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**J.E. "Sam" Ryan**  
Director

**Memorandum**

TO: The Honorable County Council  
Jack Louws, County Executive

FROM: Cliff Strong, Senior Planner *CS*

THROUGH: Mark Personius, Asst. Director *MP*

DATE: July 18, 2017

SUBJECT: 2016 Critical Areas Ordinance Update  
County Council Review Workshop on July 25, 2017

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On July 25<sup>th</sup> the Council will continue its review of the 2016 Critical Areas Ordinance Update. Topics to be covered include:

- Review of certain questions, comments, and suggestions by Council members related to:
  - Article 8, Conservation Program on Agriculture Lands
  - Article 9, Definitions

To prepare for this meeting, please review this memo. Yellow highlighting in the text indicates a Councilperson's proposed amendments.

## CPAL Minor Issues

### ITEM 1 (Originally Issue 139) (Donovan)

#### 16.16.860 Monitoring and Compliance

*Subsection (C): Why delete "If the conservation farm plan is found not to be protective of critical areas in the approved farm plan..." and where is the original language that concluded after this deletion?*

**Staff Response:** At your workshop on 7/11/17 this was tabled, as CM Donovan asked that staff find where this concept was already covered. The condition of finding a farm plan to not be protective of critical areas, and the original language that concluded after this deletion became subsection (D) because (C) had addressed two different concepts. Specifically, D.2 addresses the concept of a farm plan failing to protect critical areas.

#### 16.16.860 Monitoring and Compliance

- D. Agricultural operations shall cease to be in compliance with this Article, and a new or revised conservation farm plan will be required, when the technical administrator determines that any of the following has occurred:
2. When implementation of the conservation farm plan fails to protect critical areas. If so, a new or revised conservation farm plan shall be required to protect the values and functions of critical areas at the benchmark condition.

### ITEM 2 (Originally Issue 166) (Brenner)

#### 16.16.900 Definitions.

"Agricultural activities" means those activities directly pertaining to the production of crops or livestock including, but not limited to: cultivation; harvest; grazing; animal waste storage and disposal; fertilization; the operation and maintenance of farm and stock ponds or drainage ditches, irrigation systems, and canals; and normal maintenance, repair, or operation of existing serviceable structures, facilities, or improved areas. ~~Neither the construction of new structures nor Activities that bring a new, non-ongoing agricultural area into agricultural use are not considered agricultural activities.~~

**Staff Response:** Staff does not recommend this change. Where this term is used in the code it is in reference to exempting standard farming practices from some of the rules. However, both constructing new buildings and bringing new areas into agricultural use are supposed to always fall under the standard rules.

At your workshop on 7/11/17 CM Brenner's motion to strike this language failed. However, Council asked staff to rewrite the last sentence as with all the strikeouts and additions it was hard to read and seemed a cumbersome sentence. For clarity, without all the strikeouts and additions the proposed text would read:

*"Neither the construction of new structures nor activities that bring a new, non-ongoing agricultural area into agricultural use are considered agricultural activities."*

Another way of saying this would be:

*"The construction of new structures or activities that bring a new, non-ongoing agricultural area into agricultural use, are not considered agricultural activities."*

Both say the same thing, but staff thinks the first of the two options is a little better in terms of sentence structure.

## Broadening CPAL to All Ag

As mentioned numerous times, the CPAL program was developed in our original CAO back in 1992 as a way of grandfathering agricultural activities *existing at the time* in areas where those activities had already impacted critical areas<sup>1</sup> prior to the CAO's adoption. It was a program designed specifically for what was defined as "*ongoing agriculture.*"

When the GMA was adopted, it required jurisdictions to protect critical areas' functions and values through a Critical Areas Ordinance. But many counties excluded or ignored the impacts caused by agricultural activities (new or existing) since they wanted to support the agriculture sector. This was challenged several times, and the courts determined that the GMA did apply to agriculture. But the GMA didn't address what to do with ongoing agriculture. Needless to say, this caused a lot of consternation and uncertainty. The legislature responded by directing The William D. Ruckelshaus Center to convene the chief participants in the conflict to work on solutions. Out of that process was born the Voluntary Stewardship Program (VSP) in 2011. Washington's 39 counties then had until January 22, 2012 to decide whether to participate in the new program or to continue under existing law (the CAOs). Twenty-eight counties decided to participate. Whatcom County decided not to join the VSP, but rather stick with our CPAL program, which had already been found to meet the GMA<sup>2</sup>. The CPAL program was found to comply since it applied to ongoing agriculture only; new agriculture and buildings still had to meet the CAO requirements.

Staff is concerned because in this update to the CAO, Council has proposed to remove the term "ongoing" from the code, essentially letting the protections given to ongoing ag apply to all (including new) agriculture. We are sympathetic to and share Council's concern for farmers and farming, but are concerned that our CPAL program will no longer be compliant with the GMA's mandate to protect critical areas' functions and values, as the changes would allow all ag to take advantage of reduced standards. As previously explained, while the NRCS BMPs employed through CPAL have been found to be protective of water quality, they do not address habitat. This is fine where habitat had been previously converted to ag uses, but not for new areas converted to ag or new structures in the future. The tortured case of Clallam County<sup>3</sup> illustrates the pitfalls of exempting certain ag activities from the CAO:

On December 28, 1999, Clallam adopted Critical Areas regulations, as required by RCW 36.70A.060, as part of the Growth Management Act (GMA).

Part of Clallam's CAO regulations, Clallam County Code (CCC) 27.12.035(7), exempted pre-existing agricultural operations from the critical areas protection requirements. Protect Peninsula's Future (PPF) petitioned the Growth Management Hearing Board (GMHB) to invalidate the agricultural exemption and other parts of the ordinance. The GMHB found that the agricultural exemption did not comply with the GMA requirements and invalidated that exemption.

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<sup>1</sup> i.e., too close to a stream, in a wetland or its buffer, etc.

<sup>2</sup> The state referred the 11 counties who didn't join the VSP to our program as a model at that time.

<sup>3</sup> Excerpts from Clallam County's website at <http://www.clallam.net/LandUse/documents/7HISTORY.pdf>

In response, in 2001 Clallam amended the exemptions for ongoing ag in CCC 27.12.035(7) to state the following: “Existing and ongoing agriculture that was conducted prior to the effective date of this chapter on lands designated as critical areas or their associated buffers; provided, that such lands are classified as farm and agricultural land pursuant to Chapter 84.34 RCW; provided further, that all activities occurring on such lands employ best management practices (BMPs). For the purposes of this exemption, acceptable BMPs shall include: (a) activities carried out consistent with farm plans issued and authorized by the Natural Resources Conservation Service (NRCS); (b) activities that demonstrate consistency with total maximum daily loads (TMDL) established by the Department of Ecology for specific operations; and/or (c) activities that demonstrate consistency with standard BMPs published by the NRCS, as now or hereafter amended. Written confirmation by the administrating agency that applicable BMPs are being met will constitute evidence of eligibility for this exemption. (See also CCC 27.12.025(7)).”

The next iteration of the ordinance limited the agricultural exemption only to preexisting agricultural uses on land classified as farm and agricultural land under the open space tax program<sup>4</sup>, chapter 84.34 RCW, and required that exempt agricultural operations use best management practices. PPF again petitioned the GMHB for review. The GMHB held that the amended agricultural exemption was invalid, noting that it did not limit its application to GMA-designated agricultural resource areas. On appeal, the Court of Appeals held that the GMHB correctly ruled that Clallam could not exempt all pre-existing agricultural uses from critical areas regulations.

However, Court of Appeals also clarified that Clallam's agricultural exemption need not be limited to GMA-designated agricultural resource lands. The Court of Appeals remanded to the GMHB for further proceedings, including re-determination of whether the agricultural exemption complied with the GMA.

Before the GMHB could determine on remand whether Clallam’s agricultural exemption complied with the GMA, the legislature in 2007 enacted a moratorium on alteration of GMA critical areas regulations and initiated a policy study. Due to the moratorium, Clallam did not change its critical areas regulations. The moratorium lasted until 2011, when the legislature amended the GMA to add the Voluntary Stewardship Program (VSP). The VSP allows participating counties to comply with the GMA by implementing a watershed work plan that protects critical areas (See RCW 36. 70A.720). A participating county that is unable to implement a VSP work plan may achieve GMA compliance by, among other things, adopting the critical areas regulations of one of four counties: Clallam, Clark, King, or Whatcom. RCW 36.70A.735(1)(b).

In order to participate in the VSP, counties had to elect to participate in the program by January 22, 2012, six months after the effective date of the 2011 amendments (RCW 36.70A.710(1)(b)). Counties that did not elect to participate remained subject to the original GMA provisions

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<sup>4</sup> I.e., areas specified by Clallam County as GMA-designated ag resource lands

requiring regulations protecting critical areas per RCW 36.70A. 710(6). Clallam did not elect to participate in the VSP.

In August 2012, PPF reinitiated the delayed compliance review before the GMHB. Clallam moved to dismiss the compliance action, claiming that by enacting RCW 36.70A.735(1)(b) the legislature had validated Clallam's 2001 critical areas regulations and superseded the GMHB's invalidation order. Therefore, Clallam argued that its regulations were now fully compliant with the GMA. The GMHB agreed with Clallam's interpretation of RCW 36. 70A. 735(1)(b), stating that "clearly the legislature concluded the development regulations of those four counties were sufficiently protective of critical areas in areas used for agriculture."

As a result, the GMHB granted the motion to dismiss, which served to rescind its prior order of invalidity. PPF appealed the dismissal to the superior court, which affirmed the GMHB. PPF appealed the Superior Court decision to the Court of Appeals.

On February 18, 2015 the Court of Appeals determined that the GMHB erred by interpreting RCW 36.70A.735(1)(b) as a legislative validation of Clallam's previously invalidated critical areas regulations for counties not participating in the VSP. The Court of Appeals reversed the GMHB motion to dismiss and remanded the issue back to the GMHB to address the issue of whether Clallam County's exemption for existing agriculture as amended in 2001 complies with the GMA.

On July 23, 2015 The GMHB issued a Compliance Schedule that provided the county six months to have the issue resolved. The GMHB have issued three 90-day extensions of time, giving Clallam County until July 4, 2016 to update the Critical Areas Code to address the issue of the Critical Area Exemption for existing and on-going agriculture. They finally did that in November 2016, and their definition now reads:

"Existing, ongoing agriculture" means agriculture that is both: (a) on land located within the agricultural retention zoning district and/or on land that meets the criteria and are enrolled in the Washington State open space and agricultural current use program per RCW [84.34.020](#)(2)(b) and (c); and (b) is on land that has been used for agriculture since June 16, 1992, and not ceased use for agriculture for more than five consecutive years at any one time. Changing the type of agricultural activities being conducted is not considered new or expansion of existing agricultural activity. Agriculture that meets the definition of existing, ongoing agriculture on farmed wetlands, farmed wetland pastures, and prior converted wetlands is allowed to continue subject to the provisions of CCC [27.12.037](#).

The GMHB issued an Order on Remand Finding Compliance, on June 19, 2017 (opening with the line, "This case is believed to be the longest pending matter in the history of the Growth Management Hearings Board...") This is why staff has recommended against removing the term "ongoing ag," even where replaced by "a history of legal ag use." Doing so would allow a category of farmers, who may not qualify as "ongoing ag," to take advantage of reduced standards in "new" areas put to ag use. Almost all other similar programs, including the VSP, the Clean Water Act, and other Counties use the term "ongoing ag" and define it similarly, i.e., it had to be occurring prior to the adoption of the first set of

rules governing critical areas, and one loses the status if one doesn't farm for 5 years<sup>5</sup>. Staff doesn't want Whatcom County to repeat the tortured process Clallam had to go through were the Council to expand CAO exemptions beyond those currently afforded to ongoing ag. Nor do we want to put our CAO update at greater risk of GMA non-compliance.

### **Where Has Council Deleted the Term "Ongoing Ag"?**

CM Donovan asked for a list of all the places Council has proposed to delete the term "ongoing ag." These are:

#### **16.16.235 Activities allowed with notification.**

B. Activities allowed with notification:

9. Routine maintenance of ditches on agricultural lands; provided, that all of the following are met:
  - a. The maintenance is necessary to support ongoing agricultural operations;
  - b. The maintenance activity does not expand the dimensions of the drainage channel beyond the original, lawfully established dimensions;
  - c. The agricultural activities are conducted pursuant to an approved conservation farm plan prepared pursuant to WCC [16.16.290](#);
  - d. The farm operator obtains a hydraulic project approval (HPA), if required, from the Washington State Department of Fish and Wildlife (WDFW) prior to the maintenance activity; and
  - e. The farm operator provides a copy of the HPA to the technical administrator as part of the written notification.

#### **16.16.620 Wetlands – General standards.**

The following activities may be permitted in wetlands and/or wetland buffers as specified when all reasonable measures have been taken to avoid adverse effects on wetland functions and values as documented through an alternatives analysis, the amount and degree of alteration are limited to the minimum needed to accomplish the project purpose, and compensatory mitigation is provided for all adverse impacts to wetlands that cannot be avoided:

E. Agricultural Uses as follows:

1. Construction of an appurtenant structure that is associated with a primary agricultural use; or the reconstruction, remodeling, or maintenance of such structures in wetland buffers, subject to all of the following specific criteria:
  - i. The structure is located within an existing lot of record that **is an ongoing has a history of legal** agricultural use.
  - ii. There is no other feasible location with less impact to critical areas.
  - iii. Clearing and grading activity and impervious surfaces are limited to the minimum necessary to accommodate the proposed structure and, where possible, surfaces shall be made of pervious materials.
2. **Ongoing** Agricultural activities subject to the following:
  - i. The activities are conducted in accordance with all applicable provisions of this chapter and WCC Title 17; or
  - ii. The agricultural activity is in compliance with the Conservation Program on Agricultural Lands (CPAL) as described in Article 8 of this chapter.

#### **16.16.720 Habitat conservation areas – General standards.**

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<sup>5</sup> Which is also true for the Open Space/Ag Tax Program.

The following activities may be permitted in habitat conservation areas and/or their buffers when, pursuant to WCC 16.16.255 and 16.16.260, all reasonable measures have been taken to avoid adverse effects on species and habitats, any applicable Washington Department of Fish and Wildlife management recommendations have been applied, mitigation is provided for all adverse impacts that cannot be avoided, and the amount and degree of the alteration are limited to the minimum needed to accomplish the project purpose; provided, that locally important species and habitats shall be subject to WCC 16.16.730:

- E. Construction or improvements, other than a building, that are associated with an agricultural use in the outer 25% of the CPAL designated buffer; or the reconstruction, remodeling, or maintenance of such structures in a habitat conservation area buffer, subject to all of the following criteria:
  - 1. The structure is located within an existing lot of record **and is an ongoing with a history of legal** agricultural use.
  - 2. There is no other feasible location with less impact to critical areas. However, this provision does not apply to reconstruction, maintenance and/or remodeling of pre-existing structure.
  - 3. Clearing and grading activity and impervious surfaces are limited to the minimum necessary to accommodate the proposed structure and, where possible, surfaces shall be made of pervious materials.
  - 4. Unavoidable adverse effects on critical areas are mitigated in accordance with this chapter.

In each of these three instances the deletion of “ongoing” broadens the class of agriculture that can impact streams/ditches or farm in wetlands or HCAs from a very defined subset (those that were grandfathered, i.e., ongoing) to those with a “legal history” of farming. But what does that mean? What’s a “history”? Three days? A year? 10 years? Under federal law, the grandfathered (ongoing) ag loses its protection after 5 years of non-farming, and the same under state law. In putting this draft code together, staff (and the TAC and CAC) tried to normalize our rules with the state and federal rules so that there’s only one set one must remember.

#### **Where Does the Term “Ongoing Ag” Still Occur?**

CM Browne also asked that we point out all remaining instances of the term “ongoing agriculture.” That term is still used in: 16.16.800(B), 16.16.830(B)(1)(a) & (b), and 16.16.800 (definitions of ag activities and ongoing ag).

#### **State and Federal Definitions of “Grandfathered” Ag**

CM Browne also asked that we provide the state and federal definitions surrounding this issue of “legal” or “grandfathered” agriculture. Those are again attached at the end of this memo.

### **ITEM 3 (Originally Issues 152 & 153)**

#### **16.16.830 Conservation Farm Plans – General Standards.**

- B. A conservation farm plan ~~shall~~**may not** authorize filling, draining, grading, or clearing activities within critical areas or buffers:
  - 1. ~~except~~**Only** on ~~existing ongoing~~ agricultural land where such activities are ~~a~~ **demonstrated to be an integral essential** part of the ~~ongoing~~ agricultural use **or part of routine maintenance**; and,

#### **16.16.830 Conservation Farm Plans – General Standards.**

- C. ~~The~~**A** conservation farm plan ~~shall not~~**may** authorize:

1. The construction of new structures. New structures shall be constructed in compliance with the applicable provisions standard requirements of this chapter and the Whatcom County Code. ~~landowner shall ensure that all of the following are met:~~
  - ~~—Siting of structures shall not result in surface or groundwater contamination.~~
  - ~~—Dust, odor, and noise concerns attendant to the use of the improvement shall be mitigated.~~
  - ~~—Impermeable surfaces such as building roofs, roads, and yards shall not change the flow, volume, and/or direction of runoff, or cause erosion or downstream flooding.~~
2. New or expanded drainage systems. (Routine maintenance of existing drainage systems may be allowed but only in compliance with the Washington State hydraulic code (WAC 220-660) and the Best Management Practices found in the “Drainage Management Guide for Whatcom County Drainage Improvement Districts.”)
3. The conversion of land to agricultural use.

**Staff Response:** At your workshop on 6/13/17 Council rejected the above proposals. CM Browne started to propose some alternative language but the meeting ended prior to Council resolving it. That proposal was:

**16.16.830 Conservation Farm Plans – General Standards.**

B. A conservation farm plan ~~shall~~may not authorize filling, draining, grading, or clearing activities within critical areas or buffers;

1. ~~except~~Only on ~~existing ongoing~~ agricultural land with a history of legal agricultural uses and where such activities are a ~~an~~ demonstrated essential part of the ongoing agricultural use or part of routine maintenance; and,

Though Council had a lengthy discussion of these two (related) issues at your 7/11/17 workshop, both were tabled. Based on your discussion, staff has developed new language that we think meets your intent. To better see the new proposed amendments we’ve removed all the previous insertions/deletions and embedded comments that you didn’t discuss (and therefore surmise it’s acceptable). We’ve:

- Reverted the language to “shall not/except” from the “may/only” P/C recommended grammar
- Combined B & C, since both intro paragraphs said the same thing
- Added CM Browne’s language of “history of legal ag use”
- added Ryan Ericson’s suggestion about “recommend” and a new (c) to make it clear that permits are required for those activities
- added a new C per CM Sidhu’s request

**16.16.830 Conservation Farm Plans – General Standards.**

A. All conservation farm plans shall include all practicable measures, including Best Management Practices, to maintain existing critical area functions and values.

B. A conservation farm plan shall not recommend nor authorize:

1. Filling, draining, grading, or clearing activities within critical areas or buffers:
  - a. Except on agricultural land with a history of legal agricultural use and where such activities are a demonstrated essential part of an ongoing agricultural use or part of routine maintenance; and,
  - b. When it does not expand the boundaries of an ongoing agricultural use; and,
  - c. The appropriate permits for doing so have been obtained.
2. The construction of new structures. New structures shall be constructed in compliance with the applicable standard requirements of this chapter and the Whatcom County Code.

3. New or expanded drainage systems. However, the routine maintenance of existing drainage systems may be allowed, but only in compliance with the Washington State hydraulic code (WAC 220-660) and the Best Management Practices found in the “Drainage Management Guide for Whatcom County Drainage Improvement Districts.”)
4. The conversion of land to agricultural use.

C. Other plans prepared for compliance with state or federal regulations (e.g., nutrient management plans), or to obtain an accredited private third-party certification (e.g., GLOBALG.A.P.), or similar plans may be used as part of or in lieu of a Conservation Farm Plan if the Technical Administrator determines they adequately address the requirements of this Title.

Staff supports all these changes with the exception of deleting “ongoing ag” and replacing it with “a history of legal agricultural use” (in 16.16.830(B)(1)(a) for the reasons provided above.

#### ITEM 4 (Originally Issue 171) (Brenner)

##### 16.16.900 Definitions.

~~“Ongoing agriculture” means those activities conducted on lands defined in RCW 84.34.020(2), and those activities involved in the production of crops and livestock, including, but not limited to, operation and maintenance of existing farm and stock ponds or drainage ditches, irrigation systems, changes between agricultural activities, and maintenance or repair of existing serviceable structures and facilities. Activities that bring an area into agricultural use are not part of an ongoing activity. An operation ceases to be ongoing when the area on which it was conducted has been converted to a nonagricultural use, or has lain idle for more than five consecutive years unless that idle land is registered in a federal or state soils conservation program. Forest practices are not included in this definition.~~

**Staff Response:** Staff does not recommend this change. We realize that several amendments have been proposed that would open up the CPAL program to all farming (both new and existing, or ongoing), but that was never the intent of this program. To do so may make us vulnerable to appeals, since treating new ag as old and allowing new impacts could be construed as violating the GMA.

## CPAL Public Disclosure

#### ITEM 5 (Originally Issue 146) (Weimer)

##### 16.16.870 Limited Public Disclosure

*Amend subsection (B) to read:*

- B. Provided, that the County will collect summary information related to the address and parcel numbers general location of a farming enterprise covered by the farm plan, the nature of the farming activity, ~~and~~ the specific best management practices to be implemented during the conservation farm plan review process, the number of acres included, and the date of the last compliance review. This information, along with a map that shows parcels covered by approved farm plans, will be made easily and publicly available on the county’s website. The summary information shall be provided by the farm operator or his/her designee and shall be used to document the basis for the County’s approval of the plan. Plans shall also be subject to disclosure if required by a court of competent jurisdiction. Upon request, the County may provide a sample

conservation farm plan, exclusive of site- or property-specific information, to give general guidance on the development of a conservation farm plan.

**Staff Response:** At your workshop of 7/11/17 Council tabled this item for further rumination. CM Weimer asked staff to reconsider its position, or at least respond to why we couldn't release the information he's suggesting we collect.

However, we still read RCW 42.56(17)(a) as exempting farm plans from disclosure (unless used to apply for a permit). While RCW 42.56.610, RCW 90.64.190, and WAC 16-06-210, allow some information to be released in certain ranges, those only apply to dairies, AFOs, and CAFOs (Type 3) and not (non-dairy) Type 1 or Type 2 farm plans.

Thus, staff still recommends against. As an alternative, may we suggest:

**16.16.870 Limited Public Disclosure**

B. Provided, that the County will collect all summary information that is determined not to be exempt from public disclosure per RCW 42.56.610 and make it publicly available on the county's website. The summary information shall be provided by the farm operator or his/her designee and shall be used to document the basis for the County's approval of the plan. Plans shall also be subject to disclosure if required by a court of competent jurisdiction. Upon request, the County may provide a sample conservation farm plan, exclusive of site- or property-specific information, to give general guidance on the development of a conservation farm plan.

This way we can work with our legal staff to determine what is disclosable and would allow us to add more, or less, as the courts refine what is.

**RCW Chapter 42.56 PUBLIC RECORDS ACT**

**RCW 42.56.270. Financial, commercial, and proprietary information.**

The following financial, commercial, and proprietary information is exempt from disclosure under this chapter:

(17)(a) Farm plans developed by conservation districts, unless permission to release the farm plan is granted by the landowner or operator who requested the plan, or the farm plan is used for the application or issuance of a permit;

(b) Farm plans developed under chapter 90.48 RCW and not under the federal clean water act, 33 U.S.C. Sec. 1251 et seq., are subject to RCW 42.56.610 and 90.64.190;

**RCW 42.56.610. Certain information from dairies and feedlots limited—Rules.**

The following information in plans, records, and reports obtained by state and local agencies from dairies, animal feeding operations, and concentrated animal feeding operations, not required to apply for a national pollutant discharge elimination system permit is disclosable only in ranges that provide meaningful information to the public while ensuring confidentiality of business information regarding: (1) Number of animals; (2) volume of livestock nutrients generated; (3) number of acres covered by the plan or used for land application of livestock nutrients; (4) livestock nutrients transferred to other persons; and (5) crop yields. The department of agriculture shall adopt rules to implement this section in consultation with affected state and local agencies.

**Chapter 90.64 RCW DAIRY NUTRIENT MANAGEMENT**

**RCW 90.64.190. Information subject to public records disclosure—Rules.**

This section applies to dairies, AFOs, and CAFOs, not required to apply for a permit. Information in plans, records, and reports obtained by state and local agencies from livestock producers under chapter 510, Laws of 2005 regarding (1) number of animals; (2) volume of livestock nutrients generated; (3) number of acres covered by the plan or used for land application of livestock nutrients; (4) livestock nutrients transferred to other persons; and (5) crop yields shall be disclosable in response to a request for public records under chapter [42.56](#) RCW only in ranges that provide meaningful information to the public while ensuring confidentiality of business information. The department of agriculture shall adopt rules to implement this section in consultation with affected state and local agencies.

**WAC 16-06-210 Exemptions** (to the Public Disclosure rules).

(29) Under RCW 42.56.610 and 90.64.190, information identifying the number of animals; volume of livestock nutrients generated; number of acres covered by the plan or used for land application of livestock nutrients; livestock nutrients transferred to other persons; and crop yields in plans, records, and reports obtained by state and local agencies from dairies, animal feeding operations, and concentrated animal feeding operations not required to apply for a National Pollutant Discharge Elimination System permit is disclosable in the following ranges: (ranges left out for brevity, but were provided in the memo for the workshop of 7/11/17)

## CAO Monitoring & Baseline Data

### ITEM 6 (Originally Issue 148) (Weimer)

*During the CAO review both the TAC and CAC raised issues regarding the lack of baseline data to allow the County to know whether our CAO is working to protect critical areas. During the CompPlan review the Council built some of this concern into it, and during the Planning Commission review of the CAO they included a finding of fact where they would not agree that the CAO was GMA compliant because of lack of baseline information:*

The proposed regulations for critical areas are ~~sufficient and appropriate to protect the functions and values of those areas~~ consistent with the Whatcom Comprehensive Plan and Growth Management Act.

*I am assuming that none of us want a similar finding of fact in what the Council ultimately produces. To avoid that, or in at least my case a no vote on the entire CAO, I would request that PDS brings us a plan to address this lack of baseline information. At a minimum the plan should include plans to address obtaining baseline info for wetlands, wildlife, and CARAs, and include an implementation timeline, specifics about what is needed (staffing/consultants/funding), and a proposed funding mechanism/source.*

**Staff Response:** There is no statutory requirement in the GMA to do jurisdiction-wide, long-term monitoring of the CAO's effectiveness, though the Growth Management Hearings Board in several of their decisions have indicated that doing so would be valuable. That said, staff could only find two jurisdictions (King and Snohomish counties) that have performed such a task. Both were done only once, and both received EPA grants to do so. Nonetheless, over the ensuing months after adoption of the CAO, if Council so desires, staff could develop a monitoring plan proposal (see Table 1, below). (This, along with other issues, was actually raised back in September at your first workshop as a potential follow-up issue for consideration by the Wildlife Advisory Committee.)

Just because the P/C struck the referenced words (above) from the proposed finding doesn't mean the Council can't reinsert them if they believe the practices contained within the CAO protect critical areas'

functions and values. Staff believes that it does and we urge you to do so, as it would greatly assist in any future appeals.

**Table 1. Existing & Potential Mitigation Monitoring Programs**

Tasks	Subtasks	Supports C/P Policies	Est. Add'l FTEs	Est. Cost (\$)
Development Permit Mitigation Monitoring Program	<ul style="list-style-type: none"> <li>Continuation of our current 5-year mitigation monitoring program for individual development projects</li> </ul>	10A-2, 10K-15, 10M-4, 10L-17	0.25	
Development Permit Mitigation Monitoring Program Review (adaptive management, on-going review every 2 years)	<ul style="list-style-type: none"> <li>Internal assessment of program consistency (Permit issuance + Mitigation)</li> <li>Review WDFW High Resolution Change Detection data</li> </ul>	10A-2, 10K-15, 10M-4, 10L-17		
Countywide Ecosystem Functions and Values Study (initial study)	<ul style="list-style-type: none"> <li>Hire a consultant to design the baseline analysis, develop data architecture, develop assessment data forms, and train field crew (WC staff). The baseline analysis is an on-the-ground rapid assessment to ground truth GIS data sets for ecosystem health.</li> <li>Create working relationship with Western University and citizen science community</li> <li>Use a stratified random sampling analysis for site selection in order to maintain statistical integrity. PDS would recommend 7 sites for each unique ecosystem (nearshore/offshore/sand spit, marine riparian, wetland, fresh water stream/ river, fresh water lake, grassland/prairie/AG, upland forest,); for a total of 49 sites. The Wildlife Committee has established 5 habitat categories for their report to Council; the study design would use these categories as one of the stratification levels.</li> <li>Complete Rapid Habitat Assessments for various habitats and wildlife (bird, amphibian, upland vegetation (grassland, forest (secession type), bald), streams, marine riparian, riparian, wetlands, lakes, nearshore</li> <li>GIS Vegetation Change Analysis (WDFW High Resolution Change Detection)</li> <li>Water quality conventional sampling at each site as applicable</li> <li>Wetland Prediction Model (work with Snohomish County and Skagit County)</li> <li>GIS Analysis</li> <li>Laboratory Analysis</li> <li>Citizen Scientist Workshops</li> </ul>	10A-2, 10K-15, 10K-16, 10M-4, 10L-17, 10L-18	0.25	\$250,000 – \$400,000
Countywide Baseline Ecosystem Functions and Values Monitoring Program (adaptive management, on-going review every 5-years)	<ul style="list-style-type: none"> <li>Complete Rapid Habitat Assessments</li> <li>Laboratory Analysis</li> <li>Internal assessment of program consistency (Permit issuance + Mitigation)</li> <li>Wetland Prediction Model Maintenance</li> <li>Citizen Scientist Workshops</li> </ul>	10A-2, 10K-15, 10K-16, 10M-4, 10L-17, 10L-18	0.25	\$100,000 (data management and consultant)
Additional (potential) Programs	<ul style="list-style-type: none"> <li>If we start a mitigation bank</li> <li>If we start/participate in an in-lieu fee program</li> </ul>		.75	

## Using CPAL to Address Nitrates in the Aquifer

### ITEM 7

#### Is Having High Concentrations of Nitrates in Groundwater a Significant Health Issue?

According to the literature, having high concentrations<sup>6</sup> of nitrates in drinking water (primarily from groundwater and wells in rural areas) *may* cause methemoglobinemia<sup>7</sup>, generally in infants under 6 months old. We say “may” because more current studies call in to question whether it is caused by high nitrate concentrations or bacteria:

*“The link between nitrate and the occurrence of methaemoglobinaemia was based on studies conducted in the 1940s in the midwest of the USA. In part, these studies related the incidence of methaemoglobinaemia in babies to nitrate concentrations in rural well water used for making up formula milk replacement. Comly (1945), who first investigated what he called “well-water methaemoglobinaemia,” found that the wells that provided water for bottle feeding infants contained bacteria as well as nitrate. He also noted that ‘In every one of the instances in which cyanosis (the clinical symptom of methaemoglobinaemia) developed in infants, the wells were situated near barnyards and pit privies.’ There was an absence of methaemoglobinaemia when formula milk replacements were made with tap water. Re-evaluation of these original studies indicate that cases of methaemoglobinaemia always occurred when wells were contaminated with human or animal excrement and that the well water contained appreciable numbers of bacteria and high concentrations of nitrate (Avery, 1999). This strongly suggests that methaemoglobinaemia, induced by well water, resulted from the presence of bacteria in the water rather than nitrate per se. A recent interpretation of these early studies is that gastroenteritis resulting from bacteria in the well water stimulated nitric oxide production in the gut and that this reacted with oxyhaemoglobin in blood, converting it into methaemoglobin (Addiscott, 2005).”*

Regardless of whether methemoglobinemia is caused by bacteria or nitrates, treatment of infant cyanosis is simple once the condition has been recognized. If the patient is mildly affected, then he/she must simply refrain from drinking from the contaminated well for a few days and the body will replenish the hemoglobin by itself in a few days. However, if the patient is severely cyanotic, methylene blue must be administered intravenously in a dosage of 1-2 mg/kg of body weight for a ten-minute period and improvement should be prompt.

Additionally there are simple methods to prevent this syndrome. Residents of rural areas should have their wells tested<sup>8</sup>, especially if pregnant women or infants are consumers of the well water. If the well is contaminated, other water source alternatives are other safe wells, bottled water, a new, deeper well, or a water purification

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<sup>6</sup> The Environmental Protection Agency (EPA) has set the Maximum Contaminant Level (MCL) of nitrate as nitrogen (NO<sub>3</sub>-N) at 10 mg/L (or 10 parts per million) for the safety of drinking water.

<sup>7</sup> AKA “blue baby syndrome,” a condition wherein nitrates alter a blood protein, which prevents the blood cells from absorbing oxygen and can lead to slow suffocation and death. Since 1945, there have been over 2,000 cases of infant methemoglobinemia reported in Europe and North America with 7 to 8 percent of the afflicted infants dying. **The WC Health Department is unaware of any known cases of methemoglobinemia in Whatcom County.**

<sup>8</sup> Always recommended by the WCHD

system<sup>9</sup> which is capable of removing the nitrates. It's also suggested that because cyanotic babies usually contract methemoglobinemia from the water used to prepare their formulas, formulas which use diluted whole milk are less risky than those prepared from powdered or evaporated milk which require large amounts of water in preparation. Breast feeding or the use of bottled water in formula preparation offers the safest solution, especially if the groundwater quality is unknown.

## Response to Council's Motion of June 13, 2017

At your direction, PDS staff met with John Wolpers (WCHD) and George Boggs (WCD) to address your request for additional information and methods of protecting groundwater from nitrate contamination. In your last workshop we heard broad support, if not unanimity, for an approach that incorporated the following elements:

- Raising awareness and recruiting adoption of groundwater protective measures through education and outreach,
- Afford the opportunity for landowners to take initiative in identifying and implementing protective measures,
- Should be some sort of a self-administered pollution prevention checklist and self-reporting with a feedback loop similar to how the WC Health Dept. addresses failing septic systems,
- Incorporate community and stakeholder in identifying additional measures, and
- Focus efforts, at least initially, to obtain the greatest benefit in the shortest possible time.

## Current Efforts

In thinking about next steps, we should look at current efforts to protect groundwater in order to identify potential gaps that could be filled by early actions. In your memo for your 5/30/17 workshop we provided you Table 1, Agencies with Roles in Minimizing Agricultural Impacts on the Environment, which outlined everything all the agencies are doing. Specifically in regard to protecting the aquifer against nitrates, we offer the following details of our local agencies' efforts.

### *Whatcom Conservation District*

While there are some qualified professionals that can develop farm plans, the majority are produced by the WCD.

### Conservation Farm Plans

**Type 1 (small/low intensity farms)** Groundwater is protected in these types of operations because this relatively simple plan is limited to less than 1 animal unit/acre) and the operation may not collect and apply liquid manure. In a low productivity pasture, one horse would meet from 30 to 61% of the nitrogen needed by the crop. One beef cow would meet from 35% to 84% of nitrogen needed by the crop. So, if the animals are grazed and the solid manure spread evenly across the field the grass is sure to consume all available nitrogen. None remains to be converted to nitrate and lost to the aquifer with fall and winter rains. Liquid manure requires special management in terms of capturing, storing and applying in order to avoid environmental impacts to surface and ground water. If the operator desires to do this for his/her operation then they must obtain a Type 2 custom plan.

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<sup>9</sup> Also recommended by the WCHD

**Type 3 (Dairies/Other livestock operations put under a National Pollution Discharge Elimination System Permit).** The appropriate capture, storage, and application of manure are central to these types of plans. In the case of dairies, the WA State Dept. of Agriculture (WSDA) inspects the dairy at least every other year. It monitors nutrient management records to ensure that they reflect that the manure applications have been applied at “agronomic” rates. This means that the amount and timing of the applications are to meet reasonably attained crop yields. It is estimated that as much of 70% of the dairies/large livestock operations (>200 animal units) are subject to the new Confined Animal Feeding Operation (CAFO) Permit. There are mandatory provisions of the CAFO Permit that impose additional manure management including monitoring, storage, and application. These plans can be very detailed and complex given the nature of the respective operations. There are annual reporting requirements. The WA Dept. of Ecology provides oversight along with WSDA.

**Type 2 (All other farming operations not either a Type 1 or 3).** It is the policy of the WCD to write all plans in a manner to protect critical areas. Nutrient management to protect groundwater is necessarily included in every plan, and the most current applicable guidance relative to fertilization is included. This is often drawn from Oregon and Washington Extension and the Agriculture Canada experiment station in Agassiz, BC.

### Education & Outreach

With the funding made available through its Pollution Identification and Correction (PIC) Program and Birch Bay Interlocal agreements with the County, the WCD developed and maintains a robust education and outreach program for livestock operations of all sizes and berry growers.

Please see the attached WCD 2016 report of accomplishments (provided in your 7/11/17 memo). It describes the breadth of activities taken to protect surface and groundwater.

### *Whatcom County Health Department*

#### Well Testing

The Whatcom County Health Department provides review of water availability for those seeking to develop property. When an individual well is drilled, they require testing to assure that the property will be served with safe and reliable potable water. If a contaminant (e.g., nitrate) is detected above the Maximum Contaminant Level (MCL) they require mitigation. If a MCL is detected (nitrate for instance), they require technology mitigation. The Health Department also provides education to property owners on proper operation and maintenance of the technology.

The Group B regulations (those public water systems serving less than 15 connections) now require all proposed new systems developed to not exceed primary contaminant levels or they cannot be developed for use and must find an alternate source for potable water. Systems already in existence with high levels of nitrates require mitigation that can either be at the source or point of use.

#### OSS Self-Certification Process

On-site sewage systems (OSS) must be evaluated regularly in order to work properly. State and local regulations require gravity OSS be evaluated every three years and all other system types annually. The OSS owner is responsible for properly operating, monitoring, maintaining their OSS. Whatcom County Health Department (WCHD) licenses operation and maintenance (O&M) specialists that can provide this service to OSS owners. WCHD also allows homeowners to perform their own OSS evaluation. Homeowners can perform their

own evaluation after attending an in-person WCHD sponsored homeowner workshop or completing the on-line homeowner training. Once a property owner has been certified, they complete the evaluation and submit a report to WCHD. The following items must be included, or the report will not be accepted:

- Photos of exposed septic tank and outlet baffle
- Site sketch of OSS if no permit is on file
- Certification form
- Must be submitted within 30 days of evaluation

Staff performs audit inspections of homeowner evaluations that are submitted to verify completeness and accuracy. If during the audit process an OSS owner is found to have not completed the evaluation or misrepresented an OSS failure, the OSS owner's certification is revoked and all subsequent evaluations must be completed by a licensed professional. Homeowners are not eligible to conduct evaluations for the following:

1. OSS with proprietary components
2. Community drainfields
3. Nonconforming replacement OSS installed as a result of a failing system
4. Food establishment
5. Property transfers

### ***Washington State Department of Health***

The Washington State Department of Health requires Group A public water systems (greater than 15 connections) to submit sampling on a scheduled basis. If a maximum contaminant is found, there are options to address through blending sources or technology treatment.

### **Additional Background Information**

In addition to agriculture there is a multitude of potential sources of nitrate in the groundwater. These include onsite septic systems, nutrient management practices in the Lower Fraser River Valley of B.C., residential lawn fertilizers, and the natural environment. An onsite septic system (OSS) can generate between 6 and 17 grams of total nitrogen (N) per person per day (2002 EPA study). The calculated loss of N for residences in the Yakima Ground Water Management Area ranged from 195 to 225 lbs. of nitrogen per year. Soils greatly affect the rate of nitrogen loss. There is an estimated 27,000 OSS in rural Whatcom County. In a 2010 study the EPA identified Red Alder as a significant source of nitrate in two Oregon coastal river systems. (See [https://cfpub.epa.gov/si/si\\_public\\_record\\_report.cfm?dirEntryId=230765](https://cfpub.epa.gov/si/si_public_record_report.cfm?dirEntryId=230765)). These are mentioned to perhaps temper the expectation that we can be successful in achieving the desired quality of groundwater in a piecemeal manner.

### **Conclusion**

It is important to note that the latest overall nitrate trend in well data from 2010 (31 wells) to 2016 (20 wells) monitored by Ecology has dropped and remained below the 10ppm MCL, though some individual wells near Lynden are still of concern. Of the 2016 data, only 5 of 20 wells are above 10 ppm and trending up. Four additional wells are slightly below 10 ppm. (See Attachment A)

Two conclusions flow from this. First, the current program of regulatory compliance, monitoring, education, outreach, and technical assistance must have some palpable efficacy to see this kind of improvement. Second,

there is opportunity for improvement but most likely focused on the limited geographic areas in the north County where the nitrate issue is most acute.

## Options for the Future

### *Near Term*

The County could:

- **Conduct a targeted education and outreach program.** The twenty wells that Ecology has and continues to monitor could serve as a basis for identifying affected landowners. Messaging could be tailored to generators of nitrogen and consumers of private wells. The WCD, WC Health Dept., and WSU Extension could coordinate and collaborate on messaging. Goals would be to reduce nitrogen contribution to groundwater and ensure that those whose source of potable water is from private wells regularly test their water to avoid potential adverse health impacts.
- **Improve coordination of groundwater quality monitoring** and remediation strategies among the Department of Ecology, Department of Health, Whatcom Conservation District, WC Health Department, and WC Planning and Development Services.

### *Intermediate Term*

The County could:

- **Support the Nooksack-Abbotsford-Sumas Transboundary Study.** Nearly 30 organizations are collaborating on a nitrogen assessment for the Lower Fraser River Valley and Whatcom County. This is one of six multi-national pilots in the World that is looking at managing nitrogen more effectively to avoid environmental impacts such as too much nitrate in groundwater. Ostensibly, the assessment and solution development will include the community, stakeholders, and agencies. (See Attachment B). One recommendation could be to evaluate whether or not the County should form a Ground Water Management Area (GWMA) and/or Aquifer Protection Area (APA) as provided under State law.
- **Conduct/seek an assessment of potable water wells** that could inform the delineation of boundaries for a future groundwater management area.

### *Longer Term*

The County could:

- **Create a Ground Water Management Area** pursuant RCW 90.44.400 and WAC 173-100<sup>10</sup>. This statute lays out a process for publicly delineating boundaries then studying the aquifer using an advisory committee made up of stakeholders, the County, and the Department of Ecology. From this would be the development of a groundwater management plan that could identify solutions and funding sources, which can then be used by agencies with jurisdiction (i.e., the County) to develop the appropriate remedies and regulations. For information on the Yakima GWMA see <http://www.yakimacounty.us/541/Groundwater-Management-Area>.
- **Create an Aquifer Protection Area** pursuant to RCW Chapter 36.36. This statute allows for the creation of aquifer protection areas to finance the protection, preservation, and rehabilitation of subterranean

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<sup>10</sup> See Attachment C – *State Mechanisms for Groundwater Protection*

water, and to reduce other special assessments imposed upon households to finance facilities for such purposes. Revenue is collected from fees assessed for withdrawals from the aquifer.

Using either or both of these mechanisms seems to address the key components of a desired program that Council addressed in their motion.

## Lahar Hazard Zones

### ITEM 8

The Mount Baker Bibleway Camp submitted a comment letter to Council dated 7/14/17 regarding concerns with the proposed lahar regulations. Mark Personius met with them last week to allay their fears, explaining that the more specific regulations of 16.16.350 (Volcanic hazard areas – Standards) would trump the general standards of 16.16.320 (Geologically hazardous areas – General standards). However, given that 16.16.350(B)(2) says “Subject to WCC 16.16.320(A, B, and C)” the Camp is still concerned that staff could use that section to minimize risks, avoid impacts, protect human life, or worse case, deny a project, contrary to Council’s intent.

Staff is concerned with removing the “subject to...” language, as there are many properties in the lahar zone where these could be implemented without affecting someone’s ability to use their property and make for a safer development. And were the Camp to expand, staff really doesn’t see a problem with applying 16.16.320(A) or (C): the County should be able to condition a permit to reduce hazards (such as adoption of an emergency evacuation plan), and if someone owns a large enough property to build out of the hazard area, then logic dictates that option should be evaluated. The Camp is more concerned with the last sentence of 16.16.320(B), “For some geologic hazards, impact avoidance may mean no development will be permitted on a property,” fearing that staff would use this to deny an expansion of their Camp (even though 16.16.350(B)(2)(a) says that expansion of legal nonconforming uses is allowed).

To address this concern, staff recommends the following minor revision:

#### **16.16.320 Geologically hazardous areas – General standards.**

In addition to the applicable general protective measures found in WWC 16.16.265, the following requirements shall apply to all activities in geologically hazardous areas:

- A. **Generally.** New developments shall be located and/or engineered and constructed to reduce risks to life, health, safety, and buildings, and not increase potential for landslides or erosion that could impact either other properties, public resources, or other critical areas. The County may impose conditions on development activity in a geologically hazardous area as needed to:
1. Protect human life and safety; and
  2. Minimize the potential for property damage related to seismic events, erosion and/or landslides;
  3. Minimize the need for stream or river bank or coastal bluff stabilization in the future;
  4. Reduce public liabilities for damages associated with geologic hazards.
  5. Protect slope stability and minimize erosion, seismic, and/or landslide hazard risks;
  6. Maintain natural sediment and erosion processes that are integral to the health and sustainability of freshwater and marine ecosystems as well as minimizing impacts to stream, river, and coastal processes such as channel infill, channel migration, sediment transport, or flooding;

- B. **Impact Avoidance.** Impact avoidance measures shall include, but not be limited to, locating the use/development outside of the hazard area, reducing the number, size or scale of buildings, driveways and other features; altering the configuration or layout of the proposed development; implementing special engineering methods for construction, drainage, runoff management etc.; foregoing construction of accessory structures; preserving native vegetation; and other feasible protective measures as determined by an alternatives analysis. For some geologic hazards, except for lahar hazard zones, impact avoidance may mean no development will be permitted on a property.
- C. **Location of Alterations.** New development shall be directed toward portions of a parcel or parcels under contiguous ownership that are not subject to, or at risk from, geological hazards and/or are outside any setback or buffer established by this Chapter.

**16.16.350 Volcanic hazard areas – Standards.**

**B. Lahar Hazard Zones.**

1. Subject to WCC 16.16.320(A, B, and C) and WCC 16.16.265, the following uses are allowed in any volcanic hazard areas:
  - a. Single-family residences and duplexes.
  - b. Accessory structures not involving human occupancy.
  - c. Sewer collection facilities, communication facilities, and other utilities that are not likely to cause harm to people or the environment if inundated by a lahar. Underground utilities such as pipelines shall be allowed if demonstrated through a geotechnical analysis to be sufficiently buried as to not likely be damaged by scour caused by a lahar.
  - d. Agricultural and forestry uses not including human habitation.
2. Subject to WCC 16.16.320(A, B, and C) and WCC 16.16.265 (except subsection (D) when located wholly within a lahar hazard zone), the following uses may be allowed in volcanic hazard areas subject to the submittal and approval of a Volcanic Hazard Emergency Management Plan meeting the requirements of subsection (B)(3); however, this requirement may be waived for properties located in an area with an estimated lahar arrival time of more than 60 minutes. The County will maintain travel time projection maps to estimate lahar approach times.
  - a. Expansion of legal nonconforming uses meeting criteria of WCC 16.16.270 and WCC 20.83.
  - b. All other uses allowed per the property’s zoning district.
3. Where required by subsection (B)(2), a Volcanic Hazard Emergency Management Plan shall be submitted for approval and meet the following requirements:
  - a. Is consistent with and integrated into a community emergency plan maintained by the Sheriff’s Office of Emergency Management.
  - b. Includes an emergency evacuation plan.
  - c. Is required to be updated every 5 years.
  - d. Evacuation route maps must be posted on the premises.

The Camp is also concerned with 16.16.265(D) (Critical areas protective measures), in particular the requirement to have a building setback from a geohazard setback.

**16.16.265 Critical areas protective measures.**

When an impact to critical area or a buffer will occur due to a proposed development, a standard buffer width has been altered, or mitigation is required, one or more of the following protective measure shall be applied:

- D. **Building Setback.** The County shall require buildings and other structures to be set back a minimum distance of 10 feet from the edge of a geological hazard setback, a critical area buffer, or from the critical area where no buffer is required. The following uses are allowed in the building setback:
  1. Landscaping;
  2. Uncovered decks;

3. Building overhangs 18 inches or less;
4. Impervious surfaces such as driveways, parking lots, roads, and patios; provided, that such surfaces conform to the applicable water quality standards and that construction equipment does not enter or damage the buffer or critical area;
5. Clearing and grading;
6. Wells.

The reason for a 10-foot setback from a critical area buffer is to give homeowners room to maintain their structures without having to disturb the buffer. For example, if a home was built right up to a wetland buffer, then when it was time to paint, the ladder and all the painting equipment would need to be placed in the buffer and vegetation would probably need to be disturbed or removed to access it. The point of this section is to protect the buffer from future impacts. In this update the term “geological hazard setback” was inserted in 16.16.265(D) because in Article 3, geohazard “buffer” was changed to “setback” (the geologists arguing that it’s not a buffer per se, as we’re not trying to protect the geohazard as we are with other critical areas, but rather life and property). The existing code still refers to geohazard buffers, so the language in WCC 16.16.265(D) still applies to geohazards. It’s just a matter of semantics.

The Camp was told that where an entire property falls within a lahar hazard zone there wouldn’t be a geological hazard setback, and thus this 10-foot setback wouldn’t be applied. Nonetheless, staff suggests adding that specification to WCC 16.16.350(B)(2), as shown above.

# DOE EIM Well Data

Analyzed 6/11/2017

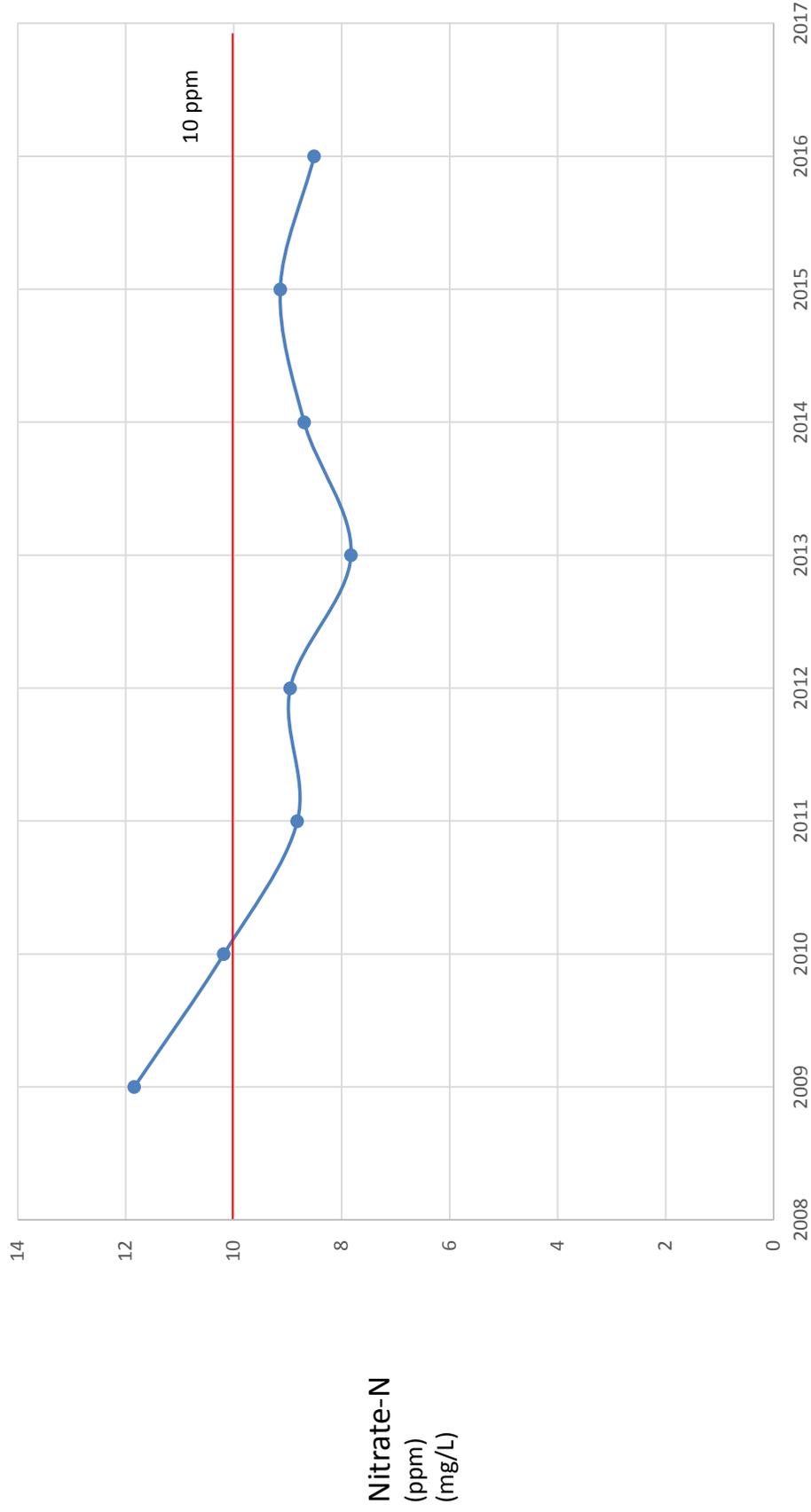
Data set from ongoing study.

# Average of All Wells

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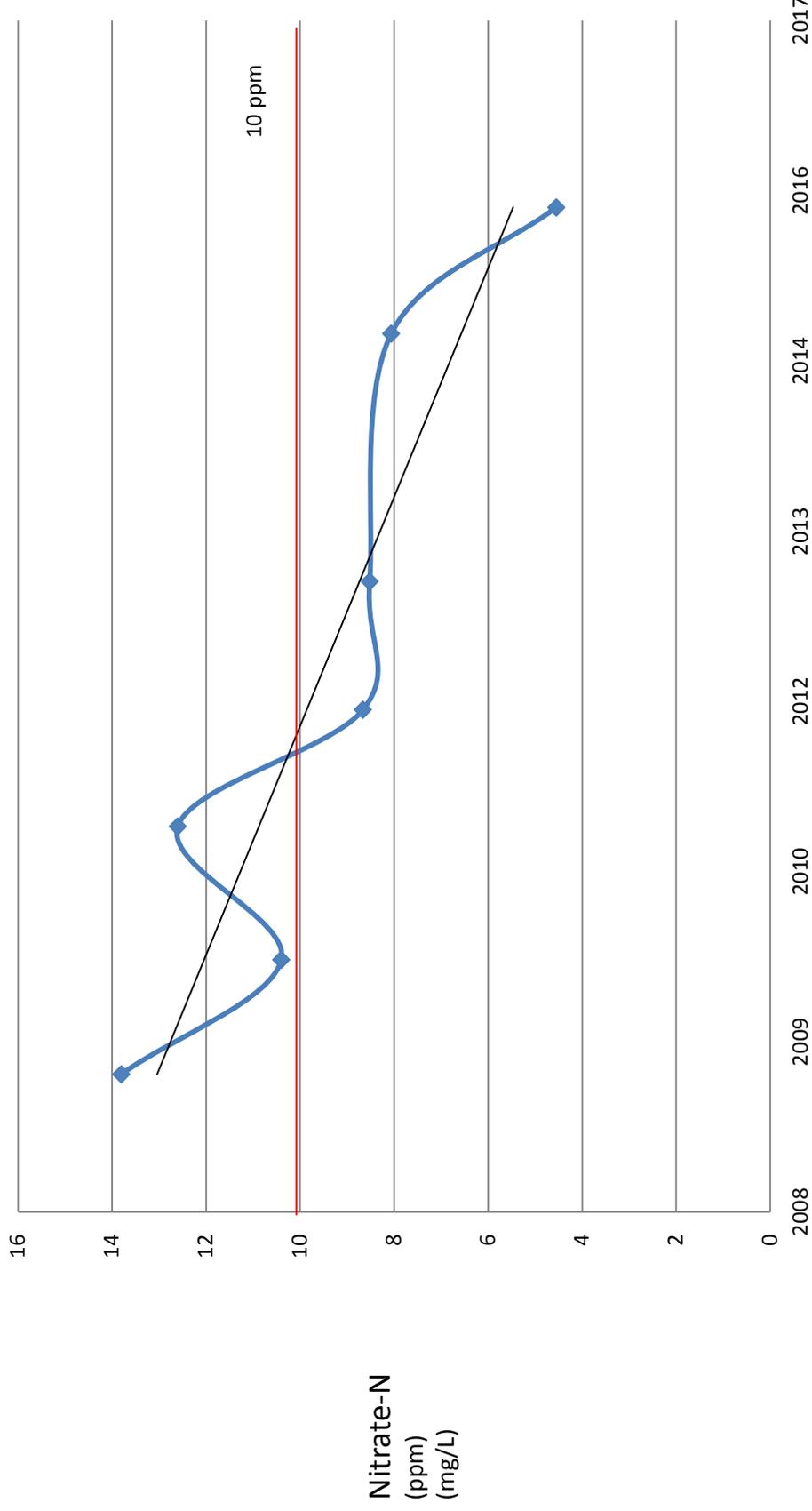
Recent Trend Down

Below 10ppm Yes



# ABO112

Trend line Down      Recent Trend Down      Below 10ppm Yes



# AGO409

Trend line

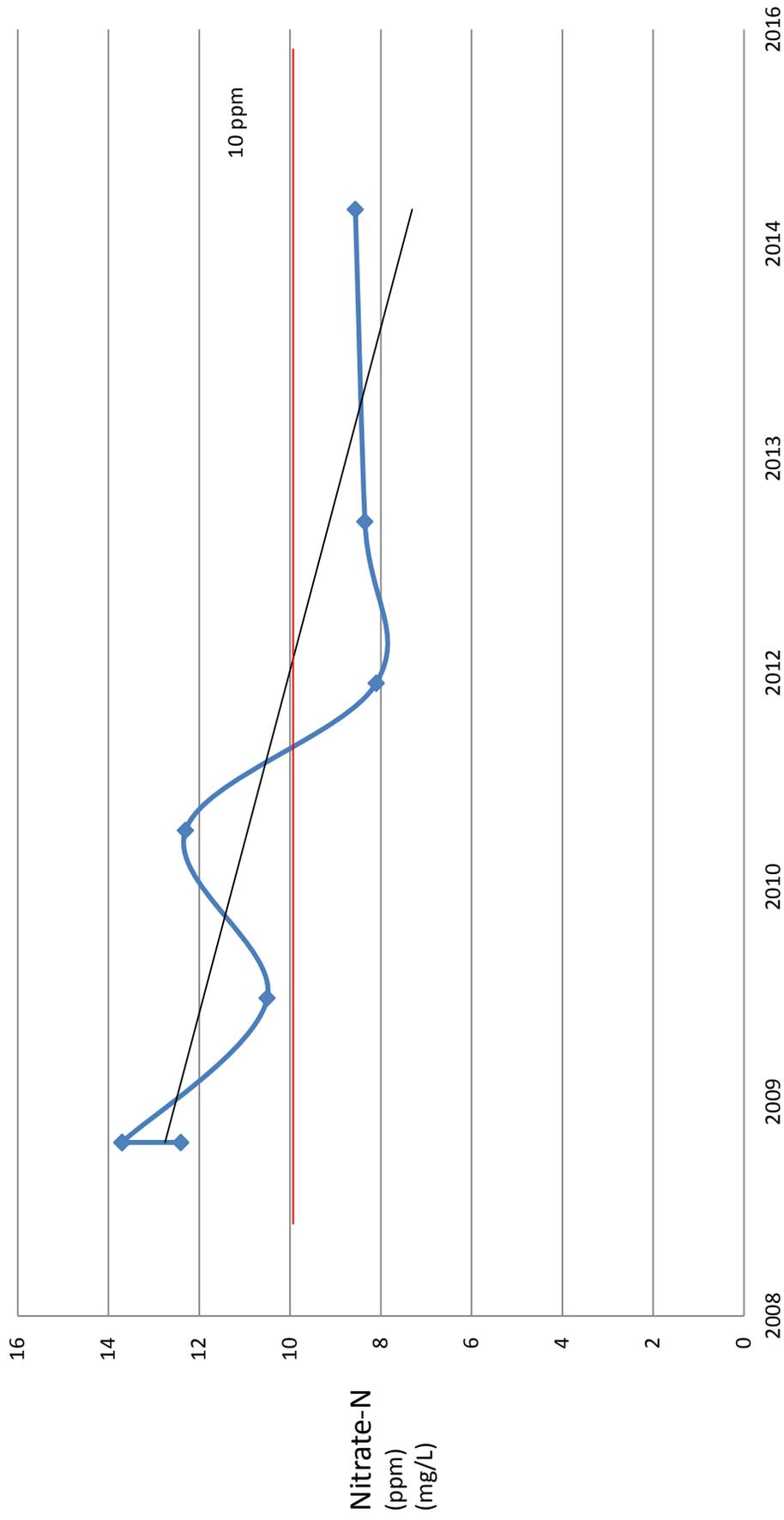
Down

Recent Trend

Up

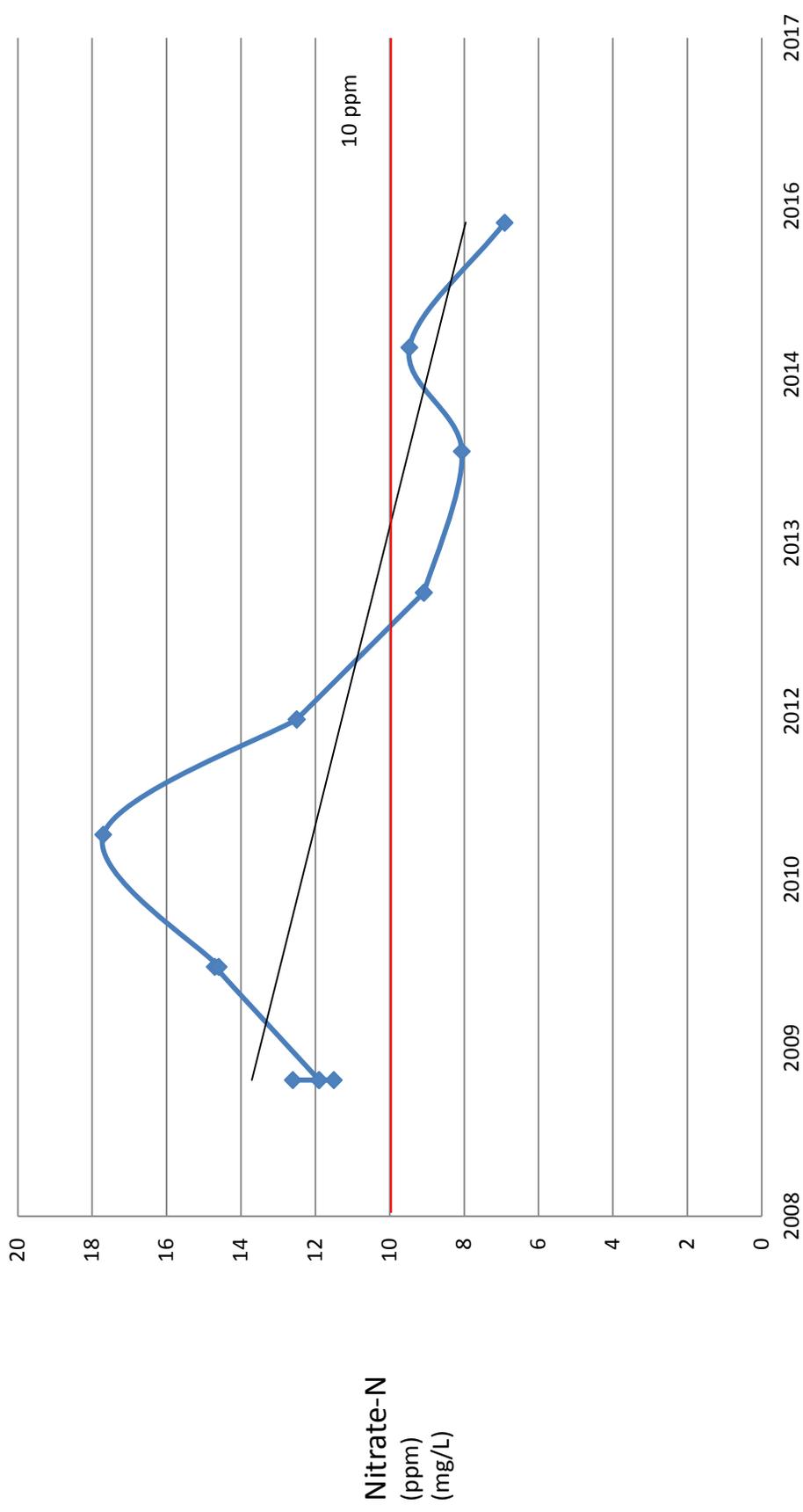
Below 10ppm

Yes



# BCS970

Trend line Down      Recent Trend Down      Below 10ppm Yes

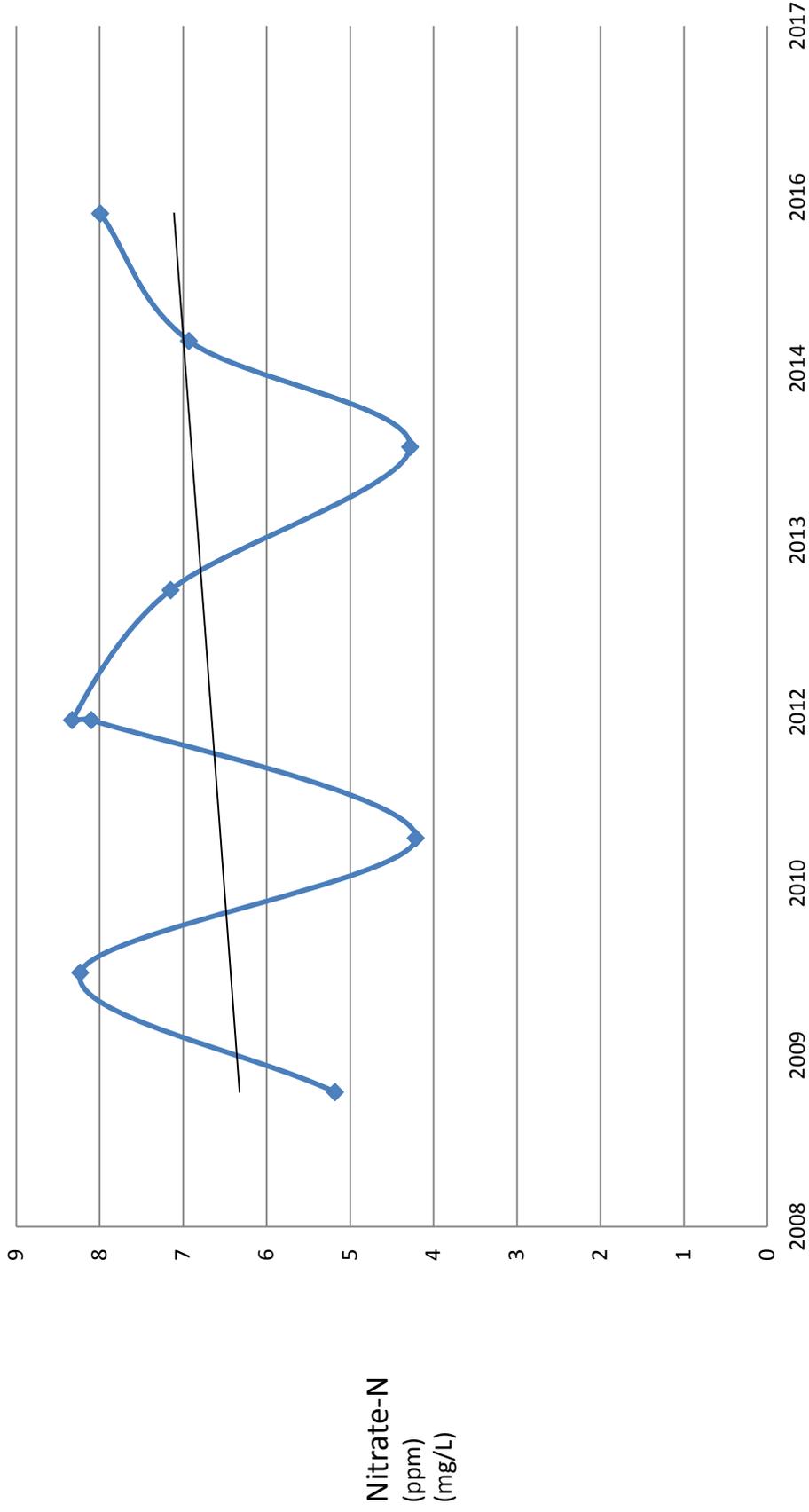


# BCS966

Trend line Up

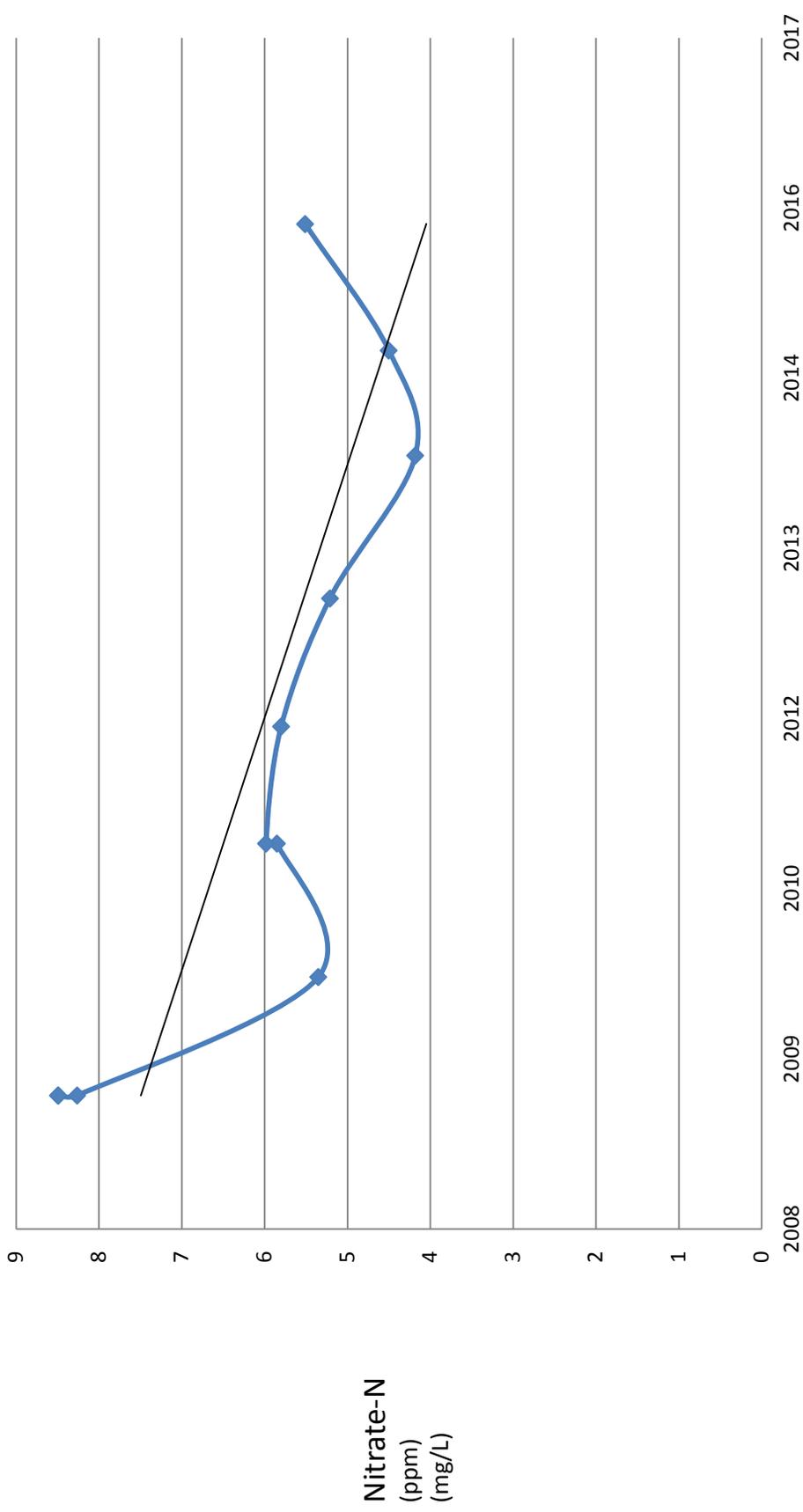
Recent Trend Up

Below 10ppm Yes



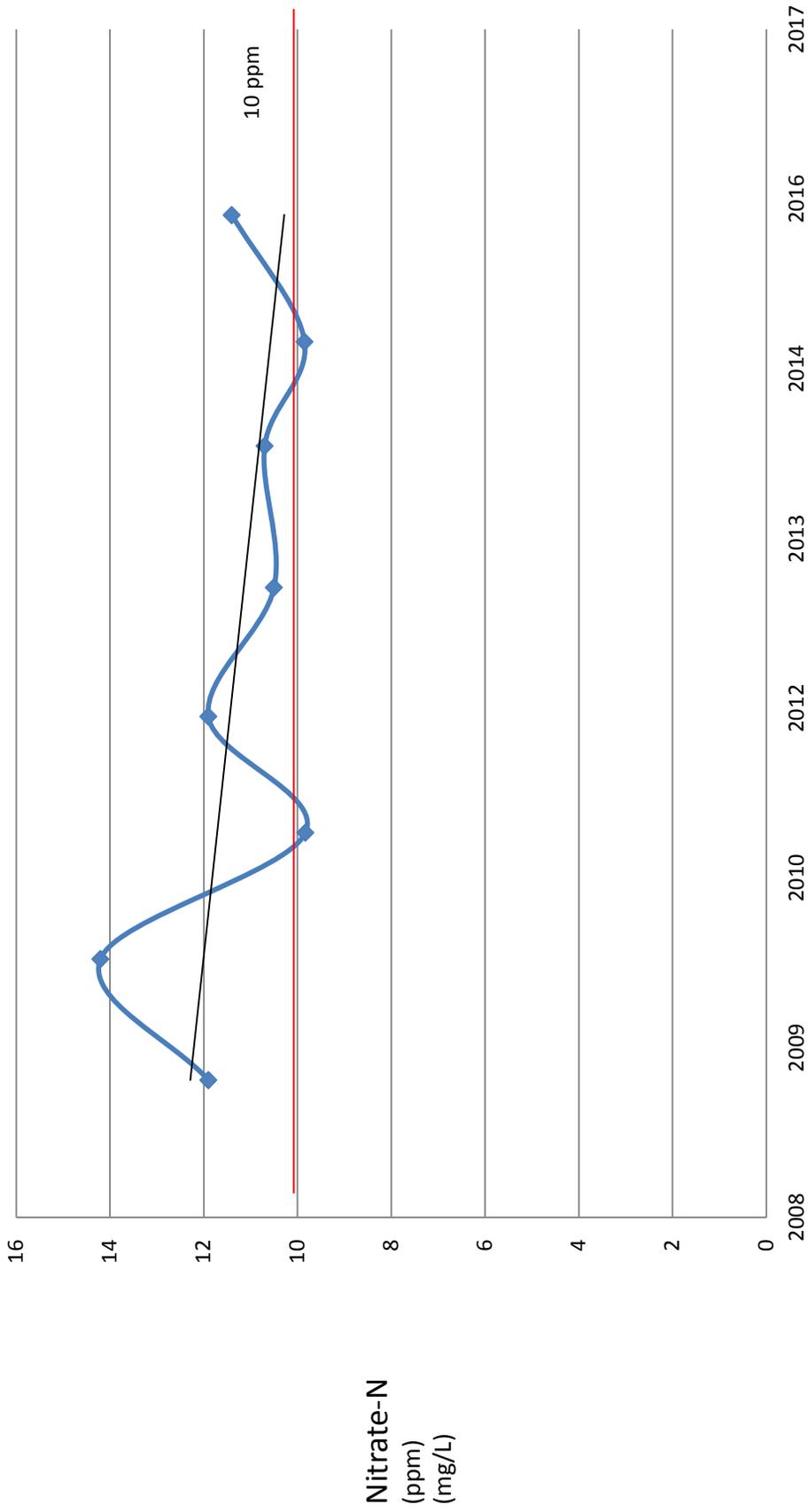
# BCS967

Trend line Down      Recent Trend Up      Below 10ppm Yes



# BCS973

Trend line Down      Recent Trend Up      Below 10ppm No

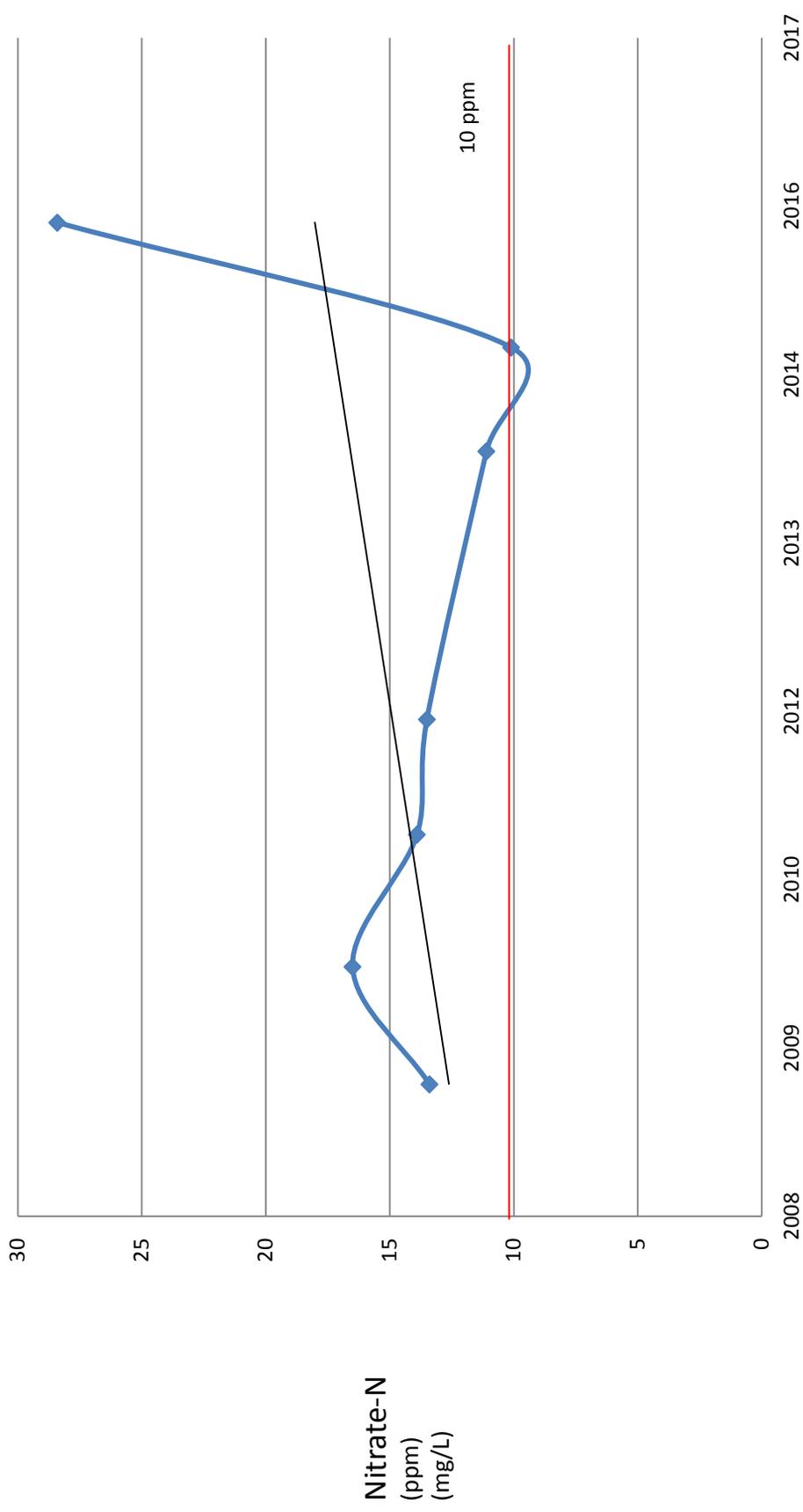


# BCS968

Trend line Up

Recent Trend Up

Below 10ppm No

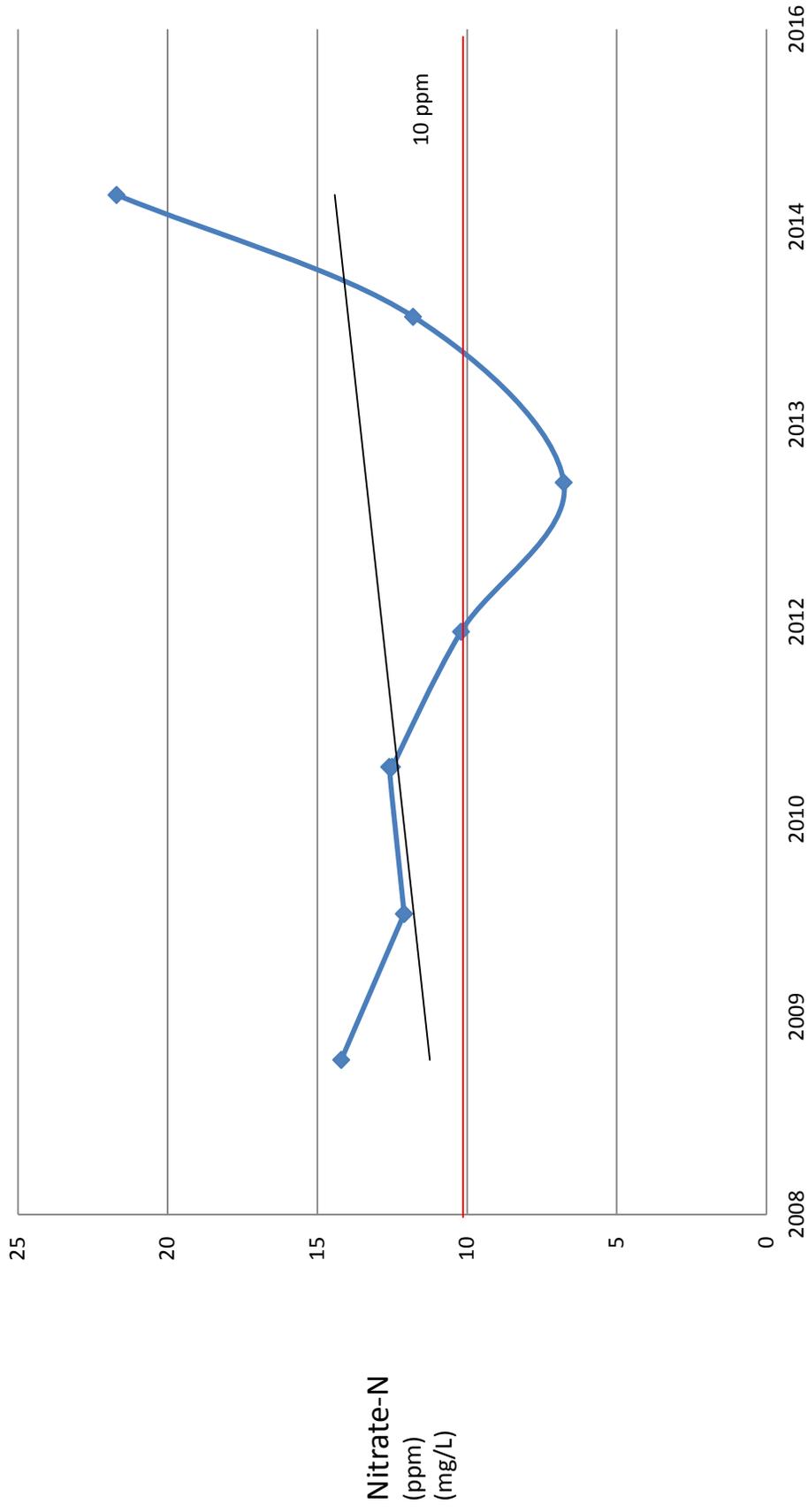


# BCS965

Trend line Up

Recent Trend Up

Below 10ppm No

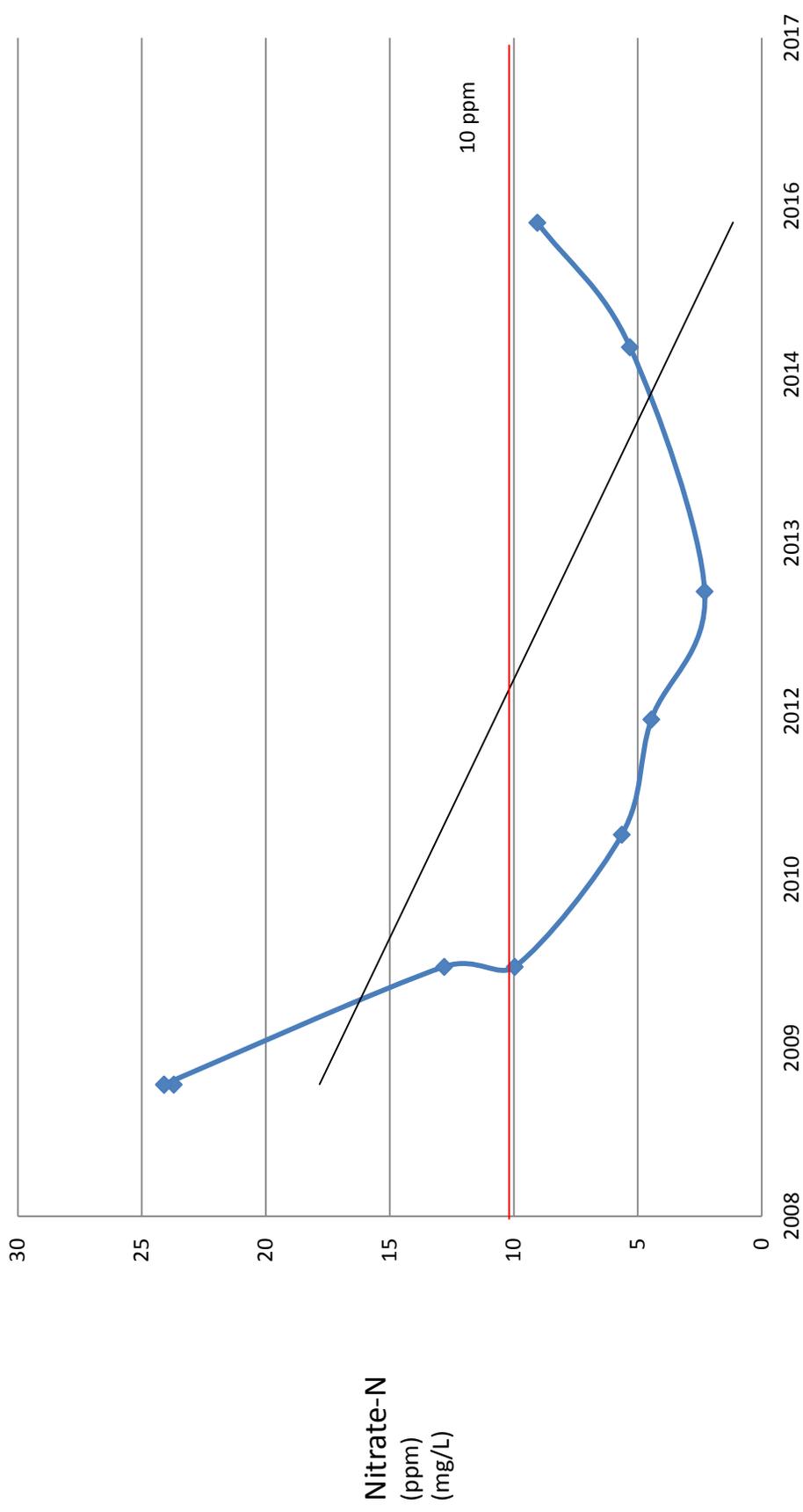


# BCS964

Trend line Down

Recent Trend Up

Below 10ppm Yes

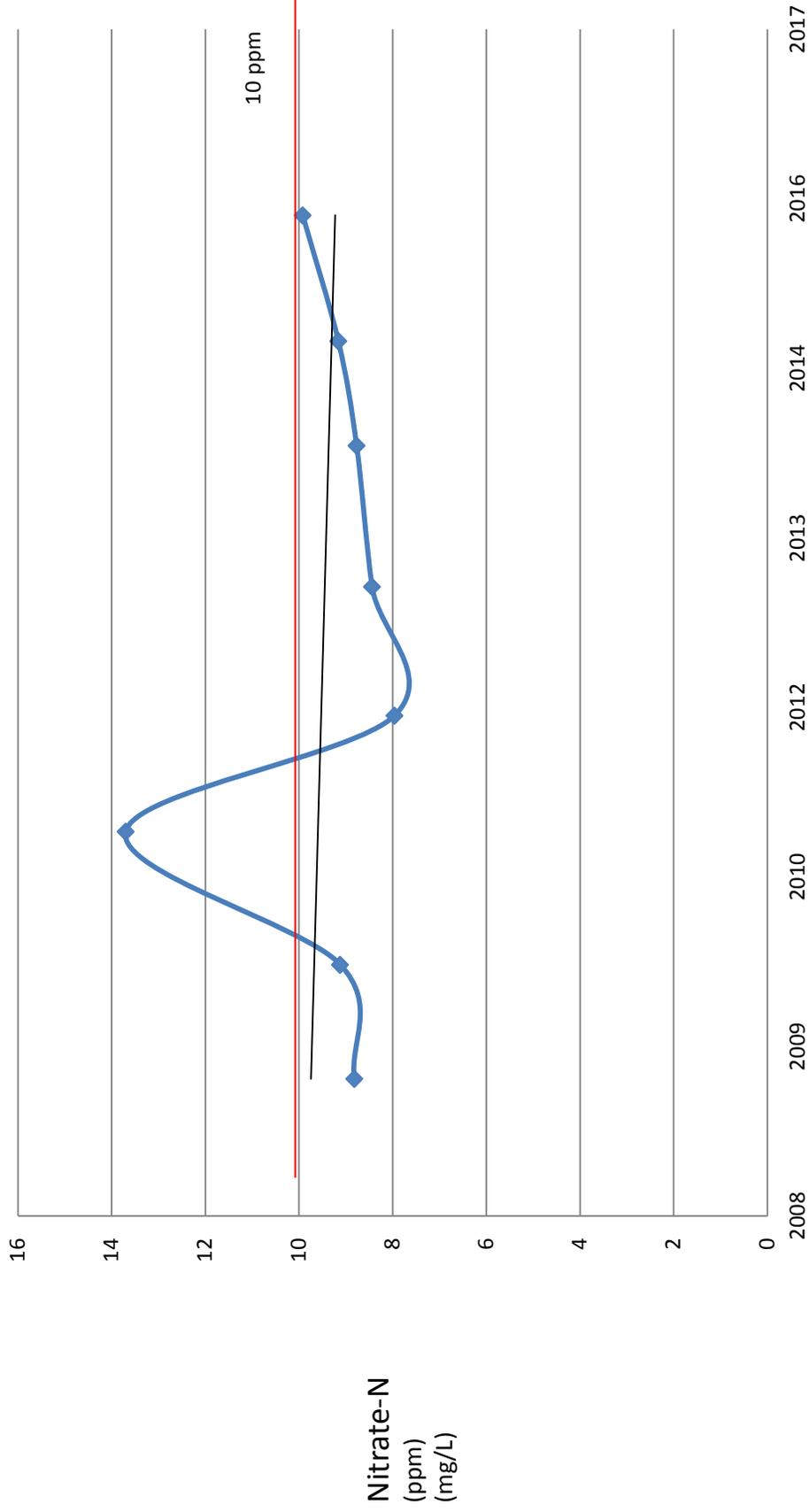


# BCS972

Trend line Down

Recent Trend Up

Below 10ppm Yes

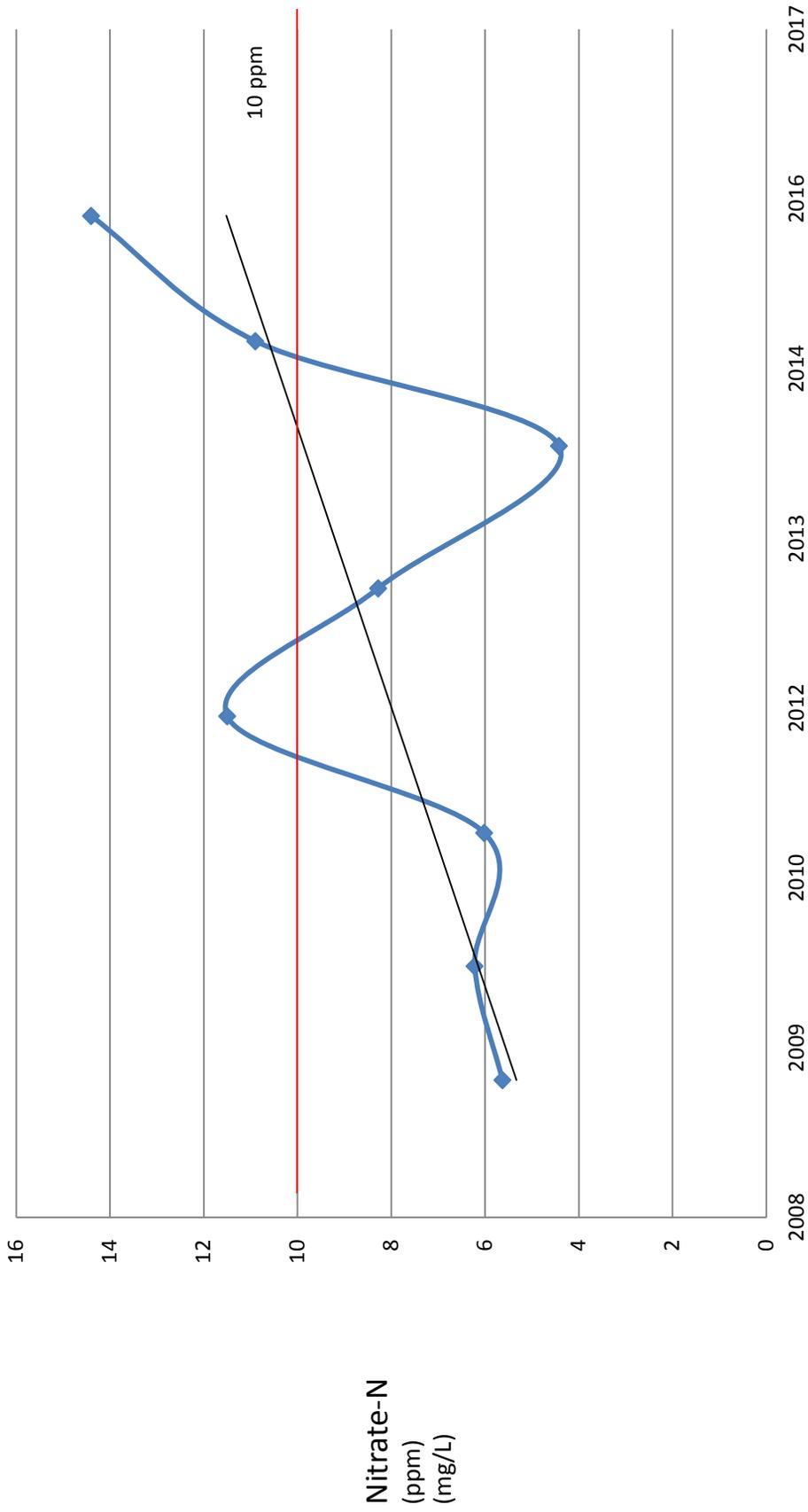


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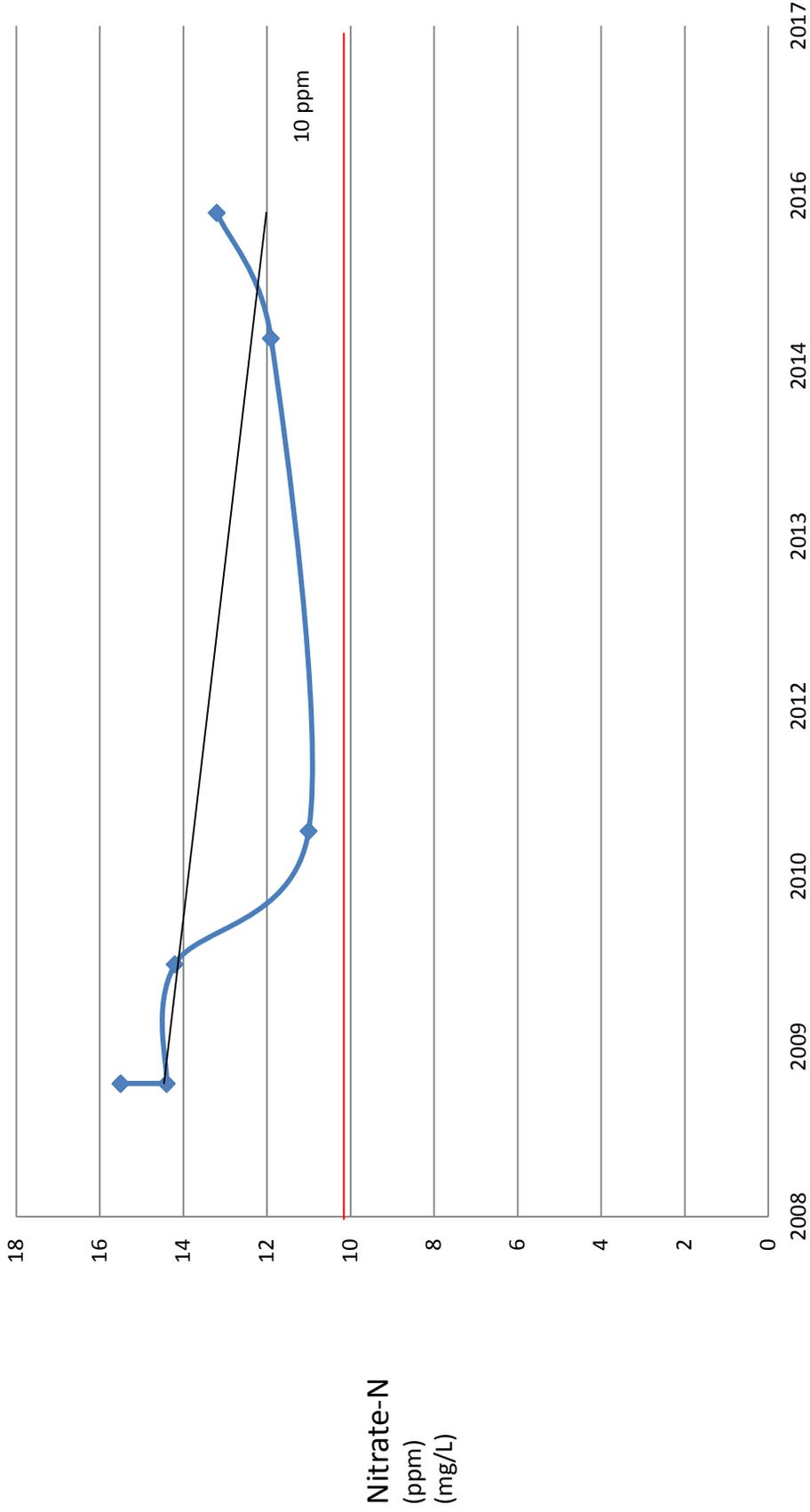
Recent Trend Up

Below 10ppm No



# BCS960

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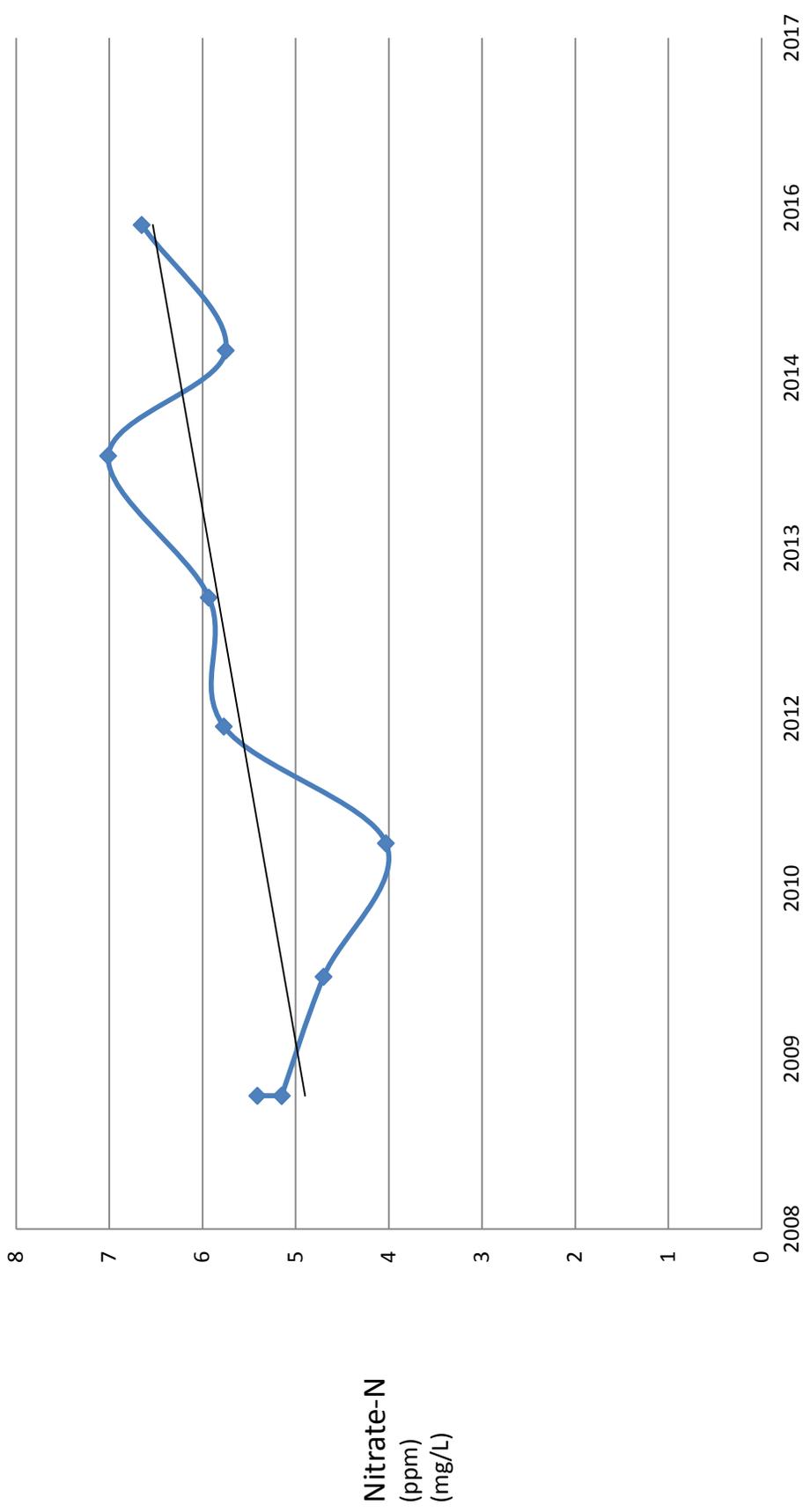


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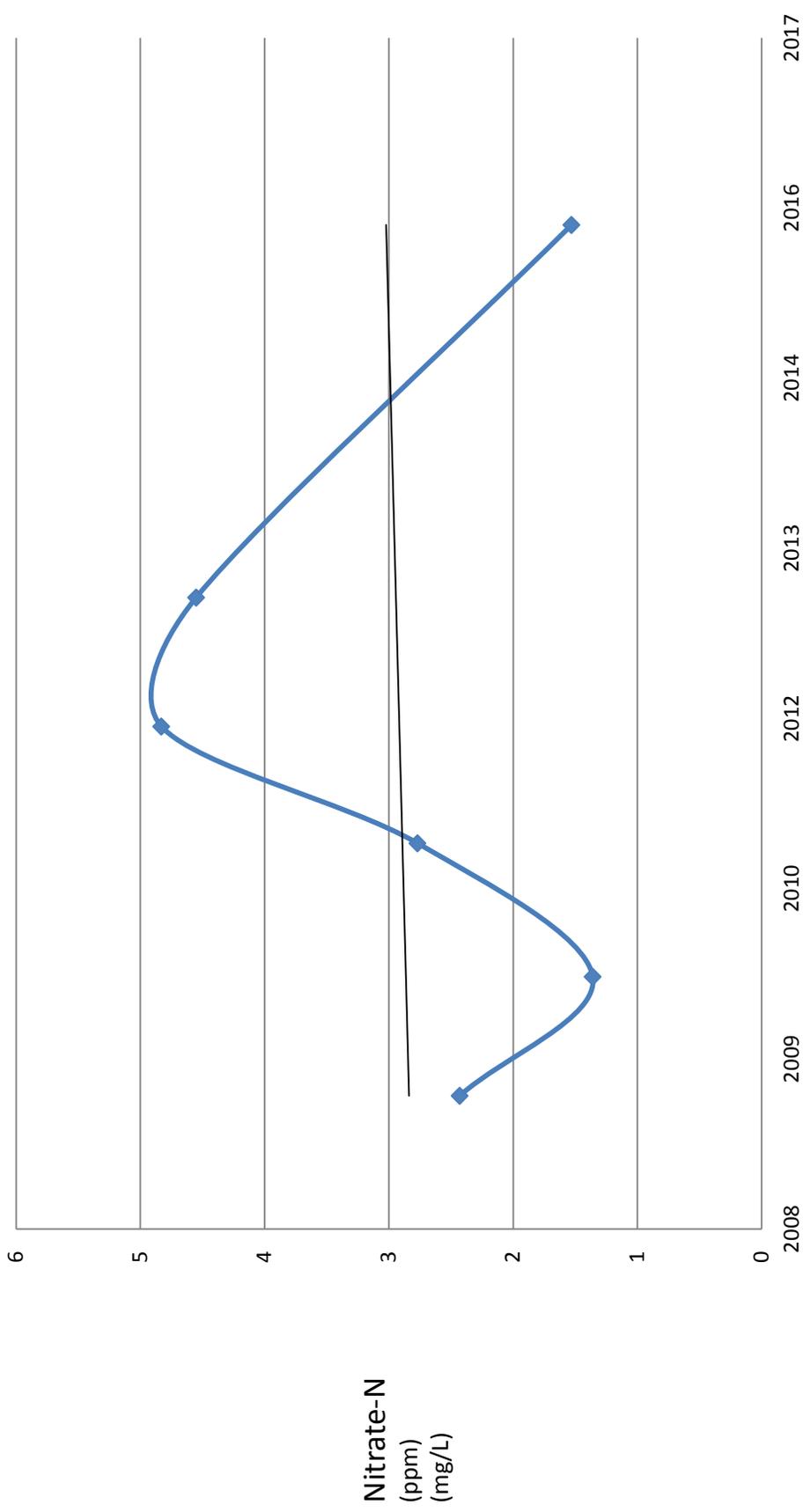
Recent Trend Up

Below 10ppm Yes



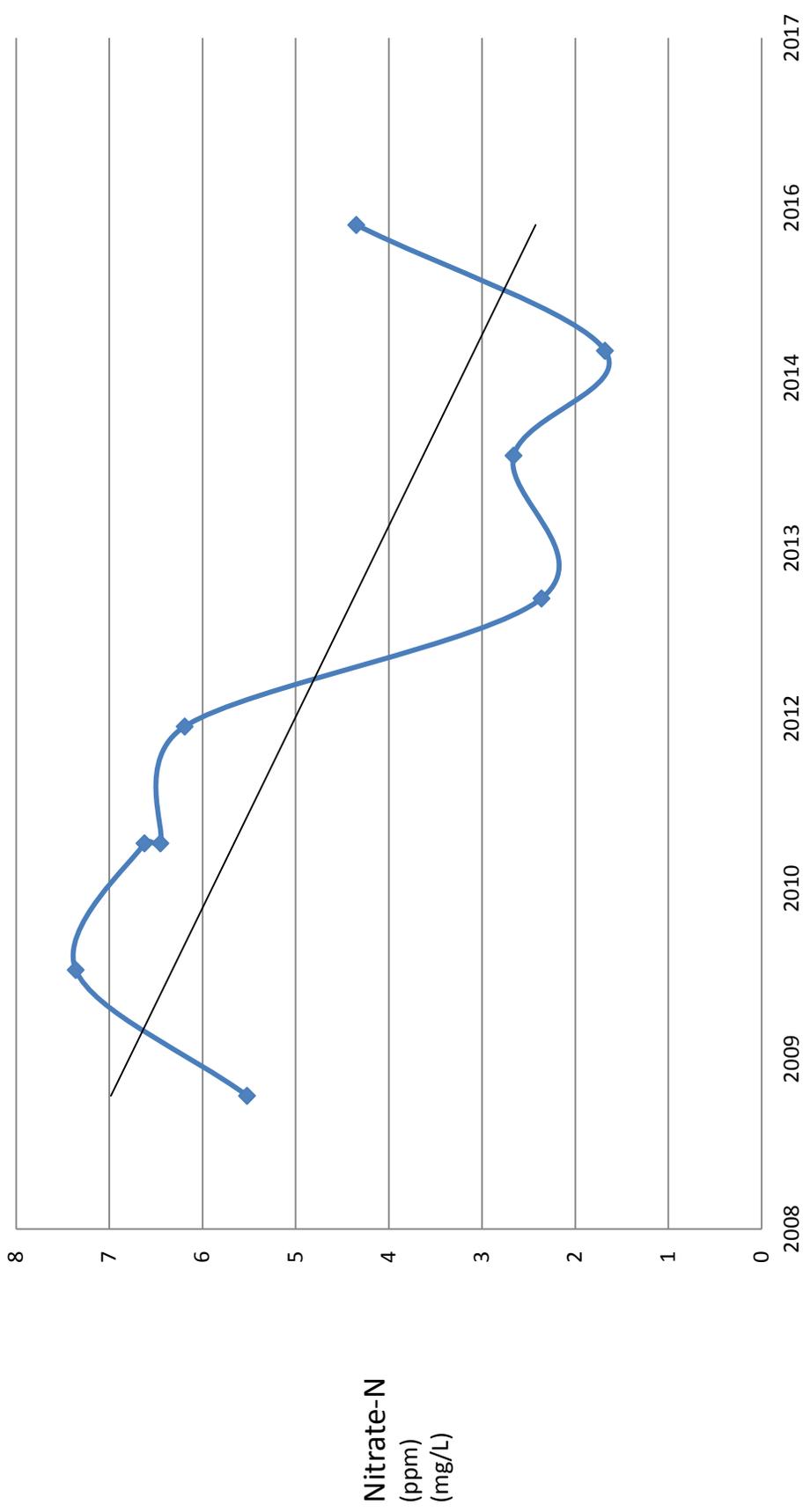
# BCS958

Trend line    Up    Recent Trend    Down    Below 10ppm    Yes



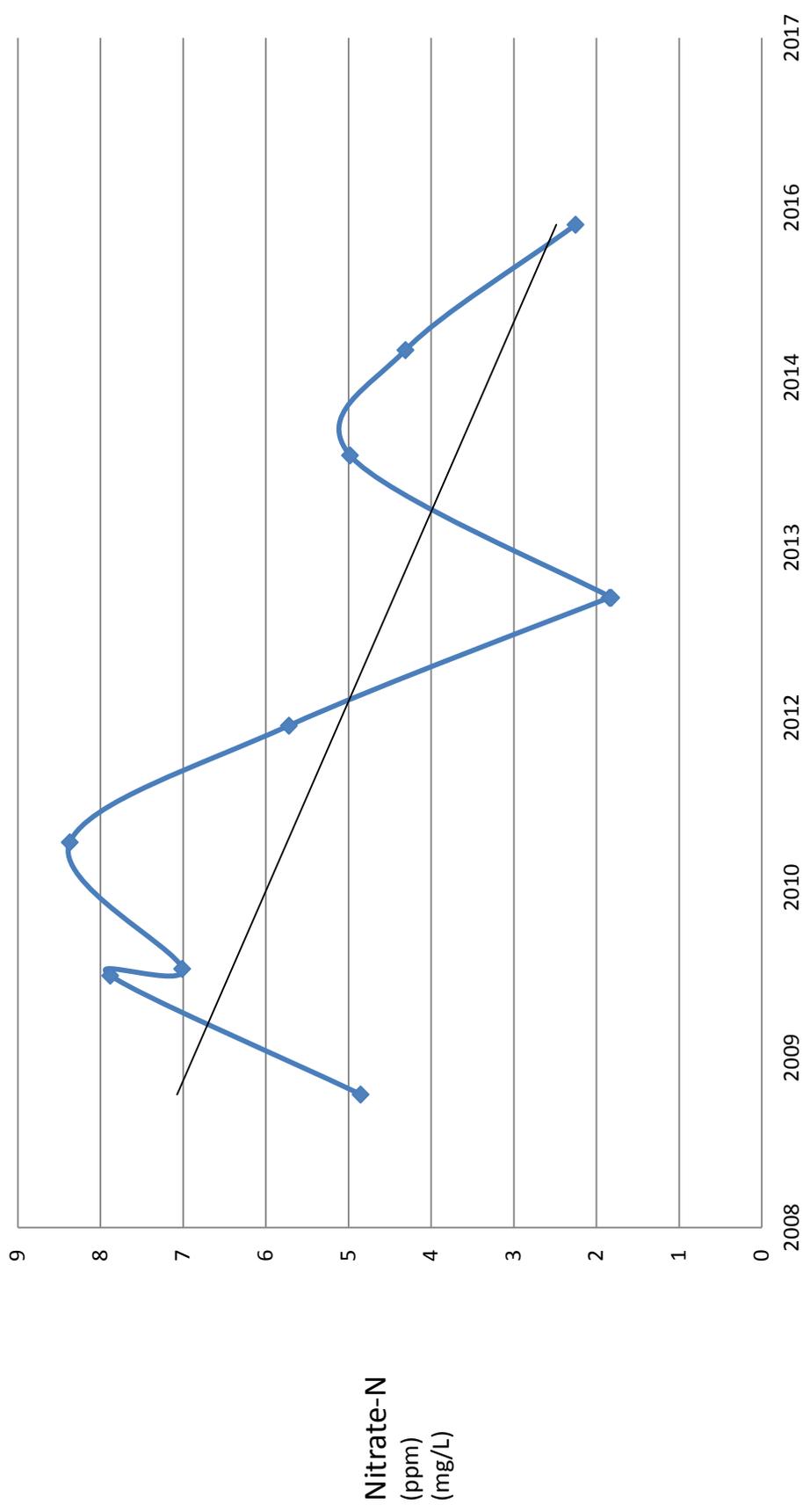
# BCS963

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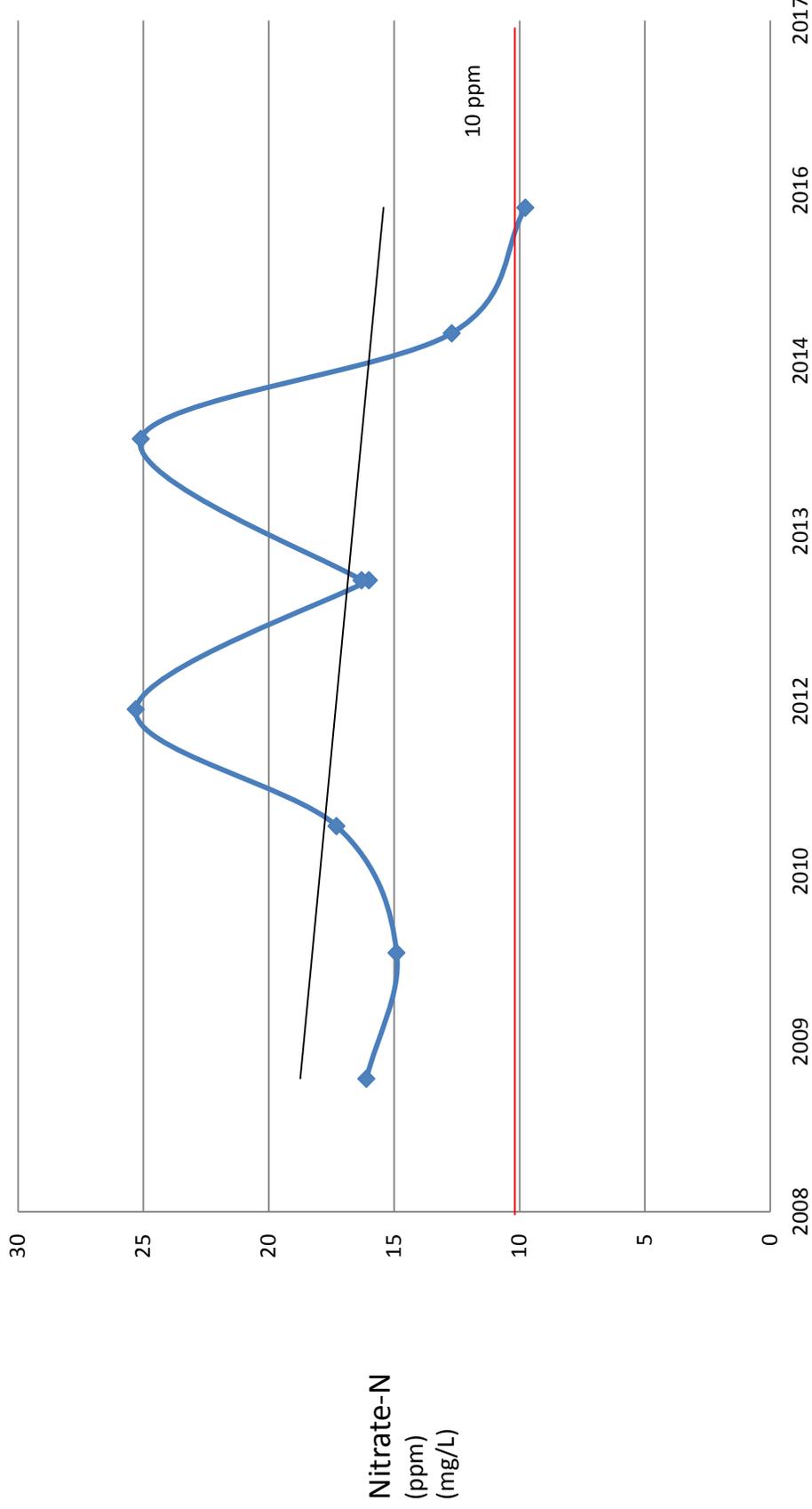
# BCS961

Trend line Down      Recent Trend Down      Below 10ppm Yes



# BCS962

Trend line Down      Recent Trend Down      Below 10ppm Yes

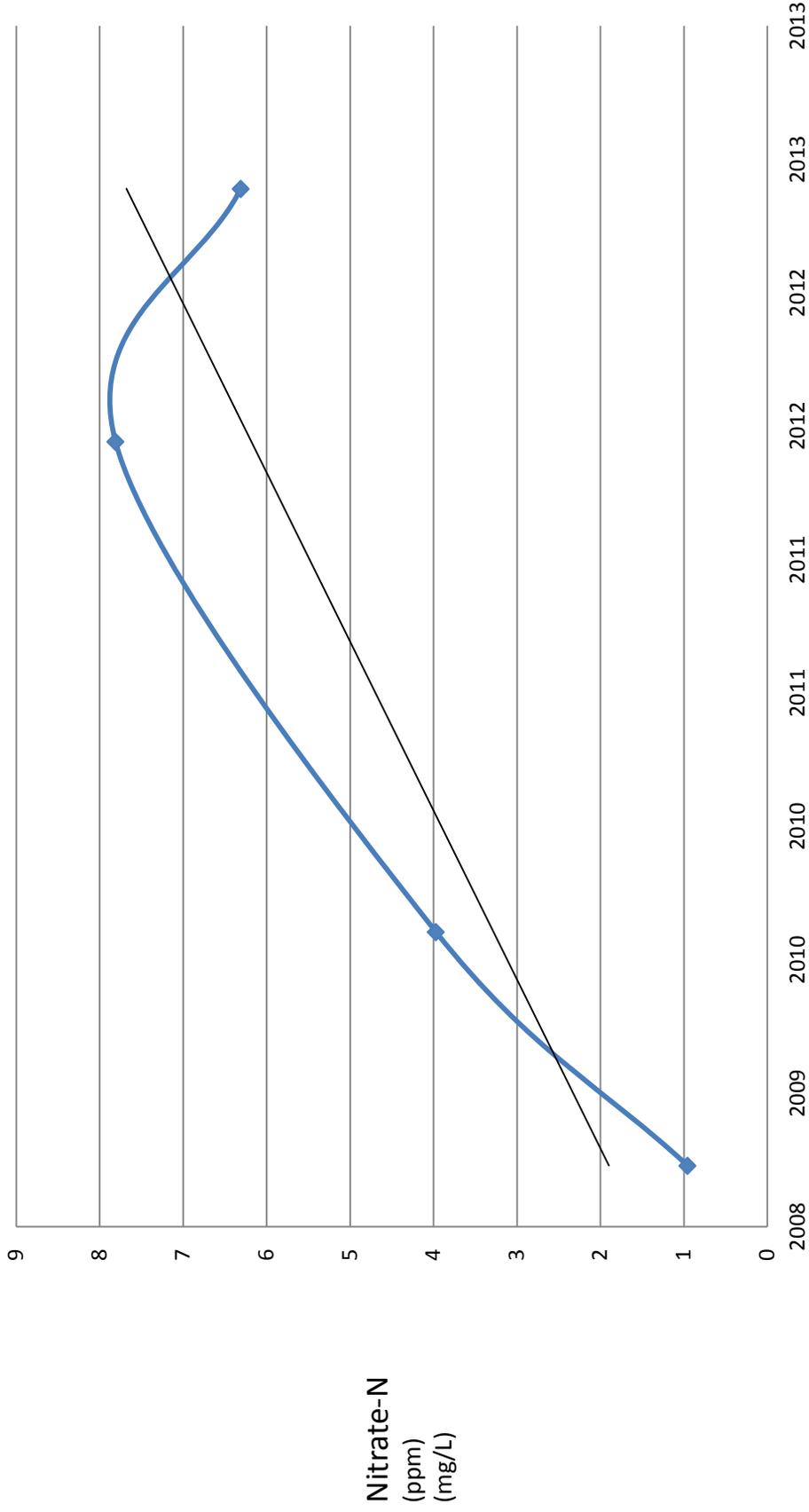


# BCS957

Trend line  
Up

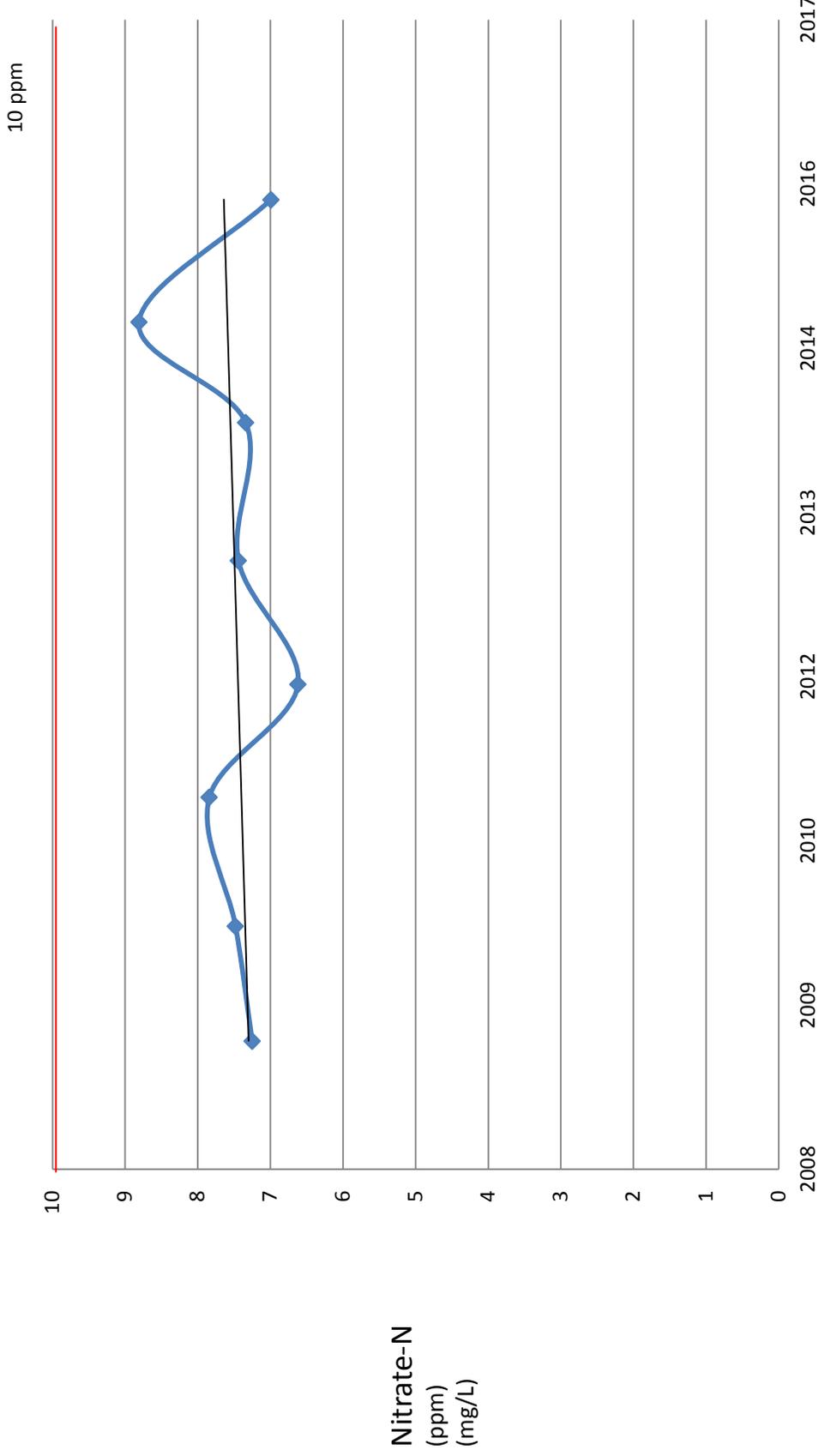
Recent Trend  
Down

Below 10ppm  
Yes



# BCS951

Trend line Up      Recent Trend Down      Below 10ppm Yes

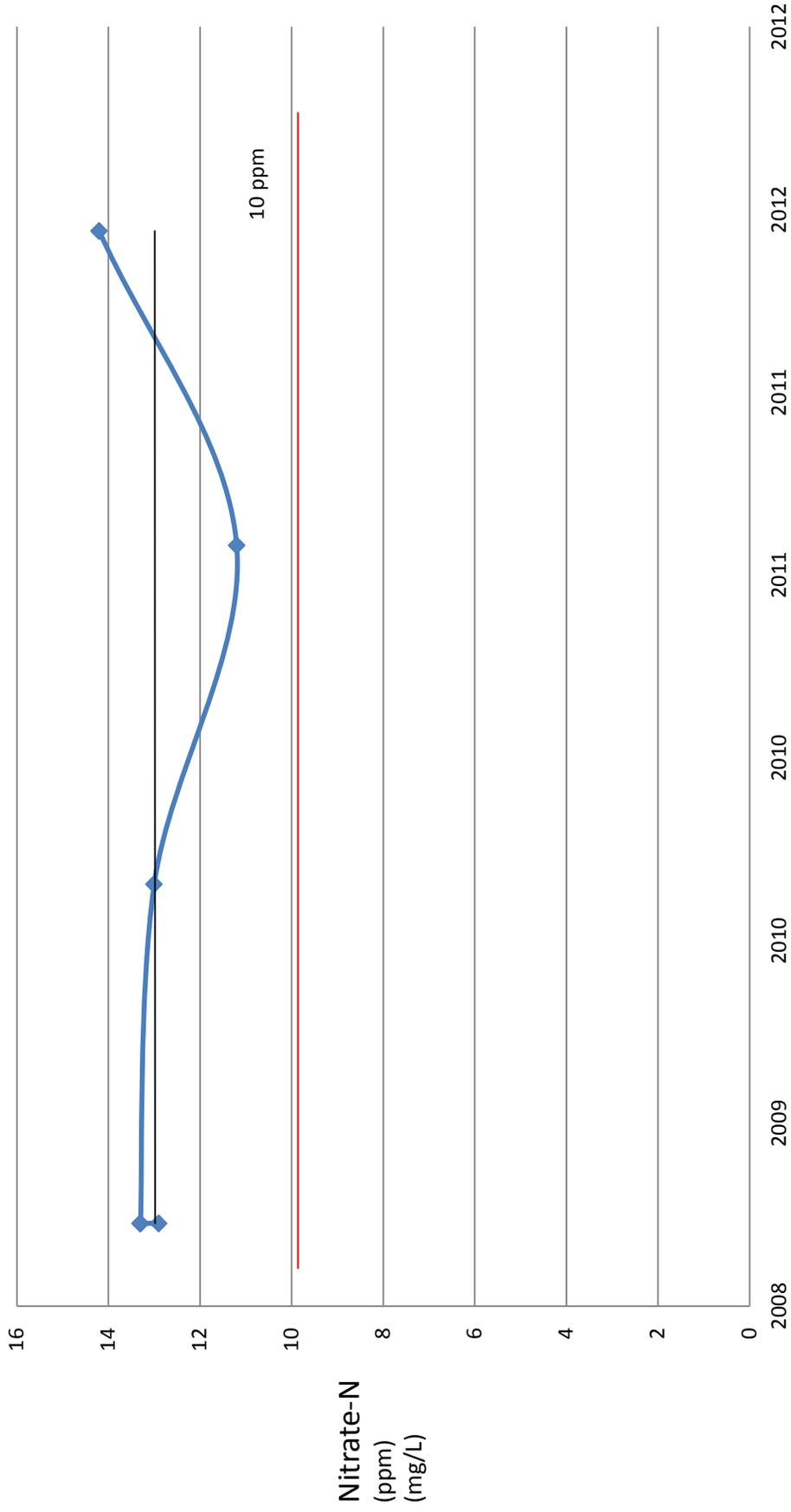


# BCS952

Trend line  
Flat

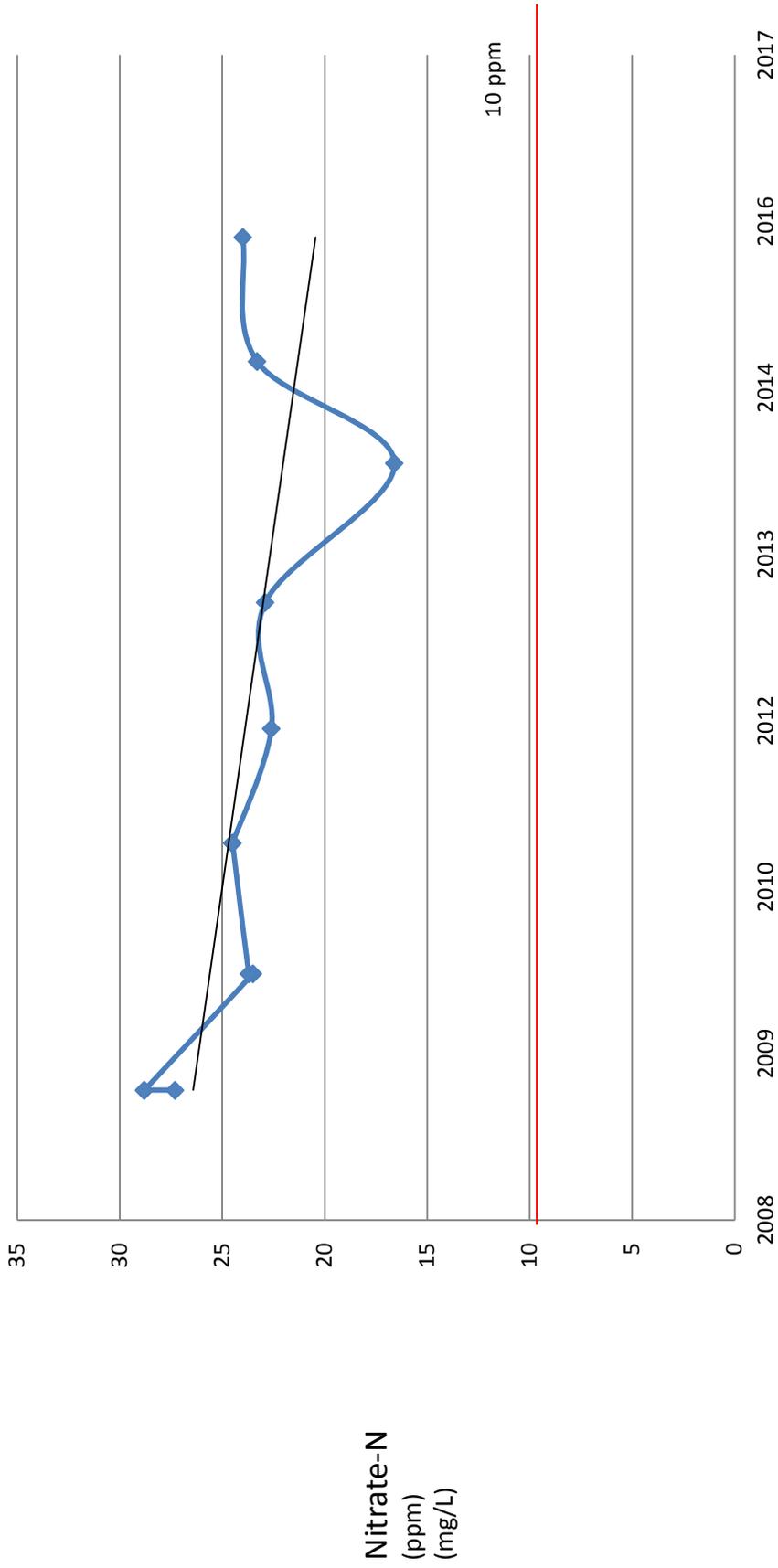
Recent Trend  
Up

Below 10ppm  
No



# BCS953

Trend line Down      Recent Trend Up      Below 10ppm No

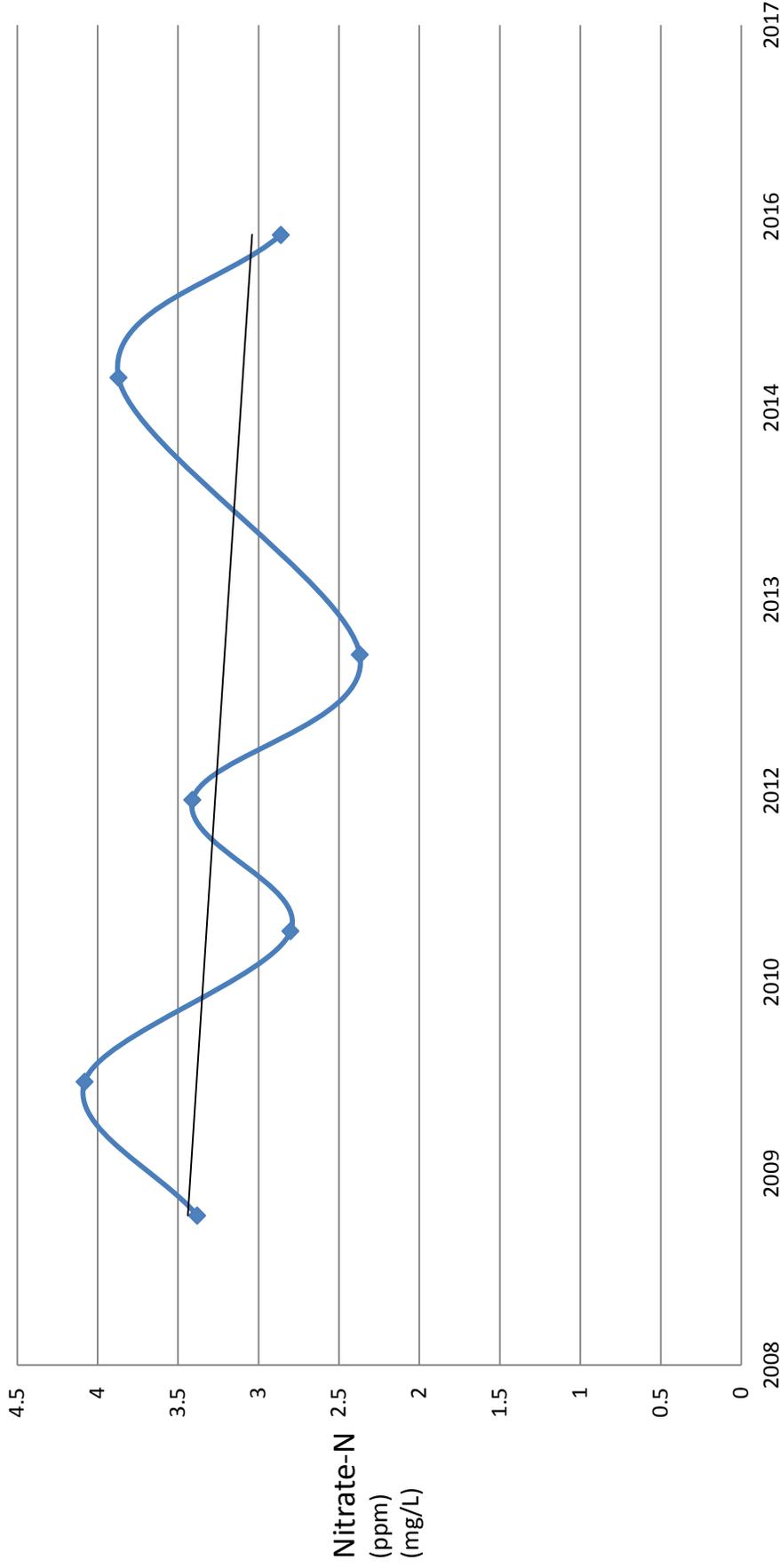


# BCS956

Trend line  
Down

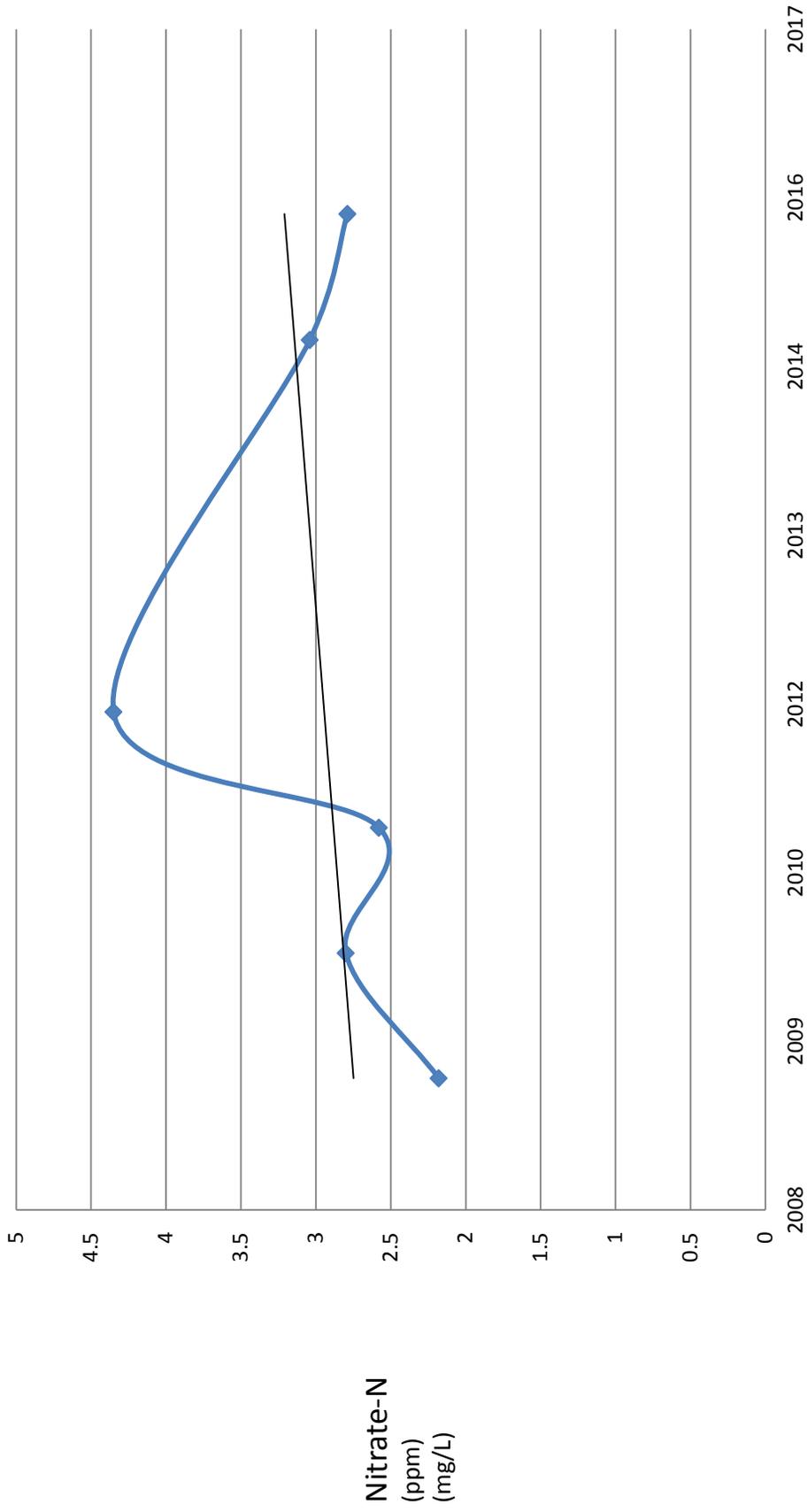
Recent Trend  
Down

Below 10ppm  
Yes



# BCS955

Trend line Up      Recent Trend Down      Below 10ppm Yes

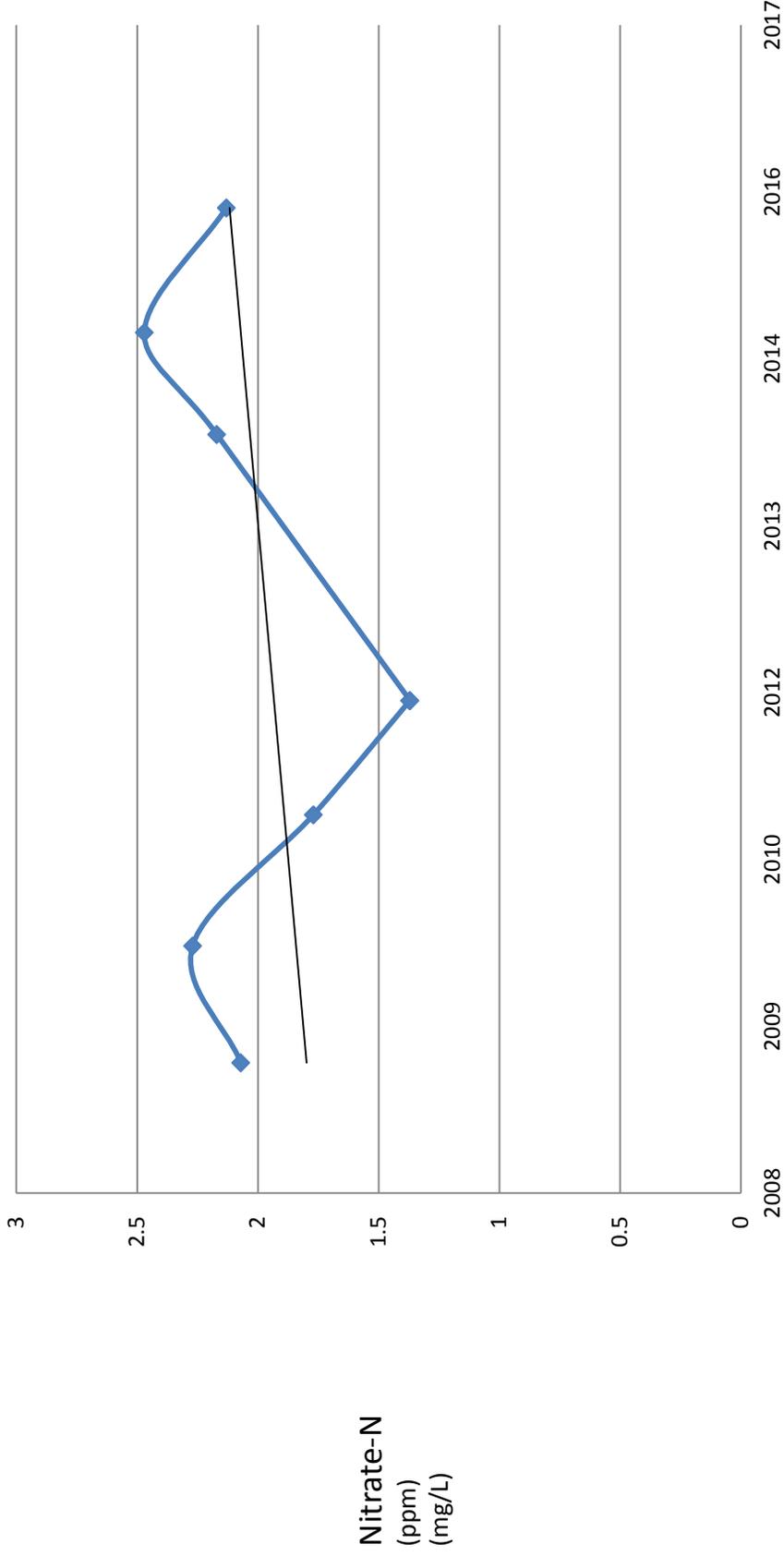


# BCS954

Trend line Up

Recent Trend Down

Below 10ppm Yes

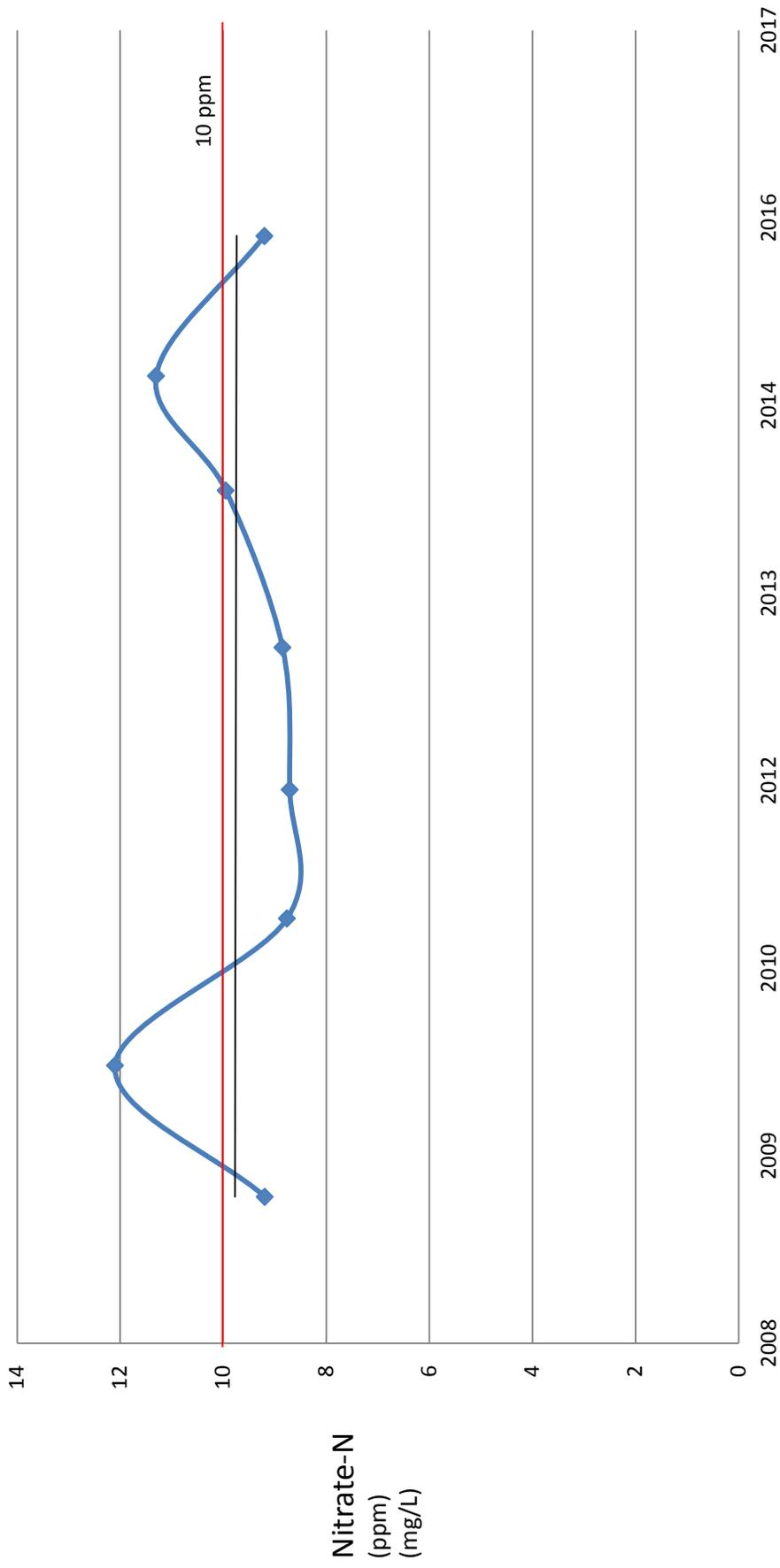


# AGF141

Trend line  
Flat

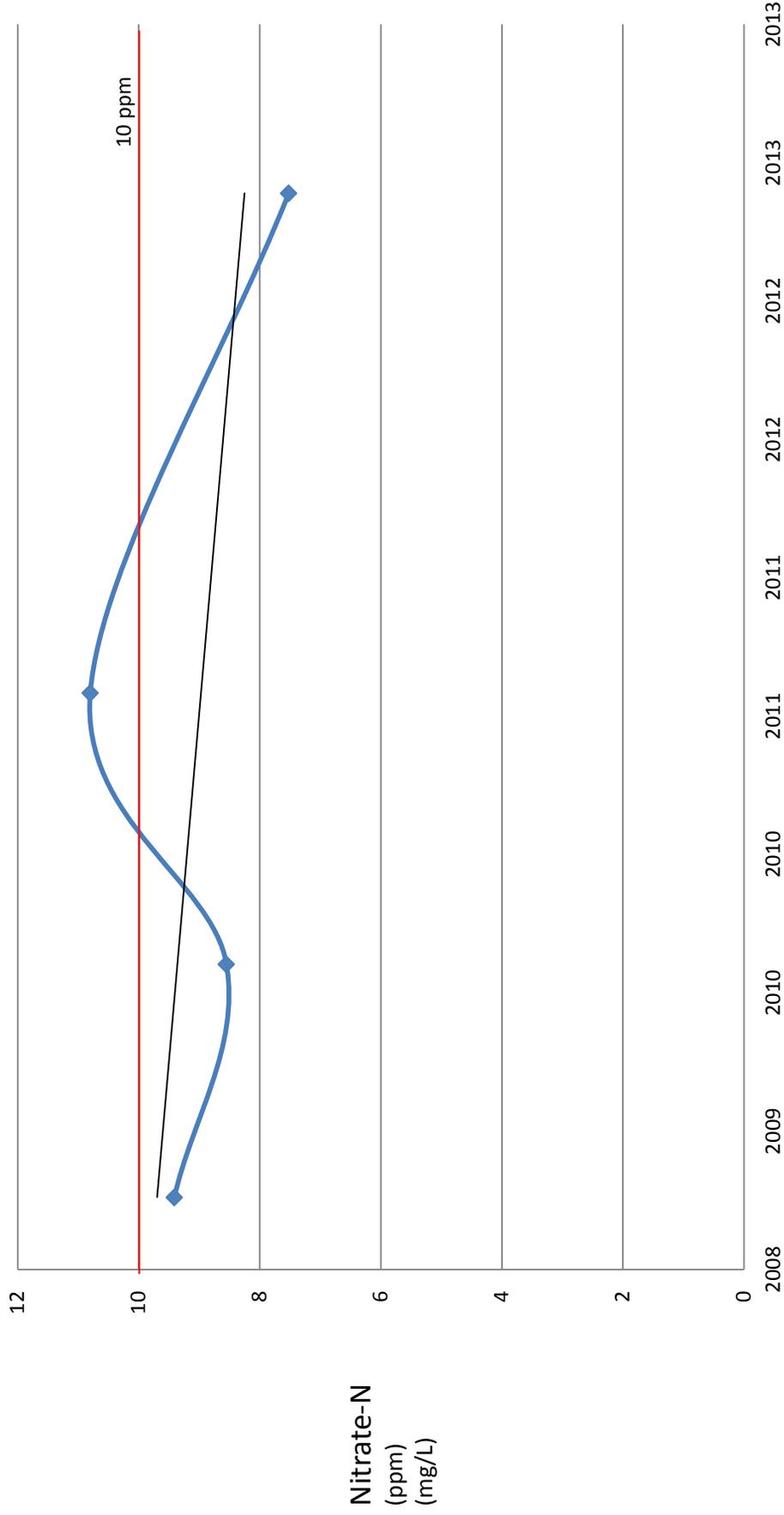
Recent Trend  
Down

Below 10ppm  
Yes



# BES971

Trend line Down      Recent Trend Down      Below 10ppm Yes



# Nooksack-Abbotsford-Sumas Transboundary Study: Developing a nitrogen assessment to support nitrogen management

We need your help make this a successful project!

## What is this project about?

The Nooksack-Abbotsford-Sumas Transboundary Study is a North American pilot demonstration of a global initiative. It gathers stakeholders to work together to understand and address problems and opportunities associated with modern beneficial uses of nitrogen (N) for food and manufacturing. The Nooksack-Abbotsford-Sumas region includes a diverse set of fairly well organized stakeholders in a relatively small, transnational watershed. This diversity and scale provides a unique opportunity to work collaboratively with stakeholders to better understand and manage nitrogen.

The issues we struggle with are common to many other parts of the world. For example, excess nitrate concentrations in the aquifer

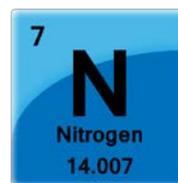
## What is Nitrogen?

Nitrogen (N) is an essential element that is found in all living things. It builds the proteins that do the cellular work that keeps all organisms alive. Ironically, while we are surrounded by N (it makes up 78% of Earth's atmosphere), it is in a biologically unavailable form necessary for plant growth, including for agriculture.

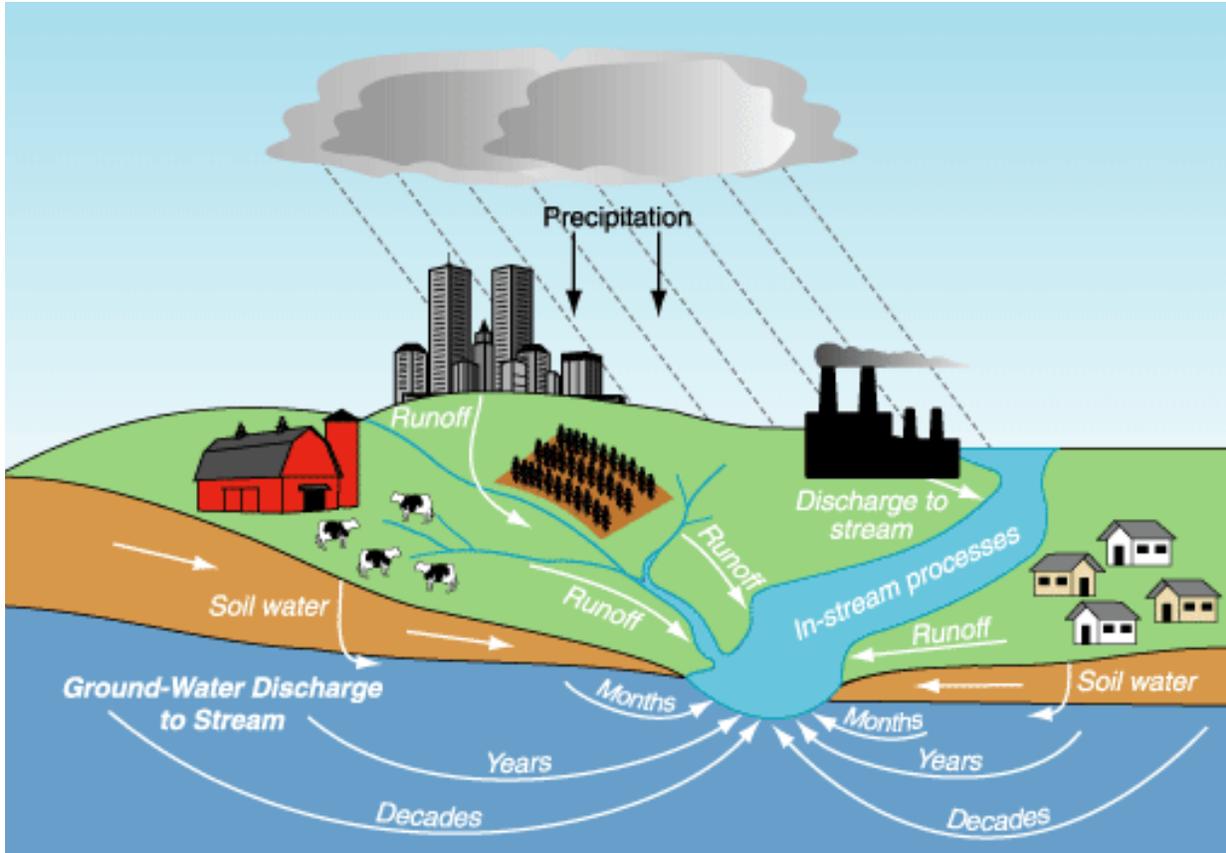
People have added this essential nutrient to increase crop production through use of legumes, recycling animal manures and plant residues, and industrial production of fertilizer. Ready access to cheap and abundant plant available N has contributed greatly to the abundance of affordable food



shared by Canada and the USA affect thousands of wells and households in both countries. Concentrations in some water supply wells often exceed U.S., Canadian, and international drinking water standards and guidelines of 10 ppm nitrate-N that were set to safeguard human health (especially infants). High concentrations have been observed since the 1970s.



in many parts of the world. Excess nitrogen use in some areas contributes to water pollution, in surface and groundwater. Biologically available nitrogen is also made as a by-product of burning fossil fuels for energy generation, industrial processes, and transportation. In such cases, it can be an important contributor to air pollution, such as haze or smog. The challenge society now faces is how to exploit nitrogen for its benefits in a sustainable manner without harming air, water, and soil. The health and well being of future generations is at stake.



*Nitrogen sources and movement in a watershed. Source: USGS*

Nitrogen has environmental impacts, and high concentrations can degrade surface water quality and may harm fish in the river. It can also contribute to localized ocean pollution, promoting toxic algal blooms or acidification. In addition to the shared aquifer and surface waters, our region shares an airshed. Emissions into the atmosphere of certain nitrogen forms, such as ammonia and nitrogen oxides from

transportation, agriculture, and metropolitan areas, including Vancouver, add to the regional nitrogen surplus. These forms of nitrogen in the atmosphere contribute to smog, poor visibility, and respiratory ailments in humans, and eventually are deposited back on the earth where they acidify both soil and water, and can be re-emitted in a new form that contributes to global warming.

**How will this project help and inform the local community?**

1. Create a comprehensive inventory of N inputs from many sources (including natural sources, inputs from urban land, emissions, and agricultural inputs).
2. Identify voluntary approaches and best practices to reducing nitrate losses to the environment.
3. Provide a website containing a spatial database on N loading and related air and water quality information to be accessed by local stakeholders.

## The goals of the project are to:

1. **Create a nitrogen inventory:** Trace and quantify the sources and movement of nitrogen, both inside and outside our study area. The first step in the project is to gather all of the currently available qualitative (who and what) and quantitative (how much) information on nitrogen sources and uses including inputs and outputs. Next would be to quantify effects of different nitrogen types on resources (i.e., air, surface water, groundwater, soil, etc.), and to identify knowledge gaps.
2. **Share among stakeholders:** Bring together stakeholders in the study region to share the information collected in Step 1 and collect their input, knowledge and concerns. This second step aims to find out what kinds of information or management tools would be most useful to different stakeholders. Anyone affected by nitrogen in some way is a stakeholder who is welcome to participate, adding your information, knowledge, and perspective, such as:
  - a. People living here, using and working with the land, air and water resources,
  - b. Groups/entities supporting stakeholder deliberations by providing objective information and scientific understanding, and
  - c. Governmental representatives who might later on be responsible for supporting implementation of any strategies that are agreed upon by stakeholders.
3. **Identify and evaluate solutions:** Work with all stakeholders to develop a menu of strategies for dealing with regional nitrogen issues, along with pros and cons. The goal of this third step is to find ways to work together to protect local food production, the economy, and natural resources, including air and water. Gathering and presenting a common set of biophysical facts and viewing them from multiple socioeconomic perspectives can help everyone to understand the problems and to identify the preferred potential solutions to a variety of nitrogen-related issues.



## Who are the parties involved?

An international team of scientists and natural resource professionals from Canada, the United States, the Lummi Nation and the Nooksack Indian Tribe are collaborating in this project to develop a regional nitrogen assessment for the Nooksack-Abbotsford-Sumas Transboundary Region. So far, about 50 individuals from a diverse array of agencies, organizations, tribes, and institutions have participated in initial meetings and correspondence. In addition to a small amount of financial support from the National Science Foundation and the Environmental Protection Agency, stakeholders donate their time and resources. Additional funding is being sought.

## How do I interact with the project?

In order to make a successful and effective model of nitrogen use and cycling, we need the most current and accurate information we can gather. This will require stakeholders, individual land users and industries to assist us by providing data relevant and representative to their individual nitrogen use activities, including recommendations for best management practices based on local ideas. If approached for information, please consider working with us. The highest quality discussions about possible management strategies—which we want to encourage—will only happen if we have highest quality information to work with.

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## What do you plan to do with the data collected?

Locally, we hope to work with stakeholders to provide information that can be used to develop lasting nitrogen management solutions that benefit everyone in the Nooksack-Abbotsford-Sumas Transboundary Region. This may include promotion of successful nitrogen management practices, suggestions to modify current activities to reduce nitrogen losses, and looking to the future to reduce potential nitrogen losses. Our intent is to inform the public and stakeholders about nitrogen cycling in the project area with the hope that different sectors can use it to modify and promote

behaviors as appropriate. Our intent is not to use the data for regulatory purposes.

Internationally, the data, and the ways in which we use them, will serve as the North American demonstration project for the International Nitrogen Management System (<http://www.inms.international/>), a program of the Global Environmental Facility and the International Nitrogen Initiative. Other demonstration projects are being developed in Latin America, Africa, Western Europe, Eastern Europe, Asia, and Australia.

## Will the data/results be used in a regulatory context?

**If no, how can you ensure that? If yes, how does that affect me?**

Our intent is to provide scientifically sound, objective information that can be used by local stakeholders to identify common regional goals and practical, comprehensive, and sustainable solutions where everyone, including people and their livelihoods, and the environment, benefits. More regulation should be the last and least preferable resort.

## Who is involved?

Western Washington University  
University of Washington – Vancouver  
University of British Columbia  
Northwest Indian College  
University of Maryland  
Colorado State University  
Washington Department of Health  
Whatcom Conservation District  
Natural Resource Marketplace Working Group  
Northwest Straits Commission  
Washington State Department of Ecology  
Washington State Department of Agriculture  
Washington State Department of Health

British Columbia Ministry of Agriculture  
British Columbia Ministry of Environment  
Lummi Nation  
Nooksack Indian Tribe  
U.S. Geological Survey  
U.S. Environmental Protection Agency  
USDA Natural Resource Conservation Agency  
National Park Service  
National Oceanic and Atmospheric Administration  
Environment and Climate Change Canada  
Agriculture and Agri-Food Canada  
International Nitrogen Initiative  
International Nitrogen Management System

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**For more information please check our webpage or contact:**

<https://drive.google.com/drive/u/0/folders/0B7CVzzwALo12NTI4dkc1Q3dHamM>

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David Hooper, Western Washington University ([david.hooper@wwu.edu](mailto:david.hooper@wwu.edu))

Jana Compton, U.S. Environmental Protection Agency ([Compton.jana@epa.gov](mailto:Compton.jana@epa.gov))

Shabtai Bitman, Agriculture and Agri-Food Canada ([shabtai.bittman@agr.gc.ca](mailto:shabtai.bittman@agr.gc.ca))

Nichole Embertson, Whatcom Conservation District ([Nembertson@whatcomcd.org](mailto:Nembertson@whatcomcd.org))

George Boggs, Whatcom Conservation District ([GBoggs@whatcomcd.org](mailto:GBoggs@whatcomcd.org))

# Attachment C: State & Federal Definitions of Agricultural Land

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## RCW Chapter 84.34 Open Space, Agricultural, Timberlands—Current Use—Conservation Futures

### 84.34.020 Definitions.

(2) "Farm and agricultural land" means:

- (a) Any parcel of land that is twenty or more acres or multiple parcels of land that are contiguous and total twenty or more acres:
  - (i) Devoted primarily to the production of livestock or agricultural commodities for commercial purposes;
  - (ii) Enrolled in the federal conservation reserve program or its successor administered by the United States department of agriculture; or
  - (iii) Other similar commercial activities as may be established by rule;
- (b)(i) Any parcel of land that is five acres or more but less than twenty acres devoted primarily to agricultural uses, which has produced a gross income from agricultural uses equivalent to, as of January 1, 1993:
  - (A) One hundred dollars or more per acre per year for three of the five calendar years preceding the date of application for classification under this chapter for all parcels of land that are classified under this subsection or all parcels of land for which an application for classification under this subsection is made with the granting authority prior to January 1, 1993; and
  - (B) On or after January 1, 1993, two hundred dollars or more per acre per year for three of the five calendar years preceding the date of application for classification under this chapter;
- (ii) For the purposes of (b)(i) of this subsection, "gross income from agricultural uses" includes, but is not limited to, the wholesale value of agricultural products donated to nonprofit food banks or feeding programs;
- (c) Any parcel of land of less than five acres devoted primarily to agricultural uses which has produced a gross income as of January 1, 1993, of:
  - (i) One thousand dollars or more per year for three of the five calendar years preceding the date of application for classification under this chapter for all parcels of land that are classified under this subsection or all parcels of land for which an application for classification under this subsection is made with the granting authority prior to January 1, 1993; and
  - (ii) On or after January 1, 1993, fifteen hundred dollars or more per year for three of the five calendar years preceding the date of application for classification under this chapter. Parcels of land described in (b)(i)(A) and (c)(i) of this subsection will, upon any transfer of the property excluding a transfer to a surviving spouse or surviving state registered domestic partner, be subject to the limits of (b)(i)(B) and (c)(ii) of this subsection;
- (d) Any parcel of land that is five acres or more but less than twenty acres devoted primarily to agricultural uses, which meet one of the following criteria:
  - (i) Has produced a gross income from agricultural uses equivalent to two hundred dollars or more per acre per year for three of the five calendar years preceding the date of application for classification under this chapter;

- (ii) Has standing crops with an expectation of harvest within seven years, except as provided in (d)(iii) of this subsection, and a demonstrable investment in the production of those crops equivalent to one hundred dollars or more per acre in the current or previous calendar year. For the purposes of this subsection (2)(d)(ii), "standing crop" means Christmas trees, vineyards, fruit trees, or other perennial crops that: (A) Are planted using agricultural methods normally used in the commercial production of that particular crop; and (B) typically do not produce harvestable quantities in the initial years after planting; or
- (iii) Has a standing crop of short rotation hardwoods with an expectation of harvest within fifteen years and a demonstrable investment in the production of those crops equivalent to one hundred dollars or more per acre in the current or previous calendar year;
- (e) Any lands including incidental uses as are compatible with agricultural purposes, including wetlands preservation, provided such incidental use does not exceed twenty percent of the classified land and the land on which appurtenances necessary to the production, preparation, or sale of the agricultural products exist in conjunction with the lands producing such products. Agricultural lands also include any parcel of land of one to five acres, which is not contiguous, but which otherwise constitutes an integral part of farming operations being conducted on land qualifying under this section as "farm and agricultural lands";
- (f) The land on which housing for employees and the principal place of residence of the farm operator or owner of land classified pursuant to (a) of this subsection is sited if: The housing or residence is on or contiguous to the classified parcel; and the use of the housing or the residence is integral to the use of the classified land for agricultural purposes;
- (g) Any land that is used primarily for equestrian related activities for which a charge is made, including, but not limited to, stabling, training, riding, clinics, schooling, shows, or grazing for feed and that otherwise meet the requirements of (a), (b), or (c) of this subsection; or
- (h) Any land primarily used for commercial horticultural purposes, including growing seedlings, trees, shrubs, vines, fruits, vegetables, flowers, herbs, and other plants in containers, whether under a structure or not, subject to the following:
  - (i) The land is not primarily used for the storage, care, or selling of plants purchased from other growers for retail sale;
  - (ii) If the land is less than five acres and used primarily to grow plants in containers, such land does not qualify as "farm and agricultural land" if more than twenty-five percent of the land used primarily to grow plants in containers is open to the general public for on-site retail sales;
  - (iii) If more than twenty percent of the land used for growing plants in containers qualifying under this subsection (2)(h) is covered by pavement, none of the paved area is eligible for classification as "farm and agricultural land" under this subsection (2)(h). The eligibility limitations described in this subsection (2)(h)(iii) do not affect the land's eligibility to qualify under (e) of this subsection; and
  - (iv) If the land classified under this subsection (2)(h), in addition to any contiguous land classified under this subsection, is less than twenty acres, it must meet the applicable income or investment requirements in (b), (c), or (d) of this subsection.

## WAC Chapter 458-30 Open Space Taxation Act Rules

### WAC 458-30-200 Definitions.

(w) "Farm and agricultural land" means:

- (i) Any parcel of land twenty or more acres in size or multiple parcels of land that are contiguous and total twenty or more acres in size when the lands are:
  - (A) Primarily used to produce agricultural products for commercial agricultural purposes;
  - (B) Enrolled in the federal conservation reserve program or its successor administered by the United States Department of Agriculture; or
  - (C) Primarily used for other commercial agricultural purposes as established by rule.
- (ii) Any parcel of land or contiguous parcels of land at least five acres, but less than twenty acres in size that are primarily used for commercial agricultural purposes, and produce a gross income equal to:
  - (A) One hundred dollars or more in cash per acre per year for three of the five calendar years preceding the date of application for classification when the application was made prior to January 1, 1993; or
  - (B) Two hundred dollars or more in cash per acre per year for three of the five calendar years preceding the date of application for classification when the application is made on or after January 1, 1993.For the purposes of meeting the minimum gross income requirements as described in (w)(ii)(A) and (B) of this subsection for leased classified farm and agricultural land, the owner may use either the cash income received from leasing his or her classified farm and agricultural land, or the cash income received by the lessee for the production of the agricultural product on the owner's classified farm and agricultural land.
- (iii) Any parcel of land or contiguous parcels of land at least five acres, but less than twenty acres in size that are primarily used for commercial agricultural purposes and that have:
  - (A) Standing crops with an expectation of harvest within seven years and a demonstrable investment in the production of those crops equivalent to one hundred dollars or more per acre in the current or previous calendar year; or
  - (B) Standing crops of short rotation hardwoods with an expectation of harvest within fifteen years and a demonstrable investment in the production of those crops equivalent to one hundred dollars or more per acre in the current or previous calendar year.For the purposes of meeting the minimum investment requirements as described in (w)(iii)(A) and (B) of this subsection for leased classified farm and agricultural land, the owner may use either the cash income received from leasing his or her classified farm and agricultural land, or the cash income invested by the lessee in the production of the standing crop on the owner's classified farm and agricultural land.
- (iv) Any parcel of land or contiguous parcels of land less than five acres in size that are primarily used for commercial agricultural purposes, and produce a gross income equal to:
  - (A) One thousand dollars or more in cash per year for three of the five calendar years preceding the date of application for classification when the application was made prior to January 1, 1993; or
  - (B) One thousand five hundred dollars or more in cash per year for three of the five calendar years preceding the date of application for classification when the application is made on or after January 1, 1993.

For the purposes of meeting the minimum gross income requirements as described in (w)(iv)(A) and (B) of this subsection for leased classified farm and agricultural land, the owner may use either the cash income received from leasing his or her classified farm and agricultural land, or the cash income received by the lessee for the production of the agricultural product on the owner's classified farm and agricultural land.

(v) Farm and agricultural land also includes:

- (A) Land on which employee housing or the principal residence of the farm owner or operator is located, if the housing or residence is on or contiguous to a classified farm and agricultural land parcel of twenty acres or more or multiple parcels that are contiguous and total twenty acres or more, and the use of the housing or residence is integral to the use of the classified farm and agricultural land for commercial agricultural purposes;
- (B) Land on which appurtenances necessary for the production, preparation, or sale of the agricultural products are situated when the appurtenances are used in conjunction with the land(s) producing agricultural products, such as a machinery maintenance shed or a shipping facility located on farm and agricultural land that produces the products to be shipped;
- (C) Land incidentally used for an activity or enterprise that is compatible with commercial agricultural purposes as long as the incidental use does not exceed twenty percent of the classified land. An incidental use of classified farm and agricultural land may include, but is not limited to, wetland preservation, a gravel pit, a farm woodlot, or a produce stand;
- (D) A noncontiguous parcel of land from one to five acres in size that constitutes an integral part of the commercial agricultural operation being conducted on land qualifying as "farm and agricultural land." As used in this paragraph, noncontiguous means not adjoining or touching but held by the same ownership as defined in RCW 84.34.020;
- (E) Land used primarily for equestrian related activities for which a charge is made including, but not limited to, stabling, training, riding, clinics, schooling, shows, or grazing for feed and that otherwise meets the requirements in (w)(i), (ii), or (iv) of this subsection; or
- (F) Land used primarily for horticultural purposes including growing plants in the ground or in a container, regardless of whether under a structure, such as a greenhouse, subject to the following:
  - (I) The land is not primarily used for the storage, care, or selling of plants purchased from other growers for retail sale;
  - (II) If the land is less than five acres and used primarily to grow plants in containers, such land does not qualify as "farm and agricultural land" if more than twenty-five percent of the land used primarily to grow plants in containers is open to the general public for on-site retail sales;
  - (III) If more than twenty percent of the land used for growing plants in containers is covered by pavement, none of the paved area is eligible for classification as "farm and agricultural land." However, this limitation does not prevent up to twenty percent of the paved area from qualifying as "incidental use" as described in (bb) of this subsection; and
  - (IV) If the land classified under (w)(v)(F) of this subsection, in addition to any contiguous land classified under (w) of this subsection, is less than twenty acres, it must meet the applicable income or investment requirements described in (w)(ii), (iii), or (iv) of this subsection.

## U.S. Food Security Act

### Subpart D - Labels: Wetlands Converted to Agricultural Use Before December 23, 1985

#### 514.30 Prior Converted Cropland (PC)

##### A. Definition

- (1) Prior converted cropland (PC) is a converted wetland where the conversion occurred before December 23, 1985; an agricultural commodity had been produced at least once before December 23, 1985; and as of December 23, 1985, the area was capable of producing an agricultural commodity (i.e., did not support woody vegetation and was sufficiently drained to support production of an agricultural commodity). The conversion could include draining, dredging, filling, leveling, or otherwise manipulating (including the removal of woody vegetation or any activity that results in impairing or reducing the flow and circulation of water) the wetland area. In addition, PC meets the following hydrologic criteria:
  - (i) If the area is not a pothole, playa, or pocosin, inundation is less than 15 consecutive days during the growing season or 10 percent of the growing season, whichever is less, in most years (50 percent chance or more).
  - (ii) If the area is a pothole, playa, or pocosin, inundation is less than 7 consecutive days and saturation is less than 14 consecutive days during the growing season in most years (50 percent chance or more).
- (2) The presence and extent of pothole, playa, and pocosin wetlands in each State will be determined by the State Conservationist with advice from the State Technical Committee.

##### B. Supporting Documentation

- (1) The NRCS Engineering Field Handbook (EFH), Chapter 19, "Hydrology Tools for Wetland Determination;" the 1987 COE Manual; and the approved State mapping conventions are used to determine if the area is inundated for the requisite time. Site conditions must be thoroughly documented, using information such as:
  - (i) Aerial photographs and FSA slides.
  - (ii) Flood frequency studies.
  - (iii) Interviews with the person and other knowledgeable residents of the area.
  - (iv) Field indicators of surface water such as water marks, drift lines, and drowned or stressed crops.
  - (v) Stream gauge data.
- (2) FSA records may be used to determine current or prior cropping history. In the absence of FSA records, any determination of cropping history should be based on aerial photography, crop expense or receipt records, grain elevator records specific to tract and field, or other suitable documentation that can be tied to the specific field and/or tract under review.

##### C. Drainage Maintenance and Improvement

- (1) Drainage systems or other hydrologic manipulations on PCs may be maintained or improved after December 23, 1985, without loss of eligibility for USDA program benefits. USDA program participants should exercise caution when maintaining drainage systems so that neighboring wetlands are not inadvertently drained.

#### D. Procedures for Identifying PCs

(1) Aerial photographs, crop records, and other resources are consulted to determine if the area—

- (i) Has hydric soils.
- (ii) Was converted for production of an agricultural commodity before December 23, 1985.
- (iii) Was capable of producing an agricultural commodity (i.e., did not support woody vegetation and was sufficiently drained to support production of an agricultural commodity) as of December 23, 1985.
- (iv) Fails to meet hydrologic criterion of Farmed Wetland (FW).

#### USDA

##### **Prior Converted Cropland Exemption**

Areas that qualify as Prior Converted Cropland (PC) are exempt from the Swampbuster provision of the Farm Bill. These areas can be further drained, cropped or manipulated without loss of eligibility for USDA program benefits. Prior converted croplands that are certified by NRCS are also exempt from wetland regulations administered by the Army Corps of Engineers and EPA (Section 404 of the Clean Water Act). However, if the land changes to a non-agricultural use, or is abandoned, according to the criteria established by the Corps and EPA, it may be regulated under the CWA.

##### **What it Takes for Farmland to Qualify as Prior Converted Cropland**

Farmland must meet **all of the following criteria** for it to be designated as Prior Converted Cropland:

- Cropped prior to December 23, 1985 with an agricultural commodity (an annually tilled crop such as corn);
- The land was cleared, drained or otherwise manipulated to make it possible to plant a crop;
- The land has continued to be used for agricultural purposes (cropping, haying or grazing)
- The land does not flood or pond for more than 14 days during the growing season

**Woodland, pasture and hayland without a history of annual tillage and cropping do not qualify as Prior Converted Cropland.**

##### **Department of Ecology Prior Converted Croplands/Wetlands Information**

##### **What are prior converted croplands?**

Prior converted croplands (PCCs) are identified for the purpose of implementing the Food Security Act (FSA), and refers to wetlands that were converted from a non-agricultural use to production of a commodity crop prior to December 23, 1985. In other words, PCCs are wetlands that were drained, dredged, filled, leveled, or otherwise manipulated, including the removal of woody vegetation, to enable production of an agricultural commodity. To be considered a PCC, the area must have had an agricultural commodity planted or produced at least once prior to December 23, 1985. After 1985 these sites must continue to be in active agricultural use. This means a commodity crop that requires annual tilling must be produced at least once every five years.

In addition, PCCs must not have standing water present for more than 14 consecutive days during the growing season. If an agricultural site has standing water for greater than 14 consecutive days it would be considered a "farmed wetland." Many farmed areas in valleys flood throughout the winter and would not be considered PCC.

Therefore, it is important to document surface water levels throughout the year (i.e., determining the hydroperiod during the dry season alone is not adequate).

### **Conversion of a PCC to a non-agricultural use may be subject to local, state, and federal regulations**

While many PCC areas have been extensively manipulated and drained, and some may no longer be wetlands, a PCC area may meet the federal and state wetland hydrology criterion (refer to the federal [delineation manual and regional supplements](#)). If the land changes to non-agricultural use, or is abandoned, a PCC area may be regulated under federal, state or local laws. Landowners, who intend to develop their land or conduct an activity that precludes use of the land for continued agricultural production, should [contact the Corps, Ecology](#) and the local government ([city/town](#) or [county](#)) to determine if the land meets the criteria for jurisdictional wetlands under applicable laws.

Even if not abandoned, PCC wetlands, like [isolated wetlands](#), that meet the state's wetland delineation criteria ([Chapter 173-22-035 WAC](#)) are still regulated under the state's Water Pollution Control Act ([Chapter 90.48 RCW](#)), the Shoreline Management Act, and the Growth Management Act. ***Conversion of a PCC wetland to non-agricultural use requires state and local approval.***

### **Why regulate PCC wetlands?**

In the past, PCC wetlands were often exempt from federal regulation under the Clean Water Act, based on the belief that these wetlands had been so altered they no longer provided important wetland functions. However, PCC wetlands in Washington perform many of the same important environmental functions as other wetlands, including recharging streams and aquifers, storing flood waters, filtering pollutants from water and providing wildlife habitat. In some cases, PCC wetlands have been significantly altered so they provide only minimal functions. However, in many cases, PCC wetlands provide important hydrologic functions and may provide significant wildlife habitat.

### **Guidance on delineating wetlands on agricultural lands**

In 1994, the Departments of Agriculture, Interior, and Army and the EPA entered into a Memorandum of Agreement (MOA), *Guidance on Conducting Wetland Determinations for the Food Security Act (FSA) and Section 404 of the Clean Water Act (CWA)*. The MOA was developed to streamline the wetland delineation process on agricultural lands, to promote consistency between the CWA and the FSA, and to provide predictability and simplification for U.S. Department of Agriculture program participants.

In January 2005, both the Natural Resources Conservation Service (NRCS) and Department of the Army withdrew from the MOA. The MOA was replaced with the Corps and NRCS [Joint Guidance on Conducting Wetland Delineations for the Food Security Act of 1985 and Section 404 of the Clean Water Act](#) (PDF, February 25, 2005). This guidance addresses the responsibility of NRCS for performing wetland delineations for the FSA and the Corps for delineations for CWA Section 404 purposes. Also see [Key Points - February 28, 2005](#) (PDF) for the rationale for withdrawal from the 1994 MOA.

The 2005 MOA also states that the identification of prior converted croplands (PCC) made by NRCS remains valid as long as the area is devoted to an agricultural use. If the land changes to a non-agricultural use, the PCC determination is no longer applicable and a new wetland determination is required for Clean Water Act purposes. Specific guidance will be provided by the Corps in the future addressing how the Corps will treat PCC designations for land that changes from agricultural to non-agricultural use.