Category	Commenter	Comment Code	Summary of Comment	Reference Document	Reference Obtained	Reference Reviewed	Result of Review	Notes
Landslide	(b) (6)	4-C	Oregon needs to prioritize clean water (even for smallest streams) and guard against human-made landslides.	N/A	N/A	N/A	N/A	N/A
Landslide		9-B	For too long, has been concerned about landslides, siltation, and clearcuts from forestry and	N/A	N/A	N/A	N/A	N/A
Landslide		13-B	Supportive of 3 key areas where Oregon hasn't met program requirements (forestry--all elements, OSDS, and new devel) and asks us to continue to work with OR to address those issues.	N/A	N/A	N/A	N/A	N/A
Landslide	N. Coast Basin Coalition	30-E	Oregon must increase protection of riparian areas for small and medium fish and non-fish streams and high-risk landslide areas.	N/A	N/A	N/A	N/A	N/A
Landslide	N. Coast Basin Coalition	30-J	Watersheds experience landslides from failed logging roads.Cites 4 landslides in Arch Cape (drinking water watershed) in 2013.	N/A	N/A	N/A	N/A	N/A
Landslide	(b) (6)	31-D	Timber companies are unaccountable for overuse of pesticides, landslides caused by poorly maintained logging roads, and increased sediment load in our rivers which inhibit salmon spawning ability.	N/A	N/A	N/A	N/A	N/A
Landslide	(b) (6)	42-D	Jetty Creek watershed provides drinking water to Rockaway Beach. 80% of watershed has been clearcut over past several years even though DEQ source water assessment noted these are steep slopes with erosive soils.	Oregon Department of Environmental Quality. 2003. Source Water Assessment Summary Brochure: Rockaway Beach Water Department PWS #4100708. http://www.deq.state.or.us/wq/dwp/docs/swasummary/pws00708.pdf	Yes	Yes	Accurate (perhaps embellished)	"2002 DEQ Source Water Assessment" referenced in comment. Located a Source Water Assessment Summary Brochure for Rockaway Beach, which was reviewed. Summary Brochure says: "high soil permeability, high soil erosion potential, high runoff potential …" but does not say "very steep slopes" as per the comment.
Landslide	(b) (6)	44-D	Areas where program improvement needed that could actually work to control polluted runoff from logging would be protection of riparian areas for small and medium streams (fish and non-fish bearing), including sufficient riparian buffers for application of pesticides along non-fish streams; treating old logging roads often built on fill that are leaching sediment, protection of high-risk landslide areas from cuts	N/A	N/A	N/A	N/A	N/A
Landslide	Oceanside Cleanwater Subcommittee	53-C	Logging rds/overharvesting/landslides cause excess turbidity that reacts with Cl to produce carcinogens.	N/A	N/A	N/A	N/A	N/A
Landslide	Oregon Wild	58-B	Climate Change Preparation/Mitigation, and Ocean Acidification: Need to prepare for climate change by putting programs in place to prevent harm to water quality and make watersheds more resilient to large storms, by requiring wider stream buffers for forestry and agriculture operations, larger fish-friendly culverts that pass more water from larger storms, improved road drainage, road drainage disconnected from streams, removal of valley bottom and mid-slope roads that intercept the downslope movement of beneficial wood and sediment, reduced road density especially in steep terrain, and better protection for unstable slopes. Under climate change jet stream changes may mean that storms will move more slowly over coastal zone – dropping more precipitation per storm event (exacerbating potential for landslides and road failures)	N/A	N/A	N/A	N/A	N/A
Landslide	Oregon Wild	58-E	Focus on forest issues have been on shade/sediment. Also need large woody debris. Large wood is recruited from a large area adjacent to streams and upslope, including unstable areas that move downslope toward streams (implication is that harvest on unstable slopes will result in lack of delivery of large wood to streams). Logging near streams and on unstable slopes deprives streams of the essential functions provided by dead wood.	See "LWD" comments in working tab; related, but not yet reviewed.	pending	pending	pending	pending
Landslide	Oregon Wild	58-H	Cites numerous studies about inadequacy of OFPA and how its worse than federal and neighboring states. White paper analyzing the proposed O&C Trust, Conservation and Jobs Act provides ample evidence supporting the need for more stringent programs to protect water quality in Oregon's coastal zone.	Oregon Wild. 2012. Problems and Pitfalls Associated with the Proposed "O&C Trust, Conservation, and Jobs Act". Version 1.3, June 5, 2012.	Yes	Yes	Accurate	Reference (Oregon Wild 2012) included 11 endnotes. Copies of these were obtained (currently only have abstracts for 2 of them) and verified. All citations were accurately represented by OR 2012.
Landslide	(b) (6)	61-A	Supports disapproval	N/A	N/A	N/A	N/A	N/A
Landslide		63-B	Concerned with logging impacts, particularly from clearcutting and resultant hillside erosion, which may pollute our drinking water spring. We had severe clearcutting around our private forest and this caused substantial loss of river quality.	N/A	N/A	N/A	N/A	N/A

Landslide	(b) (6)	67-B	Oregon does not have a program in place to control nonpoint pollution sufficiently to meet the additional CZARA MM needed to attain/maintain wqs and protect designated uses, particularly due to logging on private lands.	N/A	N/A	N/A	N/A	N/A
Landslide		67-D	Observed sediment loads from forest roads and landslides. We are aware of many landslides, which often initiate at roads or start in clear cuts on steep ground	N/A	N/A	N/A	N/A	N/A
Landslide		67-E	Additional MMs needed for forestry such as what is described on pg. 7-12 of proposed findings. Need more measures to prevent landslides caused by harvest on steep slopes. ODF has analyzed potential landslide locations in relation to public safety on the Tillamook State Forest (and required operational restrictions). Similar operational restrictions should be extended to steep slopes likely to affect streams in other areas	N/A	N/A	N/A	N/A	N/A
Landslide		67-F	Used Salmonberry River in north Coast range as prime example of impacts. Numerous clearcuts on steep ground were source of landslides. Note that Salmonberry is designated as salmon anchor habitat. On-the-ground surveys and Google Earth confirm landslides initiating in recent harvests contributed to stream damage (loss of riparian; channel simplification; scouring to bedrock; alluvial deposits that isolate habitat segments). Kinney Creek Landslide in recent harvest (trib to Salmonberry).	On-the-ground surveys and Google Earth; Personal observations of Ian Fergusson	N/A	N/A	N/A	No additional information provided to back up statements.
Landslide		67-F (sub)	Steep slopes and landslides in many recent clearcuts likely demonstrate patterns found by Montgomery et al. (2010) and Tucker et al. (2010) and noted in the EPA/NOAA Proposed Finding (i.e. significant increases in landslide rates after clear-cutting compared to unmanaged forests in the Pacific Northwest)	Montgomery, D.R., K.M. Schmidt, H.M. Greenberg, and W.E. Dietrich. 2000. Forest clearing and regional landsliding. *Geology,* 28(4): 311-314.	Yes	Yes	Accurate	Note that the year of citation is incorrect in comment; it is 2000. Montgomery did note increases in landslides in clearcut areas.
Landslide		67-F (sub)	Steep slopes and landslides in many recent clearcuts likely demonstrate patterns found by Montgomery et al. (2010) and Tucker et al. (2010) and noted in the EPA/NOAA Proposed Finding (i.e. significant increases in landslide rates after clear-cutting compared to unmanaged forests in the Pacific Northwest)	Turner, T.R., S.D. Duke, B.R. Frabsen, M.L. Reiter, A.J. Kroll, J.W. Ward, J.L. Bach, T.E. Justice, and R.E. Bilby. 2010. Landslide densities associated with rainfall, stand age, and topography on forested landscapes, southwestern Washington, USA. *Forest Ecology and Management.* 259(12): 2233-2247.	Yes	Yes	Accurate	Note that in letter 67 the commenters refer to the EPA/NOAA Proposed Finding – however they misspelled one of the references. It should be Turner et al. (not Tucker et. al).
Landslide		67-F (sub)	Natural disturbance can rejuvenate coastal river systems, however the frequency of disturbances, along with their concentration in (the Salmonberry watershed) appear to have increased due to logging. Net effects are detrimental to water and habitat quality.	N/A	N/A	N/A	N/A	N/A
Landslide		67-?	ODFW subsequently conducted a habitat survey of the mainstem Salmonberry in the summer of 2008. The survey documented a loss of pool habitat and increase of fast water habitat, and expressed concern that "deleterious long-term impacts…may result from an increased deposition of fine materials from the scoured banks, landslides and debris avalanches into the stream."	ODFW. 2008. ODFW Aquatic Inventory Project: Stream Report, Salmonberry River. http://oregonstate.edu/dept/ODFW/freshwater/inventory/pdffiles/Basin%20PDFs/NW/NW%20Coast%20Reports/Salmonberry%20R%202008%20Complete%20Report.pdf	Yes	Yes	Questionable	The comment letter referred to the stream report as well as a cover letter (indicated that these were attached). These attachments were not provided with the comment letter; however, the Stream Report was obtained and reviewed. It did not include any conclusive statements such as those made in the comment (just presented a summary of the data and findings from the 2008 survey rather than a comparison with previous surveys). It is assumed that the cover letter included the statements similar to the
Landslide	Oregon Forest Industries and Oregon Small Woodlands Association	77-?	Shallow landslides (e.g., debris slides, debris flows, and debris avalanches) are the primary landslide of concern in managed forest lands in the Pacific Northwest. They typically occur over only one to two percent of Pacific Northwest landscapes impacted by large storm events (Ketcheson and Froelich 1978; Ice 1985) that are typically initiated during the fall and winter months (Swanson et al 1987, Wiley 2000).	Swanson, F. J.; Bend a, L.E.; Duncan, S.H.; Grant, G.E.; Megahan, W.F.; Reid, L.M.; and Ziemer, R.R. 1987. Mass failures and other processes of sediment production in Pacific Northwest forest landscapes, in : Streamside Management: Forestry and Fishery Interactions. University of Washington, Institute of Forest Resources, Contribution no. 57. p. 9 - 38.	Yes	Yes	Accurate	Swanson statements indicate that landslides caused by large storms are infrequent due to timing and nature of where they occur. Did not find reference to timing of events.
Landslide	Oregon Forest Industries and Oregon Small Woodlands Association	77-?	Shallow landslides (e.g., debris slides, debris flows, and debris avalanches) are the primary landslide of concern in managed forest lands in the Pacific Northwest. They typically occur over only one to two percent of Pacific Northwest landscapes impacted by large storm events (Ketcheson and Froelich 1978; Ice 1985) that are typically initiated during the fall and winter months (Swanson et al 1987, Wiley 2000).	Wiley, T.J. 2000. Relationship between rainfall and debris flows in western Oregon. Oregon Geology 62(2): 27-34.	Yes	Yes	Accurate	Wiley cites that most debris flow causing rainstorms occur in December.

Landslide	Oregon Forest Industries and Oregon Small Woodlands Association	77-?	Shallow landslides (e.g., debris slides, debris flows, and debris avalanches) are the primary landslide of concern in managed forest lands in the Pacific Northwest. They typically occur over only one to two percent of Pacific Northwest landscapes impacted by large storm events (Ketcheson and Froelich 1978; Ice 1985) that are typically initiated during the fall and winter months (Swanson et al 1987, Wiley 2000).	Ketcheson, G. and Froehlich, H. A. 1978. Hydrologic factors and environmental impacts of mass soil movements in the Oregon Coast Range. Water Resources Institute, WRRI- 56. Oregon State University. Corvallis, OR. 94 pp.	Yes	Yes	Questionable	Document cites that debris avalanches typically occur from November to March. However many statements in the document indicate that large storms cause frequent landslides. This does not seem to support the statement that only one to two percent of landscapes are impacted by large storm events. Need to review ICE 1985.
Landslide	Oregon Forest Industries and Oregon Small Woodlands Association	77-?	Shallow landslides (e.g., debris slides, debris flows, and debris avalanches) are the primary landslide of concern in managed forest lands in the Pacific Northwest. They typically occur over only one to two percent of Pacific Northwest landscapes impacted by large storm events (Ketcheson and Froelich 1978; Ice 1985) that are typically initiated during the fall and winter months (Swanson et al 1987, Wiley 2000).	National Council for Air and Stream Improvement, Inc. (NCASI). 1985. Catalog of landslide inventories for the Northwest. Technical Bulletin 456. Research Triangle Park, NC. National Council for Air and Stream Improvement, Inc.	No	pending	pending	This is the Ice 1985 reference. Need to be an NCASI member to get the bulletin: http://www.ncasi.org/Programs/Reports-and-Articles/Technical-Bulletins-and-Special-Reports/Technical-Bulletins/Index.aspx Abstract: Landslides are an important source of sediment in both undisturbed and managed steep drainages in the Northwest. Recent regulatory and management issues, including a lawsuit against the Siuslaw National Forest, and proposals for new state forest practice rules have focused attention on landsliding processes, and control opportunities. Most of the information on landslide rates and factors controlling landslides has been obtained from landslide inventories, some of which cover large areas and time periods. This technical bulletin is intended as a quick reference to landslide inventory information and provides a summary of inventory findings. Inventory summaries are found in Appendix A. Appendix A was designed to complement the "Erosion Sedimentation Catalog of the Pacific Northwest" which was prepared by the USDA Forest Service, Northwest Region, in 1980. Topics considered in this bulletin include: (a) the extent of area involved in landsliding, (b) relative amount of landsliding which occurs as a result of roads and harvesting, (c) opportunities for controlling landsliding, (d) methods of quantifying landslide potential, (e) impacts of and recovery from landslide events, and (f) database needs for landslide inventories. Based on landslide inventories it appears that roads have been the major
Landslide	Oregon Forest Industries and Oregon Small Woodlands Association	77-J	We disagree that the FPA is not protective of high-risk landslide prone areas. In evaluating the results from Turner et. al. (2010), it is misleading to focus only on landslide density relationships. Rather, it is important to also consider the total number of landslides triggered during major storms. While landslide densities have been shown to be higher in steep terrain with young forest stands, the proportion of this area across mountainous terrain is potentially very low, so that potential increases in sediment delivery to public resources from landslides triggered in these areas is also proportionately small. ... Channel alterations from debris flows are a natural habitat-forming process and not necessarily negative.	Turner, T.R., S.D. Duke, B.R. Frabsen, M.L. Reiter, A.J. Kroll, J.W. Ward, J.L. Bach, T.E. Justice, and R.E. Bilby. 2010. Landslide densities associated with rainfall, stand age, and topography on forested landscapes, southwestern Washington, USA. *Forest Ecology and Management*. 259(12): 2233-2247.	Yes	Yes	Accurate	The reference does focus on landslide density relationships. However, commenter is indicating that additional factors are important.
Landslide	Oregon Forest Industries and Oregon Small Woodlands Association	77-J	We disagree that the FPA is not protective of high-risk landslide prone areas. In evaluating the results from Turner et. al. (2010), it is misleading to focus only on landslide density relationships. Rather, it is important to also consider the total number of landslides triggered during major storms. While landslide densities have been shown to be higher in steep terrain with young forest stands, the proportion of this area across mountainous terrain is potentially very low, so that potential increases in sediment delivery to public resources from landslides triggered in these areas is also proportionately small. ... Channel alterations from debris flows are a natural habitat-forming process and not necessarily negative. For example Benda et al. (2003) found that channel morphology and habitat complexity (e.g., pool density, substrate texture, and channel widths) increased in proximity to low-order tributary confluences where debris flows typically deposit wood and sediment, which are important to the maintenance of productive stream habitat.	Benda, Lee, C. Veldhuisen, J. Black. ?2003? Debris flows as agents of morphological heterogeneity at low-order confluences, Olympic Mountains, Washington. Available online at: http://www.earthsystems.net/docs/Benda_et_al_lowres.pdf	Yes	Yes	Inaccurate. Misuse of statement.	While it is true that the study cites that there are correlations among low-order confluences, debris-flow deposits, and channel morphology starting on page 1113, these statements are based on a study of how low-order confluences which are prone to debris flow deposition influence channel and valley morphology. This study is specifically on natural low-order confluence areas where you would expect debris flow deposition. This is not a study on how unnatural landslides affect morphology of other order streams or non-confluence areas.
Landslide	Oregon Forest Industries and Oregon Small Woodlands Association	77-K	EPA argues that Oregon must have additional management measures for forestry to protect HLHLs, to maintain good water quality, and to ensure that designated uses are protected. However, EPA does not offer any objective evidence that these additional measures are necessary. It simply refers to a single study in the Oregon coast range (Montgomery et.al. 2000) in which landslide rates increased following timber harvest. While studies do reveal a small management signal on a small fraction of the landscape, none have demonstrated significant or lasting impacts to fish populations from these changes. In fact, where habitat changes and fish responses have been carefully monitored, impacts have been subdued and short - lived (Jones et al. 1998, Danehy et al. 2011, Doug Bateman, OSU, personal communication).	Jones, K.K., S. Foster, and K.M.S. Moore. 1998. Preliminary assessment of 1996 flood impacts: channel morphology and fish habitat. ODFW	Yes	Yes	Inaccurate. Study not relevant to reference in comment.	Study focuses on effects of flooding, not debris flow, and no detailed discussions of fish habitat or fish response are made. The study suggests that flooding increased the number of second order streams that are important fish habitat.

Landslide	Oregon Forest Industries and Oregon Small Woodlands Association	77-K	EPA argues that Oregon must have additional management measures for forestry to protect HLHLs, to maintain good water quality, and to ensure that designated uses are protected. However, EPA does not offer any objective evidence that these additional measures are necessary. It simply refers to a single study in the Oregon coast range (Montgomery et.al. 2000) in which landslide rates increased following timber harvest. While studies do reveal a small management signal on a small fraction of the landscape, none have demonstrated significant or lasting impacts to fish populations from these changes. In fact, where habitat changes and fish responses have been carefully monitored, impacts have been subdued and short - lived (Jones et al. 1998, Danehy et al. 2011, Doug Bateman, OSU, personal communication).	Montgomery, D.R., K.M. Schmidt, H.M. Greenberg, and W.E. Dietrich. 2000. Forest clearing and regional landsliding. Geology, 28(4): 311-314.	Yes	Yes	Accurate	
Landslide	Oregon Forest Industries and Oregon Small Woodlands Association	77-K	EPA argues that Oregon must have additional management measures for forestry to protect HLHLs, to maintain good water quality, and to ensure that designated uses are protected. However, EPA does not offer any objective evidence that these additional measures are necessary. It simply refers to a single study in the Oregon coast range (Montgomery et.al. 2000) in which landslide rates increased following timber harvest. While studies do reveal a small management signal on a small fraction of the landscape, none have demonstrated significant or lasting impacts to fish populations from these changes. In fact, where habitat changes and fish responses have been carefully monitored, impacts have been subdued and short - lived (Jones et al. 1998, Danehy et al. 2011, Doug Bateman, OSU, personal communication).	Danehy, Robert J. R.E. Bilby, R.B. Langshaw, D.D Evans, T.R. Turner, W.C. Floyd, S.H. Schoenholtz, S.D. Duke. 2011. Biological and Water Quality Responses to Hydrologic Disturbances in Third-Order Forested Streams. Ecohydrology 01/2011; 5:90-98.	Yes	Yes	Questionable	This study noted that it took 6 years for trout densities to recover from a debris flow event. The study noted that changes from loss of riparian cover were likely to persist until mature forest stands are re-established. Need to define "short-lived" If 6 years for trout recovery is short-lived than yes this statement/reference is used semi-accurately.
Landslide	Oregon Forest Industries and Oregon Small Woodlands Association	77-K	EPA argues that Oregon must have additional management measures for forestry to protect HLHLs, to maintain good water quality, and to ensure that designated uses are protected. However, EPA does not offer any objective evidence that these additional measures are necessary. It simply refers to a single study in the Oregon coast range (Montgomery et.al. 2000) in which landslide rates increased following timber harvest. While studies do reveal a small management signal on a small fraction of the landscape, none have demonstrated significant or lasting impacts to fish populations from these changes. In fact, where habitat changes and fish responses have been carefully monitored, impacts have been subdued and short - lived (Jones et al. 1998, Danehy et al. 2011, Doug Bateman, OSU, personal communication).	Doug Batemen. OSU. Personal communication.	No	pending	pending	Need to request.
Landslide	Oregon Forest Industries and Oregon Small Woodlands Association	77-K	EPA argues that Oregon must have additional management measures for forestry to protect HLHLs, to maintain good water quality, and to ensure that designated uses are protected. However, EPA does not offer any objective evidence that these additional measures are necessary. We respectfully suggest that EPA consider a landscape-scale view over long timeframes as the proper context for evaluating whether water quality standards and designated uses are impaired or attained. Disturbance and recovery processes are an essential part of these landscape-driven forest ecosystems. Oregon's coast range is a dynamic landscape prone to mass wasting. The fish that inhabit this landscape have evolved to accommodate this process and even rely on it to maintain quality habitats (Reeves et al. 1995). Reeves et al. (1995) recommend establishing g a system of reserve watersheds in concert with managing for watershed - scale disturbance regimes. The reserve system has been accomplished under the aquatic conservation strategy of the Northwest Forest Plan. Very little timber harvest or other forest management activities beyond restoration have occurred in federal forests of the Pacific Northwest since 1994. These lands constitute the majority of forested areas in Oregon. On private lands, Oregon has rules in place to reduce the fraction of landslides associated with roads, and it manages the quality of landslides on steep hill slopes through voluntary leave tree areas. It is irrational to think that all landslides are preventable, or that this would be desirable.	Reeves, G.H., Benda, L.E., Burnett, K.M., Bisson, P.A., Sedell, R., 1995. A disturbance based ecosystem approach to maintaining and restoring freshwater habitats of evolutionarily significant units of anadromous salmonids in the Pacific Northwest. In: Nielsen, J.L. (Ed.), Evolution and the Aquatic System: Defining Unique Units in Population Conservation, American Fisheries Society Symposium 17, Bethesda,MD, USA, pp. 334–349.	Yes	Yes	Questionable	Reeves does indicate that while landslides can cause immediate mortality of fish and loss of food resources that over the long term landslides can provide habitat.

Landslide	Oregon Forest Industries and Oregon Small Woodlands Association	77-K	EPA argues that Oregon must have additional management measures for forestry to protect HLHLs, to maintain good water quality, and to ensure that designated uses are protected. However, EPA does not offer any objective evidence that these additional measures are necessary. We respectfully suggest that EPA consider a landscape-scale view over long timeframes as the proper context for evaluating whether water quality standards and designated uses are impaired or attained. Disturbance and recovery processes are an essential part of these landscape-driven forest ecosystems. While it is likely that landslides naturally contribute deposits in streams that may temporarily impact water quality and aquatic life, a body of science suggests that populations quickly recover and often benefit from such events. Aquatic communities have evolved in a dynamic landscape and naturally respond to disturbance events such as landslides. Some species flourish in recently disturbed habitats, others prefer conditions more typical of streams that have not been impacted by recent disturbance. Community composition and productivity naturally ebb and flow over time in these natural aquatic systems.	N/A	N/A	N/A	N/A	
Landslide	Oregon Forest Industries and Oregon Small Woodlands Association	77-L	From a strictly legal perspective, the Agencies have produced no evidence (much less, substantial evidence), that landslides resulting from forest management activities are causing water quality standard exceedances, or negatively impacting aquatic life more than landslides do under background conditions. Without more, a decision to disapprove Oregon's CNPCP would not withstand judicial review.	N/A	N/A	N/A	N/A	N/A
Landslide	Umpqua Watersheds, Inc.	75-D	Inspected recent road failure: The down hill shoulder of this mid-slope sited road had broken away in several locations, due to fill slope failure. Mud and debris flows, some recent, were much in evidence, their effect on the watershed some two or three hundred feet below, clearly discernible. This phenomenon, obviously the result of heavy rain fall on deforested and very steep slopes, has repeated itself with regularity over the years I have been roaming these hills. It is a disgrace and impacts directly on water quality. The cost to repair the failure will be borne by U.S. taxpayers through BLM & FHA.	N/A	N/A	N/A	N/A	first hand account
Landslide	Audubon Society of Portland	83-H	The logging of unstable slopes and Type N stream created polluted runoff and the existing logging road network is also source of sediment.	N/A	N/A	N/A	N/A	first hand account
Landslide	NWEA	57-I	Failure to protect water quality from impacts due to roads, buffers, and logging on steep/unstable slopes	Frissel. 2014. Declaration of Christopher A. Frissell,Ph.D. in Support of The U.S. Environmental Protection Agency's and The National Oceanic and Atmospheric Administration's Proposal to Disapprove the State of Oregon's Coastal Nonpoint Pollution Control Program for Failing to Adopt Additional Management Measures for Forestry. March 3rd, 2014.	Yes	Yes	Accurate	Note that this declaration includes many other references to support these statements. Those were not yet reviewed but were provided.
Landslide	NWEA	57-M	The science is overwhelming: Oregon's riparian buffer and steep slope logging rules are insufficient to protect water quality and all designated beneficial uses.	Frissel. 2014. Declaration of Christopher A. Frissell,Ph.D. in Support of The U.S. Environmental Protection Agency's and The National Oceanic and Atmospheric Administration's Proposal to Disapprove the State of Oregon's Coastal Nonpoint Pollution Control Program for Failing to Adopt Additional Management Measures for Forestry. March 3rd, 2014.	Yes	Yes	Accurate (perhaps embellished)	Note that this declaration includes many other references to support these statements. Those were not yet reviewed but were provided.
Landslide	NWEA	57-R	Oregon's forest road rules are so loaded with vague, ambiguous, precatory, and conditional language that they can afford EPA and NOAA no rational basis for concluding that they ensure protection of water quality and designated beneficial uses in Oregon's coastal areas.	Oregon Department of Forestry. 2009. Forest Practice Rule Guidance: Road Construction and Maintenance.	Yes	Yes	Accurate	
Landslide	NWEA	57-D	Oregon has repeatedly submitted a coastal nonpoint program that EPA and NOAA have repeatedly refused to approve, in large part because it did not include adequate regulation of forest practices in the form of additional management measures.	State of Oregon. 1995. Pollution Prevention and Control Program for Oregon's Coastal Waters. July 1995.	No	pending	Accurate	Do not have copy of previous submittal.
Landslide	NWEA	57-D	Oregon has repeatedly submitted a coastal nonpoint program that EPA and NOAA have repeatedly refused to approve, in large part because it did not include adequate regulation of forest practices in the form of additional management measures.	NOAA and EPA. 1998. Findings for the Oregon Coastal Nonpoint Program. January 13, 1998.	Yes	Yes	Accurate	

Landslide	NWEA	57-D	Oregon has repeatedly submitted a coastal nonpoint program that EPA and NOAA have repeatedly refused to approve, in large part because it did not include adequate regulation of forest practices in the form of additional management measures.	State of Oregon. 2002. Pollution Prevention and Control Program for Oregon's Coastal Waters. October 2002.	No	pending	Accurate	Do not have copy of previous submittal.
Landslide	NWEA	57-D	Oregon has repeatedly submitted a coastal nonpoint program that EPA and NOAA have repeatedly refused to approve, in large part because it did not include adequate regulation of forest practices in the form of additional management measures.	State of Oregon. 2003. Pollution Prevention and Control Program for Oregon's Coastal Waters. March 2003.	No	pending	Accurate	Do not have copy of previous submittal.
Landslide	NWEA	57-D	Oregon has repeatedly submitted a coastal nonpoint program that EPA and NOAA have repeatedly refused to approve, in large part because it did not include adequate regulation of forest practices in the form of additional management measures.	State of Oregon. 2007. Pollution Prevention and Control Program for Oregon's Coastal Waters.	No	pending	Accurate	Do not have copy of previous submittal.
Landslide	NWEA	57-D	Oregon has repeatedly submitted a coastal nonpoint program that EPA and NOAA have repeatedly refused to approve, in large part because it did not include adequate regulation of forest practices in the form of additional management measures.	Amanda Punton. 2006. Personal communication to Robert Baumgartner (Oregon state official). September 20, 2006.	No	pending	pending	Need to request.
Landslide	State of Oregon	pending	See 1999 study. In 3 out of 4 study areas landslide density was greater in young stands, 0-10 compared to stands from 10-100 years.	Robinson, E.G., K.A. Mills, J. Paul, L. Dent, and A. Skaugset. 1999. Oregon Department of Forestry Storm Impacts and Landslides of 1996: Final Report. June 1999. Oregon Department of Forestry, Forest Practices Monitoring Program. http://www.wou.edu/las/physci/taylor/g473/refs/robison_etal_1999.pdf	Yes	Yes	Accurate	Reference not cited directly in comment, but this citation has identical conclusion on page 108.
Landslide	State of Oregon	pending	Montgomery et al. (2000) study found: Landslide sensitivity was dependent on a combination of slope steepness and topography; Storms of less than a 4-year recurrence interval triggered landslides in decades after timber harvest; Montgomery developed model to estimate regional landslide rates based on mapped landslides from 14 industrial forest watersheds assessed under the WA State watershed analysis method. The model estimated that contemporary landslide rate was 3-9 times to the estimated background rate for Oregon coast.	Montgomery, D.R., K.M. Schmidt, H.M. Greenberg, and W.E. Dietrich. 2000. Forest clearing and regional landsliding. *Geology,* 28(4): 311-314.	Yes	Yes	Accurate	Online version found here: http://eps.berkeley.edu/~bill/papers/97.pdf
Landslide	State of Oregon	pending	A study by Turner et al. 2010, examined associations between landslide density, precipitation, topography, and forest stand age. The study found: Very few landslides occurred with less than or equal to the 100 year rainfall category; At higher rainfall intensities significantly higher landslide densities occurred on steep slopes(>70% gradient compared to lower gradients; Above 150% of 100 year rainfall, the density of landslides was 2-3 times larger in the 0-5 and 6-10 year stand age than in the 11-20, 20-31, 30-41. The effect of stand age was strongest at the highest rainfall intensities; Landslide density was similar to what was found in Oregon in 1999.	Turner, T.R., S.D. Duke, B.R. Frabsen, M.L. Reiter, A.J. Kroll, J.W. Ward, J.L. Bach, T.E. Justice, and R.E. Bilby. 2010. Landslide densities associated with rainfall, stand age, and topography on forested landscapes, southwestern Washington, USA. *Forest Ecology and Management.* 259(12): 2233-2247.	Yes	Yes	Questionable	All findings were identical to those presented in the abstract, except for the last statement. There was no mention in the reference of comparison to landslide density in Oregon in 1999.
Pesticides	(b) (6)	2-C	Urine samples in Triangle Lake show citizens with elevated 2,4-D and atrazine metabolites from drift in aerial applications.	Chevrier, Cecile, Limon, Gwendolina, Monfort, Christine, Rouget, Florence, Garlantezec, Ronan, Petit, Claire, Durand, Gael, Cordier, Sylvaine. 2011. Urinary Biomarkers of Prenatal Atrazine Exposure and Adverse Birth Outcomes in the PELAGIE Birth Cohort, *Environmental Health Perspective.* 119(7): 1034–1041.	Yes	Yes	Questionable	Study did not reference drift from aerial applications.
Pesticides		2-G	Current data is suggestive of widespread human uptake of these compounds [2,4 D and atrazine] and warrants investigation of Forest practices Act BMPs associated with aerial spraying in the coast range	Chevrier, Cecile, Limon, Gwendolina, Monfort, Christine, Rouget, Florence, Garlantezec, Ronan, Petit, Claire, Durand, Gael, Cordier, Sylvaine. 2011. Urinary Biomarkers of Prenatal Atrazine Exposure and Adverse Birth Outcomes in the PELAGIE Birth Cohort, *Environmental Health Perspective.* 119(7): 1034–1041.	Yes	Yes	Accurate (perhaps embellished)	The study discusses the presence of atrazine in pregnant women up to 3 years after the banning of atrazine use in Europe and suggests that uptake should be more of a concern in countries that have not yet banned atrazine.
Pesticides	NWEA	57-II2	ODF Rules to protect fish-bearing streams are inadequate to protect threatened and endangered species. As the NMFS biological opinions on pesticides demonstrate, the federal labels do not provide adequate and full protection for threatened and endangered species in Oregon.	National Marine Fisheries Service. 2011.Endangered Species Act Section 7 Consultation, Biological Opinion, Environmental Protection Agency Registration of Pesticides containing Chlorpyrifos, Diazinon, and Malathion	Yes	Yes	Accurate	See cover letter
Pesticides	NWEA	57-CF-A	Aerial spraying is of greatest concern because on forest lands, it involves the largest quantities of chemical application over the largest areas.	Dent L and J Robben. 2000. Aerial Pesticide Application Monitoring Final Report. Oregon Department of Forestry Forest Practices Monitoring Program. Technical Report 7.	Yes	Yes	Jenny to Review	Could not find comment in reference

Pesticides	NWEA	57-CF page 52	It is a simple matter to conclude that Oregon's forest chemical application rules are not protective of all streams and wetlands. First many water bodies are afforded no mandatory application buffer whatsoever, so chemicals may be sprayed to the water's edge, and some level of overspray, indirect drift, and delivery by surface runoff or groundwater transport through soil macropores (Armstrong et al. 2000) into adjacent water bodies is inevitable (even when direct application to waters is forbidden) (Harris and Forster 1997, Battaglin et al. 2008)	Armstrong, A.C., Matthews, A.M., Portwood, A.M., Leeds-Harrison, P.B., & Jarvis, N.J. 2000. CRACK-NP: a pesticide leaching model for cracking clay soils. *Agricultural Water Management* 44(1): 183-199.	Yes	Yes	Accurate	Rapid "by-passing" or macropore flows processes are known to influence, and may even dominate, the transport of water and dissolved substances.
Pesticides	NWEA	57-CF-page 53	It is a simple matter to conclude that Oregon's forest chemical application rules are not protective of all streams and wetlands. First many water bodies are afforded no mandatory application buffer whatsoever, so chemicals may be sprayed to the water's edge, and some level of overspray, indirect drift, and delivery by surface runoff or groundwater transport through soil macropores (Armstrong et al. 2000) into adjacent water bodies is inevitable (even when direct application to waters is forbidden) (Harris and Forster 1997, Battaglin et al. 2008)	Harris, G.L., and A. Forster. 1996. Pesticide contamination of surface waters: potential role of buffer zones. Pp. 62-69 in *Buffer Zones: Their Processes and Potential in Water Protection,* NE Haycock, TP Burt, KWT Goulding, and G. Pinay, Editors. Quest Environmental. Greenwood Village, CO.	Yes	Yes	Accurate	Note: really 1997 (comment letter says 1996); Considerable pesticide movement is observed in sub-surface drainage in clay-based soils, entering the stream system effectively as point sources. (In such circumstances, surface buffers are unlikely to result in any noticeable reduction in pesticide movement to surface waters.)
Pesticides	NWEA	57-CF-page 53	It is a simple matter to conclude that Oregon's forest chemical application rules are not protective of all streams and wetlands. First many water bodies are afforded no mandatory application buffer whatsoever, so chemicals may be sprayed to the water's edge, and some level of overspray, indirect drift, and delivery by surface runoff or groundwater transport through soil macropores (Armstrong et al. 2000) into adjacent water bodies is inevitable (even when direct application to waters is forbidden) (Harris and Forster 1997, Battaglin et al. 2008)	Battaglin, W.A., Rice K.C., Focazio, M.J., Salmons, S., & Barry, R.X. 2009. The occurrence of glyphosate, atrazine, and other pesticides in vernal pools and adjacent streams in Washington, DC, Maryland, Iowa, and Wyoming, 2005-2006. *Environmental Monitoring and Assessment* 155(1-4): 281-307.	Yes	Yes	Accurate	Note: really 2009? Study showed that the most likely source for atrazine, glyphosate, their degradation products, and most other detected pesticides is runoff from application to adjacent areas upstream or up-gradient from the sampling location.
Pesticides	NWEA	57-CF-page 54	The frequent, if not near-ubiquitous detection of pesticide residues in water quality monitoring samples in Oregon (e.g. the USGS Clackamas Study, http://pubs.usgs.gov/sir/2008/5027/section6.html, Carpenter et al. 2008) suggest that the problem is more widespread and systematic, and less controlled by existing rules and practices, than Oregon admits.	Carpenter, K.D., S. Sobieszczyk, A.J. Arnsberg, and F.A. Rinella. 2008. Pesticide Occurrence and Distribution in the Lower Clackamas River Basin, Oregon, 2000–2005.U.S. GEOLOGICAL SURVEY Scientific Investigations Report 2008–5027. Prepared in cooperation with the Clackamas Watershed Management Group (Clackamas River Water Providers and Clackamas County Water Environment Services) and the National Water-Quality Assessment Program. http://pubs.usgs.gov/sir/2008/5027/section6.html	Yes	Yes	Accurate (perhaps embellished)	Ultra low detection level analyses were utilized in study.
Pesticides	OFIC	77-R	Water quality monitoring of a type-N (non-fish bearing) forest stream during and after herbicide spray operations (applied under OFPA rules and guidelines and FIFRA/labeling regulations) shows no evidence of detrimental impacts. Nevertheless, Oregon continues to support monitoring that would identify potential problems should they arise. ... Recent monitoring has not found a problem with contemporary forest aerial herbicide spray operations; in fact just the opposite. Oregon is currently monitoring for over 100 pesticides, which will allow the state to respond should herbicides be identified at unacceptable levels. The Spray Drift Task Force worked to identify ways of quantifying and modeling chemical drift to better protect off-target locations (http://www.agdrift.com/) (Teske et al. 2003).	Teske, M.E., H.W. Thistle, and Ice, G.G. 2003. Technical advances in modeling aerially applied sprays. *Transactions of the American Society of Agricultural Engineers* 46(4):985-996.	Yes	Yes	Source irrelevant to comment.	The original comment included here is not associated with the listed reference. The Teske 2003 comment highlighted in blue about the Spray Drift Task Force is accurate.
Pesticides	OFIC	77-T	ODF has developed extensive guidelines for implementing the Oregon Forest Practices Act rules for herbicide applications to forest lands. See Oregon Department of Forestry, Forest Practice Rule Guidance: Chemicals and Other Petroleum Products (2009), available at http://goo.gl/uv8oIH. Also cite pesticide monitoring studies that show no significant impact.	Oregon Department of Forestry, Forest Practice Rule Guidance: Chemicals and Other Petroleum Products. 2009. http://goo.gl/uv8oIH	Yes	Yes	Partial; Accurate to date	Red text not addressed
Pesticides	OFIC	77-R	A number of water quality monitoring projects have been conducted which have assessed herbicide concentrations in Oregon and Northwest streams. These began with research by the USDA Forest Service.	Norris, L.A. and P. Charlton. 1995. Determination of the effectiveness of herbicide buffer zones in protecting water quality, p. 147-152. In: G.J. Doucet, C. Sequin, and M. Giguere (eds.). Proceedings: Fifth International Symposium on Environmental Concerns in Rights-of-way Management. 9/19-22/1993. Hydro-Quebec, Montreal, Canada.	No	pending	pending	Could not obtain copy of reference http://rights-of-way.org/15symp.htm; request from author? Logan.Norris@oregonstate.edu
Pesticides	OFIC	77-R	Of particular significance for this assessment is a study by Rashin and Graber (1993). They monitored seven small streams in Washington: six forested and one Christmas tree plantation. These streams would be considered small type-N streams in Oregon. Herbicides were found in all streams monitored, but the maximum instantaneous concentration observed was 7.55 mg/L.	Rashin, E. and Graber, C. 1993. *Effectiveness of best management practices for aerial application of forest pesticides.* TFW-WQ1-93-001. Olympia, WA: Washington Department of Ecology.	Yes	Yes	Partial; Accurate to date	Red text not evaluated
Pesticides	OFIC	77-R	The Oregon Department of Forestry conducted a study of 26 streams following aerial pesticide (both herbicides and fungicides) applications to assess the effectiveness of the OFPA rules.	Dent L and J Robben. 2000. Aerial Pesticide Application Monitoring Final Report. Oregon Department of Forestry Forest Practices Monitoring Program. Technical Report 7.	Yes	Yes	Accurate	

Pesticides	OFIC	77-R	The state of Oregon is continuing to monitor waters across the state pro-actively to detect any significant impacts from current practices under the Oregon State Plan and Pesticide Stewardship Program ("PSP").	Pesticide Stewardship Program http://www.oregon.gov/deq/Pages/Features/peststeward.aspx	Yes	Yes	Accurate	Website said program encourages better use and application of pesticides, and ongoing monitoring to stay current on the extent of pesticides in water-bodies.
Pesticides	Beyond Pesticides	54-C	Supports NOAA/EPA rationales for why OR hasn't met CZARA requirements, including concerns raised about ag. 2014 Farm Bill exempts forestry from NPDES permitting requirements.	Agricultural Act of 2014. 2014. 7 U.S.C. Sec. 12313.	Yes	Yes	Questionable	Statute exempts nursery operations, site preparation, reforestation and subsequent cultural treatment, thinning, prescribed burning, pest and fire control, harvesting operations, surface drainage, or road construction and maintenance from NPDES permitting requirements and goes on to state that nothing in the paragraph exempts silviculture from existing 402 (NPDES) requirements. Needs review - is this a
Pesticides	Beyond Pesticides	54-F	EPA and NOAA improperly assume that, should riparian buffer standards for type N streams and monitoring programs within the coastal zone adhere to existing state laws and programs concerning water quality and pesticides, then Oregon's CNPCP would warrant approval. We disagree because existing state and federal laws fail to address large swaths of the pesticide application activities and fail to collect critical pesticide application and risk data. Comments cite report's findings related to lax regulation of Oregon's private forestry operations compared to federal and border-state operations.	Bernstein, L., L. Arkin, and R. Lindberg. 2013. Oregon's Industrial Forests and Herbicide Use: A Case Study of Risk to People, Drinking Water and Salmon. Beyond Toxics. December 2013.	Yes	Yes	Questionable	First bullet in list for footnote 31 states there are know endocrine disrupting chemicals entering drinking water sources… The reference includes a study that found Imazapyr in drinking water. Is Imazapyr a known endocrine disruptor? All other points appear to be accurate based on the reference.
Pesticides	Beyond Toxics	70-B	Our comments address the inadequacies of Oregon's existing program to implement the required CZARA management measures, its inability and disinterest in evaluating the sufficiency of those management measures to ensure pesticides do not violate Oregon's water quality standards and impair its designated uses, its lack of a monitoring program to support such an evaluation, and its lack of practices that protect those designated uses. Beyond Toxics recently analyzed three years of herbicide spray application records. This analysis is the first in-depth look at private, industrial forestry pesticide application records in the State of Oregon.	Bernstein, L., L. Arkin, and R. Lindberg. 2013. Oregon's Industrial Forests and Herbicide Use: A Case Study of Risk to People, Drinking Water and Salmon. Beyond Toxics. December 2013.	Yes	Yes	Accurate	Based on portion of comment that references report (added - original comment summary did reference report in comment letter)
Pesticides	Beyond Toxics	70-B	Our comments address the inadequacies of Oregon's existing program to implement the required CZARA management measures, its inability and disinterest in evaluating the sufficiency of those management measures to ensure pesticides do not violate Oregon's water quality standards and impair its designated uses, its lack of a monitoring program to support such an evaluation, and its lack of practices that protect those designated uses. Beyond Toxics recently analyzed three years of herbicide spray application records. This analysis is the first in-depth look at private, industrial forestry pesticide application records in the State of Oregon.	Beyond Toxics. 2013. Oregon's Industrial Forests and Herbicide Use: A Case Study of Risk to People, Drinking Water and Salmon. Retrieved from Beyond Toxics.org: http://www.beyondtoxics.org/wp-content/uploads/2013/12/FINAL_Report_OregonIndustrialForest_and_HerbicideUse_12-17-13.pdf	Yes	Yes	Comment not associated with reference	This comment is not associated with the listed reference.
Pesticides	Beyond Toxics	70-C	Beyond Toxics report on pesticide/herbicide use in forestry shows that FPA lacks any program to protect Oregon streams and their beneficial uses (see report attached). Requires no pesticide buffer on non-fish streams even though neighboring states (WA, ID) require 25ft buffers. In non-fish bearing streams, amphibians and crawfish are affected by pesticide application	Bernstein, L., L. Arkin, and R. Lindberg. 2013. Oregon's Industrial Forests and Herbicide Use: A Case Study of Risk to People, Drinking Water and Salmon. Beyond Toxics. December 2013.	Yes	Yes	Questionable	The first two points are accurate (report posits that FPA is inadequate to protect water quality standards and states that there are no protections for non-fish streams). To the third point, the report summarizes a number of studies that identify atrazine effects on amphibians, but does not discuss pesticide effects on crawfish.
Pesticides	Beyond Toxics	70-C	Beyond Toxics report on pesticide/herbicide use in forestry shows that FPA lacks any program to protect Oregon streams and their beneficial uses (see report attached). Requires no pesticide buffer on non-fish streams even though neighboring states (WA, ID) require 25ft buffers. In non-fish bearing streams, amphibians and crawfish are affected by pesticide application. Unlike Oregon's neighboring states, Washington and Idaho, the Oregon FPA lacks protective pesticide buffers for non-fish perennial streams and intermittent streams that are flowing during time of application.	Adams, P.W. and R. Storm. 2011. Oregon's Forest Protection Laws, Revised, Second Edition. Oregon Forest Resources Institute.	Yes	Yes	Inaccurate	No buffers are required for aquatic areas of other streams (Type N streams [a stream with neither fish nor domestic water use]) for aerial or ground application of herbicides, rodenticides, and all other chemicals except fungicides and non-biological insecticides and fertilizers. For fungicides and non-biological insecticides, no buffer is specified for ground application but a 60-foot buffer is specified for aerial application if the stream is flowing at the time of application.
Pesticides	Beyond Toxics	70-D	Unknown risks from synergistic interactions of chemicals mixed together. Industrial forest aerial spray applications tend to have two to three herbicides plus adjuvants mixed together in one tank	Beyond Toxics. 2013. Oregon's Industrial Forests and Herbicide Use: A Case Study of Risk to People, Drinking Water and Salmon. Retrieved from Beyond Toxics.org: http://www.beyondtoxics.org/wp-content/uploads/2013/12/FINAL_Report_OregonIndustrialForest_and_HerbicideUse_12-17-13.pdf	Yes	Yes	Accurate	p 12-16
Pesticides	Beyond Toxics	70-D	Unknown risks from synergistic interactions of chemicals mixed together. Chemicals applied in a mix can interact with each other, which may result in more harmful environmental effects than when applied individually	Laetz, C.D. 2009. The synergistic toxicity of pesticide mixtures: implication for risk assessment and the conservation of endangered Pacific salmon. Environmental Health Perspectives, 117(3): 348-353.	Yes	Yes	Accurate	
Pesticides	Beyond Toxics	70-D	Unknown risks from synergistic interactions of chemicals mixed together. Chemicals applied in a mix can interact with each other, which may result in more harmful environmental effects than when applied individually	Hayes, T.P. 2006. Pesticides Mixtures, Endocrine Disruption, and Amphibian Declines; Are we Underestimating the Impact? *Environmental Health Perspectives* , 114:40-50.	Yes	Yes	Accurate	

Pesticides	Beyond Toxics	70-D	Unknown risks from synergistic interactions of chemicals mixed together. In other words, the effects of synergistic doses cannot be predicted by the effects observed at single doses. Consequently, the impacts to people, fish and other organisms, and drinking water from these tank mixes are not clearly understood and they cannot be considered scientifically sound practices. This is not consistent with Oregon water quality standard OAR 340-041- 0033(1)	OAR 340-041-033(1). Oregon Administrative Rules. Chapter 340. Division 41. Rule 0033. Toxic Substances. Available online at: http://www.deq.state.or.us/wq/standards/docs/toxics/oar3400410033.pdf	Yes	Yes	Accurate	(1) Toxic substances may not be introduced above natural background levels in waters of the state in amounts, concentrations, or combinations that may be harmful, may chemically change to harmful forms in the environment, or may accumulate in sediments or bioaccumulate in aquatic life or wildlife to levels that adversely affect public health, safety, or welfare or aquatic life, wildlife, or other designated beneficial uses.	
Pesticides	Beyond Toxics	70-E	Oregon has inadequate protection of fish-bearing streams and drinking water compared to neighboring states. Aerial spray buffers range between 100 and 325-foot in Washington.	Washington Department of Natural Resources. 2009. Forest Practices Illustrated.	Yes	Yes	Inaccurate	Note: Added to Jenny's list; The referenced document does not specify 325-foot buffers for aerial application as stated in comment.	
Pesticides	Beyond Toxics	70-E	Oregon has inadequate protection of fish-bearing streams and drinking water compared to neighboring states.	Bernstein, L., L. Arkin, and R. Lindberg. 2013. Oregon's Industrial Forests and Herbicide Use: A Case Study of Risk to People, Drinking Water and Salmon. Beyond Toxics. December 2013.	Yes	Yes	Accurate		
Pesticides	Beyond Toxics	70-G	Herbicides (e.g., Atrazine) can persist in water and can bind with soil particles, so under OR's FPA, pesticides such as atrazine are sprayed into dry channels that become active in wetter months, carrying herbicides downstream to fish. For example the U.S. EPA (2007) Chemical Summary of Atrazine states "atrazine persists in surface and ground water with a half-life of longer than 6 months" and "atrazine persistence in soil generally ranges from 14-109 days, though in some soils can persist to at least 4 years."	US EPA. 2007. Atrazine: Chemical Summary.	Yes	Yes	Accurate	page 9	
Pesticides	Beyond Toxics	70-H	State doesn't have a program to protect groundwater/drinking water. The residents getting water from the Heceta Water District and the water district itself have expressed concerns that ground and aerial forestry pesticide sprays taking place directly upslope from Clear Lake is potentially jeopardizing the safety of their drinking water (US EPA, 1987).	US EPA. 1987. For Consideration of the North Florence Dunal Aquifer as a Sole Source Aquifer. EPA 910/9-87-767.	Yes	Yes	Partially Accurate	Reference does not specifically cite concerns over aerial pesticide application to forest, but does mention pesticides and chemical fertilizers as possible aquifer contamination sources.	
Pesticides	Beyond Toxics	70-I	The EPA should require ODF, in consultation with DEQ, to exercise their authority to review, comment, and require modifications of forest vegetation management written plans based on an environmental and water quality risk assessment and proof of compliance with state and federal laws. There is no reasonable basis to keeping forestry spray records secret from the public and other state agencies	Beyond Toxics. 2013. Oregon's Industrial Forests and Herbicide Use: A Case Study of Risk to People, Drinking Water and Salmon. Retrieved from Beyond Toxics.org: http://www.beyondtoxics.org/wp-content/uploads/2013/12/FINAL_Report_OregonIndustrialForest_and_HerbicideUse_12-17-13.pdf	Yes	Yes	This is an opinion, not a statement of fact.	pages 60-62 detail other state policies which include opportunities for public input and more transparency.	
Pesticides	Beyond Toxics	70-J	Oregon must develop a research program to determine if aerial application of herbicides is necessary for timber production. Oregon needs additional management measures to protect uses and water quality from pesticide drift. Oregon Health Authority (Oregon Health Authority, 2013) stated drift can travel up to 4 miles from aerial spray applications.	Oregon Health Authority. 2013. Public Health Assessment Highway 36 Corridor Exposure Investigation.	Yes	Yes	Accurate	page 28	
Pesticides	Beyond Toxics	70-J	Oregon must develop a research program to determine if aerial application of herbicides is necessary for timber production. Oregon needs additional management measures to protect uses and water quality from pesticide drift. The EPA found atrazine particulates and vapors could be transported up to 186 miles from the site of application	US EPA. 2007. Atrazine: Chemical Summary.	Yes	Yes	Accurate		
Pesticides	Beyond Toxics	70-O	Amphibians that live in streams within clearcuts in the Oregon Coastal Range are in decline and have become a management concern. Amphibians are particularly vulnerable to absorbing toxins since they have moist, permeable skin and unshelled eggs that are directly exposed to soil and water. Amphibians that live in streams within clearcuts in the Oregon Coastal Range are in decline and have become a management concern	Kluber, M.R., D.H. Olson, and K.J. Puettmann. 2008. Amphibian distributions in riparian and upslope areas and their habitat associations on managed forest landscapes in the Oregon Coast Range. *Forest Ecology and Management* . 256 (2008) 529-536.	Yes	Yes	Accurate		
Pesticides	Beyond Toxics	70-O	Amphibians that live in streams within clearcuts in the Oregon Coastal Range are in decline and have become a management concern. Amphibians are particularly vulnerable to absorbing toxins since they have moist, permeable skin and unshelled eggs that are directly exposed to soil and water. Amphibians are particularly vulnerable to absorbing toxins since they have moist, permeable skin and unshelled eggs that are directly exposed to soil and water	Blaustien, A.R., J.M. Romansic, J.M. Kiesecker & A.C. Hatch. 2003. Ultraviolet radiation, toxic chemicals and amphibian population declines. *Diversity and Distributions* (2003) 9, 123-140	Yes	Yes	Accurate		
Agriculture	Oregon	0-A	1993 Agriculture Water Quality Management Program is an outcome-based program that combines education, outreach, and technical assistance to improve and maintain water quality and address impairments from agricultural lands.	ORS 568-900 through 568-933. Oregon Revised Statutes. 2013. Chapter 568. Soil and Water Conservation; Water Quality Management.	Yes	Yes	Statement is Accurate,reference not really needed.		20
Agriculture	Oregon	0-A	1993 Agriculture Water Quality Management Program is an outcome-based program that combines education, outreach, and technical assistance to improve and maintain water quality and address impairments from agricultural lands.	OAR 603-090. Oregon Administrative Rules. Chapter 603. Division 90. Agricultural Water Quality Management Program	Yes	Yes	Statement is Accurate,reference not really needed.		

Agriculture	Oregon	0-AA	AWQMA plans and associated regulations apply to impaired areas as well as healthy areas.	OAR 603-090-0000(3) Oregon Administrative Rules. Chapter 603. Division 90. Agricultural Water Quality Management Program	Yes	Yes	Unclear as written	The rule does not explicitly state that management plans should be performed for *healthy and impaired* watersheds but could be implied as it does state that it should *prevent and control* water pollution. The rules make it seem like either a TMDL, groundwater plan, or "otherwise specifically state or federal requirement" for a plan
Agriculture	Oregon	0-AC	OAR requires biennial review (progress, impediments, recommendations for changes) of each AWQMA Plan by ODA and a Local Advisory Committee. 18 reviews/year.	OAR 603-090-0020(4)(C). Oregon Administrative Rules. Chapter 603. Division 90. Agricultural Water Quality Management Program	Yes	Yes	Partially Accurate	biennial reports are required by the rule for all management areas. The rule does not state how many management areas there are to verify statement in red.
Agriculture	Oregon	0-C	ODA has the authority to enforce AWQMA rules.	ORS 568-912. Oregon Revised Statutes. 2013. Chapter 568. Soil and Water Conservation; Water Quality Management.	Yes	Yes	Accurate	
Agriculture	Oregon	0-V	Nutrient Mgt Plans consistent with (g) guidance required for all new and expanded CAFO permits.	ORS 468B.Oregon Revised Statutes. 2013. Chapter 468B. Water Quality.	Yes	Yes	Accurate	
Agriculture	Oregon	0-V	Nutrient Mgt Plans consistent with (g) guidance required for all new and expanded CAFO permits.	OAR 603-074. Oregon Administrative Rules. Chapter 603. Division 74. Confined Animal Feeding Operation Program.	Yes	Yes	Accurate	
Agriculture	Oregon	0-W	All CAFOS registered under general permit are implementing Waste Management Plans. Violations of the plan are violations of the permit and subject to Enforcement.	Oregon Department of Agriculture. 2012. Animal Waste Management Plan: Minimum Required Elements. Available online at: http://www.oregon.gov/ODA/NRD/docs/pdf/awmp_minreq.pdf	Yes	Yes	Statement is Accurate,reference not really needed.	The reference is a list of minimum CAFO requirements, it doesn't actually make a statement about enforcement.
Agriculture	Oregon	0-Z	AWQM Program adaptive management approach is supported by 125 studies referenced in ODA's white paper.	Oregon Department of Agriculture. ?. Scientific Basis for an Outcome-based Water Quality Management Program.	No			Unable to locate white paper
Agriculture	Oregon	0-Z	AWQM Program adaptive management approach is supported by 125 studies referenced in ODA's white paper.	Bates. S, and L. Scarlett. 2013. Agricultural Conservation and Environmental Programs: the Challenge of Measuring Performance. University of Montana.	Yes	Yes	Partially Accurate	Document cites 93 references. It is a literature review to determine many possible ways to measure environmental performance of agriculture.
Agriculture	(b) (6)	55-G	ODA does not track implementation and effectiveness of ODA area plans: Ag. Monitoring is not sufficient. A monitoring plan developed by ODA was submitted to the State's Independent Multidisciplinary Science Team (part of the state's salmon recovery effort), which found the plan to be lacking in detail and focus, and offered extensive advice to ODA about the basics of monitoring. http://www.fsl.orst.edu/imst/reports/ODA_06-27-06.pdf	Independent Multidisciplinary Science Team (IMST). 2006. IMST Review of Oregon Department of Agriculture's Agricultural Water Quality Program Monitoring Guidebook: Policies, Priorities, and Methods (ODA March 1, 2006 draft). Available online at: http://www.fsl.orst.edu/imst/reports/ODA_06-27-06.pdf	Yes	Yes	Accurate	Text in red was not addressed in reference.
Agriculture		55-H	ODA's remote sensing monitoring of riparian areas showed very little (if any) improvements in buffers. Now ODA may be scrapping remote sensing monitoring program for something else (see link in letter).	Oregon Department of Agriculture. 2008. 2008 Landscape Monitoring of the Coos & Coquille, Upper and North Fork John Day, Mid-Coast, Mid-Deschutes, North Coast, and Yamhill Basins First Replication of 2003 Monitoring. Available online at: http://www.oregon.gov/ODA/NRD/docs/pdf/water/riparian_condition_monitoring_2008.pdf	Yes	Yes	Accurate	Riparian index scores on page 4 of 12 do not show vast improvement.
Agriculture		55-H	ODA's remote sensing monitoring of riparian areas showed very little (if any) improvements in buffers. Now ODA may be scrapping remote sensing monitoring program for something else (see link in letter).	Oregon Department of Agriculture. 2013. Streamside Vegetation Assessment Tool. ODA Ag Water Quality Program. Presentation available online at: http://www.oregon.gov/ODA/NRD/docs/pdf/water/oda_assessment%20tools_presentation_at_%20oacd_conf.pdf	Yes	Yes	Potentially Accurate	Presentation is for a vegetation assessment tool. It is possible this verifies that ODA is switching to this tool instead of remote sensing.
Agriculture		55-H	ODA's remote sensing monitoring of riparian areas showed very little (if any) improvements in buffers. Now ODA may be scrapping remote sensing monitoring program for something else (see link in letter).	Oregon Department of Agriculture. 2013. Proposed Tools For Measuring Progress in Small Watersheds. Water Quality Management Program Draft Overview September 4, 2013. Available online at: http://www.oregon.gov/ODA/NRD/docs/pdf/water/assessment_overview_draft_9413.pdf	Yes	Yes	Potentially Accurate	Document does not list remote sensing as an evaluation tool.
Agriculture	(b) (6)	55-O	ODA is abandoning its approach in addressing riparian improvements. It now appears to have initiated a new program. See the attached specific web sites	Oregon Department of Agriculture. 2013. Streamside Vegetation Assessment Tool. ODA Ag Water Quality Program. Presentation available online at: http://www.oregon.gov/ODA/NRD/docs/pdf/water/oda_assessment%20tools_presentation_at_%20oacd_conf.pdf	Yes	Yes	Potentially Accurate	This is a repeat of comment 55-H worded slightly differently.
Agriculture		55-O	ODA is abandoning its approach in addressing riparian improvements. It now appears to have initiated a new program. See the attached specific web sites	Oregon Department of Agriculture. 2013. Proposed Tools For Measuring Progress in Small Watersheds. Water Quality Management Program Draft Overview September 4, 2013. Available online at: http://www.oregon.gov/ODA/NRD/docs/pdf/water/assessment_overview_draft_9413.pdf	Yes	Yes	Potentially Accurate	This is a repeat of comment 55-H worded slightly differently.
Agriculture	Socially Responsible Agriculture Project	60 – general statement		Socially Responsible Agricultural Project (SRAP)				Socially Responsible Agricultural Project (SRAP) – its definition,

Agriculture	Socially Responsible Agriculture Project	60 – general statement		OAR 603-074-0010(3).Oregon Administrative Rules. Chapter 603. Division 74. Confined Animal Feeding Operation Program.	Yes	pending	pending	(3) "Confined animal feeding operation" means (a) The concentrated confined feeding or holding of animals or poultry, including but not limited to horse, cattle, sheep, or swine feeding areas, dairy confinement areas, slaughterhouse or shipping terminal holding pens, poultry and egg production facilities and fur farms; (A) In buildings or in pens or lots where the surface has been prepared with concrete, rock or fibrous material to support animals in wet weather; or (B) That have wastewater treatment works; or (C) That discharge any wastes into waters of the
Agriculture	Socially Responsible Agriculture Project	60-B	OR fails to adequately regulate CAFOs. Study by Lewis and Clark Law School's Animal Law Clinic found that ODA lacks federal authorization to manage NPDES programs.	Hessler. K., D. Luk, S. McMillan. 2011. Revised report on the Authority to Administer and Enforce the Clean Water Act as it relates to CAFOs By Oregon Department of Agriculture (2011)	Yes	Yes	Accurate	The study dfound that Oregon modified its original contract with EPA that DEQ would administer CAFO permitting by authorizing ODA a role in CAFO pemritting under an MOU.
Agriculture	Socially Responsible Agriculture Project	60-D	Agricultural Water Quality Management Area ("AWQMA") plan is entirely voluntary. "The rules adopted under this subsection shall constitute the only enforceable aspects of a water quality management plan." O.R.S. § 568.912(1). "Area rules are the only enforceable aspect of an AWQMA plan." O.A.R. 603-090-0000 (4). And this voluntary program is not backed up by any legal enforcement authority to regulate nonpoint sources as EPA/NOAA requires.	ORS 568-912(1). Oregon Revised Statutes. 2013. Chapter 568. Soil and Water Conservation; Water Quality Management.	Yes	Yes	Partially Accurate	As written in the rule it appears that there are enforceable requirments of landowners and that the plan is not entirely voluntary, it seems as though this comment may be partially accurate but not entirely accurate. Text in blue not verified by reference.
Agriculture	Socially Responsible Agriculture Project	60-D	Agricultural Water Quality Management Area ("AWQMA") plan is entirely voluntary. "The rules adopted under this subsection shall constitute the only enforceable aspects of a water quality management plan." O.R.S. § 568.912(1). "Area rules are the only enforceable aspect of an AWQMA plan." O.A.R. 603-090-0000 (4). And this voluntary program is not backed up by any legal enforcement authority to regulate nonpoint sources as EPA/NOAA requires.	OAR 603-090-0000(4) Oregon Administrative Rules. Chapter 603. Division 90. Agricultural Water Quality Management Program	Yes	Yes	Partially Accurate	The comment directly cites the rule. But then makes statements about the lack of legal authority which is not covered in the rule/reference. Text in blue not verified by reference.
Agriculture	Socially Responsible Agriculture Project	60-F	Oregon fails to ensure basic management measures are in place	EPA/NOAA's response to Oregon's Submittal of Additional Information on the State's Measures for Agricultural Sources in response to Federal Findings of January 1998, December 31, 2002, comments 4-5. (If the Oregon CNPCP plans to rely on voluntary programs to implement the program, a back-up water quality authority is necessary.)	No			
Agriculture	Water Watch of Oregon	65-D	Oregon's rules do not ensure that water use will be adequately limited to maintain those minimum flows . Prior water use rights and uses such as livestock consumption have priority over minimum flows.	OAR 690-076-0015. Oregon Administrative Rules, Chapter 690. Division 76, Establishment of Minimum Perennial Streamflows.	Yes	Yes	Accurate	
Agriculture	Water Watch of Oregon	65-F	OWRD's report describes the limited scope of the Basin Plans and the fact that they are very dated, and also acknowledges that the Basin Plans predate efforts under the Clean Water Act and Endangered Species Act.	Oregon Water Resources Department. 2014. Place-Based Integrated Water Resources Planning: Initial Observatins from the State of Oregon. March 10, 2014.	Yes	Yes	Accurate	
Agriculture	Water Watch of Oregon	65-F* new code #	Basin Programs fail to "ensure that water quality and habitat for sensitive and endangered species is not impaired" because the Basin Programs fail to maintain minimal flows.	Oregon Water Resources Department's Water Availability Reporting System (WARS), Watershed ID # 70908 (Chetco River) and Watershed ID # 266 (Rogue River). http://apps.wrd.state.or.us/apps/wars/wars_display_wa_tables/search_for_WAB.aspx	Yes	Yes	Questionable	Data downloaded in Excel format. The WARS database tracks water availability (the amount that can be appropriated for new out-of-stream consumptive uses). The database reports water availability at two statistical exceedance levels (50% and 80%). For the two watersheds listed, the data show that, after consumptive uses, there is insufficient stream flow to meet the instream flow requirement (water rights held in trust by the Water Resources Department for the benefit of the people of Oregon to maintain water in-stream for public use) during summer and fall months. However, to determine whether the reference is cited accurately, one needs to know whether the
Agriculture	Oregon Farm Bureau	71		ORS 561-191(1)-(2)	pending	pending	pending	ORS 561.191(1)-(2)
Agriculture	Oregon Farm Bureau	71-		ORS 634 Oregon Pesticide Control Law;	pending	pending	pending	ORS 634 Oregon Pesticide Control Law; Upper Willamette AWQMP 38-39; http://www.epa.gov/oecaagct/lfra.html#Labeling%20Requirements, OAR 603-095-
Agriculture	Oregon Farm Bureau	71-		Upper Willamette AWQMP 38-39;	pending	pending	pending	ORS 634 Oregon Pesticide Control Law; Upper Willamette AWQMP 38-39; http://www.epa.gov/oecaagct/lfra.html#Labeling%20Requirements, OAR 603-095-
Agriculture	Oregon Farm Bureau	71-		http://www.epa.gov/oecaagct/lfra.html#Labeling%20Requirements,	pending	pending	pending	ORS 634 Oregon Pesticide Control Law; Upper Willamette AWQMP 38-39; http://www.epa.gov/oecaagct/lfra.html#Labeling%20Requirements OAR 603-095-
Agriculture	Oregon Farm Bureau	71-		OAR 603-095-1540(4); OAR 603-095-2240.	pending	pending	pending	ORS 634 Oregon Pesticide Control Law; Upper Willamette AWQMP 38-39; http://www.epa.gov/oecaagct/lfra.html#Labeling%20Requirements, OAR 603-095-
Agriculture	Oregon Farm Bureau	71-AA	Under AWQMA, landowners must avoid ag activities that place the animal wastes in any location where they are likely to escape to waters.	OAR 603-095-0840(6)(a). Oregon Administrative Rules. Chapter 603. Division 95. Agricultural Water Quality Management Program (comment incorrectly cites 0740(5))	Yes	Yes	Partially Accurate	The statement is accurate, but the citation is not. The comment cites OAR 603-095-0740(5), which is not the correct paragraph for this restriction - the reference should be to OAR 603-095-0840(6)(a)
Agriculture	Oregon Farm Bureau	71-AC	AWQMP "specifically identifies individual nutrients" and sets strict limits on nutrient levels in water sources.	OAR 603-095-0740(4). Oregon Administrative Rules. Chapter 603. Division 95. Agricultural Water Quality Management Program OAR 603-095-0840(6). Oregon Administrative Rules. Chapter 603. Division 95. Agricultural Water Quality Management Program	Yes	Yes	Questionable	0740(4) states that movement of phosphorus from ag lands into state waters at levels exceeing water quality standards is an unacceptable condition. 0840(6) does not identify specific nutrients and generally prohibits "pollution" from ag, discharges that reduce water quality below water quality standards, and violations of waste discharge permits, but also provides exceptions for livestock watering and stream crossings.

Agriculture	Oregon Farm Bureau	71-AD		ORS 468B-025	Yes	pending	pending	ORS 468B.025
Agriculture	Oregon Farm Bureau	71-AG	AWQMP meets grazing MM by protecting streambanks and water sources through grazing management practices.	OAR 603-095-3540(3)(a)(A). Oregon Administrative Rules. Chapter 603. Division 95. Agricultural Water Quality Management Program OAR 603-095-2240(2)(a). Oregon Administrative Rules. Chapter 603. Division 95. Agricultural Water Quality Management Program	Yes	Yes	Questionable	The reference to paragraph 3540(a)(A) is incorrect - a paragraph number is missing before the (a). The only paragraph in section 3540 with a subparagraph (a) is paragraph 3. Paragraph 3540(3) (along with its subparagraphs) and paragraph 2240(2)(a) provide for riparian activities including grazing so long as the activities are consistent with the "vegetative site capability" to provide streambank stability and shade. Paragraph 2240(2)(a) states that activities must also protect filtration of
Agriculture	Oregon Farm Bureau	71-F	NOAA/EPA don't provide scientific data or substantial evidence that identifies agriculture land uses as a cause or significant contributor to water quality impairment in Oregon's coastal streams. EPA has indicated that ag is not a threat to foreseeable increases in pollution loadings. There is no sound scientific evidence to demonstrate that agriculture lands within the coastal zone in fact cause or significantly contributing to water quality degradation. ODA is required to regulate, based on science, those agriculture activities that are causing the type of water pollution that prohibits the State from achieving and maintaining water quality standards.	Department of Commerce, National Oceanic and Atmospheric Administration. 2008. Endangered and Threatened Species: Final Threatened Listing Determination, Final Protective Regulations, and Final Designation of Critical Habitat for the Oregon Coast Evolutionarily Significant Unit of Coho Salmon. 73 Fed. Reg. 7816 - 7873. February 11, 2008.	Yes	Yes	Inaccurate	The statement referenced ("habitat conditions on agricultural lands are not likely to show significant improvement or decline."[page 7821]) is made in the context of whether the suite of existing regulations, restoration programs, and other efforts would improve habitat conditions. The prevous sentence states, "Any modest improvements in riparian vegetation on agricultural lands under current rules that might be expected may be offset by habitat declines resulting from urban and rural development." The paragraph also discusses the lack of specificity and resulting uncertainty in effectiveness and enforcement of agricultural plans and rules. The reference does not support the commenter's point.
Agriculture	Oregon Farm Bureau	71-O	Most ambient water quality monitoring in region reporting fair to excellent water quality. Sites with poor condition are not due to ag activities.	Oregon Department of Environmental Quality. 2012. North Coast Water Quality Status and Action Plan Summary 2012. Tillamook, OR.	Yes	Yes	Questionable	The quotation included in the comment letter is accurate. However, the referenced document does not support the statement that the the location with poor water qulaity (the Tillamook River) is not significantly influenced by agriculture. The document does not identify sources of specific pollutants, but does indicate that the Tillamook River watershed, although improving, has some of the highest bacteria levels in the region. The report goes on to cite BMPs that are helping to reduce bacteria levels in the watershed, including livestock exclusion, manure storage,
Agriculture	Oregon Farm Bureau	71-O	Most ambient water quality monitoring in region reporting fair to excellent water quality. Sites with poor condition are not due to ag activities.	Oregon Department of Environmental Quality. 2004. Water Quality Report: Ambient Monitoring Stations in the Oregon Coast Coho Evolutionarily Significant Unit. Portland, OR.	Yes	Yes	Accurate	The statements attributed to the report are accurate. The report does not make any statements regarding pollutant sources.
Agriculture	Oregon Farm Bureau	71-S	Biennial reviews of AWQMA plans provide a tracking mechanism. ~~According to ODA, ~18 biennial reviews are conducted annually. In addition ODA is currently creating a more formalized process for tracking program implementation and effectiveness – known as the Strategic Implementation Areas and Focus Areas processes. Also, in 2012, Oregon began an Enterprise Monitoring Initiative to maximize statewide efforts for environmental protection and restoration. This initiative will monitor waterways that pass through agriculture lands and can also be used to inform the effectiveness of the AWQMA.~~	OAR 603-090-0020(4)(C). Oregon Administrative Rules. Chapter 603. Division 90. Agricultural Water Quality Management Program	Yes	Yes	Accurate	The struck font is not attributed to the reference in the comment letter.
Agriculture	Oregon Farm Bureau	71-U	CZARA only requires legal enforcement authority. AWQMA includes that authority	Robertson, P. and D. Wietman. 2001. Enforceable Policies and Mechanisms for State Coastal Nonpoint Source Program. Memo from Peyton Robertson, NOAA, and Dov Weitman, EPA, to State Coastal Nonpoint Program Coordinators and State Nonpont Source Coordinators. Jan. 23 2001.	Yes	Yes	Questionable	The referenced memo details three elements which together form the basis for demonstrating that so-called "back-up authorities" can be sued to meet the requirement for enforceable policies na dmechanisms. The elements are: 1) a legal opinion that such authorities can be used to prevent nonpoint pollution and require management measure implementation, 2) a description of the voluntary or incentive-based programs, and 3) a descrptin of the linkage between the implementing agency
Agriculture	Oregon Farm Bureau	71-W	AWQMP address erosion MM by ensuring site capable riparian vegetation is in place to meet ecological function designed to reduce erosion.	OAR 603-095-2240(5). Oregon Administrative Rules. Chapter 603. Division 95. Agricultural Water Quality Management Program OAR 603-095-2640(5). Oregon Administrative Rules. Chapter 603. Division 95. Agricultural Water Quality Management Program OAR 603-095-0840(5). Oregon Administrative Rules. Chapter 603. Division 95. Agricultural Water Quality Management Program	Yes	Yes	Questionable	Paragraphs 2240(5) and 2640(5) prohibit formation of specific visual indicators of erosion from ag activity where it may cause sediment runoff to state waters. Paragraph 0840(5) limits soil loss from cropland to T (but allows exceptions where T cannot be practically or economically achieved), requires construction and maintenance of private roads to limit contributing sediment to state waters, requires management of ag lands to prevent sediment runoff to public road drainage systems, and prohibits conversion of woodland to ag uses in a manner that results in placement or delivery of soil or sediment to state waters, initiation or aggravation of streambak
Agriculture	Oregon Farm Bureau	71-X	AWQMP exceeds erosion MM (requiring management practices based on pollutant levels from runoff delivered from up to 10-year, 24-hour storms) by requiring that practices be based on a 25-year, 24-hour frequency.	OAR 603-095-0840(2). Oregon Administrative Rules. Chapter 603. Division 95. Agricultural Water Quality Management Program (comment incorrectly cites OAR 603-095-2240(5), OAR 603-095-2640(5), and OAR 603-095-0840(5))	Yes	Yes	Inaccurate	The citations in the comment letter are not accurate. The only paragraph that references the 25-year storm event is OAR 603-095-0840(2), which requires ag landowners and operators to "allow the natural and managed regeneration and growth of riparian vegetation... to provide shade to moderate water temperatures and bank stability to maintain erosion near background levels" and states that compliance determinations will be based on criteria including whether management activities are conducted in a manner so as to maintain streambank integrity through 25-year storm
Agriculture	Oregon Farm Bureau	71-Y		ORS 468B-050(1)(d)	Yes	pending	pending	ORS 468B.050(1)(d)
Agriculture	Oregon Farm Bureau	71-Z		ORS 468B-220	Yes	pending	pending	ORS 468B.220

Agriculture	The Freshwater Trust	73-D	Requests that NOAA/EPA include TFT's 4/22/13 response to NWEA's March 13, 2013 to EPA Regarding Medford Permits to record. TFT's letter corrects factual and legal inaccuracies in NWEA's letter. Also should include TFT's 9/27/13 public comments to Oregon DEQ on Wilsonville's now-withdrawn water quality trading program as section III(C)(4)(d) of the Proposed Finding.	Whitworth, J. 2013. Corrections to Northwest Environmental Advocates' March 15, 2013 Letter Seeking EPA Oversight of Oregon Water Quality Trading Program and Medford Permit. Letter from Joe Whitworth, President of The Freshwater Trust, to Michael Lidgard, NPDES Permits Unit, EPA Region 10 Office of Water and Watersheds. April 22, 2013.	Yes	Yes	Accurate	The letter corrects out what the author asserts to be inaccuracies in NWEA's letter; this review did not extend to evaluation of whether the corrections themselves are accurate.
Agriculture	The Freshwater Trust	73-D	Requests that NOAA/EPA include TFT's 4/22/13 response to NWEA's March 13, 2013 to EPA Regarding Medford Permits to record. TFT's letter corrects factual and legal inaccuracies in NWEA's letter. Also should include TFT's 9/27/13 public comments to Oregon DEQ on Wilsonville's now-withdrawn water quality trading program as section III(C)(4)(d) of the Proposed Finding.	Letter from Joe Whitworth, President of The Freshwater Trust, to Nancy Stellmach, Water Quality Permit Coordinator, Oregon DEQ, City of Wilsonville Proposed Modification of Permit and City of Wilsonville Proposed Water Quality Trading Program (Sept. 27, 2013) (on file with the author).	No	No	Unknown	Letter on file with author - need to obtain
Agriculture	Audubon Society of Portland	83-G	SB1010s are inadequate to protect water quality or improve habitat conditions.	ODA's Ag Water Quality Management Planning Program under Senate Bill 1010	N/A	N/A	N/A	The commenter is making a statement about SB1010. The letter does not cite SB1010 to support a different point. Reference not obtained or included in Comprehensive Reference List
Agriculture	Letter 54 – Beyond Toxics	54-G	Documented in a recent report, Oregon's Industrial Forests and Herbicide Use: A Case Study of Risk to People, Drinking Water and Salmon, private forestry operations in Oregon operate under antiquated and loose regulations, allowing aerial spraying and unmonitored applications of pesticides as compared to their federal forestry operation and border-state counterparts. Specifically 1)There are known endocrine disrupting chemicals entering our drinking water sources and fish-bearing streams. 2) Oregon does not require a no-spray buffer near homes and schools. 3) Aerial herbicide sprays regularly occur directly over headwaters and tributaries of protected salmon streams. 4) Oregon permits pesticides to be sprayed with only the smallest protective buffer of 60 feet from salmon and steelhead streams—a buffer significantly smaller than other Northwest states with similar forest and river ecosystems. 5) Stricter chemical and pesticide rules apply in neighboring states with heavy forestry industries. 6) Under the current administrative rules, the Oregon Forest Practices Act prohibits researchers, doctors and the public from obtaining accurate information about what types and quantities of herbicides are sprayed.	Bernstein, L., L. Arkin, and R. Lindberg. 2013. Oregon's Industrial Forests and Herbicide Use: A Case Study of Risk to People, Drinking Water and Salmon. Beyond Toxics Report. December 2013. http://www.beyondtoxics.org/work/pesticide-reform/forestry-pesticide-project/. 31 Id.	Yes	Yes	Accurate	
Agriculture	Letter 54 – Beyond Toxics	54-I	General comment on the requirements of States' CNPCP - Beyond complying with the detailed Coastal Nonpoint Guidance, states and territories must revise its program to incorporate additional management measures for land uses and areas subject to water quality standards and protected uses. These programs must also align with the overlapping env. laws and regulations such as the CWA, ESA and FIFRA	Federal Water Pollution Control Act. 2002. 33 U.S.C. 1251 et seq. As amended through P.L. 107-303, November 27, 2002.	Yes	Yes	Accurate	Just referencing that compliance with these laws is also necessary.
Agriculture	Letter 54 – Beyond Toxics	54-I	General comment on the requirements of States' CNPCP - Beyond complying with the detailed Coastal Nonpoint Guidance, states and territories must revise its program to incorporate additional management measures for land uses and areas subject to water quality standards and protected uses. These programs must also align with the overlapping env. laws and regulations such as the CWA, ESA and FIFRA	Endangered Species Act of 1973. 2002. As amended trhough P.L. 107-136, January 24, 2002.	Yes	Yes	Accurate	Just referencing that compliance with these laws is also necessary.
Agriculture	Letter 54 – Beyond Toxics	54-I	General comment on the requirements of States' CNPCP - Beyond complying with the detailed Coastal Nonpoint Guidance, states and territories must revise its program to incorporate additional management measures for land uses and areas subject to water quality standards and protected uses. These programs must also align with the overlapping env. laws and regulations such as the CWA, ESA and FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act. 2012. As amended through P.L. 112-177, September 28, 2012.	Yes	Yes	Accurate	Just referencing that compliance with these laws is also necessary.
Agriculture	Letter 54 – Beyond Toxics	54-J	Among the specific reasons for disapproval, EPA and NOAA targeted Oregon's lack of buffers for pesticide application on type N streams	NOAA and EPA. 2013. Oregon Coastal Nonpoint Program: NOAA/EPA Proposed Finding. December 20, 2013.	Yes	Yes	Accurate	
Agriculture	Letter 54 – Beyond Toxics	54-K	Nonpoint pollution sources like forestry and agriculture, present increasingly difficult sources of water pollution to control because of many exemptions to federal environmental lows surrounding these activities. For example, with the passage of the Agricultural Act of 2014, forestry operations were officially exempt from the NPDES permitting program that acts as the primary control of water pollution within the US. Most agriculture has also been exempted from the same standards since the inception of the CWA. (page3-4)	Agricultural Act of 2014. P.L. 113-79. February 7, 2014. http://agriculture.house.gov/sites/republicans.agriculture.house.gov/files/pdf/legislation/AgriculturalAct2014.pdf	Yes	Yes	Accurate	
Agriculture	Letter 54 – Beyond Toxics	54-L	Studies abound concerning health and environmental effects of a commonly applied herbicide, glyphosate.	Beyond Pesticides. 2003. ChemicalWATCH Factsheet: Atrazine. Updated December 2003. http://www.beyondpesticides.org/pesticides/factsheets/Atrizine.pdf	Yes	Yes	Inaccurate	Fact sheet does not mention glyphosate.

Agriculture	Letter 54 – Beyond Toxics	54-M	A study published in 1999 found that people exposed to glyphosate are 2.7 times more likely to contract non-Hodgkin lymphoma (NHL). In 2002, a study of Swedish men showed that glyphosate exposure was significantly associated with an increased risk of NHL, and hairy cell leukemia - a rare subtype of NHL. Further, a 2003 review of studies conducted on farmers by researchers at the National Cancer Institute shows that exposure to glyphosate is associated with an increased incidence of NHL. The American Cancer Society states that non-Hodgkin lymophoma is a cancer that starts in cells called lymphocytes, which are part of the body's immune system.	Hardell L. and M. Eriksson. 1999. A Case-Control Study of non-Hodgkin Lymphoma and Exposure to Pesticides. Cancer 85(6): 1353-1360.	Yes	Yes	Inaccurate	Study found this correlation with MCPA (4-chloro-2-methyl phenoxyacetic acid).
Agriculture	Letter 54 – Beyond Toxics	54-M	A study published in 1999 found that people exposed to glyphosate are 2.7 times more likely to contract non-Hodgkin lymphoma (NHL). In 2002, a study of Swedish men showed that glyphosate exposure was significantly associated with an increased risk of NHL, and hairy cell leukemia - a rare subtype of NHL. Further, a 2003 review of studies conducted on farmers by researchers at the National Cancer Institute shows that exposure to glyphosate is associated with an increased incidence of NHL. The American Cancer Society states that non-Hodgkin lymophoma is a cancer that starts in cells called lymphocytes, which are part of the body's immune system.	Hardell L. M. Eriksson, and M. Nordstrom. 2002. Exposure to pesticides as risk factor for non-Hodgkin's lymphoma and hairy cell leukemia: pooled analysis of two Swedish case-control studies. Leuk Lymphoma. 43(5): 1043-1049.	Yes	Yes	Accurate	
Agriculture	Letter 54 – Beyond Toxics	54-M	A study published in 1999 found that people exposed to glyphosate are 2.7 times more likely to contract non-Hodgkin lymphoma (NHL). In 2002, a study of Swedish men showed that glyphosate exposure was significantly associated with an increased risk of NHL, and hairy cell leukemia - a rare subtype of NHL. Further, a 2003 review of studies conducted on farmers by researchers at the National Cancer Institute shows that exposure to glyphosate is associated with an increased incidence of NHL. The American Cancer Society states that non-Hodgkin lymophoma is a cancer that starts in cells called lymphocytes, which are part of the body's immune system.	De Roos, A.J., S.H. Zahm, K.P. Cantor, D.D. Weisenburger, F.F. Holmes, L.F. Burmeister, and A. Blair. 2003. Integrative assessment of multiple pesticides as risk factors for non-Hodgkin Lymphoma among men. Occup Environ Med 60(9): .	Yes	Yes	Accurate	
Agriculture	Letter 54 – Beyond Toxics	54-M	A study published in 1999 found that people exposed to glyphosate are 2.7 times more likely to contract non-Hodgkin lymphoma (NHL). In 2002, a study of Swedish men showed that glyphosate exposure was significantly associated with an increased risk of NHL, and hairy cell leukemia - a rare subtype of NHL. Further, a 2003 review of studies conducted on farmers by researchers at the National Cancer Institute shows that exposure to glyphosate is associated with an increased incidence of NHL. The American Cancer Society states that non-Hodgkin lymophoma is a cancer that starts in cells called lymphocytes, which are part of the body's immune system.	American Cancer Society. 2013. Detailed Guide: Non-Hodgkin Lymphoma. http://www.cancer.org/docroot/CRI/content/CRI_2_4_1X_What_Is_Non_Hodgkins_Lymphoma_32.asp.	Yes	Yes	Accurate	
Agriculture	Letter 54 – Beyond Toxics	54-N	Breast cancer, ADD/ADHD, increased risks of late abortion, and endocrine disruption have all been linked to glyphosate exposure. Glyphosate has also been suggestively, associated with an increased risk of multiple myeloma, according to an Agricultural Health Study published in 2005. Multiple meloma is another type of cancer that starts in plasma cells- a type of white blood cell.	Thongprakaisang, S., A. Thiantanawat, N. Rangkadilok, T. Suriyo, and J. Satayavivad. 2013. Glyphosate induces human breast cancer cells growth via estrogen Receptors, Food and Chemical Toxicology. 59: 129-136.	Yes	Yes	Accurate	
Agriculture	Letter 54 – Beyond Toxics	54-N	Breast cancer, ADD/ADHD, increased risks of late abortion, and endocrine disruption have all been linked to glyphosate exposure. Glyphosate has also been suggestively, associated with an increased risk of multiple myeloma, according to an Agricultural Health Study published in 2005. Multiple meloma is another type of cancer that starts in plasma cells- a type of white blood cell.	Garry, V.F., M.E. Hawkins, L.L. Erickson, L.K. Long-Simpson, S.E. Holland, and B.L. Burroughs. 2002. Birth defects, season of conception, and sex of children born to pesticide applicators living in the Red River Valley of Minnesota, USA. Environ Health Perspective. 110(Suppl 3): 441-449.	Yes	Yes	Accurate (perhaps embellished)	Study states "our present study shows a tentative association between ADD/ADHD and use of this herbicide."
Agriculture	Letter 54 – Beyond Toxics	54-N	Breast cancer, ADD/ADHD, increased risks of late abortion, and endocrine disruption have all been linked to glyphosate exposure. Glyphosate has also been suggestively, associated with an increased risk of multiple myeloma, according to an Agricultural Health Study published in 2005. Multiple meloma is another type of cancer that starts in plasma cells- a type of white blood cell.	Arbuckle, T.E., Z. Lin, and L.S. Mery. 2001. An Exploratory Analysis of the Effect of Pesticide Exposure on the Risk of Spontaneous Abortion in an Ontario Farm Population. Environmental Health Perspectives 109: 851-857.	Yes	Yes	Accurate	
Agriculture	Letter 54 – Beyond Toxics	54-N	Breast cancer, ADD/ADHD, increased risks of late abortion, and endocrine disruption have all been linked to glyphosate exposure. Glyphosate has also been suggestively, associated with an increased risk of multiple myeloma, according to an Agricultural Health Study published in 2005. Multiple meloma is another type of cancer that starts in plasma cells- a type of white blood cell.	Walsh, L.P., C. McCormick, C. Martin, and D.M. Stocco. 2000. Roundup Inhibits Steroidogenesis by Disrupting Steroidogenic Acute Regulatory (StAR) Protein Expression. Environ Health Perspective. 108: 769-776.	Yes	Yes	Accurate	

Agriculture	Letter 54 – Beyond Toxics	54-N	Breast cancer, ADD/ADHD, increased risks of late abortion, and endocrine disruption have all been linked to glyphosate exposure. Glyphosate has also been suggestively, associated with an increased risk of multiple myeloma, according to an Agricultural Health Study published in 2005. Multiple meloma is another type of cancer that starts in plasma cells- a type of white blood cell.	De Roos, A.J., A. Blair, J.A. Rusiecki, J.A. Hoppin, M. Svec, M. Dosemeci, D.P. Sandler, and M.C. Alavanja. 2005. Cancer Incidence among Glyphosate-Exposed Pesticide Applicators in the Agricultural Health Study. Environmental Health Perspectives. 113(1): 49-54.	Yes	Yes	Accurate	
Agriculture	Letter 54 – Beyond Toxics	54-N	Breast cancer, ADD/ADHD, increased risks of late abortion, and endocrine disruption have all been linked to glyphosate exposu re. Glyphosate has also been suggestively, associated with an increased risk of multiple myeloma, according to an Agricultural Health Study published in 2005. Multiple meloma is another type of cancer that starts in plasma cells- a type of white blood cell.	National Cancer Institute. 2008. What You Need to Know About: Multiple Myeloma. http://www.cancer.gov/cancertopics/wyntk/meloma/page 2.	Yes	Yes	Accurate	
Agriculture	Letter 54 – Beyond Toxics	54-O	Health effects are not limited to humans. A 2011 study found that glyphosate changed the toxicological parameters in certain fish. Another study from 2010 found that sublethal residues of glyphosate induced immunological responses in fish and alters their natural immune response to bacterial and possibly to other aquatic microorganism. Chronic esposure has been associated with histopathological damage in the gills and liver of freshwater fish species, some of which was irreversible. A study found that Roundup, the most commonly used glyphosate product, alone, is extremely lethal to amphibians in concentrations found in the environment.	Glusczak, L., V.L. Loro, A. Pretto, B.S. Moraes, A. Raabe, M.F. Duarte, M.B. de Fonseca, C.C. de Menezes, and D.M. de Sousa Valladao, 2011. Acute Exposure to Glyphosate Herbicide Affects Oxidative Parameters in Piava (Leporinus obtusidens), Arch Environ Contam Toxicol. 61(4): 624-630.	Yes	Yes	Accurate	
Agriculture	Letter 54 – Beyond Toxics	54-O	Health effects are not limited to humans. A 2011 study found that glyphosate changed the toxicological parameters in certain fish. Another study from 2010 found that sublethal residues of glyphosate induced immunological responses in fish and alters their natural immune response to bacterial and possibly to other aquatic microorganism. Chronic esposure has been associated with histopathological damage in the gills and liver of freshwater fish species, some of which was irreversible. A study found that Roundup, the most commonly used glyphosate product, alone, is extremely lethal to amphibians in concentrations found in the environment.	Kreutz, L.C., L.J.G. Barcellos, A. Marteninghe, E.D. dos Santos, and R. Zanatta. 2010. Exposure to sublethal concentration of glyphosate or atrazine-based herbicides alters the phagocytic function and increases the susceptibility of silver catfish fingerlings *(Rhamdia quelen)* to *Aeromonas hydrophila* challenge. Fish Shellfish Immunol. 29(4): 694-697.	Yes	Yes	Accurate	
Agriculture	Letter 54 – Beyond Toxics	54-O	Health effects are not limited to humans. A 2011 study found that glyphosate changed the toxicological parameters in certain fish. Another study from 2010 found that sublethal residues of glyphosate induced immunological responses in fish and alters their natural immune response to bacterial and possibly to other aquatic microorganism. Chronic esposure has been associated with histopathological damage in the gills and liver of freshwater fish species, some of which was irreversible. A study found that Roundup, the most commonly used glyphosate product, alone, is extremely lethal to amphibians in concentrations found in the environment.	Ortiz-Ordoñez, E., E. Uria-Galicia, R.A. Ruiz-Picos, A.G.S. Duran, Y.H. Trejo, J.E. Sedeno-Diaz, and E. Lopez-Lopez. 2011. Effect of Yerbimat Herbicide on Lipid Peroxidation, Catalase Activity, and Histological Damage in Gills and Liver of the Freshwater Fish *Goodea Atripinni.* Arch Environ Contam Toxicol. 61(3):443-452.	Yes	Yes	Accurate	
Agriculture	Letter 54 – Beyond Toxics	54-O	Health effects are not limited to humans. A 2011 study found that glyphosate changed the toxicological parameters in certain fish. Another study from 2010 found that sublethal residues of glyphosate induced immunological responses in fish and alters their natural immune response to bacterial and possibly to other aquatic microorganisma. Chronic esposure has been associated with histopathological damage in the gills and liver of freshwater fish species, some of which was irreversible. A study found that Roundup, the most commonly used glyphosate product, alone, is extremely lethal to amphibians in concentrations found in the environment.	Relyea, R. 2005. The lethal impact of Roundup on aquatic and terrestrial amphibians. Ecological Applications, 15(4): 1118–1124.	Yes	Yes	Accurate	
Agriculture	Letter 54 – Beyond Toxics	54-P	The environmental impacts to glyphosate to surface waters and surrounding areas are becoming an increasing concern. More than 180 million pounds of glyphosate are used annually in the US. The U.S. Geological Survey (USGS) recently published a report which documents the distribution and trends of pesticide use from 1992-2009. Because of heavy use Glyphosate is routinely detected in surface and ground water. A separate USGS survey detected glyphosate in 36% of samples, and aminomethylphosphonic acid or AMPA (a degradation product of glyphosate) in 69% of the samples.	USGS. 2013. National Assessment Shows Geographic Distributions and Trends of Pesticide Use, 1992-2009. Available at http://www.usgs.gov/newsroom/article.asp?ID=3594.	Yes	Yes	Accurate (perhaps embellished)	changed text in comment summary to match comment exactly. The referenced study does summarize pesticide use in the US. When looking to validate the previous statement of 180 million pounds per year, there are data provided in one of the appendices. When summarizing this by year, the annual use has increased since 1992 and is over 180 million pounds per year in 2007, 2008, and 2009. Links provided in citation will lead to Appendix 1 of the "Estimation of..." publication, which contains the data.

Agriculture	Letter 54 – Beyond Toxics	54-P	The environmental impacts to glyphosate to surface waters and surrounding areas are becoming an increasing concern. More than 180 million pounds of glyphosate are used annually in the US. See USGS report. Because of heavy use Glyphosate is routinely detected in surface and ground water. A separate USGS survey detected glyphosate in 36% of samples, and aminomethylphosphonic acid or AMPA (a degradation product of glyphosate) in 69% of the samples.	Scribner, E.A., W.A. Battaglin, J.E. Dietze, and E.M. Thurman. 2003. Reconnaissance Data for Glyphosate, Other Selected Herbicides, Their Degradation Products, and Antibiotics in 51 Streams in Nine Midwestern States, 2002 U.S. Geological Survey, Open-File Report 03–217, 101 p.	Yes	Yes	Accurate	
Agriculture	Letter 54 – Beyond Toxics	54-Q	EPA set the MCL at 0.7 PPM. Unfortnately, many fo the above noted health effects and environmental impacts have been observed at levels below this MCL.	USEPA. 2014. Basic Information about Glyphosate in Drinking Water. http://water.epa.gov/drink/contaminants/basicinformation/glyphosate.cfm.	Yes	Yes	Accurate	
Agriculture	Letter 54 – Beyond Toxics	54-R	Unknown and unmonitored uses are a large part of the problem, but so too are the unknown and unmonitored health and environmental risks, a fact directly raised by litigation concerning failed mandatory ESA evaluations of 37 pesticides for potential impacts on endangered and threatened species. As most risk assessments are based on not only old but incomplete data and endpoint evaluations, pesticides application management measures should require reevaluation for this endpoints and impacts on health and environment	US District Court. 2008. NW Coalition for Alternatives to Pesticides, LLC v. NMFS. No. 07-1791-RSL. Stipulated Settlement Agreement and Order of Dismissal. http://www.nmfs.noaa.gov/pr/pdfs/consultations/pesticide_agreement.pdf.	Yes	Yes	Questionable	The referenced document does describe the settlement. The settlement required NMFS to meet a schedule to complete section 7(a)(2) consultations within 2 years on 37 pesticides. However, the first part of the comment regarding "unknown and unmonitored health and environmental health risks" is not mentioned in the reference.
Agriculture	Letter 54 – Beyond Toxics	54-R	Unknown and unmonitored uses are a large part of the problem, but so too are the unknown and unmonitored health and environmental risks, a fact directly raised by litigation concerning failed mandatory ESA evaluations of 37 pesticides for potential impacts on endangered and threatened species. As most risk assessments are based on not only old but incomplete data and endpoint evaluations, pesticides application management measures should require reevaluation for this endpoints and impacts on health and environment.	Oregon Department of Forestry. 2000. Aerial Pesticides Application Project, *Executive Summary* , Final Report, March 2000. http://www.oregon.gov/odf/privateforests/docs/chemappexecsum.pdf.	Yes	Yes	Questionable	Included in comment footnote: Based on current understanding of the toxicity of commonly used forest pesticides with regard to human health and aquatic biota, the authors conclude that forest practice rules are effective at protecting water quality during aerial herbicide and fungicide applications on Type F and D streams....” Seems like the comment footnote should have been after the first comma (in the red text) to be accurate. Otherwise, reference does not seem applicable to the comment.
Agriculture	Letter 54 – Beyond Toxics	54-S	Inert ingredients in Pesticides - "Adjuvants". Most risk assessments and testing standards for pesticides do not require extensive testing of disclosure of the inert ingredients which can be biologically or chemically active. They can pose more dangers than active ingredients. Recent scientific inquiries reveal that these ingredients demonstrate significant toxic effect themselves and increase the toxicity of active ingredients. A 2008 study was the first to definitely confirm this fact. Researchers found that glyphosate formulated products kill human cells, particularly embryonic, placental and umbilical cord cells, even at very low concentrations.	Benachour, N. and G.-E. Seralini. 2009. *Glyphosate Formulations Induce Apoptosis and Necrosis in Human Umbilical, Embryonic, and Placental Cell* s. Chemical Research in Toxicology, 22(1): 97-105.	Yes	Yes	Accurate	Comment had publication year incorrect; 2009, not 2008.
Agriculture	Letter 54 – Beyond Toxics	54-Q	Other studies have found that the formulated glyphosate products reduces human placental JEG3 cells viability at least two times more efficiently than glyphosate, disrupts aromataze activity and mRNA levels, induce a dose-dependent formation of DNA adducts in the kidneys and liver of mice, and induce developmental retardation of the fetal skeleton, a disease in sperm number, and increase in the percentage of abnormal sperms.	Richard S., S. Moslemi, H. sipahutar, N. Benachour, and G-F. Seralini. 2005. Differential effects of glyphosate and roundup on human placental cells and aromatase. Environ Health Perspect, 113(6): 716-720.	Yes	Yes	Accurate	Note: duplicate numbering of previous comment.
Agriculture	Letter 54 – Beyond Toxics	54-Q	Other studies have found that the formulated glyphosate products reduces human placental JEG3 cells viability at least two times more efficiently than glyphosate, disrupts aromataze activity and mRNA levels, induce a dose-dependent formation of DNA adducts in the kidneys and liver of mice, and induce developmental retardation of the fetal skeleton, a disease in sperm number, and increase in the percentage of abnormal sperms.	Peluso, M., A. Munnia, C. Bolognesi, and S. Parodi. 1998. 32P-postlabeling detection of DNA adducts in mice treated with the herbicide roundup. Environmental and Molecular Mutagenesis, 31(1): 55-59.	Yes	Yes	Accurate	Note: duplicate numbering of previous comment.
Agriculture	Letter 54 – Beyond Toxics	54-Q	Other studies have found that the formulated glyphosate products reduces human placental JEG3 cells viability at least two times more efficiently than glyphosate, disrupts aromataze activity and mRNA levels, induce a dose-dependent formation of DNA adducts in the kidneys and liver of mice, and induce developmental retardation of the fetal skeleton, a disease in sperm number, and increase in the percentage of abnormal sperms.	Dallegrave, E. F.D. Mantese, R.S. Coelho, J.D. Pereira, P.R. Dalsenter, and A. Langeloh. 2003. The teratogenic potential of the herbicide glyphosate-Roundup® in Wistar rats. Toxicology Letters. 142(1-2): 45-52.	Yes	Yes	Accurate	Note: duplicate numbering of previous comment. Accurate for the red text.
Agriculture	Letter 54 – Beyond Toxics	54-Q	Other studies have found that the formulated glyphosate products reduces human placental JEG3 cells viability at least two times more efficiently than glyphosate, disrupts aromataze activity and mRNA levels, induce a dose-dependent formation of DNA adducts in the kidneys and liver of mice, and induce developmental retardation of the fetal skeleton, a disease in sperm number, and increase in the percentage of abnormal sperms.	Dallegrave, E., F.D. Mantese, R.T. Oliveira, A.J.M. Andrade, P.R. Dlasenter, and A. Langeloh. 2007. Pre- and postnatal toxicity of the commercial glyphosate formulation in Wistar rats. Arch Toxicol, 81(9): 665-673.	Yes	Yes	Accurate	Note: duplicate numbering of previous comment. Accurate for the red text.

Agriculture	Letter 54 – Beyond Toxics	54-S	The dangers of inerts do not stop with humans. Using glyphosate as the demonstrative chemical again, glyphosate and its formulated products adversely impact aquatic organisms contrary to industry claims. A study in 2005 found that Round-up as a whole is "extremely lethal" to amphibians in concentrations found in the environment. Another study found that tadpoles chronically exposed to environmentally relevant concentrations of glyphosate formulations containing POEA showed decreased snout-vent length at metamorphosis and increased time to metamorphasis, tail damage adn gonadal abnormalities. Other organisms such as the freshwater mussel are found to be the most sensitive aquatic organisms tested to date with glyphosate-based chemicals and its surfactant.	Relyea, R. 2005. The lethal impact of Roundup on aquatic and terrestrial amphibians. Ecological Applications, 15(4): 1118–1124.	Yes	Yes	Accurate	Note: duplicate numbering of previous comment.
Agriculture	Letter 54 – Beyond Toxics	54-S	The dangers of inerts do not stop with humans. Using glyphosate as the demonstrative chemical again, glyphosate and its formulated products adversely impact aquatic organisms contrary to industry claims. A study in 2005 found that Round-up as a whole is "extremely lethal" to amphibians in concentrations found in the environment. Another study found that tadpoles chronically exposed to environmentally relevant concentrations of glyphosate formulations containing POEA showed decreased snout-vent length at metamorphosis and increased time to metamorphasis, tail damage adn gonadal abnormalities. Other organisms such as the freshwater mussel are found to be the most sensitive aquatic organisms tested to date with glyphosate-based chemicals and its surfactant.	Bringolf, R.B., W.G. Cope, S. Mosher, M.C. Barnhart, and D. Shea. 2007. Acute and chronic toxicity of glyphosate compounds to glochidia and juveniles of Lampsilis siliquoidea (Unionidae). Environ Toxicol Chem. 26(10): 2094-2100.	Yes	Yes	Questionable	Note: duplicate numbering of previous comment. Red font in comment summary is definitely accurate based on the reference (footnote was put at the end of this sentence). However, the text in blue font in the comment summary is not backed up by a reference.
Agriculture	Beyond Toxics	54-T	EPA in its RegistrationEligibility Decision RED document in 1993 acknowledges that an "inert" ingredient in some glyphosate end-use products was toxic to aquatic organisms and found that these products necessitated labeling: "toxic to fish" as these products are applied directly to aquatic environments. EPA is also aware that glyphosate poses a risk of water contamination since it is not only released directly into aquatic environments, but also via the transport of residues adsorbed to soil particles suspended in runoff water, leaching, and drift.	USEPA. 1993. Reregistration Eligibility Decision (RED) Glyphosate.	Yes	Yes	Accurate, though misleading	The comment is accurate, but leaves out the other statements that EPA found gyphosphate for the most part to have minimal effects on birds, mammals, fish, and invertebrates.
Agriculture	Beyond Toxics	54-U	Concerns over inert ingredients' health and environmental effects are not limited to glyphosate products especially with regard to Oregon Coastal zone species. This is why in its Biological Opinion concerning Chloropyrifos, Diazinon and Malathion, the National Marine Fisheries Service (NMFS) went one step further than the usual assessment protocols and examined risks associated with the adjuvant, nonylphenol. NMFS made the following observation. "These results show that nonylphenol is of concern to aquatic life, particularly salmonid endocrine systems involved in reproduction adn smoltification.....Consequently, the effects that these ingredients may have on listed salmonids and designated critical habitat remain an uncertainty and are a recognized data gap of EPA's action under consultation". Thus when scientists do have access to information concerning inert ingredients and can conduct risk assessments of the impacts of these chemicals, the findings do no bode well for humans or other species.	NMFS. 2008. *National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion Environmental Protection Agency Registration of Pesticides Containing Chlorpyrifos, Diazinon, and Malathion.* Available online at*:* http://www.nmfs.noaa.gov/pr/pdfs/pesticide_biop.pdf	Yes	Yes	Accurate	
Agriculture	Beyond Toxics	54-U	Concerns over inert ingredients' health and environmental effects are not limited to glyphosate products especially with regard to Oregon Coastal zone species. This is why in its Biological Opinion concerning Chloropyrifos, Diazinon and Malathion, the National Marine Fisheries Service (NMFS) went one step further than the usual assessment protocols and examined risks associated with the adjuvant, nonylphenol. NMFS made the following observation. "These results show that nonylphenol is of concern to aquatic life, particularly salmonid endocrine systems involved in reproduction adn smoltification.....Consequently, the effects that these ingredients may have on listed salmonids and designated critical habitat remain an uncertainty and are a recognized data gap of EPA's action under consultation". Thus when scientists do have access to information concerning inert ingredients and can conduct risk assessments of the impacts of these chemicals, the findings do no bode well for humans or other species.	NOAA Fisheries. Pesticide Consultations with EPA. Available online at: http://www.nmfs.noaa.gov/pr/consultation/pesticides.htm.	Yes	Yes	Reference not necessary, reference above addresses comment directly, this reference does not	

Agriculture	Beyond Toxics	54-V	Endocrine disruption occurs when chemicals interfere with human or other species' hormones and hormone-receptors. In humans, adverse effects from endocrine disruption are far ranging and include reproductive abnormalities, neurological effects, and diseases such as diabetes, ADHD and cancer. In fish and other aquatic species, similar problems with reproductive systems and neurological development have been documented.	Beyond Pesticides. *Pesticides That Disrupt Endocrine System Still Unregulated by EPA. Available online at:* http://www.beyondpesticides.org/gateway/health%20effects/endocrine%20cited.pdf.	Yes	Yes	Accurate	Review cited references? 1Kavlock, R.J., et al.,1996. Research Needs for the Risk Assessment of Health and Environmental Eff ects of Endocrine Disruptors: A Report of the U.S. EPA-Sponsored Workshop. Environmental Health Perspec ves, 104: p. 715-740. 2Federal Register No ce, Endocrine Disruptor Screening Program (EDSP); Dra Policies and Procedures for Ini al Screening; Request for Comment, [EPA–HQ–OPPT–2007–1080], Editor. 2007, U.S. EPA. 3Federal Register No ce, Dra List of Ini al Pes cide Ac ve Ingredients and Pes cide Inerts to be Considered for Screening under the Federal Food, Drug, and Cosme c Act, in [EPA–HQ–OPPT–2004–0109]. 2007, U.S. EPA. 4EuropeanCommission. Endocrine Disruptor Research in the European Union. [cited 2008 Jan 11]; Available from: h p://ec.europa.eu/ research/endocrine/index_en.html. 5Colborn, T. 1995. Commentary: Environmental Estrogens: Health Implica ons for Humans and Wildlife. Environmental Health Perspec ves, 103: p. 135-136. 6Guise, S.D., et al. 2001. Consensus Statement: Atlan c Coast Contaminants Workshop 2000. Environmental Health Perspec ves, 109(12): p. 1301-1302. 7Hayes, T.B., et al. 2006. Pes cide mixtures, endocrine disrup on, and amphibian declines: Are we underes ma ng the impact? Environmental Health Perspec ves, 114: p. 40-50. 8Kavlock, R.J. 1998. What's Happening to Our Frogs? Environmental Health Perspec ves, 106(12): p. 773-774. 9Colborn, T., Dumanoski, D., Myers, J. P., Our Stolen Future. 1996, New York: Penguin Books USA. 10Cro on, K.M., et al. 2007. Short-term in vivo exposure to the water contaminant triclosan: Evidence for disrup on of thyroxine. Environmental Toxicology and Pharmacology,24(2): p. 194-197. 11Chen, J., et al. 2007. Triclocarban enhances testosterone ac on: A new type of endocrine disruptor? p. en.2007-1057.
Agriculture	Oregon Association of Nurseries	84-M	The Ag Water Quality management plans are designed for the prevention and control of water pollution from agricultural activities and soil erosion in the affected management area. Further, as EPA stated, "A well developed management program supports activities with the greatest potential to produce early, demonstrable water quality results.....".	USEPA. Outreach & Communication: The Nonpoint Source Management Program. Available online at: http://water.epa.gov/polwaste/nps/outreach/point4.cfm	Yes	Yes	Accurate	
Agriculture	Oregon Association of Nurseries	84-F	Congress specifically required that such measures could only be implemented so long as they are "economically achievable." Together, these two components materially define the management measures to be implemented in the Area Plans-a fact also recognized by EPA. "the CNCPs must provide for implementation of these measures or alternative management measures....."	16 USC 1455b(g)(5). United States Code. Title 16. Chapter 33. Protecting Coastal Waters.	Yes	Yes	Accurate	(5) Management measures For purposes of this subsection, the term "management measures" means economically achievable measures for the control of the addition of pollutants from existing and new categories and classes of nonpoint sources of pollution, which reflect the greatest degree of pollutant reduction achievable through the application of the best available nonpoint pollution control practices, technologies, processes, siting
Agriculture	Oregon Association of Nurseries	84-F	Congress specifically required that such measures could only be implemented so long as they are "economically achievable." Together, these two components materially define the management measures to be implemented in the Area Plans-a fact also recognized by EPA. "the CNCPs must provide for implementation of these measures or alternative management measures....."	USEPA. Coastal Zone Act Reauthorization Amendments: Agriculture Chapter Factsheet. Online at: http://water.epa.gov/polwaste/nps/czara/agricult.cfm	Yes	Yes	Accurate	
Agriculture	Oregon Association of Nurseries	84-O	Area Plans do provide for specific measures. By exampleonly, required conditions in the North Coast Basin area in part require as follows: (2)(a) allow the natural and managed regeneration and growth of riparian vegetation--trees shrubs, grasses and sedges--along natural waterways (as defined in OAR 141--085-0010(27) to provide shade to moderate water tempertures and bank stability to maintain erosion near background levels. (b) The technical criteria to determine compliance with OAR 603-095-0840(2)(a) are:..... (E) Management activities are conducted in a manner so as o maintain streambank integrity through 25-year storm events. OAR 603-095-0840	OAR 141-085-0010(27). Oregon Administrative Rules. Chapter 141. Division 85.	No			Unable to locate rule. There is a draft with this numbering but doesn't make sense with current comment.

Agriculture	Oregon Association of Nurseries	84-O	Area Plans do provide for specific measures. By exampleonly, required conditions in the North Coast Basin area in part require as follows: (2)(a) allow the natural and managed regeneration and growth of riparian vegetation--trees shrubs, grasses and sedges--along natural waterways (as defined in OAR 141--085-0010(27) to provide shade to moderate water tempertures and bank stability to maintain erosion near background levels. (b) The technical criteria to determine compliance with OAR 603-095-0840(2)(a) are:..... (E) Management activities are conducted in a manner so as o maintain streambank integrity through 25-year storm events. OAR 603-095-0840	OAR 603-095-0840(2)(a). Oregon Administrative Rules. Chapter 603. Division 95. Agricultural Water Quality Management Program	Yes	Yes	Accurate	
Agriculture	Oregon Association of Nurseries	84-O	Area Plans do provide for specific measures. By exampleonly, required conditions in the North Coast Basin area in part require as follows: (2)(a) allow the natural and managed regeneration and growth of riparian vegetation--trees shrubs, grasses and sedges--along natural waterways (as defined in OAR 141--085-0010(27) to provide shade to moderate water tempertures and bank stability to maintain erosion near background levels. (b) The technical criteria to determine compliance with OAR 603-095-0840(2)(a) are:..... (E) Management activities are conducted in a manner so as o maintain streambank integrity through 25-year storm events. OAR 603-095-0840	OAR 603-095-0840. Oregon Administrative Rules. Chapter 603. Division 95. Agricultural Water Quality Management Program	Yes	Yes	Accurate	
Agriculture	Oregon Association of Nurseries	84-P	Disagree with the NOAA/EPA statement that AWQMA planning has focused primarily on impaired areas when the focus should be on both protection and restoration. Suggests that standards that could be used to address an impaired area could just as easily apply to any restoration effort. For example, the excerpt of standards provided above from OAR 603-095-0840 can be said to address an impaired area while also providing protection and restoration benefits.	OAR 603-095-0840. Oregon Administrative Rules. Chapter 603. Division 95. Agricultural Water Quality Management Program	Yes	Yes	Factual Statement Accurate, text in black = opinion.	
Agriculture	NWEA	57-XX	Management measures do not provide sufficient protection of water bodies from temperature pollution. Temperature pollution is the most prevalent water quality problem in coastal lowland streams, is pronounced in agricultural areas, and is key to salmonid productivity. Therefore the incorporation of these management measures into agricultural plans likewise is not sufficient to address temperature. The omission of a specified and sufficient width, height, and density of riparian vegetation fails to ensure that these plans will control key factors in nonpoint source contributions to temperature.	Rhodes, J. 2014. Declaration of Jonathan J. Rhodes in Support of the U.S. Environmental Protection Agency's and the National Oceanic and Atmospheric Administration's Proposal to Disapprove the State of Oregon's Coastal Nonpoint Pollution Control Program. March 14, 2014.	Yes	Yes	Accurate	NWEA comment letter p. 30.
Agriculture	NWEA	57-XX	Management measures do not provide sufficient protection of water bodies from temperature pollution. Temperature pollution is the most prevalent water quality problem in coastal lowland streams, is pronounced in agricultural areas, and is key to salmonid productivity. Therefore the incorporation of these management measures into agricultural plans likewise is not sufficient to address temperature. The omission of a specified and sufficient width, height, and density of riparian vegetation fails to ensure that these plans will control key factors in nonpoint source contributions to temperature.	Oregon DEQ. 2001. Tillamook Bay Watershed Total Maximum Daily Load (TMDL). June 2001.	Yes	Yes	Accurate	NWEA comment letter p. 40.
Agriculture	NWEA	57-XX	Management measures do not provide sufficient protection of water bodies from temperature pollution. Temperature pollution is the most prevalent water quality problem in coastal lowland streams, is pronounced in agricultural areas, and is key to salmonid productivity. Therefore the incorporation of these management measures into agricultural plans likewise is not sufficient to address temperature. The omission of a specified and sufficient width, height, and density of riparian vegetation fails to ensure that these plans will control key factors in nonpoint source contributions to temperature.	Tillamook Bay National Estuary Project, 1997	No	pending	pending	Reference does not appear to have been included in 57 package
Agriculture	NWEA	57-XX	Management measures do not provide sufficient protection of water bodies from temperature pollution. Temperature pollution is the most prevalent water quality problem in coastal lowland streams, is pronounced in agricultural areas, and is key to salmonid productivity. Therefore the incorporation of these management measures into agricultural plans likewise is not sufficient to address temperature. The omission of a specified and sufficient width, height, and density of riparian vegetation fails to ensure that these plans will control key factors in nonpoint source contributions to temperature.	EPA and NOAA. 2012. Oregon Coastal Nonpoint Source Program 6217(g) Guidance Management Measures, NOAA/EPA Approval Status. September 2012.	Yes	Yes	Accurate	NWEA comment letter pp. 40, 41; Rhodes Declaration p. 2 & throughout document

Agriculture	NWEA	57-XX	Management measures do not provide sufficient protection of water bodies from temperature pollution. Temperature pollution is the most prevalent water quality problem in coastal lowland streams, is pronounced in agricultural areas, and is key to salmonid productivity. Therefore the incorporation of these management measures into agricultural plans likewise is not sufficient to address temperature. The omission of a specified and sufficient width, height, and density of riparian vegetation fails to ensure that these plans will control key factors in nonpoint source contributions to temperature.	Rhodes, J., D. McCullough, and F. Espinosa. 1994. A Coarse Screening Process for Evaluation of the Effects of Land Management Activities on Salmon Spawning and Rearing Habitat in ESA Consultations. Columbia River Inter-Tribal Fish Commission Technical Report 94-4.	Yes	Yes	Accurate	Rhodes Declaration p. 5, 6
Agriculture	NWEA	57-XX	Management measures do not provide sufficient protection of water bodies from temperature pollution. Temperature pollution is the most prevalent water quality problem in coastal lowland streams, is pronounced in agricultural areas, and is key to salmonid productivity. Therefore the incorporation of these management measures into agricultural plans likewise is not sufficient to address temperature. The omission of a specified and sufficient width, height, and density of riparian vegetation fails to ensure that these plans will control key factors in nonpoint source contributions to temperature.	Oregon Department of Agriculture. 2012. Curry County Agricultural Water Quality Management Area Plan. Developed by The Oregon Department of Agriculture and the Curry Soil and Water Conservation District with assistance from the Curry County Local Advisory Committee. 2004, Revised 2006, 2010, and 2012.	Yes	Yes	Accurate	Rhodes Declaration p. 4 (Appendix B in ODA et al., 2012);
Agriculture	NWEA	57-XX	Management measures do not provide sufficient protection of water bodies from temperature pollution. Temperature pollution is the most prevalent water quality problem in coastal lowland streams, is pronounced in agricultural areas, and is key to salmonid productivity. Therefore the incorporation of these management measures into agricultural plans likewise is not sufficient to address temperature. The omission of a specified and sufficient width, height, and density of riparian vegetation fails to ensure that these plans will control key factors in nonpoint source contributions to temperature.	Independent Multidiciplinary Science Team. 2002. Recovery of Wild Salmonids in Western Oregon Lowlands: A report of the Independent Multidisciplinary Science Team, Oregon Plan for Salmon and Watersheds. Technical Report 2002-1 to the Oregon Plan for Salmon and Watersheds, Governor's Natural Resources Office, Salem, Oregon. July 15, 2002.	Yes	Yes	Accurate	Rhodes Declaration p. 5, 6, 9, 11
Agriculture	NWEA	57-XX	Management measures do not provide sufficient protection of water bodies from temperature pollution. Temperature pollution is the most prevalent water quality problem in coastal lowland streams, is pronounced in agricultural areas, and is key to salmonid productivity. Therefore the incorporation of these management measures into agricultural plans likewise is not sufficient to address temperature. The omission of a specified and sufficient width, height, and density of riparian vegetation fails to ensure that these plans will control key factors in nonpoint source contributions to temperature.	Beschta, R., D. Donahue, D. DellaSala, J. Rhodes, J. Karr, M. O'Brien, T. Fleischner, C. Williams. 2013. Adapting to Climate Change on Western Public Lands: Addressing the Ecological Effects of Domestic, Wild, and Feral Ungulates. Environmental Management. 51: 474-491.	Yes	Yes	Accurate	Rhodes Declaration p. 5. This paper talks about the importance of stabalizing stream vegetation, etc., but it is focused on climate change. Only mentions stream temperatures in passing.
Agriculture	NWEA	57-XX	Management measures do not provide sufficient protection of water bodies from temperature pollution. Temperature pollution is the most prevalent water quality problem in coastal lowland streams, is pronounced in agricultural areas, and is key to salmonid productivity. Therefore the incorporation of these management measures into agricultural plans likewise is not sufficient to address temperature. The omission of a specified and sufficient width, height, and density of riparian vegetation fails to ensure that these plans will control key factors in nonpoint source contributions to temperature.	USEPA. 1993. Chapter 2: Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters USEPA Report EPA-840-B-92-002.	Yes	Yes	Accurate	Rhodes Declaration p. 2 & throughout document (Chapter 2 of the)
Agriculture	NWEA	57-XX	Management measures do not provide sufficient protection of water bodies from temperature pollution. Temperature pollution is the most prevalent water quality problem in coastal lowland streams, is pronounced in agricultural areas, and is key to salmonid productivity. Therefore the incorporation of these management measures into agricultural plans likewise is not sufficient to address temperature. The omission of a specified and sufficient width, height, and density of riparian vegetation fails to ensure that these plans will control key factors in nonpoint source contributions to temperature.	Stout, H.A., P.W. Lawson, D. Bottom, T. Cooney, M. Ford, C. Jordan, R. Kope, L. Kruzic, G.Pess, G. Reeves, M. Scheuerell, T. Wainwright, R. Waples, L. Weitkamp, J. Williams and T. Williams. 2011. Scientific conclusions of the status review for Oregon Coast coho salmon (Oncorhynchus kisutch). Draft revised report of the Oregon Coast Coho Salmon Biological Review Team. NOAA/NMFS/NWFSC, Seattle, WA.	Yes	Yes	Accurate	Rhodes Declaration p. 9.
Agriculture	NWEA	57-XX	Management measures do not provide sufficient protection of water bodies from temperature pollution. Temperature pollution is the most prevalent water quality problem in coastal lowland streams, is pronounced in agricultural areas, and is key to salmonid productivity. Therefore the incorporation of these management measures into agricultural plans likewise is not sufficient to address temperature. The omission of a specified and sufficient width, height, and density of riparian vegetation fails to ensure that these plans will control key factors in nonpoint source contributions to temperature.	Oregon Department of Agriculture and Local Advisory Committee's. 2012. Curry County Agricultural Water Quality Management Area.	Yes	Yes	Questionable	Rhodes Declaration p. 2. MidCoast provides more detailed recommendations for widths than the other plans; however, no details on density.

Agriculture	NWEA	57-XX	Management measures do not provide sufficient protection of water bodies from temperature pollution. Temperature pollution is the most prevalent water quality problem in coastal lowland streams, is pronounced in agricultural areas, and is key to salmonid productivity. Therefore the incorporation of these management measures into agricultural plans likewise is not sufficient to address temperature. The omission of a specified and sufficient width, height, and density of riparian vegetation fails to ensure that these plans will control key factors in nonpoint source contributions to temperature.	Oregon Department of Agriculture and Local Advisory Committee's. 2010. The Coos and Coquille Area Agricultural Water Quality Management Area.	Yes	Yes	Questionable	Rhodes Declaration p. 2. MidCoast provides more detailed recommendations for widths than the other plans; however, no details on density.
Agriculture	NWEA	57-XX	Management measures do not provide sufficient protection of water bodies from temperature pollution. Temperature pollution is the most prevalent water quality problem in coastal lowland streams, is pronounced in agricultural areas, and is key to salmonid productivity. Therefore the incorporation of these management measures into agricultural plans likewise is not sufficient to address temperature. The omission of a specified and sufficient width, height, and density of riparian vegetation fails to ensure that these plans will control key factors in nonpoint source contributions to temperature.	Oregon Department of Agriculture and Local Advisory Committee's. 2010. The Inland Rogue Agricultural Water Quality Management Area.	Yes	Yes	Questionable	Rhodes Declaration p. 2. MidCoast provides more detailed recommendations for widths than the other plans; however, no details on density.
Agriculture	NWEA	57-XX	Management measures do not provide sufficient protection of water bodies from temperature pollution. Temperature pollution is the most prevalent water quality problem in coastal lowland streams, is pronounced in agricultural areas, and is key to salmonid productivity. Therefore the incorporation of these management measures into agricultural plans likewise is not sufficient to address temperature. The omission of a specified and sufficient width, height, and density of riparian vegetation fails to ensure that these plans will control key factors in nonpoint source contributions to temperature.	Oregon Department of Agriculture and Local Advisory Committee's. 2013. The Mid Coast Agricultural Water Quality Management Area.	Yes	Yes	Questionable	Rhodes Declaration p. 2. MidCoast provides more detailed recommendations for widths than the other plans; however, no details on density.
Agriculture	NWEA	57-XX	Management measures do not provide sufficient protection of water bodies from temperature pollution. Temperature pollution is the most prevalent water quality problem in coastal lowland streams, is pronounced in agricultural areas, and is key to salmonid productivity. Therefore the incorporation of these management measures into agricultural plans likewise is not sufficient to address temperature. The omission of a specified and sufficient width, height, and density of riparian vegetation fails to ensure that these plans will control key factors in nonpoint source contributions to temperature.	Oregon Department of Agriculture and Local Advisory Committee's. 2011. The North Coast Basin Agricultural Water Quality Management Area.	Yes	Yes	Questionable	Rhodes Declaration p. 2. MidCoast provides more detailed recommendations for widths than the other plans; however, no details on density.
Agriculture	NWEA	57-XX	Management measures do not provide sufficient protection of water bodies from temperature pollution. Temperature pollution is the most prevalent water quality problem in coastal lowland streams, is pronounced in agricultural areas, and is key to salmonid productivity. Therefore the incorporation of these management measures into agricultural plans likewise is not sufficient to address temperature. The omission of a specified and sufficient width, height, and density of riparian vegetation fails to ensure that these plans will control key factors in nonpoint source contributions to temperature.	Oregon Department of Agriculture and Local Advisory Committee's. 2010. The Umpqua Basin Agricultural Water Quality Management Area.	Yes	Yes	Questionable	Rhodes Declaration p. 2. MidCoast provides more detailed recommendations for widths than the other plans; however, no details on density.
Agriculture	NWEA	57-YY	Protection of riparian vegetation from livestock is assumed to occur by the use of measures that are flawed, such as providing salt and water away from riparian zones. The CNCP and ag rules erroneously assume that only slight improvements in grazing practices are required. **There are no criteria in the MM for what constitutes "improved" management, leaving the provision open to broad interpretation and adoption of grazing management approaches that do not effectively protect or restore riparian vegetation and stream shading.** & ##The MM do not require grazing cessation in riparian areas during the summer##	Rhodes, J. 2014. Declaration of Jonathan J. Rhodes in Support of EPA's and NOAA's Proposal to Disapprove the State of Oregon's CNCP, March 14, 2014.	Yes	Yes	Accurate	NWEA comment letter p. 30.
Agriculture	NWEA	57-YY	Protection of riparian vegetation from livestock is assumed to occur by the use of measures that are flawed, such as providing salt and water away from riparian zones. The CNCP and ag rules erroneously assume that only slight improvements in grazing practices are required. **There are no criteria in the MM for what constitutes "improved" management, leaving the provision open to broad interpretation and adoption of grazing management approaches that do not effectively protect or restore riparian vegetation and stream shading.** & ##The MM do not require grazing cessation in riparian areas during the summer##	Bell, N., NWEA. 2013. Letter to Dan Opalski, EPA, and Margaret Davidson, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; Additional Information Concerning Oregon's Failure to Regulate Agricultural Nonpoint Pollution (May 10, 2013).	Yes	pending	pending	NWEA comment letter p. 36.

Agriculture	NWEA	57-YY	Protection of riparian vegetation from livestock is assumed to occur by the use of measures that are flawed, such as providing salt and water away from riparian zones. The CNCP and ag rules erroneously assume that only slight improvements in grazing practices are required. **There are no criteria in the MM for what constitutes "improved" management, leaving the provision open to broad interpretation and adoption of grazing management approaches that do not effectively protect or restore riparian vegetation and stream shading.** & ##The MM do not require grazing cessation in riparian areas during the summer##	Oregon Department of Agriculture and Local Advisory Committee's. Curry County Agricultural Water Quality Management Area. (Appendix B in ODA et al., 2012)	Yes	pending	pending	Rhodes Declaration p. 6, 8. Agricultural Water Quality Management Area Plan for Curry County (Appendix B in ODA et al., 2012) and other Ag plans implicitly
Agriculture	NWEA	57-YY	Protection of riparian vegetation from livestock is assumed to occur by the use of measures that are flawed, such as providing salt and water away from riparian zones. The CNCP and ag rules erroneously assume that only slight improvements in grazing practices are required. **There are no criteria in the MM for what constitutes "improved" management, leaving the provision open to broad interpretation and adoption of grazing management approaches that do not effectively protect or restore riparian vegetation and stream shading.** & ##The MM do not require grazing cessation in riparian areas during the summer##	Rhodes, J., D. McCullough, and F. Espinosa. 1994. A Coarse Screening Process for Evaluation of the Effects of Land Management Activities on Salmon Spawning and Rearing Habitat in ESA Consultations. Columbia River Inter-Tribal Fish Commission Technical Report 94-4.	Yes	pending	pending	Rhodes Declaration p. 7, 10, 11
Agriculture	NWEA	57-YY	Protection of riparian vegetation from livestock is assumed to occur by the use of measures that are flawed, such as providing salt and water away from riparian zones. The CNCP and ag rules erroneously assume that only slight improvements in grazing practices are required. **There are no criteria in the MM for what constitutes "improved" management, leaving the provision open to broad interpretation and adoption of grazing management approaches that do not effectively protect or restore riparian vegetation and stream shading.** & ##The MM do not require grazing cessation in riparian areas during the summer##	Beschta, R., D. Donahue, D. DellaSala, J. Rhodes, J. Karr, M. O'Brien, T. Fleischner, C. Williams. 2013. Adapting to Climate Change on Western Public Lands: Addressing the Ecological Effects of Domestic, Wild, and Feral Ungulates. *Environmental Management* (2013) 51: 474-491.	Yes	pending	pending	Rhodes Declaration p. 7
Agriculture	NWEA	57-YY	Protection of riparian vegetation from livestock is assumed to occur by the use of measures that are flawed, such as providing salt and water away from riparian zones. The CNCP and ag rules erroneously assume that only slight improvements in grazing practices are required. **There are no criteria in the MM for what constitutes "improved" management, leaving the provision open to broad interpretation and adoption of grazing management approaches that do not effectively protect or restore riparian vegetation and stream shading.** & ##The MM do not require grazing cessation in riparian areas during the summer##	Clary, W.P. and B. F. Webster. 1989. Managing of Grazing in the Intermontane West. USDA Forest Service Intermountain Research Station General Technical Report INT-263, May 1989	Yes	pending	pending	Rhodes Declaration p. 7
Agriculture	NWEA	57-YY	Protection of riparian vegetation from livestock is assumed to occur by the use of measures that are flawed, such as providing salt and water away from riparian zones. The CNCP and ag rules erroneously assume that only slight improvements in grazing practices are required. **There are no criteria in the MM for what constitutes "improved" management, leaving the provision open to broad interpretation and adoption of grazing management approaches that do not effectively protect or restore riparian vegetation and stream shading.** & ##The MM do not require grazing cessation in riparian areas during the summer##	Beschta, R., D. Donahue, D. DellaSala, J. Rhodes, J. Karr, M. O'Brien, T. Fleischner, C. Williams. 2013. Adapting to Climate Change on Western Public Lands: Addressing the Ecological Effects of Domestic, Wild, and Feral Ungulates. *Environmental Management* (2013) 51: 474-491.	Yes	pending	pending	Rhodes Declaration p. 7, 10
Agriculture	NWEA	57-YY	Protection of riparian vegetation from livestock is assumed to occur by the use of measures that are flawed, such as providing salt and water away from riparian zones. The CNCP and ag rules erroneously assume that only slight improvements in grazing practices are required. **There are no criteria in the MM for what constitutes "improved" management, leaving the provision open to broad interpretation and adoption of grazing management approaches that do not effectively protect or restore riparian vegetation and stream shading.** & ##The MM do not require grazing cessation in riparian areas during the summer##	Independent Multidiciplinary Science Team. 2002. Recovery of Wild Salmonids in Western Oregon Lowlands: A report of the Independent Multidisciplinary Science Team, Oregon Plan for Salmon and Watersheds. Technical Report 2002-1. July 15, 2002.	Yes	pending	pending	Rhodes Declaration p. 6,9,11,12
Agriculture	NWEA	57-YY	Protection of riparian vegetation from livestock is assumed to occur by the use of measures that are flawed, such as providing salt and water away from riparian zones. The CNCP and ag rules erroneously assume that only slight improvements in grazing practices are required. **There are no criteria in the MM for what constitutes "improved" management, leaving the provision open to broad interpretation and adoption of grazing management approaches that do not effectively protect or restore riparian vegetation and stream shading.** & ##The MM do not require grazing cessation in riparian areas during the summer##	Riparian Area Management: Grazing Management for Wetland- riparian Areas, Leonard, et al., USFS and BLM TR 1737-14, 1997	pending	pending	pending	Rhodes Declaration p. 7, 8

Agriculture	NWEA	57-YY	Protection of riparian vegetation from livestock is assumed to occur by the use of measures that are flawed, such as providing salt and water away from riparian zones. The CNCP and ag rules erroneously assume that only slight improvements in grazing practices are required. **There are no criteria in the MM for what constitutes "improved" management, leaving the provision open to broad interpretation and adoption of grazing management approaches that do not effectively protect or restore riparian vegetation and stream shading.** & ##The MM do not require grazing cessation in riparian areas during the summer##	Field Review of Fish Habitat Improvement Projects in the Grande Ronde River and John Day River Basins in Eastern Oregon, Beschta et al., BPA Project No. 91-069, October, 1991	pending	pending	pending	Rhodes Declaration p. 7
Agriculture	NWEA	57-YY	Protection of riparian vegetation from livestock is assumed to occur by the use of measures that are flawed, such as providing salt and water away from riparian zones. The CNCP and ag rules erroneously assume that only slight improvements in grazing practices are required. **There are no criteria in the MM for what constitutes "improved" management, leaving the provision open to broad interpretation and adoption of grazing management approaches that do not effectively protect or restore riparian vegetation and stream shading.** & ##The MM do not require grazing cessation in riparian areas during the summer##	Post Fire Management on Forested Public Lands of the Western US, Beschta et al., Consevation Biology, Vol. 18, No. 4, pp. 957-967 August, 2004	pending	pending	pending	Rhodes Declaration p. 7
Agriculture	NWEA	57-YY	Protection of riparian vegetation from livestock is assumed to occur by the use of measures that are flawed, such as providing salt and water away from riparian zones. The CNCP and ag rules erroneously assume that only slight improvements in grazing practices are required. **There are no criteria in the MM for what constitutes "improved" management, leaving the provision open to broad interpretation and adoption of grazing management approaches that do not effectively protect or restore riparian vegetation and stream shading.** & ##The MM do not require grazing cessation in riparian areas during the summer##	The Effects of Post Fire Salvage Logging on Aquatic Ecosystems of the American West, Karr et al., Bioscience Vol. 54 No. 11, November 2004	pending	pending	pending	Rhodes Declaration p. 7
Agriculture	NWEA	57-YY	Protection of riparian vegetation from livestock is assumed to occur by the use of measures that are flawed, such as providing salt and water away from riparian zones. The CNCP and ag rules erroneously assume that only slight improvements in grazing practices are required. **There are no criteria in the MM for what constitutes "improved" management, leaving the provision open to broad interpretation and adoption of grazing management approaches that do not effectively protect or restore riparian vegetation and stream shading.** & ##The MM do not require grazing cessation in riparian areas during the summer##	An Ecosystem Approach to Salmonid Conservation, Spence et al., U.S. EPA, U.S. Fish and Wildlife Service and National Marine Fisheries Service. TR-4501-96-6057, 1996, http://www.nwr.noaa.gov/1habcon/habweb/ManTech/front.htm#TOC	pending	pending	pending	Rhodes Declaration p. 7
Agriculture	NWEA	57-YY	Protection of riparian vegetation from livestock is assumed to occur by the use of measures that are flawed, such as providing salt and water away from riparian zones. The CNCP and ag rules erroneously assume that only slight improvements in grazing practices are required. **There are no criteria in the MM for what constitutes "improved" management, leaving the provision open to broad interpretation and adoption of grazing management approaches that do not effectively protect or restore riparian vegetation and stream shading.** & ##The MM do not require grazing cessation in riparian areas during the summer##	Influence of Forest and Rangeland Managment on Anadromous Fish Habitat in Western North America: Effects of Livestock Grazing, Platts, W. USDA Forest Service Pacific NW Forest and Range Experiment Station General Technical Report PNW -124 April, 1981	pending	pending	pending	Rhodes Declaration p. 7, 8
Agriculture	NWEA	57-YY	Protection of riparian vegetation from livestock is assumed to occur by the use of measures that are flawed, such as providing salt and water away from riparian zones. The CNCP and ag rules erroneously assume that only slight improvements in grazing practices are required. **There are no criteria in the MM for what constitutes "improved" management, leaving the provision open to broad interpretation and adoption of grazing management approaches that do not effectively protect or restore riparian vegetation and stream shading.** & ##The MM do not require grazing cessation in riparian areas during the summer##	Effects of Cattle Grazing Systems on Willow-Dominated Plant associations in Central Oregon, Kovalchik and Elmore, Paper presented at the Ecology and Management of Riparian Shrub Communities, May 1991;	pending	pending	pending	Rhodes Declaration p. 8
Agriculture	NWEA	57-YY	Protection of riparian vegetation from livestock is assumed to occur by the use of measures that are flawed, such as providing salt and water away from riparian zones. The CNCP and ag rules erroneously assume that only slight improvements in grazing practices are required. **There are no criteria in the MM for what constitutes "improved" management, leaving the provision open to broad interpretation and adoption of grazing management approaches that do not effectively protect or restore riparian vegetation and stream shading.** & ##The MM do not require grazing cessation in riparian areas during the summer##	A Review and Synthesis of Effects of Alterations to the Water Temperature Regime on Freshwater Life Stages of Salmonids With Special Refernce to Chinook Salmon, by Dale McCullough, USEPA Region 10 EPA 910-R-99-010, July 1999	pending	pending	pending	Rhodes Declaration p. 9

Agriculture	NWEA	57-YY	Protection of riparian vegetation from livestock is assumed to occur by the use of measures that are flawed, such as providing salt and water away from riparian zones. The CNCP and ag rules erroneously assume that only slight improvements in grazing practices are required. **There are no criteria in the MM for what constitutes "improved" management, leaving the provision open to broad interpretation and adoption of grazing management approaches that do not effectively protect or restore riparian vegetation and stream shading.** & ##The MM do not require grazing cessation in riparian areas during the summer##	Chapter 2 of the Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters USEPA Report EPA-840-B-92-002, dated January 1993 and the summary of these management measures in "Oregon Coastal Nonpoint Source Program 6217 (g) Guidance Management Measures NOAA/EPA approval status" dated September 2012 (hereafter: NOAA/EPA, 2012);	pending	pending	pending	Rhodes Declaration p. 2 & throughout document
Agriculture	NWEA	57-YY	Protection of riparian vegetation from livestock is assumed to occur by the use of measures that are flawed, such as providing salt and water away from riparian zones. The CNCP and ag rules erroneously assume that only slight improvements in grazing practices are required. **There are no criteria in the MM for what constitutes "improved" management, leaving the provision open to broad interpretation and adoption of grazing management approaches that do not effectively protect or restore riparian vegetation and stream shading.** & ##The MM do not require grazing cessation in riparian areas during the summer##	Independent Multidiciplinary Science Team. 2002. Recovery of Wild Salmonids in Western Oregon Lowlands: A report of the Independent Multidisciplinary Science Team, Oregon Plan for Salmon and Watersheds. Technical Report 2002-1. July 15, 2002.	Yes	pending	pending	Rhodes Declaration p. 2
Agriculture	NWEA	57-YY	Protection of riparian vegetation from livestock is assumed to occur by the use of measures that are flawed, such as providing salt and water away from riparian zones. The CNCP and ag rules erroneously assume that only slight improvements in grazing practices are required. **There are no criteria in the MM for what constitutes "improved" management, leaving the provision open to broad interpretation and adoption of grazing management approaches that do not effectively protect or restore riparian vegetation and stream shading.** & ##The MM do not require grazing cessation in riparian areas during the summer##	"Scientific Conclusions of the Status Review for Oregon Coast Coho Salmon (Oncorhynchus kisutch) Draft Revised Report of the Biological Review Team" dated May 16, 2011 (hereafter: BRT, 2011);	pending	pending	pending	Rhodes Declaration p. 9, 11, 12
Agriculture	NWEA	57-YY	Protection of riparian vegetation from livestock is assumed to occur by the use of measures that are flawed, such as providing salt and water away from riparian zones. The CNCP and ag rules erroneously assume that only slight improvements in grazing practices are required. **There are no criteria in the MM for what constitutes "improved" management, leaving the provision open to broad interpretation and adoption of grazing management approaches that do not effectively protect or restore riparian vegetation and stream shading.** & ##The MM do not require grazing cessation in riparian areas during the summer##	Oregon Administrative Rules Oregon Department Of Agriculture Chapter 603, Division 95 Agricultural Water Quality Management Program for: Curry County Agricultural Water Quality Management Area, the Umpqua Basin, the Inland Rogue, the Mid Coast Agricultural Water Quality Management Area, the North Coast Basin, and the Coos and Coquille area (Hereafter, collectively: agricultural rules)	pending	pending	pending	Rhodes Declaration p. 2
Agriculture	NWEA	57-ZZ	The management measures in Oregon's agricultural plans are also deficient to provide protection of stream banks and bank stability. Stream banks are key to protecting water bodies from elevated sediment delivery that affects levels of turbidity and fine sediment in streams. Eroding stream banks also contribute to temperature increases, reduce large woody debris to streams which is critical to salmonid recovery, and contribute to nutrient and pesticide delivery from upslope agricultural activities,	Rhodes, J. 2014. Declaration of Jonathan J. Rhodes in Support of EPA's and NOAA's Proposal to Disapprove the State of Oregon's CNCP, March 14, 2014.	Yes	pending	pending	NWEA comment letter p. 30.
Agriculture	NWEA	57-ZZ	The management measures in Oregon's agricultural plans are also deficient to provide protection of stream banks and bank stability. Stream banks are key to protecting water bodies from elevated sediment delivery that affects levels of turbidity and fine sediment in streams. Eroding stream banks also contribute to temperature increases, reduce large woody debris to streams which is critical to salmonid recovery, and contribute to nutrient and pesticide delivery from upslope agricultural activities,	Bell, N., NWEA. 2013. Letter to Dan Opalski, EPA, and Margaret Davidson, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; Additional Information Concerning Oregon's Failure to Regulate Agricultural Nonpoint Pollution (May 10, 2013).	Yes	pending	pending	NWEA comment letter p. 36.
Agriculture	NWEA	57-ZZ	The management measures in Oregon's agricultural plans are also deficient to provide protection of stream banks and bank stability. Stream banks are key to protecting water bodies from elevated sediment delivery that affects levels of turbidity and fine sediment in streams. Eroding stream banks also contribute to temperature increases, reduce large woody debris to streams which is critical to salmonid recovery, and contribute to nutrient and pesticide delivery from upslope agricultural activities,	Agricultural Water Quality Management Area Plan for Curry County (Appendix B in ODA et al., 2012) and other Ag plans implicitly	pending	pending	pending	Rhodes Declaration p. 10
Agriculture	NWEA	57-ZZ	The management measures in Oregon's agricultural plans are also deficient to provide protection of stream banks and bank stability. Stream banks are key to protecting water bodies from elevated sediment delivery that affects levels of turbidity and fine sediment in streams. Eroding stream banks also contribute to temperature increases, reduce large woody debris to streams which is critical to salmonid recovery, and contribute to nutrient and pesticide delivery from upslope agricultural activities,	Rhodes, J., D. McCullough, and F. Espinosa. 1994. A Coarse Screening Process for Evaluation of the Effects of Land Management Activities on Salmon Spawning and Rearing Habitat in ESA Consultations. Columbia River Inter-Tribal Fish Commission Technical Report 94-4.	Yes	pending	pending	Rhodes Declaration p. 12

Agriculture	NWEA	57-ZZ	The management measures in Oregon's agricultural plans are also deficient to provide protection of stream banks and bank stability. Stream banks are key to protecting water bodies from elevated sediment delivery that affects levels of turbidity and fine sediment in streams. Eroding stream banks also contribute to temperature increases, reduce large woody debris to streams which is critical to salmonid recovery, and contribute to nutrient and pesticide delivery from upslope agricultural activities,	Beschta, R., D. Donahue, D. DellaSala, J. Rhodes, J. Karr, M. O'Brien, T. Fleischner, C. Williams. 2013. Adapting to Climate Change on Western Public Lands: Addressing the Ecological Effects of Domestic, Wild, and Feral Ungulates. *Environmental Management* (2013) 51: 474-491.	Yes	pending	pending	Rhodes Declaration p. 10
Agriculture	NWEA	57-ZZ	The management measures in Oregon's agricultural plans are also deficient to provide protection of stream banks and bank stability. Stream banks are key to protecting water bodies from elevated sediment delivery that affects levels of turbidity and fine sediment in streams. Eroding stream banks also contribute to temperature increases, reduce large woody debris to streams which is critical to salmonid recovery, and contribute to nutrient and pesticide delivery from upslope agricultural activities,	Clary, W.P. and B. F. Webster. 1989. Managing of Grazing in the Intermontane West. USDA Forest Service Intermountain Research Station General Technical Report INT-263, May 1989	Yes	pending	pending	Rhodes Declaration p. 7
Agriculture	NWEA	57-ZZ	The management measures in Oregon's agricultural plans are also deficient to provide protection of stream banks and bank stability. Stream banks are key to protecting water bodies from elevated sediment delivery that affects levels of turbidity and fine sediment in streams. Eroding stream banks also contribute to temperature increases, reduce large woody debris to streams which is critical to salmonid recovery, and contribute to nutrient and pesticide delivery from upslope agricultural activities,	Protecting Sediment-Sensitive Species in Mountain Streams Through Application of Biologically based Stream Bed Sediment Criteria, Bryce et al., Journal of the North American Benthological Society 29(2): 657-672, 2010	pending	pending	pending	Rhodes Declaration p. 11
Agriculture	NWEA	57-ZZ	The management measures in Oregon's agricultural plans are also deficient to provide protection of stream banks and bank stability. Stream banks are key to protecting water bodies from elevated sediment delivery that affects levels of turbidity and fine sediment in streams. Eroding stream banks also contribute to temperature increases, reduce large woody debris to streams which is critical to salmonid recovery, and contribute to nutrient and pesticide delivery from upslope agricultural activities,	How Fine Sediment in River beds Impairs Growth and Survival of Juvenile Salmonids, Suttle et al., Ecological Applications 14 (4): 969-974, 2004	pending	pending	pending	Rhodes Declaration p. 11
Agriculture	NWEA	57-ZZ	The management measures in Oregon's agricultural plans are also deficient to provide protection of stream banks and bank stability. Stream banks are key to protecting water bodies from elevated sediment delivery that affects levels of turbidity and fine sediment in streams. Eroding stream banks also contribute to temperature increases, reduce large woody debris to streams which is critical to salmonid recovery, and contribute to nutrient and pesticide delivery from upslope agricultural activities,	Forest Ecosystem Management: An Ecological, Economic and Social Assessment: A Report on the Forest Ecosystem Management Assessment Team, USDA Forest Service, National Park Service, EPA, BLM, NOAA-Fisheries, USFWS, July 1993	pending	pending	pending	Rhodes Declaration p. 11, 12
Agriculture	NWEA	57-ZZ	The management measures in Oregon's agricultural plans are also deficient to provide protection of stream banks and bank stability. Stream banks are key to protecting water bodies from elevated sediment delivery that affects levels of turbidity and fine sediment in streams. Eroding stream banks also contribute to temperature increases, reduce large woody debris to streams which is critical to salmonid recovery, and contribute to nutrient and pesticide delivery from upslope agricultural activities,	Independent Multidiciplinary Science Team. 2002. Recovery of Wild Salmonids in Western Oregon Lowlands: A report of the Independent Multidisciplinary Science Team, Oregon Plan for Salmon and Watersheds. Technical Report 2002-1. July 15, 2002.	Yes	pending	pending	Rhodes Declaration p. 12
Agriculture	NWEA	57-ZZ	The management measures in Oregon's agricultural plans are also deficient to provide protection of stream banks and bank stability. Stream banks are key to protecting water bodies from elevated sediment delivery that affects levels of turbidity and fine sediment in streams. Eroding stream banks also contribute to temperature increases, reduce large woody debris to streams which is critical to salmonid recovery, and contribute to nutrient and pesticide delivery from upslope agricultural activities,	Review of Vegetated Buffers and a Meta-Analysis of their Mitigation Efficacy in Reducing Non Point Source Pollution, Zhang et al., Journal of Environmental Quality 39:76-84, 2010	pending	pending	pending	Rhodes Declaration p. 11
Agriculture	NWEA	57-ZZ	The management measures in Oregon's agricultural plans are also deficient to provide protection of stream banks and bank stability. Stream banks are key to protecting water bodies from elevated sediment delivery that affects levels of turbidity and fine sediment in streams. Eroding stream banks also contribute to temperature increases, reduce large woody debris to streams which is critical to salmonid recovery, and contribute to nutrient and pesticide delivery from upslope agricultural activities,	Historical Changes in the Distribution and Function of Large Wood in Puget Lowlands Rivers, Collins et al., Canadian Journal of Fish and Aquatic Science 59:66-76, 2002	pending	pending	pending	Rhodes Declaration p. 12
Agriculture	NWEA	57-ZZ	The management measures in Oregon's agricultural plans are also deficient to provide protection of stream banks and bank stability. Stream banks are key to protecting water bodies from elevated sediment delivery that affects levels of turbidity and fine sediment in streams. Eroding stream banks also contribute to temperature increases, reduce large woody debris to streams which is critical to salmonid recovery, and contribute to nutrient and pesticide delivery from upslope agricultural activities,	NMFS, Interim Riparian Buffer Recommendations for Streams in Puget Sound Agricultural Landscapes November 2012, Originally proposed as federal Option 3 for the Agriculture Fish and Water (AFW) Process, March 2002."	pending	pending	pending	Rhodes Declaration p. 12

Agriculture	NWEA	57-ZZ	The management measures in Oregon's agricultural plans are also deficient to provide protection of stream banks and bank stability. Stream banks are key to protecting water bodies from elevated sediment delivery that affects levels of turbidity and fine sediment in streams. Eroding stream banks also contribute to temperature increases, reduce large woody debris to streams which is critical to salmonid recovery, and contribute to nutrient and pesticide delivery from upslope agricultural activities,	Residence Time of Large Woody Debris in the Queets River, Washington, Hyatt, T.L. and Naiman, R. J, Ecological Applications 11(1): 191-202, 2001.	pending	pending	pending	Rhodes Declaration p. 12
Agriculture	NWEA	57-ZZ	The management measures in Oregon's agricultural plans are also deficient to provide protection of stream banks and bank stability. Stream banks are key to protecting water bodies from elevated sediment delivery that affects levels of turbidity and fine sediment in streams. Eroding stream banks also contribute to temperature increases, reduce large woody debris to streams which is critical to salmonid recovery, and contribute to nutrient and pesticide delivery from upslope agricultural activities,	Chapter 2 of the Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters USEPA Report EPA-840-B-92-002, dated January 1993 and the summary of these management measures in "Oregon Coastal Nonpoint Source Program 6217 (g) Guidance Management Measures NOAA/EPA approval status" dated September 2012 (hereafter: NOAA/EPA, 2012);	pending	pending	pending	Rhodes Declaration p. 2 & throughout document
Agriculture	NWEA	57-ZZ	The management measures in Oregon's agricultural plans are also deficient to provide protection of stream banks and bank stability. Stream banks are key to protecting water bodies from elevated sediment delivery that affects levels of turbidity and fine sediment in streams. Eroding stream banks also contribute to temperature increases, reduce large woody debris to streams which is critical to salmonid recovery, and contribute to nutrient and pesticide delivery from upslope agricultural activities,	"Scientific Conclusions of the Status Review for Oregon Coast Coho Salmon (Oncorhynchus kisutch) Draft Revised Report of the Biological Review Team" dated May 16, 2011 (hereafter: BRT, 2011);	pending	pending	pending	Rhodes Declaration p. 9, 11, 12
Agriculture	NWEA	57-ZZ	The management measures in Oregon's agricultural plans are also deficient to provide protection of stream banks and bank stability. Stream banks are key to protecting water bodies from elevated sediment delivery that affects levels of turbidity and fine sediment in streams. Eroding stream banks also contribute to temperature increases, reduce large woody debris to streams which is critical to salmonid recovery, and contribute to nutrient and pesticide delivery from upslope agricultural activities,	Oregon Administrative Rules Oregon Department Of Agriculture Chapter 603, Division 95 Agricultural Water Quality Management Program for: Curry County Agricultural Water Quality Management Area, the Umpqua Basin, the Inland Rogue, the Mid Coast Agricultural Water Quality Management Area, the North Coast Basin, and the Coos and Coquille area (Hereafter, collectively: agricultural rules)	pending	pending	pending	Rhodes Declaration p. 2
Agriculture	NWEA	57-AAA	The management measures fail to address the need to anticipate inundation of agricultural lands by floodwaters in establishing practices.	Rhodes, J. 2014. Declaration of Jonathan J. Rhodes in Support of EPA's and NOAA's Proposal to Disapprove the State of Oregon's CNCP, March 14, 2014.	Yes	pending	pending	NWEA comment letter p. 30.
Agriculture	NWEA	57-AAA	The management measures fail to address the need to anticipate inundation of agricultural lands by floodwaters in establishing practices.	Chapter 2 of the Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters USEPA Report EPA-840-B-92-002, dated January 1993 and the summary of these management measures in "Oregon Coastal Nonpoint Source Program 6217 (g) Guidance Management Measures NOAA/EPA approval status" dated September 2012 (hereafter: NOAA/EPA, 2012);	pending	pending	pending	Rhodes Declaration p. 2 & throughout document
Agriculture	NWEA	57-AAA	The management measures fail to address the need to anticipate inundation of agricultural lands by floodwaters in establishing practices.	Independent Multidiciplinary Science Team. 2002. Recovery of Wild Salmonids in Western Oregon Lowlands: A report of the Independent Multidisciplinary Science Team, Oregon Plan for Salmon and Watersheds. Technical Report 2002-1. July 15, 2002.	Yes	pending	pending	Rhodes Declaration p. 2
Agriculture	NWEA	57-AAA	The management measures fail to address the need to anticipate inundation of agricultural lands by floodwaters in establishing practices.	"Scientific Conclusions of the Status Review for Oregon Coast Coho Salmon (Oncorhynchus kisutch) Draft Revised Report of the Biological Review Team" dated May 16, 2011 (hereafter: BRT, 2011);	pending	pending	pending	Rhodes Declaration p. 2
Agriculture	NWEA	57-AAA	The management measures fail to address the need to anticipate inundation of agricultural lands by floodwaters in establishing practices.	Oregon Administrative Rules Oregon Department Of Agriculture Chapter 603, Division 95 Agricultural Water Quality Management Program for: Curry County Agricultural Water Quality Management Area, the Umpqua Basin, the Inland Rogue, the Mid Coast Agricultural Water Quality Management Area, the North Coast Basin, and the Coos and Coquille area (Hereafter, collectively: agricultural rules)	pending	pending	pending	Rhodes Declaration p. 2
Agriculture	NWEA	57-BBB	The lack of a sedimentation standard that Oregon uses or has a methodology for using undermines some existing agricultural basin rules that are specifically linked to the standard. For example, the Umpqua Basin rules define "substantial amounts of sediment (i.e. in excess of water quality standards for sedimentation) moving from agricultural lands into waters of the state as a result of agricultural activities" as an "unacceptable condition." Because Oregon DEQ has not defined the meaning of "in excess of water quality standards," this key condition pertaining to the effect of nonpoint sources pollution in ODA's rules has no meaning.	OAR 603-095-0740(3). Oregon Administrative Rules. Chapter 603. Division 95. Agricultural Water Quality Management Program	Yes	Yes	Accurate	p.78; Rule does include quoted material in summary of comment. Oregon's water quality standard for sedimentation (if any) was not evaluated.

Agriculture	NWEA	57-Z	Oregon has relied on the TMDL program to-demonstrate to the federal agencies that it has a plan in place to control nonpoint source pollution in coastal watersheds. EPA cannot rely on these assertions given Oregon's own failure to use the TMDL program to bring nonpoint sources into compliance with load allocations established in the TMDLs.	Bell, N. NWEA. 2012. Letter to Michael Bussell, EPA, and John King, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; EPA and NOAA's Interim Approval of Agricultural Management Measures for Oregon (May 2, 2012). pp. 5-14 & 18-21	pending	pending	pending	p. 32
Agriculture	NWEA	57-Z	Oregon has relied on the TMDL program to-demonstrate to the federal agencies that it has a plan in place to control nonpoint source pollution in coastal watersheds. EPA cannot rely on these assertions given Oregon's own failure to use the TMDL program to bring nonpoint sources into compliance with load allocations established in the TMDLs.	Memorandum from Gene Foster, DEQ, to MidCoast TMDL LSAC, Re: MidCoast IR-TMDL Approach Update (March 19, 2013) (absence of any reference to identification of practices and their enforceability)	pending	pending	pending	p. 33
Agriculture	NWEA	57-Z	Oregon has relied on the TMDL program to-demonstrate to the federal agencies that it has a plan in place to control nonpoint source pollution in coastal watersheds. EPA cannot rely on these assertions given Oregon's own failure to use the TMDL program to bring nonpoint sources into compliance with load allocations established in the TMDLs.	Letter from Dick Pedersen, DEQ, to Dan Opalski, EPA, and Margaret Davidson, NOAA (July 1, 2013) ("the specifics of our plan diverges [sic] from the commitments in the original settlement agreement.")	pending	pending	pending	p. 33
Agriculture	NWEA	57-Z	Oregon has relied on the TMDL program to-demonstrate to the federal agencies that it has a plan in place to control nonpoint source pollution in coastal watersheds. EPA cannot rely on these assertions given Oregon's own failure to use the TMDL program to bring nonpoint sources into compliance with load allocations established in the TMDLs.	ORS 568-912(1) ("The rules adopted under this subsection shall constitute the only enforceable aspects of a water quality management plan."	pending	pending	pending	p. 33
Agriculture	NWEA	57-Z	Oregon has relied on the TMDL program to-demonstrate to the federal agencies that it has a plan in place to control nonpoint source pollution in coastal watersheds. EPA cannot rely on these assertions given Oregon's own failure to use the TMDL program to bring nonpoint sources into compliance with load allocations established in the TMDLs.	EPA/NOAA, NOAA and EPA Preliminary Decisions on Information Submitted by Oregon to Meet Coastal Nonpoint Program Conditions (Interim Approval Decisions Only), Input from Oregon (July 15, 2013) pp 3&4	pending	pending	pending	pp. 32, 33 & 34
Agriculture	NWEA	57-Z	Oregon has relied on the TMDL program to-demonstrate to the federal agencies that it has a plan in place to control nonpoint source pollution in coastal watersheds. EPA cannot rely on these assertions given Oregon's own failure to use the TMDL program to bring nonpoint sources into compliance with load allocations established in the TMDLs.	Rhodes, J. 2014. Declaration of Jonathan J. Rhodes in Support of EPA's and NOAA's Proposal to Disapprove the State of Oregon's CNCP, March 14, 2014.	Yes	pending	pending	p. 34
Agriculture	NWEA	57-Z	Oregon has relied on the TMDL program to-demonstrate to the federal agencies that it has a plan in place to control nonpoint source pollution in coastal watersheds. EPA cannot rely on these assertions given Oregon's own failure to use the TMDL program to bring nonpoint sources into compliance with load allocations established in the TMDLs.	Rhodes, J., D. McCullough, and F. Espinosa. 1994. A Coarse Screening Process for Evaluation of the Effects of Land Management Activities on Salmon Spawning and Rearing Habitat in ESA Consultations. Columbia River Inter-Tribal Fish Commission Technical Report 94-4.	Yes	pending	pending	p. 34
Agriculture	NWEA	57-DDD	DEQ is unwilling to use its own legal authorities to control agricultural nonpoint pollution. Letter described DEQ's unwillingness to use its own legal authorities to control agricultural nonpoint pollution.	Bell, N. NWEA. 2012. Letter to Michael Bussell, EPA, and John King, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; EPA and NOAA's Interim Approval of Agricultural Management Measures for Oregon (May 2, 2012).. pp. 21-22	Yes	Yes	Accurate	p. 32; The May 2012 letter states that DEQ is not willing to use its enforcement authority over ag nonpoint sources.
Agriculture	NWEA	57-EEE	DEQ's has proven their inability to control nutrient pollution.	Bell, N. NWEA. 2012. Letter to Michael Bussell, EPA, and John King, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; EPA and NOAA's Interim Approval of Agricultural Management Measures for Oregon (May 2, 2012). pp. 22-23	Yes	Yes	Accurate	p. 32; The May 2012 letter states that Oregon lacks nutrient criteria other than a nuisance phytoplankton growth measured as chlorophyll a values.
Agriculture	NWEA	57-FFF	DEQ fails to control livestock wastes.	Bell, N. NWEA. 2012. Letter to Michael Bussell, EPA, and John King, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; EPA and NOAA's Interim Approval of Agricultural Management Measures for Oregon (May 2, 2012). pp. 23-29	Yes	Yes	Questionable	p. 32; The May 2012 letter includes an extensive list of CAFO requirements. However, NWEA feels that CAFOs are not adequately regulated on the ground, but letter does not contain any specific examples of failure to control livestock waste.
Agriculture	NWEA	57-FFF	DEQ fails to control livestock wastes. The letter discussed the ongoing dairy farm manure pollution in Tillamook Bay despite Oregon's development of a TMDL for bacteria to meet the applicable water quality standards, namely shellfish criteria for human pathogens.	Letter from Nina Bell, NWEA, to Dan Opalski, EPA, and John King, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; EPA and NOAA's Interim Findings on Agriculture Including Dairy Wastes (Dec. 14, 2012).	Yes	Yes	Questionable	p. 36; The December 2012 letter contained one example of alleged dairy waste in the Tillamook River.
Agriculture	NWEA	57-FFF	DEQ fails to control livestock wastes.	Oregon DEQ, Tillamook Bay Watershed Total Maximum Daily Load (TMDL) (June, 2001)	pending	pending	pending	p. 41
Agriculture	NWEA	57-FFF	DEQ fails to control livestock wastes.	Tillamook Bay National Estuary Project, 1997	pending	pending	pending	p. 41
Agriculture	NWEA	57-GG	Oregon's management measures for pesticides are not adequate to meet water quality standards including full support of designated uses in Oregon and additional management measures are required. In the first letter, we pointed out that the federal agencies' interim approval of Oregon's program on pesticides relied on a federal court injunction that has since ceased to apply to many pesticides. See NWEA Letter to Michael Bussell, EPA, and John King, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; EPA and NOAA's Interim Approval of Agricultural Management Measures for Oregon (May 2, 2012) at 29-30.	Bell, N. NWEA. 2012. Letter to Michael Bussell, EPA, and John King, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; EPA and NOAA's Interim Approval of Agricultural Management Measures for Oregon (May 2, 2012). at 29-30.	Yes	Yes	Accurate	

Agriculture	NWEA	57-GG	Oregon's management measures for pesticides are not adequate to meet water quality standards including full support of designated uses in Oregon and additional management measures are required. Subsequently, in order to give Oregon the opportunity to emedy its failure to have a program in place, NWEA filed a petition with Oregon and provided a copy to EPA and NOAA, encouraging them to weigh in on the petition with the state. See NWEA Letter to Michael Bussell, EPA, and John King, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; EPA and NOAA's Interim Findings on Pesticides (Aug. 20, 2012)	Bell, N. NWEA. 2012. Letter to Michael Bussell, EPA, and John King, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; EPA and NOAA's Interim Findings on Pesticides (Aug. 20, 2012).	Yes	Yes	Accurate	
		57-GG	Oregon's management measures for pesticides are not adequate to meet water quality standards including full support of designated uses in Oregon and additional management measures are required. As NWEA's petition explained, these additional restrictions are not adequate to meet the Reasonable and Prudent Alternatives (RPA) set out by NMFS to address the jeopardy and adverse modification of habitat findings in the biological opinions. See NWEA Petition at 6. For example, the RPAs for hlorpyrifos, diazinon, and malathion, all of which have adverse effects on Oregon coastal coho species, call for no application buffers of 500 feet using ground applications and 1,000 feet using aerial applications. See Chlorpyrifos BiOp. These requirements are mirrored on the EPA labels or the ODF regulations.	NWEA. 2012. Petition to Initiate Rulemaking and Take Other Actions to Protect Existing and Designated Uses of Fish and Wildlife From Point and Nonpoint Sources of Pesticides (Aug. 9, 2012).	Yes	pending	pending	p. 47 - 52
Agriculture	NWEA	57-GG	Oregon's management measures for pesticides are not adequate to meet water quality standards including full support of designated uses in Oregon and additional management measures are required.NMFS found jeopardy and adverse modification of critical habitat for the Oregon coast coho from use based on EPA labels of chlorpyrifos, diazinon, and malathion, and jeopardy from use based on the label for 2,4-D.	NMFS. 2008. *National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion Environmental Protection Agency Registration of Pesticides Containing Chlorpyrifos, Diazinon, and Malathion.* Available online at*:* http://www.nmfs.noaa.gov/pr/pdfs/pesticide_biop.pdf	Yes	Yes	Accurate	Pg 391 verfies text in blue.
Agriculture	NWEA	57-GG	Oregon's management measures for pesticides are not adequate to meet water quality standards including full support of designated uses in Oregon and additional management measures are required. For the Southern Oregon/Northern California coho, NMFS found jeopardy and adverse modification of critical habitat from use based on EPA labels for chlorpyrifos, diazinon, malathion, carbaryl, carbofuran, methomyl, naled, and phosmet. Therefore, any regulatory approach that is based on the EPA labels for those pesticides is not sufficient to protect the designated uses of Oregon coast coho and Southern Oregon/Northern California coho.	NMFS. 2009. National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion Environmental Protection Agency Registration of Pesticides Containing Carbaryl, Carbofuran, and Methomyl 488 (April 20, 2009) available online at http://www.nmfs.noaa.gov/pr/pdfs/carbamate.pdf	Yes	Yes	Accurate	Southern Oregon/Northern California coho: Yes on ad mod and jeopardy = Text in blue is acucrate. See Table 194-197
Agriculture	NWEA	57-GG	Oregon's management measures for pesticides are not adequate to meet water quality standards including full support of designated uses in Oregon and additional management measures are required. For the Southern Oregon/Northern California coho, NMFS found jeopardy and adverse modification of critical habitat from use based on EPA labels for chlorpyrifos, diazinon, malathion, carbaryl, carbofuran, methomyl, naled, and phosmet. Therefore, any regulatory approach that is based on the EPA labels for those pesticides is not sufficient to protect the designated uses of Oregon coast coho and Southern Oregon/Northern California coho.	NMFS. 2010. National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion Environmental Protection Agency Registration of Pesticides Containing Azinphos methyl, Bensulide, Dimethoate, Disulfoton, Ethoprop, Fenamiphos, Naled, Methamidophos, Methidathion, Methyl parathion, Phorate and Phosmet 772-775 (August 31, 2010) available at http://www.nmfs.noaa.gov/pr/pdfs/final_ batch_3_opinion.pdf	Yes	Yes	Accurate	Southern Oregon/Northern California coho: Yes on ad mod and jeopardy = Text in blue is acucrate. See Table 194-197
Agriculture	NWEA	57-GG	Oregon's management measures for pesticides are not adequate to meet water quality standards including full support of designated uses in Oregon and additional management measures are required. As the NMFS biological opinions on pesticides demonstrate, the federal labels do not provide adequate and full protection for threatened and endangered species in Oregon .	NMFS. 2011. National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion Environmental Protection Agency Registration of Pesticides 2,4-D, Triclopyr BEE, Diuron, Linuron, Captan, and Chlorothalonil 773-774 (June 30, 2011) available online at http://www.nmfs.noaa.gov/pr/pdfs/consultations/pesticide_opinion4.pdf	Yes	Yes	Accurate	NMFS notes that EPA should include additional measures to labeling for fish protection. Pg. 787
Agriculture	NWEA	57-GG	Oregon's management measures for pesticides are not adequate to meet water quality standards including full support of designated uses in Oregon and additional management measures are required. See also, Oregon DEQ, Pesticide Use in Vicinity of Drinking Water Sources; Summary of regulations and recommendations (undated). As NWEA's petition explained, these additional restrictions are not adequate to meet the Reasonable and Prudent Alternatives (RPA) set out by NMFS to address the jeopardy and adverse modification of habitat findings in the biological opinions.	Oregon DEQ. 2012. Pesticide Use in Vicinity of Drinking Water Sources: Summary of regulations and recommendations.	Yes	Yes	Statement is opinion.	Unable to evulate reference for specific statements that would identify that it is not adequate to meet water quality standards.

Agriculture	NWEA	57-GG	Oregon's management measures for pesticides are not adequate to meet water quality standards including full support of designated uses in Oregon and additional management measures are required. After intensive monitoring for example, the likes of which are not taking place in coastal watersheds, Neal Creek in the Hood River watershed has been listed for violations of the aquatic life criterion for chlorpyrifos, but it is not listed for azinphos-methyl. See Oregon's 2010 Integrated Report, Water Quality Assessment Database;52 see also OSU, Pesticide Best Management Practices in the Hood River Watershed (undated) (showing high levels of azinphosmethyl).	Oregon DEQ. 2010. Oregon's 2010 Integrated Report, Water Quality Assessment Database. Neal Creek. Available online at: http://www.deq.state.or.us/wq/assessment/rpt2010/search.asp	Yes	Yes	Accurate	Neal Creek is listed for chlorpyrifos, but it is not listed for azinphos-methyl. (Azinphos-methyl does not appear to be in the list of ODEQ listing parameters)
Agriculture	NWEA	57-GG	Oregon's management measures for pesticides are not adequate to meet water quality standards including full support of designated uses in Oregon and additional management measures are required. After intensive monitoring for example, the likes of which are not taking place in coastal watersheds, Neal Creek in the Hood River watershed has been listed for violations of the aquatic life criterion for chlorpyrifos, but it is not listed for azinphos-methyl. See Oregon's 2010 Integrated Report, Water Quality Assessment Database;52 see also OSU, Pesticide Best Management Practices in the Hood River Watershed (undated) (showing high levels of azinphosmethyl).	OSU. Date Unknown. Pesticide Best Management Practices in the Hood River Watershed.	Yes	Yes	Accurate	Text in blue is supported by reference.
Agriculture	NWEA	57-GG	Oregon's management measures for pesticides are not adequate to meet water quality standards including full support of designated uses in Oregon and additional management measures are required.	State of Oregon. 2011. Pesticide Management Plan for Water Quality Protection (May 2011).	Yes	Yes	Blanket Statement is Opinion. Supporting statements are Accurate. See Notes	NWEA states that the Pesticide Plan does not include protection measures, rather adaptive management measures for when pesticides are found. They also state that it is unclear when and if regulatory actions will actually be made. Based on review of the plan these statements are accurate.
Agriculture	NWEA	57-X	The federal agencies claim that ODA's agricultural plans are a "mechanism for addressing eroding streambanks because agricultural activities that cause eroding streambanks are subject to regulatory actions by ODA." However, the federal agencies state that "eroding stream banks in the coastal nonpoint management area are primarily due to legacy forestry and agricultural practices which resulted in the removal of vegetation from riparian areas, and damage to the natural stream morphology from practices such as canalization, installation of tide gates and splash damming." Having claimed that eroding stream banks are primarily due to legacy practices and having concluded that the plans are subject to regulatory actions, EPA and NOAA then state that "legacy conditions . . . are not addressed through existing regulatory tools." How then can they have concluded the agricultural plans are a regulatory mechanism to address wholly past actions that are the primary cause of eroding streambanks?	EPA/NOAA, NOAA and EPA Preliminary Decisions on Information Submitted by Oregon to Meet Coastal Nonpoint Program Conditions (Interim Approval Decisions Only), Input from Oregon (July 15, 2013) pp 16 & 17	pending	pending	pending	pp. 34 & 35
Agriculture	NWEA	57-GGG	ODA reads its enforceable rules in a very narrow fashion so as to exclude conditions it considers "legacy conditions." The result of this narrow reading is that ODA's enforcement authority excludes most of Oregon's agricultural nonpoint source contributions, particularly its contribution to temperature in Oregon's streams from lack of shade and from excess sedimentation.	Letter from Nina Bell, NWEA, to Michael Bussell, EPA, and John King, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; EPA and NOAA's Interim Approval of Agricultural Management Measures for Oregon are Based on a Flawed Understanding of the State's Enforcement Authority (June13, 2012).	pending	pending	pending	p. 35
Agriculture	NWEA	57-GGG	ODA reads its enforceable rules in a very narrow fashion so as to exclude conditions it considers "legacy conditions." The result of this narrow reading is that ODA's enforcement authority excludes most of Oregon's agricultural nonpoint source contributions, particularly its contribution to temperature in Oregon's streams from lack of shade and from excess sedimentation.	Letter from Nina Bell, NWEA, to Lisa Hanson, ODA, Re: Interpretation of Oregon Department of Agriculture Basin Rules (June13, 2012)	pending	pending	pending	p.35
Agriculture	NWEA	57-GGG	ODA reads its enforceable rules in a very narrow fashion so as to exclude conditions it considers "legacy conditions." The result of this narrow reading is that ODA's enforcement authority excludes most of Oregon's agricultural nonpoint source contributions, particularly its contribution to temperature in Oregon's streams from lack of shade and from excess sedimentation.	Memorandum from Dave Wilkinson, ODA, to Nina Bell, NWEA Re: Responses to questions from Northwest Environmental Advocates regarding the Oregon Department of Agriculture Water Quality Management Program (June 19, 2012).	pending	pending	pending	p.35 & 36

Agriculture	NWEA	57-GGG	ODA reads its enforceable rules in a very narrow fashion so as to exclude conditions it considers "legacy conditions." The result of this narrow reading is that ODA's enforcement authority excludes most of Oregon's agricultural nonpoint source contributions, particularly its contribution to temperature in Oregon's streams from lack of shade and from excess sedimentation.	Letter from Nina Bell, NWEA, to Dave Wilkinson, ODA, Re: Follow- Up Questions on How ODA's Water Quality Program Basin Rules (June 26, 2012).	pending	pending	pending	p.35
Agriculture	NWEA	57-GGG	ODA reads its enforceable rules in a very narrow fashion so as to exclude conditions it considers "legacy conditions." The result of this narrow reading is that ODA's enforcement authority excludes most of Oregon's agricultural nonpoint source contributions, particularly its contribution to temperature in Oregon's streams from lack of shade and from excess sedimentation.	Email from Katy Coba, ODA, to Nina Bell, NWEA Re: reply to your letter (June 27, 2012)	pending	pending	pending	p.35
Agriculture	NWEA	57-GGG	ODA reads its enforceable rules in a very narrow fashion so as to exclude conditions it considers "legacy conditions." The result of this narrow reading is that ODA's enforcement authority excludes most of Oregon's agricultural nonpoint source contributions, particularly its contribution to temperature in Oregon's streams from lack of shade and from excess sedimentation.	BLM Technical Reference 1737-15 (1998); Riparian Area Management: A User Guide to Assessing Proper Functioning Condition and the Supporting Science for Lotic Areas	pending	pending	pending	p. 36
Agriculture	NWEA	57-AA	DEQ has issued NPDES permits in the Rogue River Basin on the assumption that nonpoint sources will contribute zero heat load, but made a completely contrary assumption when it allowed the City of Medford to plant trees on agricultural lands in lieu of directly reducing the thermal load in its discharge. This contrary assumption undermines any suggestion that Oregon relies on the load allocations established for nonpoint sources in its temperature TMDLs to protect riparian vegetation sufficient to meet water quality standards.	Bell, N., NWEA. 2013. Letter to Dan Opalski, EPA, and Margaret Davidson, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; Additional Information Concerning Oregon's Failure to Regulate Agricultural Nonpoint Pollution (May 10, 2013).	Yes	pending	pending	p. 36 Part III
Agriculture	NWEA	57-HHH	Oregon does not implement the required management measures and does not have a process by which it identifies practices to implement the management measures.	Bell, N. NWEA. 2012. Letter to Michael Bussell, EPA, and John King, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; EPA and NOAA's Interim Approval of Agricultural Management Measures for Oregon (May 2, 2012). pp. 29-30	pending	pending	pending	p.37
Agriculture	NWEA	57-HHH	Oregon does not implement the required management measures and does not have a process by which it identifies practices to implement the management measures.	Letter from Nina Bell, NWEA, to Lisa Hanson, ODA, Re: Interpretation of Oregon Department of Agriculture Basin Rules (June13, 2012)	pending	pending	pending	p. 37
Agriculture	NWEA	57-HHH	Oregon does not implement the required management measures and does not have a process by which it identifies practices to implement the management measures.	Email from Katy Coba, ODA, to Nina Bell, NWEA Re: reply to your letter (June 27, 2012)	pending	pending	pending	p. 37
Agriculture	NWEA	57-HHH	Oregon does not implement the required management measures and does not have a process by which it identifies practices to implement the management measures.	Memorandum from Dave Wilkinson, ODA, to Nina Bell, NWEA Re: Responses to questions from Northwest Environmental Advocates regarding the Oregon Department of Agriculture Water Quality Management Program (June 19, 2012).	pending	pending	pending	p.37
Agriculture	NWEA	57-BB	Approvable state programs are required to assess over time the success of the management measures in reducing pollution loads and improving water quality. Because it has not identified the practices that constitute Oregon's version of meeting management measures, it would be impossible for the state to ascertain whether the management measures are in place and whether they have been successful in reducing pollutant loads sufficiently to avoid the need for additional management measures.	ORS 568-915	pending	pending	pending	p. 38
Agriculture	NWEA	57-BB	Approvable state programs are required to assess over time the success of the management measures in reducing pollution loads and improving water quality. Because it has not identified the practices that constitute Oregon's version of meeting management measures, it would be impossible for the state to ascertain whether the management measures are in place and whether they have been successful in reducing pollutant loads sufficiently to avoid the need for additional management measures.	ODA, Oregon Department of Agriculture, 2008 Landscape Monitoring of the Coos & Coquille, Upper and North Fork John Day, Mid-Coast, Mid-Deschutes, North Coast, and Yamhill Basins First Replication of 2003 Monitoring at 3.	pending	pending	pending	p. 38
Agriculture	NWEA	57-BB	Approvable state programs are required to assess over time the success of the management measures in reducing pollution loads and improving water quality. Because it has not identified the practices that constitute Oregon's version of meeting management measures, it would be impossible for the state to ascertain whether the management measures are in place and whether they have been successful in reducing pollutant loads sufficiently to avoid the need for additional management measures.	ODA, Riparian Condition Monitoring of the Bear Creek, Curry County, Goose & Summer, Inland Rogue, Klamath Headwaters, Umpqua, and Upper Willamette Basins (2006) at 1.	pending	pending	pending	pp. 38 - 39

Agriculture	NWEA	57-CC	Oregon water quality standards and designated uses require the implementation of additional management measures. Given that in almost all instances, an allocation to all nonpoint sources for temperature increases is zero, it is even more likely that agriculture is currently contributing to violations of temperature standards and therefore requires additional management measures.	ODA, ODA Natural Resources Area Plans and Rules.pdf.	pending	pending	pending	p 41
Agriculture	NWEA	57-BB	Approvable state programs are required to assess over time the success of the management measures in reducing pollution loads and improving water quality. Because it has not identified the practices that constitute Oregon's version of meeting management measures, it would be impossible for the state to ascertain whether the management measures are in place and whether they have been successful in reducing pollutant loads sufficiently to avoid the need for additional management measures.	Oregon Department of Agriculture. 2013. Streamside Vegetation Assessment Tool - User's Guide, Version 1 (Nov. 4, 2013)	Yes	pending	pending	p. 42 at 3
Agriculture	NWEA	57-BB	Approvable state programs are required to assess over time the success of the management measures in reducing pollution loads and improving water quality. Because it has not identified the practices that constitute Oregon's version of meeting management measures, it would be impossible for the state to ascertain whether the management measures are in place and whether they have been successful in reducing pollutant loads sufficiently to avoid the need for additional management measures.	Bell, N., NWEA. 2013. Letter to Cheryl Hummon, ODS Re: User's Guide for the Streamside Vegetation Assessment Tool; Review Draft October 29, 2013 (Oct. 31, 2013).	Yes	pending	pending	p. 42
Agriculture	NWEA	57-BB	Approvable state programs are required to assess over time the success of the management measures in reducing pollution loads and improving water quality. Because it has not identified the practices that constitute Oregon's version of meeting management measures, it would be impossible for the state to ascertain whether the management measures are in place and whether they have been successful in reducing pollutant loads sufficiently to avoid the need for additional management measures.	Stelle, W. 2013. Letter to Roylene Rides-at-the-Door, USDA and Dennis McLerran, EPA, (Jan. 30, 2013) with attachments: (1) Memorandum from Usha Varanasi, NMFS to Robert Lohn, NMFS, Re: Review "Efficacy and Economics of Riparian Buffers on Agricultural Lands" (March 17, 2003), and (2) NMFS, Interim Riparian Buffer Recommendations for Streams in Puget Sound Agricultural Landscapes November 2012 (Originally proposed as federal Option 3 for the Agriculture Fish and Water (AFW) Process, March 2002).	Yes	pending	pending	p. 42
Agriculture	NWEA	57-BB	Approvable state programs are required to assess over time the success of the management measures in reducing pollution loads and improving water quality. Because it has not identified the practices that constitute Oregon's version of meeting management measures, it would be impossible for the state to ascertain whether the management measures are in place and whether they have been successful in reducing pollutant loads sufficiently to avoid the need for additional management measures.	Oregon DEQ. 2013. DEQ Preliminary Comments on the Proposed Streamside Vegetation Assessment Tool. July 9, 2013.	Yes	pending	pending	p. 43
Agriculture	NWEA	57-BB	Approvable state programs are required to assess over time the success of the management measures in reducing pollution loads and improving water quality. Because it has not identified the practices that constitute Oregon's version of meeting management measures, it would be impossible for the state to ascertain whether the management measures are in place and whether they have been successful in reducing pollutant loads sufficiently to avoid the need for additional management measures.	ODA. ODA Agricultural Water Quality Management Program, Proposed Tools For Measuring Progress in Small Watersheds: Streamside Vegetation Assessment: Compliance Evaluation: Summary of Issues Under Discussion Between ODA and DEQ, DRAFT - July 22, 2013.	Yes	pending	pending	p. 44
Agriculture	NWEA	57-BB	Approvable state programs are required to assess over time the success of the management measures in reducing pollution loads and improving water quality. Because it has not identified the practices that constitute Oregon's version of meeting management measures, it would be impossible for the state to ascertain whether the management measures are in place and whether they have been successful in reducing pollutant loads sufficiently to avoid the need for additional management measures.	Oregon Department of Agriculture. 2013. Streamside Vegetation Assessment Tool. ODA Ag Water Quality Program. Presentation available online at: http://www.oregon.gov/ODA/NRD/docs/pdf/water/oda_assessment%20tools_presentation_at_%20oacd_conf.pdf	Yes	pending	pending	p. 44, 45
Agriculture	NWEA	57-BB	Approvable state programs are required to assess over time the success of the management measures in reducing pollution loads and improving water quality. Because it has not identified the practices that constitute Oregon's version of meeting management measures, it would be impossible for the state to ascertain whether the management measures are in place and whether they have been successful in reducing pollutant loads sufficiently to avoid the need for additional management measures.	Oregon Department of Agriculture. 2013. Proposed Tools For Measuring Progress in Small Watersheds. Water Quality Management Program Draft Overview September 4, 2013. Available online at: http://www.oregon.gov/ODA/NRD/docs/pdf/water/assessment_overview_draft_9413.pdf	Yes	pending	pending	p. 45
Agriculture	NWEA	57-BB	Approvable state programs are required to assess over time the success of the management measures in reducing pollution loads and improving water quality. Because it has not identified the practices that constitute Oregon's version of meeting management measures, it would be impossible for the state to ascertain whether the management measures are in place and whether they have been successful in reducing pollutant loads sufficiently to avoid the need for additional management measures.	Oregon Department of Agriculture. 2013. Program Updates. Agricultural Water Quality Program Advisory Committee. July 25, 2013.	Yes	pending	pending	p. 45 Slides 7, 17 & 38.

Agriculture	NWEA	57-FF	Bear Creek cannot be held up as an example of how Oregon has a program to control agricultural nonpoint source pollution because it is primarily an example of how unique circumstances can pressure nonpoint sources into taking significant action. Absent those circumstances, the actions will not occur.	Oregon DEQ, Making Progress in the Bear Creek Watershed: Stakeholders' watershed approach reduces phosphorus levels	pending	pending	pending	p.45
Agriculture	NWEA	57-FF	Bear Creek cannot be held up as an example of how Oregon has a program to control agricultural nonpoint source pollution because it is primarily an example of how unique circumstances can pressure nonpoint sources into taking significant action. Absent those circumstances, the actions will not occur.	Oregon DEQ, Bear Creek Watershed 1992 TMDLs	pending	pending	pending	p.45
Agriculture	NWEA	57-FF	Bear Creek cannot be held up as an example of how Oregon has a program to control agricultural nonpoint source pollution because it is primarily an example of how unique circumstances can pressure nonpoint sources into taking significant action. Absent those circumstances, the actions will not occur.	Bear Creek Watershed Council, Rogue Valley Council of Governments, Bear Creek Watershed Assessment, Phase II - Bear Creek Tributary Assessment, Summary (Dec. 2001)	pending	pending	pending	p. 46
Agriculture	NWEA	57-FF	Bear Creek cannot be held up as an example of how Oregon has a program to control agricultural nonpoint source pollution because it is primarily an example of how unique circumstances can pressure nonpoint sources into taking significant action. Absent those circumstances, the actions will not occur.	Medford Irrigation District, Klamath Basin Adjudication Information Sheet (June 4, 2013)	pending	pending	pending	p. 46
Agriculture	NWEA	57-HH	Despite the lack of any additional ODA rules beyond the EPA pesticide labels, which have been demonstrated to be inadequate for protection of threatened coho, EPA and NOAA have not made any findings on the adequacy of Oregon's program to protect water quality and designated uses from pesticides applied to agricultural lands. In the first letter, we pointed out that the federal agencies' interim approval of Oregon's program on pesticides relied on a federal court injunction that has since ceased to apply to many pesticides. See NWEA Letter to Michael Bussell, EPA, and John King, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; EPA and NOAA's Interim Approval of Agricultural Management Measures for Oregon (May 2, 2012) at 29-30.	Bell, N. NWEA. 2012. Letter to Michael Bussell, EPA, and John King, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; EPA and NOAA's Interim Approval of Agricultural Management Measures for Oregon (May 2, 2012) at 29-30.	Yes	Yes	Accurate	page 29 and 30
Agriculture	NWEA	57-HH	Despite the lack of any additional ODA rules beyond the EPA pesticide labels, which have been demonstrated to be inadequate for protection of threatened coho, EPA and NOAA have not made any findings on the adequacy of Oregon's program to protect water quality and designated uses from pesticides applied to agricultural lands. Subsequently, in order to give Oregon the opportunity to emedy its failure to have a program in place, NWEA filed a petition with Oregon and provided a copy to EPA and NOAA, encouraging them to weigh in on the petition with the state. See NWEA Letter to Michael Bussell, EPA, and John King, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; EPA and NOAA's Interim Findings on Pesticides (Aug. 20, 2012)	Bell, N. NWEA. 2012. Letter to Michael Bussell, EPA, and John King, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; EPA and NOAA's Interim Findings on Pesticides (Aug. 20, 2012).	Yes	Yes	Accurate	Letter highlights NWEAs petition filing and request for EPA and NOAA comment.
Agriculture	NWEA	57-HH	Despite the lack of any additional ODA rules beyond the EPA pesticide labels, which have been demonstrated to be inadequate for protection of threatened coho, EPA and NOAA have not made any findings on the adequacy of Oregon's program to protect water quality and designated uses from pesticides applied to agricultural lands. As NWEA's petition explained, these additional restrictions are not adequate to meet the Reasonable and Prudent Alternatives (RPA) set out by NMFS to address the jeopardy and adverse modification of habitat findings in the biological opinions. See NWEA Petition at 6. For example, the RPAs for hlorpyrifos, diazinon, and malathion, all of which have adverse effects on Oregon coastal coho species, call for no application buffers of 500 feet using ground applications and 1,000 feet using aerial applications. See Chlorpyrifos BiOp. These requirements are mirrored on the EPA labels or the ODF regulations.	NWEA. 2012. Petition to Initiate Rulemaking and Take Other Actions to Protect Existing and Designated Uses of Fish and Wildlife From Point and Nonpoint Sources of Pesticides (Aug. 9, 2012).	Yes	pending	pending	
Agriculture	NWEA	57-HH	Despite the lack of any additional ODA rules beyond the EPA pesticide labels, which have been demonstrated to be inadequate for protection of threatened coho, EPA and NOAA have not made any findings on the adequacy of Oregon's program to protect water quality and designated uses from pesticides applied to agricultural lands. NMFS found jeopardy and adverse modification of critical habitat for the Oregon coast coho from use based on EPA labels of chlorpyrifos, diazinon, and malathion, and jeopardy from use based on the label for 2,4-D.	NMFS. 2008. *National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion Environmental Protection Agency Registration of Pesticides Containing Chlorpyrifos, Diazinon, and Malathion.* Available online at: http://www.nmfs.noaa.gov/pr/pdfs/pesticide_biop.pdf	Yes	Yes	Accurate	Pg 391 verfies text in blue.

Agriculture	NWEA	57-HH	Despite the lack of any additional ODA rules beyond the EPA pesticide labels, which have been demonstrated to be inadequate for protection of threatened coho, EPA and NOAA have not made any findings on the adequacy of Oregon's program to protect water quality and designated uses from pesticides applied to agricultural lands. For the Southern Oregon/Northern California coho, NMFS found jeopardy and adverse modification of critical habitat from use based on EPA labels for chlorpyrifos, diazinon, malathion, carbaryl, carbofuran, methomyl, naled, and phosmet. Therefore, any regulatory approach that is based on the EPA labels for those pesticides is not sufficient to protect the designated uses of Oregon coast coho and Southern Oregon/Northern California coho.	NMFS. 2009. National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion Environmental Protection Agency Registration of Pesticides Containing Carbaryl, Carbofuran, and Methomyl 488 (April 20, 2009) available online at http://www.nmfs.noaa.gov/pr/pdfs/carbamate.pdf	Yes	Yes	Accurate	Southern Oregon/Northern California coho: Yes on ad mod and jeopardy = Text in blue is acucrate. See Table 194-197
Agriculture	NWEA	57-HH	Despite the lack of any additional ODA rules beyond the EPA pesticide labels, which have been demonstrated to be inadequate for protection of threatened coho, EPA and NOAA have not made any findings on the adequacy of Oregon's program to protect water quality and designated uses from pesticides applied to agricultural lands. For the Southern Oregon/Northern California coho, NMFS found jeopardy and adverse modification of critical habitat from use based on EPA labels for chlorpyrifos, diazinon, malathion, carbaryl, carbofuran, methomyl, naled, and phosmet. Therefore, any regulatory approach that is based on the EPA labels for those pesticides is not sufficient to protect the designated uses of Oregon coast coho and Southern Oregon/Northern California coho.	NMFS. 2010. National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion Environmental Protection Agency Registration of Pesticides Containing Azinphos methyl, Bensulide, Dimethoate, Disulfoton, Ethoprop, Fenamiphos, Naled, Methamidophos, Methidathion, Methyl parathion, Phorate and Phosmet 772-775 (August 31, 2010) available at http://www.nmfs.noaa.gov/pr/pdfs/final_ batch_3_opinion.pdf	Yes	Yes	Accurate	Southern Oregon/Northern California coho: Yes on ad mod and jeopardy = Text in blue is acucrate. See Table 194-197
Agriculture	NWEA	57-HH	Despite the lack of any additional ODA rules beyond the EPA pesticide labels, which have been demonstrated to be inadequate for protection of threatened coho, EPA and NOAA have not made any findings on the adequacy of Oregon's program to protect water quality and designated uses from pesticides applied to agricultural lands. As the NMFS biological opinions on pesticides demonstrate, the federal labels do not provide adequate and full protection for threatened and endangered species in Oregon.	NMFS. 2011. National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion Environmental Protection Agency Registration of Pesticides 2,4-D, Triclopyr BEE, Diuron, Linuron, Captan, and Chlorothalonil 773-774 (June 30, 2011) available online at http://www.nmfs.noaa.gov/pr/pdfs/consultations/pesticide_opinion4.pdf	Yes	Yes	Accurate	NMFS notes that EPA should include additional measures to labeling for fish protection. Pg. 787
Agriculture	NWEA	57-HH	Despite the lack of any additional ODA rules beyond the EPA pesticide labels, which have been demonstrated to be inadequate for protection of threatened coho, EPA and NOAA have not made any findings on the adequacy of Oregon's program to protect water quality and designated uses from pesticides applied to agricultural lands. See also, Oregon DEQ, Pesticide Use in Vicinity of Drinking Water Sources; Summary of regulations and recommendations (undated). As NWEA's petition explained, these additional restrictions are not adequate to meet the Reasonable and Prudent Alternatives (RPA) set out by NMFS to address the jeopardy and adverse modification of habitat findings in the biological opinions.	Oregon DEQ. 2012. Pesticide Use in Vicinity of Drinking Water Sources: Summary of regulations and recommendations.	Yes	Yes	Statement is opinion.	Unable to evulate reference for specific statements that would identify that it is not adequate to meet water quality standards.
Agriculture	NWEA	57-HH	Despite the lack of any additional ODA rules beyond the EPA pesticide labels, which have been demonstrated to be inadequate for protection of threatened coho, EPA and NOAA have not made any findings on the adequacy of Oregon's program to protect water quality and designated uses from pesticides applied to agricultural lands. After intensive monitoring for example, the likes of which are not taking place in coastal watersheds, Neal Creek in the Hood River watershed has been listed for violations of the aquatic life criterion for chlorpyrifos, but it is not listed for azinphos-methyl. See Oregon's 2010 Integrated Report, Water Quality Assessment Database;52 see also OSU, Pesticide Best Management Practices in the Hood River Watershed (undated) (showing high levels of azinphosmethyl).	Oregon DEQ. 2010. Oregon's 2010 Integrated Report, Water Quality Assessment Database. Neal Creek. Available online at: http://www.deq.state.or.us/wq/assessment/rpt2010/search.asp	Yes	Yes	Accurate	Neal Creek is listed for chlorpyrifos, but it is not listed for azinphos-methyl. (Azinphos-methyl does not appear to be in the list of ODEQ listing parameters)

Agriculture	NWEA	57-HH	Despite the lack of any additional ODA rules beyond the EPA pesticide labels, which have been demonstrated to be inadequate for protection of threatened coho, EPA and NOAA have not made any findings on the adequacy of Oregon's program to protect water quality and designated uses from pesticides applied to agricultural lands. After intensive monitoring for example, the likes of which are not taking place in coastal watersheds, Neal Creek in the Hood River watershed has been listed for violations of the aquatic life criterion for chlorpyrifos, but it is not listed for azinphos-methyl. See Oregon's 2010 Integrated Report, Water Quality Assessment Database;52 see also OSU, Pesticide Best Management Practices in the Hood River Watershed (undated) (showing high levels of azinphosmethyl).	OSU. Date Unknown. Pesticide Best Management Practices in the Hood River Watershed.	Yes	Yes	Accurate	Text in blue is supported by reference.
Agriculture	NWEA	57-HH	Despite the lack of any additional ODA rules beyond the EPA pesticide labels, which have been demonstrated to be inadequate for protection of threatened coho, EPA and NOAA have not made any findings on the adequacy of Oregon's program to protect water quality and designated uses from pesticides applied to agricultural lands. NWEA states that the Pesticide Plan does not include protection measures, rather adaptive management measures for when pesticides are found. They also state that it is unclear when and if regulatory actions will actually be made. Based on review of the plan these statements are accurate.	State of Oregon. 2011. Pesticide Management Plan for Water Quality Protection (May 2011).	Yes	Yes	Accurate	Text in blue is a summary of NWEA statements related to this reference.
Agriculture	NWEA	57-DD	The last of the agricultural plans were put in place by ODA in October 2007. The plans and rules have been in place for such a long time, yet Oregon cannot point to their widespread success in addressing the conditions on agricultural lands that have caused and contributed to violations of water quality standards.	Oregon Department of Agriculture. 2013. Streamside Vegetation Assessment Tool - User's Guide, Version 1 (Nov. 4, 2013)	Yes			p. 42 at 3
Agriculture	NWEA	57-DD	The last of the agricultural plans were put in place by ODA in October 2007. The plans and rules have been in place for such a long time, yet Oregon cannot point to their widespread success in addressing the conditions on agricultural lands that have caused and contributed to violations of water quality standards.	Bell, N., NWEA. 2013. Letter to Cheryl Hummon, ODS Re: User's Guide for the Streamside Vegetation Assessment Tool; Review Draft October 29, 2013 (Oct. 31, 2013).	Yes	pending	pending	p. 42
Agriculture	NWEA	57-DD	The last of the agricultural plans were put in place by ODA in October 2007. The plans and rules have been in place for such a long time, yet Oregon cannot point to their widespread success in addressing the conditions on agricultural lands that have caused and contributed to violations of water quality standards.	Stelle, W. 2013. Letter to Roylene Rides-at-the-Door, USDA and Dennis McLerran, EPA, (Jan. 30, 2013) with attachments: (1) Memorandum from Usha Varanasi, NMFS to Robert Lohn, NMFS, Re: Review "Efficacy and Economics of Riparian Buffers on Agricultural Lands" (March 17, 2003), and (2) NMFS, Interim Riparian Buffer Recommendations for Streams in Puget Sound Agricultural Landscapes November 2012 (Originally proposed as federal Option 3 for the Agriculture Fish and Water (AFW) Process, March 2002).	Yes	pending	pending	p. 42
Agriculture	NWEA	57-DD	The last of the agricultural plans were put in place by ODA in October 2007. The plans and rules have been in place for such a long time, yet Oregon cannot point to their widespread success in addressing the conditions on agricultural lands that have caused and contributed to violations of water quality standards.	Oregon DEQ. 2013. DEQ Preliminary Comments on the Proposed Streamside Vegetation Assessment Tool. July 9, 2013.	Yes	pending	pending	p. 43
Agriculture	NWEA	57-DD	The last of the agricultural plans were put in place by ODA in October 2007. The plans and rules have been in place for such a long time, yet Oregon cannot point to their widespread success in addressing the conditions on agricultural lands that have caused and contributed to violations of water quality standards.	ODA. ODA Agricultural Water Quality Management Program, Proposed Tools For Measuring Progress in Small Watersheds: Streamside Vegetation Assessment: Compliance Evaluation: Summary of Issues Under Discussion Between ODA and DEQ, DRAFT - July 22, 2013.	Yes	pending	pending	p. 44
Agriculture	NWEA	57-DD	The last of the agricultural plans were put in place by ODA in October 2007. The plans and rules have been in place for such a long time, yet Oregon cannot point to their widespread success in addressing the conditions on agricultural lands that have caused and contributed to violations of water quality standards.	Oregon Department of Agriculture. 2013. Streamside Vegetation Assessment Tool. ODA Ag Water Quality Program. Presentation available online at: http://www.oregon.gov/ODA/NRD/docs/pdf/water/oda_assessment%20tools_presentation_at_%20oacd_conf.pdf	Yes	pending	pending	p. 44, 45
Agriculture	NWEA	57-DD	The last of the agricultural plans were put in place by ODA in October 2007. The plans and rules have been in place for such a long time, yet Oregon cannot point to their widespread success in addressing the conditions on agricultural lands that have caused and contributed to violations of water quality standards.	Oregon Department of Agriculture. 2013. Proposed Tools For Measuring Progress in Small Watersheds. Water Quality Management Program Draft Overview September 4, 2013. Available online at: http://www.oregon.gov/ODA/NRD/docs/pdf/water/assessment_overview_draft_9413.pdf	Yes	pending	pending	p. 45

Agriculture	NWEA	57-DD	The last of the agricultural plans were put in place by ODA in October 2007. The plans and rules have been in place for such a long time, yet Oregon cannot point to their widespread success in addressing the conditions on agricultural lands that have caused and contributed to violations of water quality standards.	Oregon Department of Agriculture. 2013. Program Updates. Agricultural Water Quality Program Advisory Committee. July 25, 2013.	Yes	pending	pending	p. 45 Slides 7, 17 & 38.
Agriculture	NWEA	57-EE	ODA's most recent new efforts to address agricultural water quality are inadequate to meet CZARA management measures and additional management measures that are needed. None of the ODA basin rules incorporates additional management measures as needed to meet the zero load allocations established in the existing temperature TMDLs for Oregon coastal watersheds.	Oregon Department of Agriculture. 2013. Streamside Vegetation Assessment Tool - User's Guide, Version 1 (Nov. 4, 2013)	Yes	pending	pending	p. 42 at 3
Agriculture	NWEA	57-EE	ODA's most recent new efforts to address agricultural water quality are inadequate to meet CZARA management measures and additional management measures that are needed. None of the ODA basin rules incorporates additional management measures as needed to meet the zero load allocations established in the existing temperature TMDLs for Oregon coastal watersheds.	Bell, N., NWEA. 2013. Letter to Cheryl Hummon, ODS Re: User's Guide for the Streamside Vegetation Assessment Tool; Review Draft October 29, 2013 (Oct. 31, 2013).	Yes	pending	pending	p. 42
Agriculture	NWEA	57-EE	ODA's most recent new efforts to address agricultural water quality are inadequate to meet CZARA management measures and additional management measures that are needed. None of the ODA basin rules incorporates additional management measures as needed to meet the zero load allocations established in the existing temperature TMDLs for Oregon coastal watersheds.	Stelle, W. 2013. Letter to Roylene Rides-at-the-Door, USDA and Dennis McLerran, EPA, (Jan. 30, 2013) with attachments: (1) Memorandum from Usha Varanasi, NMFS to Robert Lohn, NMFS, Re: Review "Efficacy and Economics of Riparian Buffers on Agricultural Lands" (March 17, 2003), and (2) NMFS, Interim Riparian Buffer Recommendations for Streams in Puget Sound Agricultural Landscapes November 2012 (Originally proposed as federal Option 3 for the Agriculture Fish and Water (AFW) Process, March 2002).	Yes	pending	pending	p. 42
Agriculture	NWEA	57-EE	ODA's most recent new efforts to address agricultural water quality are inadequate to meet CZARA management measures and additional management measures that are needed. None of the ODA basin rules incorporates additional management measures as needed to meet the zero load allocations established in the existing temperature TMDLs for Oregon coastal watersheds.	Oregon DEQ. 2013. DEQ Preliminary Comments on the Proposed Streamside Vegetation Assessment Tool. July 9, 2013.	Yes	pending	pending	p. 43 at 3-4 &1
Agriculture	NWEA	57-EE	ODA's most recent new efforts to address agricultural water quality are inadequate to meet CZARA management measures and additional management measures that are needed. None of the ODA basin rules incorporates additional management measures as needed to meet the zero load allocations established in the existing temperature TMDLs for Oregon coastal watersheds.	ODA. ODA Agricultural Water Quality Management Program, Proposed Tools For Measuring Progress in Small Watersheds: Streamside Vegetation Assessment: Compliance Evaluation: Summary of Issues Under Discussion Between ODA and DEQ, DRAFT - July 22, 2013.	Yes	pending	pending	p. 44 at 2
Agriculture	NWEA	57-EE	ODA's most recent new efforts to address agricultural water quality are inadequate to meet CZARA management measures and additional management measures that are needed. None of the ODA basin rules incorporates additional management measures as needed to meet the zero load allocations established in the existing temperature TMDLs for Oregon coastal watersheds.	Oregon Department of Agriculture. 2013. Streamside Vegetation Assessment Tool. ODA Ag Water Quality Program. Presentation available online at: http://www.oregon.gov/ODA/NRD/docs/pdf/water/oda_assessment%20tools_presentation_at_%20oacd_conf.pdf	Yes	pending	pending	p. 44, 45 See ODA, ODA Ag Water Quality Program, Streamside Vegetation Assessment Tool, OACD Conference, November 7, 2013 at Slide 12
Agriculture	NWEA	57-EE	ODA's most recent new efforts to address agricultural water quality are inadequate to meet CZARA management measures and additional management measures that are needed. None of the ODA basin rules incorporates additional management measures as needed to meet the zero load allocations established in the existing temperature TMDLs for Oregon coastal watersheds.	Oregon Department of Agriculture. 2013. Proposed Tools For Measuring Progress in Small Watersheds. Water Quality Management Program Draft Overview September 4, 2013. Available online at: http://www.oregon.gov/ODA/NRD/docs/pdf/water/assessment_overview_draft_9413.pdf	Yes	pending	pending	p. 45
Agriculture	NWEA	57-EE	ODA's most recent new efforts to address agricultural water quality are inadequate to meet CZARA management measures and additional management measures that are needed. None of the ODA basin rules incorporates additional management measures as needed to meet the zero load allocations established in the existing temperature TMDLs for Oregon coastal watersheds.	Oregon Department of Agriculture. 2013. Program Updates. Agricultural Water Quality Program Advisory Committee. July 25, 2013.	Yes	pending	pending	p. 45 Slides 7, 17 & 38.

Comment Letter #	Reference (Y/N)	If Y, note category (multiple categories on separate rows)
1		
2	Y	Pending (full letter not checked)
3		
4	N	N/A
5		
6		
7		
8		
9	N	N/A
10		
11		
12		
13	N	N/A
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30	Y	?(working)
31	N	N/A
32		
33		
34		

6/25 Note - comment category Pesticides: letters have not been fully searched

35		
36		
37		
38		
39		
40		
41		
42	Y	landslides
42	Y	?(working)
43		
44	N	N/A
45		
46		
47		
48		
49		
50		
51		
52		
53	N	N/A
54	Y	Pesticides
54	Y	Agriculture
54		?Pending review
55	Y	Agriculture
56		
57	Y	landslides
57	Y	?(working)
57	Y	Pending (full letter not checked)
57	Y	Agriculture
58	Y	landslides
58	Y	?(working); still more to add
59		
60	Y	Agriculture
61	N	N/A
62		
63	N	N/A

64		
65	Y	Agriculture
66		
67	Y	landslides
68	Y	?(working)
69		
70	Y	Pesticides
70		?Pending review
71	Y	Agriculture
72		
73	Y	Agriculture
74		
75	Y	?(working)
76		
77	Y	landslides
77	Y	Pending (full letter not checked)
78		
79		
80		
81		
82		
83	Y	Agriculture
84	Y	Agriculture
85		
OR Response	Y	landslides
OR Response	Y	Agriculture

Citation (author, date consistent with file name)	Applicable comment letter(s)	Notes
http://www.epa.gov/oecaagct/lfra.html#Labeling%20Requirements,	71	
Adams, P.W. and R. Storm. No date. Oregon's Forest Protection Laws, Revised, Second Edition. Oregon Forest Resources Institute.	70	
Agricultural Act of 2014. 2014. 7 U.S.C. Sec. 12313.	54	
Agricultural Act of 2014. P.L. 113-79. February 7, 2014. http://agriculture.house.gov/sites/republicans.agriculture.house.gov/files/pdf/legislation/AgriculturalAct2014.pdf	54	
Amanda Punton. 2006. Personal communication to Robert Baumgartner (Oregon state official).	57	
American Cancer Society. 2013. Detailed Guide: Non-Hodgkin Lymphoma. http://www.cancer.org/docroot/CRI/content/CRI_2_4_1X_What_Is_Non_Hodgkins_Lymphoma_32.asp.	54	
Arbuckle, T.E., Z. Lin, and L.S. Mery. 2001. An Exploratory Analysis of the Effect of Pesticide Exposure on the Risk of Spontaneous Abortion in an Ontario Farm Population. Environmental Health Perspectives 109: 851-857.	54	
Armstrong, A.C., Matthews, A.M., Portwood, A.M., Leeds-Harrison, P.B., & Jarvis, N.J. 2000. CRACK-NP: a pesticide leaching model for cracking clay soils. *Agricultural Water Management* 44(1): 183-199.	57	
Bates. S, and L. Scarlett. 2013. Agricultural Conservation and Environmental Programs: the Challenge of Measuring Performance. University of Montana.	OR Response	
Battaglin, W.A., Rice K.C., Focazio, M.J., Salmons, S., & Barry, R.X. 2009. The occurrence of glyphosate, atrazine, and other pesticides in vernal pools and adjacent streams in Washington, DC, Maryland, Iowa, and Wyoming, 2005-2006. *Environmental Monitoring and Assessment* 155(1-4): 281-307.	57	
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Category	Comment Letter #	Summary of Comment	Reference Document	Reference Obtained
	42	Please see the attachment for a summary written in September 2012 by Rockaway Beach Citizens for Watershed Protection which describes concerns regarding its drinking water. Included in this report is a composite aerial photograph which compares the Jetty Creek watershed that existed in 2004 versus the one that existed in 2013 after substantial clearcutting	Webster, N. and Rockaway Citizens for Watershed Protection. 2013. Jetty Creek: Municipal Water Source Within an Industrial Forest. July 24, 2013.	Yes
	30	The Oregon Department of Fish and Wildlife ("ODFW") and National Marine Fisheries Service ("NMFS") agree many freshwater environmental impacts on Oregon coast coho are human related, including "rearing and spawning habitat loss[.]"	ODFW, Coho Salmon at http://www.dfw.state.or.us/fish/species/coho.asp	
	30	Even ODF has found its logging practices violate water quality standards.	Groom, J.D., L. Dent, and L.J. Madsen. Stream temperature change detection for state and private forests in the Oregon Coast Range , WaterResources Research, 47.1 (2011)	
	30	To make matters worse, Oregon does not even require tree buffers on the hundreds of non-fish bearing tributaries that feed into our drinking waters streams making sedimentation a constant impediment and risk.	Oregon Department of Environmental Quality. 2010. Turbidity Analysis for Oregon Public Water Systems; Water Quality in Coast Range Drinking Water Source Areas. DEQ 09-WQ-024. June 2010. http://www.deq.state.or.us/wq/dwp/docs/TurbidityAnalysisOregonPWS201006.pdf	Yes
	30	For example, while it may be a point source and thus not an issue for CZARA purposes, Oregon's pesticide discharge permit allows spraying forest canopy "by using aerial application of a pesticide over a forest environment or from the ground when in order to target pests effectively, a portion of the pesticide unavoidably will be applied over and deposited in water."	http://www.deq.state.or.us/wq/wqpermit/docs/npdes2300a/2300aPermitOverview.pdf	
	58	Through 1990, more than 1.5 billion metric tons of net carbon emissions were caused by the conversion of old growth forests to short rotation forestry in western Washington and western Oregon. This region represent only .017% of global land area but emitted an astounding 2% of global carbon emissions from land use.	Harmon, M., Ferrell, W., and J. Franklin. 1990. Effects on Carbon Storage of Conversion of Old-Growth to Young Forests. Science. 9 February 1990.	
	58	In recent years, logging in western Oregon (mostly on non-federal land) removes ~5.5 million metric tons of carbon from the forest each year. In a typical year, the magnitude of carbon removal caused by logging is roughly 50 times greater than carbon removal due to wildfire.	Law, B.E., Turner, D., et al 2004. Disturbance and climate effects on carbon stocks and fluxes across Western Oregon USA. Global Change Biology (2004) 10, 1429-1444.	
	58	DLCD Statewide Goal 5 says "Plans providing for open space, scenic and historic areas and natural resources should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources."	OAR 660-015-0000(5)	
	58	The state needs to develop a coastal zone policy framework that fully implements Oregon's Statewide Land Use Goals, including those related to carrying capacity: DLCD Statewide Goal 6 says "With respect to the air, water and land resources of the applicable air sheds and river basins described or included in state environmental quality statutes, rules, standards and implementation plans, such discharges shall not (1) exceed the carrying capacity of such resources, considering long range needs;..."	OAR 660-015-0000(6)	
	58	DLCD Statewide Goal 19 says "all actions by local, state, and federal agencies that are likely to affect the ocean resources and uses of Oregon's territorial sea shall be developed and conducted to conserve marine resources and ecological functions for the purpose of providing long-term ecological, economic, and social values and benefits..."	OAR 660-015-0010(4)	

	58	Oregon has approved several TMDLs in the Coast Range but the assumptions underlying those TMDLs are about to be undermined by efforts to reduce stream protection on federal forest lands. All of the alternatives proposed by BLM for the revision of its Resource Management Plans in western Oregon call for significant narrowing of stream buffers, and none of the action alternatives maintain the current buffers.	Bureau of Land Management. No date. Preliminary Alternatives; Resource Management Plans for Western Oregon. http://www.blm.gov/or/plans/rmpswesternoregon/files/alternfaq.pdf	Yes
	58	The TMDLs approved by the state allow more logging on non-federal lands, under the assumption that there logging near streams on federal lands would be strictly limited. Now it turns out that there will likely be more logging near streams on federal lands, so there needs to be a corresponding decrease in logging near streams on non-federal lands in order to avoid exceeding the watershed scale waste load identified in the TMDLs.	Reeves, G.H., Pickard, B.R., and K.N. Johnson 2013. Alternative Riparian Buffer Strategies for Matrix Lands of BLM Western Oregon Forests That Maintain Aquatic Ecosystem Values. REVIEW DRAFT. January 23, 2013, http://fes.forestry.oregonstate.edu/sites/fes.forestry.oregonstate.edu/files/PDFs/Riparian%20paper%20Jan%2023.pdf	
	58	The TMDLs approved by the state allow more logging on non-federal lands, under the assumption that there logging near streams on federal lands would be strictly limited. Now it turns out that there will likely be more logging near streams on federal lands, so there needs to be a corresponding decrease in logging near streams on non-federal lands in order to avoid exceeding the watershed scale waste load identified in the TMDLs.	Heiken, D. 2013. Riparian Reserves Provide Both Aquatic & Terrestrial Benefits - A Critical Review of Reeves, Pickard & Johnson (2013). https://dl.dropboxusercontent.com/u/47741/Heiken%202013.%20Review%20of%20Reeves%20et%20al%20Riparian%20Proposal.pdf	
LWD	58	Oregon has rules requiring "Waters of the State must be of sufficient quality to support aquatic species without detrimental changes in the resident biological communities." OAR 340-041-0011. However, Oregon lacks programs to actually realize this important objective. Oregon's lack of requirements regarding recruitment of large wood to streams in forest and agricultural areas is a good example.	OAR 340-041-0011.	
LWD	58	The "key conclusion" of Oregon's Riparian Management Workgroup is that "Riparian corridors have been substantially degraded across large portions of the landscape. Achieving water quality standards and aquatic habitat objectives in such areas will require that vegetated, functional riparian areas be reestablished and maintained… Oregon does not have an overarching comprehensive riparian or stream corridor management policy or program. For the most part, three state programs influence the management and use of riparian areas, and each one has evolved to achieve different objectives. Restoration and maintenance of productive aquatic habitat is not a common, stated objective of all three of these programs."	OREGON STATE PROGRAMS FOR MANAGING RIPARIAN RESOURCES REPORT BY THE RIPARIAN MANAGEMENT WORK GROUP, October 2000. http://www.oregon.gov/OPSW/archives/riparian/4-0.pdf	
LWD	58	Large quantities of down logs are an important component of many streams. Coarse woody debris influences the form and structure of a channel by affecting the profile of a stream, pool formation, and channel pattern and position. The rate at which sediment and organic matter are transported downstream is controlled in part by storage of this material behind coarse woody debris. Coarse woody debris also affects the formation and distribution of habitat, provides cover and complexity, and acts as a substrate for biological activity. Coarse woody debris in streams comes directly from the adjacent riparian area, from tributaries that may not be inhabited by fish, and from hillslopes.	1994 Northwest Forest Plan FSEIS, page 3&4-61.	

LWD	58	Large wood in streams—preferably whole trees with root wads and all—provides the randomness and dynamic environment that fish absolutely need to survive in the ever-changing waters they occupy. Wood breaks up the current and spreads water sideways across its natural floodplain, creating wonderful, dynamic and necessary diversity while also absorbing energy that could cause serious damage downstream otherwise, such as flooding or unnatural erosion. It sorts gravels during high flows, creating those beautiful spawning gravel beds laid out like blankets among bigger rock. It makes those current breaks downstream of log jams. It provides cooling shade and cover, and slow pools and edge habitat that baby fish need after emerging from those gorgeous gravels to ride out high flows, find food and hide from prying eyes. Decomposing wood and the nutrients it produces jumpstarts that the natural processes critical to insect, animal, amphibian and plant life.	Alan Moore, Why Fish Love 'Large Woody Debris.' Trout Unlimited. 2-4-2013. http://troutunlimitedblog.com/large-woody-debris-makes-for-fishy-rivers/	
LWD	58	Several studies (Steinblums 1977, Franklin et al. 1981, Heimann 1988, Andrus et al. 1988, Ursitti 1991, and Morman 1993) have found the basal area of conifers, which reflects the size and number of trees present, to be less in riparian areas of second-growth forests than in late-successional and old-growth forests. …Maintenance of riparian forests in late-successional and old-growth forests and restoration in second-growth forests will depend on regeneration rates of conifers in the future. Regeneration of conifers in the riparian zones of natural stands is dependent, at least in part, on downed large trees. Researchers at the Pacific Northwest Research Station, Corvallis, Oregon found that more than 80 percent of conifer regeneration in the riparian zones along coastal Oregon streams that they studied occurred on down logs. The role of nurse trees in forest regeneration in the Pacific Northwest is widely recognized (Harmon et al. 1986). in riparian zones, nurse trees originate within 0 to 400 feet of the active channel. Greater retention of live trees and snags in riparian stands and adjacent upslope source areas will enhance the generation of future riparian forests	1993 Scientific Analysis Team (SAT) Report, page 460	
	58	p. 10-11 of the comment letter provides additional sources that EPA is "urged" to "carefully review" to "appreciate the water quality impacts of industrial forestry and associated roads impacts in coastal watersheds."	references have not been cited; just listed as additional sources	
	75	A stream temperature study conducted by the Department of Forestry, known as "Rip Stream," found the OFPA to be out of compliance with Clean Water Act Standards. Since that finding was published, at least four years ago, nothing has changed.	Oregon Department of Foresty. Accessed 2014. Riparian Function and Stream Temperature (RipStream) Study. Available online at: http://www.oregon.gov/odf/privateforests/pages/monitoringripstream.aspx	
	67	The Salmonberry has well-documented spawning and rearing habitat for both steelhead trout and coho salmon.	Association"of"Northwest"Steelheaders"OWEB"Grant"Application,"2013	Yes
floods?	67	A long---term volunteer monitoring project on the Salmonberry points to a loss of spawning habitat in the mainstem, consistent with the observations in the ODFW habitat survey. In the 5 years prior to the December 2007 flood, winter steelhead redd density in the mainstem averaged 25.6 redds/mile. In the 5 years following the flood, redd density dropped to 6.4 redds/mile. In contrast, the North Fork, a very productive tributary that suffered only minor damage in the 2007 flood, showed almost no change over that period (49.4 to 48.4 redds/mile).	Summary of spawning survey data available at ODFW Data Clearinghouse; letter indicated that summary was attached; not available online?	
floods?	67	The monitoring project has also documented increased temperatures in Wolf and Kinney Creeks, ever since the February 1996 flood, which also scoured the same tributaries. The comparison is made with Pennoyer Creek, which was not appreciably affected by either flood. Also provided plots that extend these analyses to include additional data years.	Fergusson, I. 2011. Effects of Debris Torrents on Summer Water Temperatures: Salmonberry (Nehalem Basin) Oregon. July 2011. https://nrimp.dfw.state.or.us/web%20stores/data%20libraries/files/ODFW/ODFW_943_2_Effects%20of%20Debris%20Torrents%20on%20Summer%20Water%20Temperatures,%20Salmonberry%20River.pdf	Yes