A. Suhrbier, and K. McLaughlin (2015): [Impacts of coastal acidification on the Pacific Northwest shellfish industry and adaptation strategies implemented in response](#). *Oceanography*, 28(2), 146–159, doi: 10.5670/oceanog.2015.38.
- Feely, R.A., R. Wanninkhof, B. Carter, J.T. Mathis, and C.L. Sabine (2015): [Global ocean carbon cycle](#). In *State of the Climate in 2014, Global Oceans*. *Bull. Am. Meteorol. Soc.*, 96(7), S87–S90.

- Jiang, L.-Q., R.A. Feely, B.R. Carter, D.J. Greeley, D.K. Gledhill, and K.M. Arzayus (2015): [Climatological distribution of aragonite saturation state in the global oceans](#). *Global Biogeochem. Cycles*, 29(10), 1656–1673, doi: 10.1002/2015GB005198.
- Kim, T.-W., G.-H. Park, D. Kim, K. Lee, R.A. Feely, and F.J. Millero (2015): [Seasonal variation in the aragonite saturation state in the upper-open waters of the North Pacific Ocean](#). *Geophys. Res. Lett.*, 42, 4498–4506, doi: 10.1002/2015GL063602.
- Le Quéré, C., R. Moriarty, R.M. Andrew, J.G. Canadell, S. Sitch, J.I. Korsbakken, G.P. Peters, R.J. Andres, T.A. Boden, P. Friedlingstein, R.A. Houghton, J.I. House, R.F. Keeling, G. Marland, P. Tans, A. Arneeth, D.C.E. Bakker, L. Barbero, L. Bopp, J. Chang, F. Chevallier, L.P. Chini, P. Ciais, M. Fader, R.A. Feely, T. Gkritzalis, I. Harris, J. Hauck, T. Ilyana, A.K. Jain, E. Kato, V. Kitidis, K. Klein Goldewijk, C. Koven, P. Landschützer, S.K. Lauvset, N. Lefèvre, A. Lenton, I.D. Lima, N. Metzl, F. Millero, D. Munro, A. Murata, J.E.M.S. Nabel, S. Nakaoka, Y. Nojiri, K. O'Brien, A. Olsen, T. Ono, F.F. Pérez, B. Pfeil, D. Pierrot, B. Poulter, G. Rehder, C. Rödenbeck, S. Saito, U. Schuster, J. Schwinger, R. Séférian, T. Steinhoff, B.D. Stocker, A.J. Sutton, T. Takahashi, B. Tilbrook, I. van der Laan-Luijkx, G.R. van der Werf, S. van Heuven, D. Vandemark, N. Viovy, A. Wiltshire, and S. Zaehle (2015): [Global Carbon Budget 2015](#). *Earth Sys. Sci. Data*, 7, 349–396, doi: 10.5194/essd-7-349-2015.
- Mathis, J.T., S.R. Cooley, N. Lucey, S. Colt, J. Ekstrom, T. Hurst, C. Hauri, W. Evans, J.N. Cross, and R.A. Feely (2015): [Ocean acidification risk assessment for Alaska's fishery sector](#). *Prog. Oceanogr.*, 136, 71–91, doi: 10.1016/j.pocean.2014.07.001.
- McLaughlin, K., S.B. Weisberg, A.G. Dickson, G.E. Hofmann, J.A. Newton, D. Aseltine-Neilson, A. Barton, S. Cudd, R.A. Feely, I.W. Jefferds, E.B. Jewett, T. King, C.J. Langdon, S. McAfee, D. Pleschner-Steele, and B. Steele (2015): [Core principles of the California Current Acidification Network: Linking chemistry, physics, and ecological effects](#). *Oceanography*, 28(2), 160–169, doi: 10.5670/oceanog.2015.39.
- Patsavas, M.C., R.H. Byrne, R. Wanninkhof, R.A. Feely, and W.-J. Cai (2015): [Internal consistency of marine carbonate system measurements and assessments of aragonite saturation state: Insights from two U.S. coastal cruises](#). *Mar. Chem.*, 176, 9–20, doi: 10.1016/j.marchem.2015.06.022.
- Sutton, A., A. Jeffries, A. Devol, A. Cox, B. Tyler, B. Roman, B. Bill, B. Murphie, C. Maloy, C. Rice, C. Greengrove, C. Scholin, C. Preston, C. Krembs, C.L. Sabine, C.R. Elliser, C. Hard, C. Herrmann, C. Greene, D. Mora, D. Sargeant, E. Grossman, G. Hannach, J. Birch, J. Newton, J. Runyan, J. Mathis, J. Borchert, J. Thomson, J. Thompson, J. Mickett, J. Evanson, J. Bos, J. Ruffner, J. Masura, K. Bumbaco, K. Welch, K. Dzinbal, K. Yamahara, K. Stark, L. Friedenber, L. Wigand, L. Robinson, L. Lahner, L. Rhodes, M. Dutch, M. Alford, M. Keyzers, P. Hodum, R.A. Feely, R. Marin, S. Weakland, S. Grossman, S. Jensen, S. Mickelson, S. Pearson, S. Veirs, S.R. Alin, S. Albertson, S. Moore, S. Hallam, S. Thomas, S. Pool, S. Musielwicz, T. King, T. Good, T. Cyra, V. Partridge, V. Trainer, W. Ruef, W. Eash-Loucks, and W. Nilsson (2015): [Puget Sound Marine Waters: 2014 Overview](#). Moore, S.K., K. Stark, J. Bos, P. Williams, J. Newton, and K. Dzinbal (eds.), NOAA Northwest Fisheries Science Center for the Puget Sound Ecosystem Monitoring Program's (PSEMP) Marine Waters Workgroup.
- Takeshita, Y., C.A. Frieder, T.R. Martz, J.R. Ballard, R.A. Feely, S. Kram, S. Nam, M.O. Navarro, N.N. Price, and J.E. Smith (2015): [Including high frequency variability in coastal ocean acidification projections](#). *Biogeosciences*, 12(19), 5853–5870, doi: 10.5194/bg-12-5853-2015.
- Williams, N.L., R.A. Feely, C.L. Sabine, A.G. Dickson, J.H. Swift, L.D. Talley, and J.L. Russell (2015): [Quantifying anthropogenic carbon inventory changes in the Pacific sector of the Southern Ocean](#). *Mar. Chem.*, 174, 147–160, doi: 10.1016/j.marchem.2015.06.015.

2014

- Bakker, D.C.E., B. Pfeil, K. Smith, S. Hankin, A. Olsen, S.R. Alin, C. Cosca, S. Harasawa, A. Kozyr, Y. Nojiri, K.M. O'Brien, U. Schuster, M. Telszewski, B. Tilbrook, C. Wada, J. Akl, L. Barbero, N. Bates, J. Boutin, W.-J. Cai, R.D. Castle, F.P. Chavez, L. Chen, M. Chierici, K. Currie, H.J.W. de Baar, W. Evans, R.A. Feely, A. Fransson, Z. Gao, B. Hales, N. Hardman-Mountford, M. Hoppema, W.-J. Huang, C.W. Hunt, B. Huss, T. Ichikawa, T. Johannessen, E.M. Jones, S.D. Jones, S. Jutterström, V. Kitidis, A. Körtzinger, P. Landschützer, S.K. Lauvset, N. Lefèvre, A.B. Manke, J.T. Mathis, L. Merlivat, N. Metzl, A. Murata, T. Newberger, T. Ono, G.-H. Park, K. Paterson, D. Pierrot, A.F. Ríos, C.L. Sabine, S. Saito, J. Salisbury, V.V.S.S. Sarma, R. Schlitzer, R. Sieger, I. Skjelvan, T. Steinhoff, K. Sullivan, H. Sun, A.J. Sutton, T. Suzuki, C. Sweeney, T. Takahashi, J. Tjiputra, N. Tsurushima, S.M.A.C. van Heuven, D. Vandemark, P. Vlahos, D.W.R. Wallace, R. Wanninkhof, and A.J. Watson (2014): An update to the surface ocean CO₂ atlas (SOCAT version 2). *Earth Syst. Sci. Data*, 6, doi: 10.5194/essd-6-69-2014, 69–90.
- Barrett, P.M., J.A. Resing, N.J. Buck, R.A. Feely, J.L. Bullister, C.S. Buck, W.M. Landing, and C.I. Measures (2014): Calcium carbonate dissolution in the upper 1000 m of the eastern North Atlantic. *Global Biogeochem. Cycles*, 28(4), doi: 10.1002/2013GB004619, 386–397.
- Bednaršek, N., R.A. Feely, J.C.P. Reum, W. Peterson, J. Menkel, S.R. Alin, and B. Hales (2014): Limacina helicina shell dissolution as an indicator of declining habitat suitability due to ocean acidification in the California Current Ecosystem. *Proc. Roy. Soc. B*, 281, 20140123, doi: 10.1098/rspb.2014.0123.
- Cao, Z., M. Dai, W. Evans, J. Gan, and R. Feely (2014): Diagnosing CO₂ fluxes in the upwelling system off the Oregon coast. *Biogeosciences Disc.*, 11, doi: 10.5194/bgd-11-7389-2014, 7389–7412.
- Cronin, M.F., M. Bourassa, C.A. Clayson, J. Edson, C. Fairall, R.A. Feely, D.E. Harrison, S. Josey, M. Kubota, B. Praveen Kumar, K. Kutsuwada, B. Large, J.T. Mathis, M.J. McPhaden, L. O'Neill, R. Pinker, K. Takahashi, H. Tomita, R.A. Weller, L. Yu, and C. Zhang (2014): TPOS White Paper #11: Wind stress and air-sea fluxes observations: status, implementation and gaps. In *Proceedings of the Tropical Pacific Observing System 2020 Workshop, A Future Sustained Tropical Pacific Ocean Observing System for Research and Forecasting*, La Jolla, CA, 27–30 January 2014.
- Cyr, N., R. Feely, E. Jewett, K. Osgood, C. Sabine, J. Howard, K. Arzayus, D. Garrison, M. Boatman, K. Schaaf, J. Gear, C. Moore, P. Bontempi, K. Tedesco, B. Wolfe, L. Robbins, K. Yates, K. Segarra, and M.H. Mayeaux (2014): Strategic Plan for Federal Research and Monitoring of Ocean Acidification. Committee on Environment, Natural Resources, and Sustainability, National Science and Technology Council, Interagency Working Group on Ocean Acidification, www.whitehouse.gov/sites/default/files/microsites/ostp/NSTC/iwg-oa_strategic_plan_march_2014.pdf, 86 pp.
- Feely, R., M. Chadsey, J. Newton, T. Klinger, B. Hales, and J. Mathis (2014): Ocean Acidification in the Pacific Northwest. West Coast Ocean Acidification and Hypoxia Science Panel, Institute for Natural Resources, Oregon State University and California Ocean Science Trust, <http://westcoastoah.org/>.
- Feely, R.A., L.D. Talley, J.L. Bullister, C.A. Carlson, S.C. Doney, R.A. Fine, E. Firing, N. Gruber, D.A. Hansell, G.C. Johnson, R.M. Key, C. Langdon, A. Macdonald, J.T. Mathis, S. Mecking, F.J. Millero, C.W. Mordy, C.L. Sabine, W.M. Smethie, J.H. Swift, A.M. Thurnherr, R. Wanninkhof, and M.J. Warner (2014): The U.S. Repeat Hydrography CO₂/Tracer Program (GO-SHIP): Accomplishments From The First Decadal Survey. A US CLIVAR and OCB Report, 2014-5, U.S. CLIVAR Project Office, Washington, DC, Published online at US OCB.

- Ishii, M., R.A. Feely, K.B. Rodgers, G.-H. Park, R. Wanninkhof, D. Sasano, H. Sugimoto, C.E. Cosca, S. Nakaoka, M. Telszewski, Y. Nojiri, S.E. Mikaloff Fletcher, Y. Niwa, P.K. Patra, V. Valsala, H. Nakano, I. Lima, S.C. Doney, E.T. Buitenhuis, O. Aumont, J.P. Dunne, A. Lenton, and T. Takahashi (2014): Air-sea CO₂ flux in the Pacific Ocean for the period 1990-2009. *Biogeosciences*, 11, doi: 10.5194/bg-11-709-2014, 709–734.
- Jewett, E., N. Cyr, R. Feely, K. Osgood, C. Sabine, K. Arzayus, S. Gittings, D. Garrison, J. Culbertson, K. Kim, J. Grear, C. Moore, P. Bontempi, K. Tedesco, B. Wolfe, L. Robbins, K. Yates, J. Kimball, and M.H. Mayeaux (2014): Strategic Plan for Federal Research and Monitoring of Ocean Acidification. Interagency Working Group on Ocean Acidification, 86 pp.
- Ko, Y.H., K. Lee, P.D. Quay, and R.A. Feely (2014): Decadal (1994–2008) change in the carbon isotope ratio in the eastern South Pacific Ocean. Published online, *Global Biogeochem. Cycles*, 28, doi: 10.1002/2013GB004786.
- Mathis, J.T., S.R. Cooley, N. Lucey, S. Colt, J. Ekstrom, T. Hurst, C. Hauri, W. Evans, J.N. Cross, and R.A. Feely (2014): Ocean acidification risk assessment for Alaska’s fishery sector. *Prog. Oceanogr.*, doi: 10.1016/j.pocean.2014.07.00.
- Mathis, J.T., R.A. Feely, A. Sutton, C. Carlson, F. Chai, F. Chavez, M. Church, C. Cosca, M. Ishii, C. Mordy, A. Murata, J. Resing, P. Strutton, T. Takahashi, and R. Wanninkhof (2014): TPOS Whitepaper #6. Tropical Pacific biogeochemistry: Status, implementation and gaps. In *Proceedings of the Tropical Pacific Observing System 2020 Workshop, A Future Sustained Tropical Pacific Ocean Observing System for Research and Forecasting*, La Jolla, CA, 27–30 January 2014.
- Reum, J.C.P., S.R. Alin, R.A. Feely, J. Newton, M. Warner, and P. McElhany (2014): Seasonal carbonate chemistry covariation with temperature, oxygen, and salinity in a fjord estuary: Implications for the design of ocean acidification experiments. *PLOS ONE*, 9(2), e89619, doi: 10.1371/journal.pone.0089619.
- Sutton, A.J., R.A. Feely, C.L. Sabine, M.J. McPhaden, T. Takahashi, F.P. Chavez, G.E. Friederich, and J.T. Mathis (2014): Natural variability and anthropogenic change in equatorial Pacific surface ocean pCO₂ and pH. *Global Biogeochem. Cycles*, 28(2), doi: 10.1002/2013GB004679, 131–145.

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