Heal the Bay

1444 9th Street
Santa Monica CA 90401

ph 310 451 1500
fax 310 496 1902

info@healthebay.org
www.healthebay.org

January 9, 2017

Dr. Don Tsai, Groundwater Permitting Unit
California Regional Water Quality Control Board, Los Angeles Region
320 West 4th St., Suite 200
Los Angeles, CA 90013
don.tsai@waterboards.ca.gov

VIA EMAIL

Re: Tentative Resolution and Tentative Revised MOU with City of Malibu on the Malibu Civic Center Area Prohibition

Dear Mr. Tsai,

On behalf of Heal the Bay, we submit the following comments on the *Tentative Resolution and Tentative Revised MOU with City of Malibu on the Malibu Civic Center Area Prohibition* (Revised MOU). Heal the Bay is an environmental organization with over 15,000 members dedicated to making the coastal waters and watersheds of greater Los Angeles safe, healthy, and clean. We appreciate the opportunity to provide comments on this Revised MOU.

Heal the Bay understands that the delays in receiving commitment and financing from the Phase I assessment district have led certain deadlines in the 2014 MOU to be impracticable to meet. Regardless, it is disappointing to see any hold-ups, wherever they occur, when it comes to preventing further degradation of the water quality of Malibu Lagoon and the City of Malibu's local coastal waters.

In consideration of this we encourage the Regional Board to be firm in holding the City of Malibu to this new revised timeline that will allow for the long-proposed elimination of on-site wastewater disposal systems to finally become a reality. We would also like to remind the City of Malibu that its people and environment only stand to gain from all these many years of diligence and effort.

Thank you for your consideration of these comments. If you have any questions please feel free to contact us at (310) 451-1500.

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ph 310 451 1500
fax 310 496 1902

info@healthebay.org
www.healthebay.org

Sincerely,

Steven Johnson
Water Resources Policy Analyst
Heal the Bay

From the Desk of Joan C. Lavine
Attorney at Law
123 North Hobart Blvd.
Los Angeles, California 90004, U.S.A.
Office Phones: (213)627-3241
E-mail addresses: JCLavine@aol.com; JoanLavine@gmail.com

Monday, January 09, 2017

City of Malibu Mayor Skylar Peak and Members of the City of Malibu City Council
Attention: City of Malibu Clerk Ms. Lisa Pope, email: LPope@MalibuCity.org
Attention: City of Malibu City Manager Ms.Reva Feldman, email at RFeldman@MalibuCity.org
23825 Stewart Ranch Road
Malibu, CA 90265
Sent via email to: Ms. Lisa Pope and Ms. Reva Feldman

Current Chairperson and Board Members Los Angeles Regional Water Quality Control Board, Region 4
Clerk, Los Angeles Regional Water Quality Control Board, Region 4
Mr. Sam Unger, Director, Los Angeles Regional Water Quality Control Board, Region 4
Attention: Dr. Don Tsai, Ph.D. Phone: 213-620-2264
4th Street, Suite 200
Los Angeles, CA 90013
Filed and sent via email to Don.Tsai@WaterBoards.ca.gov

Current Chairperson and Board Members, State Water Resources Control Board
Attention: Ms. Jeanine Townsend, Clerk, State Water Resources Control Board
1001 "I" Street
Sacramento, Ca. 95814
Via E-mail to: commentletters@waterboards.ca.gov

TO CITY OF MALIBU MAYOR SKYLAR PEAK AND MEMBERS OF THE CITY OF MALIBU CITY COUNCIL

TO THE CHAIRMAN OF THE CALIFORNIA STATE WATER RESOURCES QUALITY CONTROL BOARD, AND TO THE RESPECTIVE MEMBERS OF SAID BOARD:

TO THE CHAIRMAN OF THE LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD, AND TO THE RESPECTIVE MEMBERS OF SAID BOARD:

Re: COMMENT LETTER SUBMITTED BY MALIBU CIVIC CENTER RESIDENTIAL PROPERTY OWNER JOAN C. LAVINE – NOTICE OF PUBLIC MEETING ON A TENTATIVE RESOLUTION AND TENTATIVE REVISED MEMORANDUM OF UNDERSTANDING WITH CITY OF MALIBU ON MALIBU CIVIC CENTER AREA PROHIBITION AND OPPORTUNITY FOR PUBLIC

COMMENT, DATED DECEMBER 20, 2016; DEADLINE TO FILE COMMENTS WITH THE LARWQCB ON JANUARY 9, 2017, AT 5:00 P.M. (PST).

Sirs and Madams:

I remain opposed to the California State Water Resources Control Board, year 2009, complete, blanket, outright ban on the use, operation and installation of legal residential permitted and licensed on-site waste management systems (also known as septic systems) in the Malibu Civic Center, and to any part of it. I repeat and incorporate by reference herein all of my prior written comments and objections and my oral presentations before the California State Water Resources Control Board (SWRCB) and the Los Angeles Regional Water Quality Control Board (LARWQCB), as well as my various objections to the Malibu Civic Center waste disposal plant and assessment district formation.

I urge each of you to reject the proposed revised MOU and to vote "NO" in order to do so. I base my objections and position on the following grounds, factual and legal, to-wit:

1. No factual basis exists for the septic ban in the Malibu Civic Center. The Board's own information shows no pollution emitting from residential septic systems.

   The SWRCB's own mapping refutes the claim that residential on-site waste disposal systems, also called septic systems, have polluted the ground or groundwater in the Malibu Civic Center. Attached hereto in Exhibit "A" is a printout of the SWRCB's map for my property on Malibu Road diagramming and stating "No pollution within 2000 feet". See the SWRCB website mapping.

   The U.S. Geological Survey found, based on DNA testing, that bacteria the Boards' staffs claimed came from septic systems was in fact from plants and animals, and was not human-sourced waste. See "Sources of Fecal Indicator Bacteria To Ground Water, Malibu Lagoon and the Near-Shore Ocean, Malibu, California, USA, published in Annals of Environmental Science/2012, Vol. 6. pages 35-86; published on the Internet at www.aes.northeastern.edu, ISSN 1939-2621; and at https://ca.water.usgs.gov/pubs/IzbickiEtAl2012.pdf. See a chart summary of that peer-reviewed and published study attached hereto in Exhibit "B" hereof.

2. The septic systems in Malibu are permitted, licensed and legal. Their revocation, without any right to be heard and to respond and refute the claims of pollution, constitutes regulatory Taking and confiscation of valuable residential properties in violation of the "Takings" and Due Process clauses of the Fifth and Fourteenth Amendments, U.S. constitution, and Article 19, California Constitution.

3. A sewer system, with a sewer plant, as the "approved" alternative not only does not decrease or eliminate ground pollution, but, on the contrary, creates the risk of plant and line failures and overflows and opens the Malibu Civic Center to significant commercial development and greater waste generation.

4. In addition, the USGS has studied and found that injection of groundwater causes earthquakes and extensive seismic activity. See extensive USGS research and studies at reference list attached hereto in Exhibit "C" hereof, and on the Internet at: http://earthquake.usgs.gov/research/induced/references.php

   Given that the Malibu Civic Center has localized earthquake faults that are active and produce frequent tremors, there is a serious and immediate potential that this pollution "fix" will cause a much more perilous hazard to the lives and safety of those present in the Malibu Civic Center by injection induced earthquake activity.

5. In violation of Article 13B, Sec. 6(a), California Constitution, the State of California has failed to fund the replacement of a waste management system.

6. In violation of federal mandates that the State provide for replacement housing for displaced residents, and funding for same, it has failed to do so.

7. The ban and the proposed MOU, as well the other versions of the proposed revised MOU, violate and contradict the City of Malibu's plan to preserve the residential and rural nature of Malibu.

8. This MOU effectively deprives the City of Malibu elected officials of their authority, obligations and duties to represent, protect and advocate their constituents' rights and mandates, and the authority granted to them as municipal elected officials by the State Constitution and State legislation. It deprives the City of Malibu constituents of their right to freely elected public officials and a democratically established municipal government. This massive impairment of municipal government authority violates the California Constitution and delegation to municipal governments of their rights to operate democratically.

9. No California State Water Resources Board member, no Los Angeles Regional Water Quality Resources Board member, and no staff member of either of those boards is a duly elected public official. In light of their not being elected officials, I challenge the perceived authority of any of them to deprive Malibu voters, residential property owners and occupants, and municipal elected officials of their constitutional and statutory granted authority to plan, zone, license, permit and manage within the boundaries of the City of Malibu, and of the substantial property rights of Malibu property owners, residents and occupants affected by the septic ban.

10. The septic ban is effectively a form of unconstitutional spot zoning in violation of Due Process of Law.

11. The septic ban and the proposed MOU regarding it promote and facilitate commercial development and destruction of a long-standing residential community, and are and will displace older and more modest-income residents. They place the burden of unwanted commercial development on the financial backs of older residential property owners with more limited financial resources.

12. I incorporate by reference my prior objections and comments. I incorporate by reference as though fully set forth the attached Exhibits "A", "B" and "C".

13. I object to the failure of the proposed resolution and proposed MOU to provide exemptions from the sewer system and exemptions from taxation, assessments and any other financial burdens for it for properties that are permitted and licensed to install, maintain and operate septic systems and are legal. I also object to the failure of the proposed resolution and proposed MOU to provide any procedure or protocol in order for property owners and occupants to be able to petition for exemption from the sewer system requirements and taxation, assessments and other financial burdens.

14. Again, I urge you to reject and not approve this revised MOU by voting "NO" and to withhold authorization of your agents to enter into it.

Dated: January 9, 2017

Respectfully submitted,

JOAN C. LAVINE
Attorney at Law, California State Bar No. 048169
Owner, 23900 Malibu Road, Malibu, California 90265

Enclosures:

Exhibit "A": Copy of SWRCB webpage related to pollution of Lavine property in Malibu Civic Center

Exhibit "B": Izbicki/USGS study chart regarding evaluation and testing for fecal bacteria in Malibu Lagoon, Santa Monica Bay and area

Exhibit "C": USGS List of study references regarding groundwater injection induced seismic earthquake activity

EXHIBIT "A"

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
STATE WATER RESOURCES CONTROL BOARD

Is My Property Near a Nutrient- or Pathogen-Impaired Water Body?

NOTE: We recommend clearing your cache to see the most up-to-date changes on this page. Here are step-by-step guides for doing this in some popular web browsers: Firefox Internet Explorer 8 Internet Explorer 7 Google Chrome Safari

Zoom to Regional Board: Los Angeles (4) ☑ Show RB

Zoom to county: Los Angeles ☑ Show county

Enter Your Address : 23900 Malibu Road Malibu CA 90265 Locate

(v.1.1, 03/16/12)

EXHIBIT "B"

USGS science for a changing world

This study was cooperatively funded by the City of Malibu, California and the U.S. Geological Survey

USE OF ISOTOPIC, GENETIC, AND CHEMICAL DATA TO EVALUATE THE SOURCE OF FECAL INDICATOR BACTERIA NEAR MALIBU, CALIFORNIA

John A. Izbicki, Carmen A. Burton, and Peter W. Swarzenski

Introduction

Each year, over 550 million people visit California's public beaches. To protect beach-goers from exposure to waterborne disease, California state law requires water-quality monitoring for fecal indicator bacteria (FIB), such as enterococci and *Escherichia coli (E. coli)*, at beaches with more than 50,000 yearly visitors. FIB are used to assess the microbiological quality of water because, although not typically disease causing, they are correlated with the occurrence of certain waterborne diseases. Periodically, tests show that FIB concentrations exceed U.S. Environmental Protection Agency (EPA) public health standards for recreational water in Malibu Lagoon and at several Malibu beaches (fig. 1).

Figure 1. Selected sample locations, Malibu, California.

There are several potential sources of FIB to Malibu Lagoon and the nearby coastline including:

- Seepage from commercial and residential onsite sewage treatment systems that may enter the lagoon or near-shore ocean water through the groundwater system
- Discharge or runoff from commercial and residential developments into Malibu Creek and Malibu Lagoon.
- Bird and wildlife feces, either deposited directly into the lagoon or onto beaches, or washed into these areas by tides and storms.

Conclusions

For onsite wastewater treatment systems to be a source of FIB to Malibu Lagoon or the near-shore ocean, bacteria must first move through the groundwater system. Low FIB concentrations in wells having a high fraction of imported water suggest that this is not occurring. In addition, large changes in microbial populations suggest that bacteria are being removed by death or attenuation after discharge from treatment systems. Isotopic data were useful in estimating the fraction of wastewater in groundwater samples and to evaluate the timing of groundwater discharge to the near-shore ocean. In contrast to FIB, wastewater indicator compounds increase as the fraction of imported water in a sample increases - confirming the presence of wastewater in the system.

Overview of fecal indicator bacteria concentrations

More than 450 samples were collected from wells, Malibu Creek, Malibu Lagoon and the near-shore ocean as part of this study (fig. 1). Onsite sewage treatment systems, groundwater, and surface water including Malibu Creek, Malibu Lagoon, and near-shore ocean sites (Surfrider Beach and Malibu Colony beach) were sampled and analyzed for enterococci, *E. coli*, and total coliforms. Most samples were collected during the dry season (July 2009), and at the end of rainy season (April 2010).

Enterococci were found at the highest concentrations in samples taken from onsite treatment systems (fig. 2). Groundwater samples had the lowest concentrations, usually less than the detection limit, during both the dry and wet season. Enterococci concentrations in Malibu Lagoon were greater than enterococci concentrations in groundwater samples. Water carrying FIB from onsite wastewater treatment systems must pass through the groundwater system before infiltrating into the lagoon and near-shore ocean. Low enterococci concentrations, generally less than the detection limit, in water from wells suggest that FIB are not moving through the groundwater system, and that groundwater discharge may not be an important source of FIB to Malibu Lagoon or the near-shore ocean.

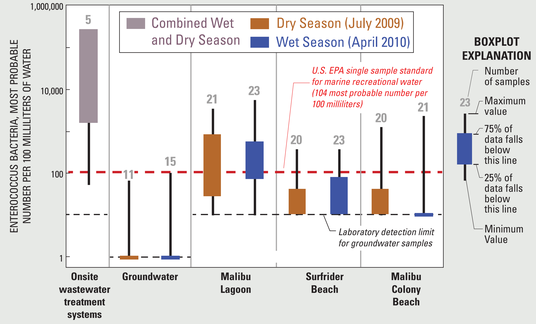


Figure 2. Enterococcus data from onsite wastewater treatment systems, groundwater, Malibu Lagoon and near-shore ocean, Malibu California, 2009-2010

Identification of wastewater and groundwater discharge

The naturally-occurring, stable isotopes of oxygen and hydrogen in the water molecule (oxygen-18 and deuterium, respectively) were used to determine the percentage of imported water that was used for water supply and then discharged as treated wastewater in a sample. This technique works because all the water used for public supply in the study area is imported from either northern California or the Colorado River and has an oxygen-18 and deuterium composition different from that of native water (fig. 3). Some groundwater samples contained as much as 70 percent treated wastewater, but did not contain detectable concentrations of FIB.

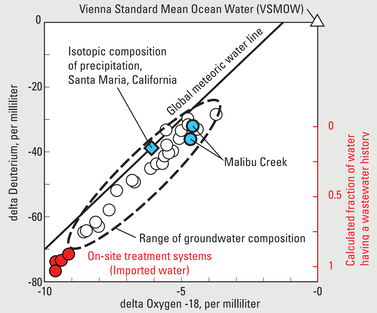


Figure 3. delta Oxygen-18 and delta deuterium data in water from onsite wastewater treatment systems, wells, and Malibu Creek, near Malibu, California, July 2009 and April 2010

Radon-222 is a naturally occurring radioactive isotope that has high activity in groundwater and low activity in surface water. Radon-222 activity increases in surface water with increasing groundwater discharge. Increased radon-222 activity was used to evaluate changing FIB concentrations as groundwater discharge was occurring to Malibu Lagoon and the near-shore ocean. For example, in November 2009, there were small increases in enterococcus concentrations in the near-shore ocean at low tide as water from Malibu Lagoon discharged through the sand berm separating the lagoon from the ocean (fig. 4). In contrast, FIB concentrations remained below the detection limit as radon-222 activity increased and groundwater discharged at low tide adjacent to unsewered residential development in Malibu Colony.

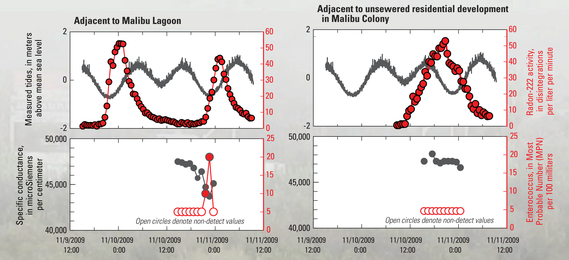
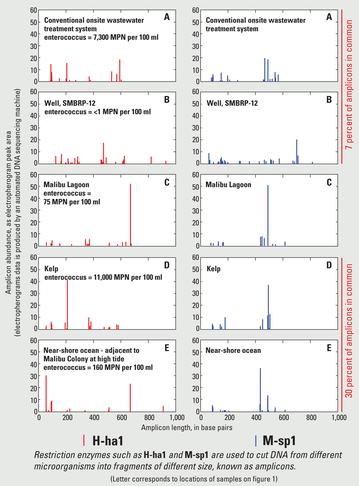


Figure 4. Tides, radon-222 activity, specific conductance, and enterococcus concentrations in the near-shore ocean adjacent to Malibu Lagoon, Malibu, California.

Genetic and chemical tracers of fecal indicator bacteria and wastewater

A combination of genetic, and chemical techniques were used with isotopic data to identify the source of FIB in groundwater, Malibu Lagoon, and the near-shore ocean. Terminal-Restriction Fragment Length Polymorphism (T-RFLP), uses restriction enzymes to cut DNA from microorganisms into fragments of different sizes known as amplicons. Microbial communities present in the discharge from onsite wastewater treatment systems and groundwater having as much as 70 percent wastewater have only 7 percent of amplicons present in both samples (fig. 5A and B). In contrast, as many as 30 percent of amplicons measured in samples from both kelp and the near-shore ocean were present in both samples (fig. 5D and E) consistent with possible contributions of FIB from kelp accumulated along the wrack line to the ocean at high tide.



Restriction enzymes such as **H-ha1** *and* **M-sp1** *are used to cut DNA from different microorganisms into fragments of different size, known as amplicons.*

(Letter corresponds to locations of samples on figure 1)

Figure 5. Selected T-RFLP amplicons from onsite wastewater treatment systems, a well having had fraction of treated wastewater in malibu lagoon, near Malibu California, July 2009.

A combination of genetic, and chemical techniques were used with isotopic data to identify the source of FIB in groundwater, Malibu Lagoon, and the near-shore ocean. Terminal-Restriction Fragment Length Polymorphism (T-RFLP), uses restriction enzymes to cut DNA from microorganisms into fragments of different sizes known as amplicons. Microbial communities present in the discharge from onsite wastewater treatment systems and groundwater having as much as 70 percent wastewater have only 7 percent of amplicons present in both samples (fig. 5A and B). In contrast, as many as 30 percent of amplicons measured in samples from both kelp and the near-shore ocean were present in both samples (fig. 5D and E) consistent with possible contributions of FIB from kelp accumulated along the wrack line to the ocean at high tide.

Sixty nine organic compounds, including caffeine, fecal sterols, personal health-care products, and other compounds associated with human use, were analyzed. Indicators of human use were frequently detected in treated water from within onsite wastewater treatment systems and from sampled wells with a high percent of treated wastewater (fig. 6). However, these samples did not contain FIB. Although wastewater compounds are transported with the groundwater, FIB are removed.

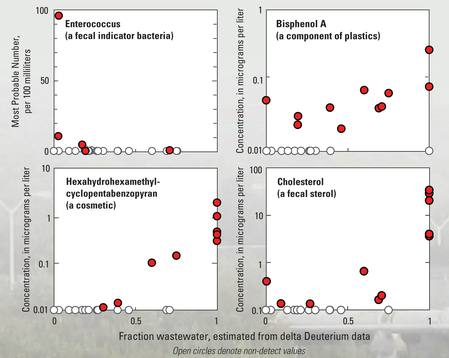


Figure 6. Enterococcus and selected wastewater indicator compounds in water from wells, as a function of the fraction wastewater, Malibu, California July, 2009 to April 2010.

Birds in Malibu Lagoon, a potential source of fecal indicator bacteria, Malibu, California, July 2009

EXHIBIT "C"

U.S. Geological Survey - Earthquake Hazards Program

Induced Earthquakes

USGS Publications

2016

Choy, G. L., Rubinstein, J. L., Yeck, W. L., McNamara, D. E., Mueller, C. S., Boyd, O. S., 2016, A Rare Moderate-Sized (Mw 4.9) Earthquake in Kansas: Rupture Process of the Milan, Kansas, Earthquake of 12 November 2014 and Its Relationship to Fluid Injection, Seismol. Res. Letters, v. 87, p. 1-9, DOI: 10.1785/0220160100.

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2015

*Benz, Harley M., McMahon, Nicole D., Aster, Richard C., McNamara, Daniel E., and David B. Harris (**2015**), Hundreds of Earthquakes per Day: The 2014 Guthrie, Oklahoma, Earthquake Sequence, Seismological Research Letters, V 86, Number 5, doi: 10.1785/0220150019.*

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*Ellsworth, William L. et al. (**2015**), Increasing seismicity in the U. S. midcontinent: Implications for earthquake hazard, The Leading Edge 34, 6(2015); pp. 618-626 doi: 10.1190/tle34060618.1.*

*Hauksson et al. (**2015**), A century of oil-field operations and earthquakes in the greater Los Angeles Basin, southern California, The Leading Edge 34, 6(2015); pp. 650-656 doi 10.1190/tle34060650.1.*

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*Hough, S.E. and M. Page (**2015**), The Petroleum Geologist and the Insurance Policy, Seismological Research Letters, 87:1, 171-176, doi:10.1785/0220150218.*

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*McGuire, J. J. et al. (**2015**), Relationships among seismic velocity, metamorphism, and seismic and aseismic fault slip in the Salton Sea Geothermal Field region, J. Geophys. Res. Solid Earth, 120, 2600-2615, doi:10.1002/ 2014JB011579.*

*McNamara, D. E. et al. (**2015**), Efforts to monitor and characterize the recent increasing seismicity in central Oklahoma, The Leading Edge 34, 6(2015); pp. 628-639, doi: 10.1190/tle34060628.1.*

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*Rubinstein, J.L. and Mahani, A. B (**2015**), Myths and Facts on Wastewater Injection, Hydraulic Fracturing, Enhanced Oil Recovery, and Induced Seismicity, Seismological Research Letters Volume 86, Number 4 July/August 2015, doi: 10.1785/0220150067.*

*Weingarten, M., et al. (**2015**), High-rate injection is associated with the increase in U.S. mid-continent seismicity, Science, 348(6241), pp 1336-1340.*

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*Barbour, A. J., and F. K. Wyatt (**2014**), Modeling strain and pore pressure associated with fluid extraction: The Pathfinder Ranch experiment, Journal of Geophysical Research: Solid Earth, 119(6), 5254-5273.*

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10.1002/2014JB010950.

*Frohlich, C. et al. (**2014**), The 17 May 2012 M4. 8 earthquake near Timpson, East Texas: An event possibly triggered by fluid injection, Journal of Geophysical Research: Solid Earth, 119(1), 581-593.*

*Gupta, H. et al. (**2014**), Probing reservoir-triggered earthquakes near Koyna, India, through scientific deep drilling, Scientific Drilling, v. 18, p. 5-9, doi:10.5194/sd-18-5-2014.*

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*McGarr, A. (**2014**), Maximum magnitude earthquakes induced by fluid injection, Journal of Geophysical Research, DOI: 10.1002/2013JB010597.*

*Rubinstein, J. L. et al. (**2014**), The 2001–Present Induced Earthquake Sequence in the Raton Basin of Northern New Mexico and Southern Colorado, Bull. Seismol. Soc. Am., 104(5), 2162-2181, doi:10.1785/0120140009..*

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*Ellsworth, W.L. (**2013**), Injection-induced earthquakes, Science, 341, doi:10.1126/science.1225942.*

*Keranen, K.M. et al. (**2013**), Potentially induced earthquakes in Oklahoma, USA: Links between wastewater injection and the 2011 Mw 5.7 earthquake sequence, Geology, doi: 10.1130/G34045.1.*

*Llenos, A.L. and A.J. Michael (**2013**), Modeling earthquake rate changes in Oklahoma and Arkansas: Possible signatures of induced seismicity, Bulletin of the Seismological Society of America, v. 2013, p 2850-2861, doi: 10.1785/0120130017.*

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*Gomberg, J. and L. Wolf (**1999**), Possible cause for an improbable earthquake: The 1997 Mw 4.9 southern Alabama earthquake and hydrocarbon recovery, Geology, 27(4), 367-370.*

1992

*Nicholson, C. and R.L. Wesson (**1992**), Triggered Earthquakes and Deep Well Activities, Pure and Applied Geophysics, 139(3), 561-578.*

1990

*Nicholson, C. and R.L. Wesson (**1990**), Earthquake hazard associated with deep well injection: A report to the U.S. Environment Protection Agency, US Geological Survey Bulletin 1951, 74pp.*

1988

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1981

*Hseih, P. and J. Bredehoeft (**1981**), A reservoir analysis of the Denver earthquakes: A case of induced seismicity, J. Geophys. Res., 86(B2), 903-920.*

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