STATE OF IDAHO

IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY

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JAMES E. RISCH, GOVERNOR
TONI HARDESTY, DIRECTOR

September 22, 2006

RECEIVED
SEP 27 2006
DEPT. OF WATER RESOURCES
SOUTHERN REGION

Ms. Sharon Wilson
Office of Water and Watersheds;
USEPA Region 10
1200 Sixth Avenue, OWW-130
Seattle, WA 98101

RE: Comments Pertaining to the Preliminary Draft Aquaculture NPDES Permits and the Associated Fact Sheet
IDG-130000 – Aquaculture Facilities Subject to Wasteload Allocations (WLAs)
IDG-131000 – Cold Water Aquaculture Facilities Not Subject to WLAs
IDG-132000 – Fish Processors Associated with Aquaculture Facilities
ID-0028266 – Epicenter Aquaculture (a warm water facility without a WLA)

Dear Ms. Wilson:

The Idaho Department of Environmental Quality (DEQ) has reviewed the above-referenced draft permits and associated fact sheet. DEQ's comments are contained in the attached document. Our draft 401 water quality certification will be on DEQ's web page at http://www.deq.idaho.gov/ later this week.

We appreciate this opportunity to provide comments on the draft permit and look forward to receiving the proposed final permits which will enable us to complete our §401 water quality certification decision. If you have any questions regarding our comments, please contact Johnna Sandow at 208-373-0163, or at Johnna.Sandow@deq.idaho.gov.

Sincerely,

Barry N. Burnell

Barry N. Burnell
Water Quality Division Administrator

BNB:JS

Attachments: DEQ Comments for the Draft Aquaculture NPDES Permits and Associated Fact Sheet
Updated DMR Data Spreadsheet for Fish Processors (Processors exp data 2000-5_2006.xls)
Draft Section 401 Water Quality Certification

cc: Doug Conde, Idaho Attorney Generals Office
Regional Administrators, DEQ
Aquaculture Facility Distribution List
Upper Snake BAG Chair
Mike Lidgard, Region X EPA
Jim Werntz, IOO EPA

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Idaho DEQ Comments for
Draft Aquaculture NPDES Permits and the associated Fact Sheet

Comments Pertaining to the Wasteload Allocation Permit

Page 11
Table 2

Limitations for 12 facilities deviate from what is specified in the TMDL. For TSS, loads are expressed in the TMDL as tons/year. To calculate pounds per day (lbs/day), the TMDL WLA was multiplied by 2000 and divided by 365. The corrected limitations (reflecting rounding to the nearest tenth) are presented in the table below.

Permit Number	Parameter	Average Monthly Limitations (lbs/day)
IDG130061	Net TSS	841.1
IDG130008	Net TSS	4223.0
IDG130014	Net TSS	8060.8
IDG130088	Net TSS	614.2
IDG130011	Net TSS	4322.7
IDG130006	Net TSS	5538.1
IDG130007	Net TSS	4891.5
IDG130018	Net TSS	3207.1
IDG130002	Net TSS	2581.9
IDG130020	Net TSS	821.9

Page 27
Table 8

The TSS limits for Batise Springs Trout Farm do not appear to be correct given the reported monthly average concentrations (5 mg/L average monthly limit (AML), 10 mg/L maximum daily limit (MDL)) and average flow 30.8 cfs. Based on our calculations, the AML should be 830.5 lbs/day and the MDL should be 1661.1 lbs/day.

The TP limits presented in Table 8 are NOT based on the 2001 EPA-approved WLAs. According to the 2001 TMDL, the WLA for TP is 2.37 tons/year (13.0 lbs/day) based on a flow of 22.2 million gallons/day. Please correct the table to accurately reflect what is contained within the 2001 Portneuf River TMDL.

The total inorganic nitrogen (TIN) limits presented in Table 8 are NOT based on information presented in the 2001 Portneuf River TMDL, which assigned a TIN WLA of 5.42 tons/year (29.7 lbs/day) based on a target concentration of 0.16 mg/L.

Page 28
Table 9

According to DEQ calculations, the AML for Net TP for the Crystal Springs Trout Farm should be 6.7 lbs/day (1.223 tons/year WLA reported in the American Falls Reservoir TMDL). Please correct the table.

Page 29
II.A.10

It is unclear if this permit condition applies to all off-line settling basins or just those that discharge pollutants to surface waters. Discharge of off-line settling basins to land disposal or into full flow settling ponds should not have intermediate limits. Table 11 should only apply to facilities that discharge effluent from off-line settling basins to surface waters.

Page 29
II.B.2

Please include the following under Prohibited Discharges:
g. Any deleterious materials in concentrations that impair designated beneficial uses;

h. Any oxygen-demanding materials in concentrations that would result in an anaerobic water condition;

Please revise subpart "b" to read: Any hazardous materials *in concentrations found to be of public health significance or to impair designated beneficial uses.*

Page 30 II.D.3	It would be helpful to provide a list of the EPA-approved methods (including information about the appropriate preservation, sample volume, container type, and holding time) that achieve the method detection limits specified in Table 15 to provide clear guidance to the industry. It is our understanding that EPA is likely to have this information readily available and incorporation into the permit should be relatively easy and straight-forward.
Page 32 II.E.1	EPA should define "zone of partial mixing."
Page 32 II.E.2	DEQ believes it is inappropriate to require monitoring during those periods when a facility is not discharging. Please clarify that monitoring is only required during quarters that a facility discharges. Please see the section entitled "Comments Pertaining to the Fact Sheet" for additional DEQ comments regarding monitoring (page 51).
Page 34 Table 15	The units and/or values presented for total copper and hardness appear to be incorrect. Did EPA mean to report these as mg/L rather than µg/L? In Table 12 (page 31), EPA is requiring the permittees to report total copper in mg/L and hardness in µg/L. EPA should check the permit to ensure the units for parameters are consistent among the various tables. Furthermore, DEQ does not have any documentation of any water bodies in the state having hardness levels less than 5 mg/L and would like to understand why EPA is requiring such a low MDL for hardness. Please double check the method detection limits to ensure they correctly represent the EPA analytical method capabilities and are meeting the objectives and goals of the TMDL monitoring plans DEQ has established.
Page 34 II.E.7	The permit requires receiving water monitoring information (such as date, time, and place of sample collection, analysis dates, analytical methods, and analytical results) and DMRs be submitted to EPA. In addition, EPA is requiring the permittee to provide a "summary and evaluation of the analytical results." DEQ would like to more fully understand exactly what information EPA is expecting when asking for a "summary and evaluation" of the analytical results. EPA should be more explicit about the type of information that will meet this permit requirement.
App. B Page 4	DEQ received a NOI from Deadman Hatchery (IDG130091) on July 30, 2004. DEQ provided EPA with a copy of this on July 10, 2006. DEQ suggests listing this facility with the other WLA general permit facilities.
App. B Page 4	Snyder Blue Rock Farms (IDG130102) is presently in operation and has been for nearly a year (Dirk Bogaard, Clear Lakes Trout Company, personal communication July 14, 2006). Therefore, this facility should not be included in the final table ("Dischargers believed to be eligible for coverage under the WLA Permit but who are not expected to be containing, growing, or holding fish at the facility on the effective date of the WLA permit") of Appendix B.

App. C Pollutant trading can provide a useful tool for facilities to meet TMDL goals. DEQ recognizes that the potential for localized impacts to water quality is least when the seller of pollutant credits is upstream of the buyer. However, DEQ's Pollutant Trading Guidance document does allow a buyer to be upstream of a seller as long as the ambient water quality between the parties is not adversely impacted. DEQ encourages EPA to provide for such trades and omit the requirement that a purchasing facility must be downstream of a selling facility.

We suggest the sentence stating "In order to trade phosphorus credits, the outfall for the purchasing facility must be downstream of the outfall for the selling facility" be removed from the first paragraph of Appendix C (page 1) of the permit.

In addition, we suggest that the first sentence in Appendix C (page 1) under Section I "How to Buy Credits for Pollutant Trading" be modified as follows:

> *A facility may purchase available phosphorus credits (in lbs/day for a specified month) from ~~an upstream~~ another eligible facility using the Trade Tracking System...*

These changes would allow for trades between all eligible facilities no matter the location of the buyer and seller provided there are no adverse impacts to water quality.

Furthermore, DEQ suggests that this NPDES permit provide for trades between point sources and non-point sources as allowed in the Pollutant Trading Guidance document. DEQ is willing to work with EPA on appropriate language for the permits.

Comments Pertaining to the Cold Water Aquaculture Facility (not subject to WLAs) Permit

Page 10 Table 1	Hardness is reported in µg/l, are these the correct units?
Page 12 II.B.2	Please include the following under Prohibited Discharges: g. Any deleterious materials in concentrations that impair designated beneficial uses; h. Any oxygen-demanding materials in concentrations that would result in an anaerobic water condition; Please revise subpart "b" to read: Any hazardous materials *in concentrations found to be of public health significance or to impair designated beneficial uses.*
Page 13 II.E.1	EPA should define "zone of partial mixing." Please see the section entitled "Comments Pertaining to the Fact Sheet" for additional DEQ comments regarding monitoring (page 51).
Page 13 Tables 3 & 4	Are the units and/or values for Total Copper and hardness correct? DEQ does not have documentation of any water bodies in the state with hardness levels less than 5 mg/L, and would like to understand why EPA is requiring such a low method detection limit. Please double check the detection limits to ensure they correctly represent the EPA analytical method capabilities and are appropriate for expected conditions. EPA should check the permit to ensure the units for parameters are consistent among the various tables.
Page 14 II.E.5	The permit requires receiving water monitoring information (such as date, time, and place of sample collection, analysis dates, analytical methods, and analytical results) and DMRs be submitted to EPA. In addition, EPA is requiring the permittee to provide a "summary and evaluation of the analytical results." DEQ would like to more fully understand exactly what information EPA is expecting when asking for a "summary and evaluation" of the analytical results. EPA should be more explicit about the type of information that will meet this permit requirement.

Comments Pertaining to the Fish Processors Permit

Page 9
II.B.1

Please include the following under Prohibited Discharges:
g. Any deleterious materials in concentrations that impair designated beneficial uses;
h. Any oxygen-demanding materials in concentrations that would result in an anaerobic water condition;

Please revise subpart "b" to read: Any hazardous materials *in concentrations found to be of public health significance or to impair designated beneficial uses.*

Page 11
II.E.1

EPA should define "zone of partial mixing."

Please see the section entitled "Comments Pertaining to the Fact Sheet" for additional DEQ comments regarding monitoring (page 51).

Page 12
II.E.4

The permit requires receiving water monitoring information (such as date, time, and place of sample collection, analysis dates, analytical methods, and analytical results) and DMRs be submitted to EPA. In addition, EPA is requiring the permittee to provide a "summary and evaluation of the analytical results." DEQ would like to more fully understand exactly what information EPA is expecting when asking for a "summary and evaluation" of the analytical results. EPA should be more explicit about the type of information that will meet this permit requirement.

App. C

Pollutant trading can provide a useful tool for facilities to meet TMDL goals. DEQ recognizes that the potential for localized impacts to water quality is least when the seller of pollutant credits is upstream of the buyer. However, DEQ's Pollutant Trading Guidance document does allow a buyer to be upstream of a seller as long as the ambient water quality between the parties is not adversely impacted. DEQ encourages EPA to provide for such trades and omit the requirement that a purchasing facility must be downstream of a selling facility.

We suggest the sentence stating "In order to trade phosphorus credits, the outfall for the purchasing facility must be downstream of the outfall for the selling facility" be removed from the first paragraph of Appendix C (page 1) of the permit.

In addition, we suggest that the first sentence in Appendix C (page 1) under Section I "How to Buy Credits for Pollutant Trading" be modified as follows:

> *A facility may purchase available phosphorus credits (in lbs/day for a specified month) from ~~an upstream~~ another eligible facility using the Trade Tracking System...*

These changes would allow for trades between all eligible facilities no matter the location of the buyer and seller provided there are no adverse impacts to water quality.

Furthermore, DEQ suggests that this NPDES permit provide for trades between point sources and non-point sources as allowed in the Pollutant Trading Guidance document. DEQ is willing to work with EPA on appropriate language for the permits.

Comments Pertaining to the Epicenter Permit

Page 6 II.C.2	Please include the following under Prohibited Discharges: g. Any deleterious materials in concentrations that impair designated beneficial uses; h. Any oxygen-demanding materials in concentrations that would result in an anaerobic water condition; Please revise subpart "b" to read: Any hazardous materials *in concentrations found to be of public health significance or to impair designated beneficial uses.*
Page 7 Table 2	Are the units for Total Copper and hardness correct? EPA should check the permit to ensure the units for parameters are consistent among the various tables.
Page 8 Table 3	Did EPA intend to omit hardness from this table? Are the units for total copper correct in this table?

Comments Pertaining to the Fact Sheet

Page 20 DEQ believes it is appropriate to wait until the temperature TMDL for the Upper Snake Rock subbasin is developed and does not recommend EPA develop temperature limits for the three warm-water facilities.

Page 40 VI.C.9 EPA should clarify in the text that the compliance schedule is provided only for solids (TSS and settleable solids) and temperature. As written, the permit reads as though final compliance for the all of the limits is required by August 3, 2007.

Page 40 EPA proposes to apply concentration limits in the permit for the Big Lost River facilities because DEQ reported concentration based wasteload allocations in the TMDL. Similarly, DEQ reported concentration based TSS WLAs for Batise Springs Trout Farm, however, EPA converted them to mass limits. Why did EPA employ different approaches to assigning permit limits?

Page 42 VI.C.10.a EPA states "The Total Inorganic Nitrogen limits are technology-based limits, calculated from data submitted by the facility." However, on page 27 of Appendix B of the Fact Sheet, EPA concludes the WLA is more stringent and is applied as the average monthly limit. Please clarify the basis for the limit – is it technology based or is it water quality based?

In addition, please see comments for the WLA permit under Page 27, Table 8. Please correct Appendix B of the Fact Sheet as appropriate.

Page 49 VII.B In response to EPA's solicitation for comments on the frequency and manner of flow measurement requirements for off-line settling basins (OLSBs), DEQ would like emphasize that a consistent and accurate approach be used to report flows for OLSBs. Flows to OLSBs are normally very small in comparison to the total facility flows. OLSB effluent is typically less than 1.5% of the total flow during daytime working hours and less than 0.75% against 24 hour averages (Idaho Waste Management Guidelines for Aquaculture, 1997). This is in part due to the fact that these waste treatment systems are in operation intermittently, with periods of daily or weekly inactivity being common across the range of facilities using this type of discharging waste treatment system. A review of NPDES inspection reports conducted on fish farms in the Twin Falls Region showed that there are generally two basic methods of flow monitoring being done on OLSBs in the area.

1) Time and Known Delivery Rate. In this method the fish farm has determined the delivery rate of wastewater being sent to the OLSB during quiescent zone cleaning and the minutes of cleaning are tracked and reported daily. The variation in reporting comes from how the numbers are reported on the monthly DMR. We have observed 5 day averages being used and reported (each 5 day average is used as one week's worth of flow information); true monthly averages (30 of 30 flow measurements) and 7 day averages; and, just picking one day of the week and consistently using the flow from that day to determine monthly averages and maximums.

2) Discharge Rate. In this method, some facilities measure the actual discharge at a weir. This can occur once to several times a day when quiescent zone cleaning is occurring. It has been frequently observed during inspections that the reported flow value is that for 24 hours of continuous discharge at the observed rate and does not reflect the period of inactivity that occurs after normal business hours.

What these two methods have in common is that while the current NPDES permit requires a certain minimum monitoring frequency for flow, that minimum is generally exceeded at the

fish farms. DEQ is not suggesting that either of these two methods of determining OLSB flow is inappropriate; however, as indicated earlier, DEQ encourages consistency as well as accuracy in the industry when measuring and reporting OLSB flows.

Page 49 VII.B Robert Sharpnack, of the DEQ Twin Falls Regional Office previously provided EPA with a database containing aquaculture facility effluent monitoring data through December 2004. As part of these comments, DEQ is submitting an updated spreadsheet (called "Processors exp data 2000-5_2006.xls) that contains raw DMR data for fish processors through 2006.

Page 51 DEQ is supportive of requiring limited receiving water monitoring for permitted discharge pollutants in waters that are 303(d) listed or that have TMDLs. However, DEQ believes EPA should provide further guidance on how to conduct receiving water monitoring in order to ensure proper sample collection and analysis. EPA should more clearly stipulate the monitoring objectives. Each facility faces its own unique circumstances, and such variation makes a one-size-fits-all approach difficult to successfully implement. As such, DEQ recommends the following:

- There is no definition for what constitutes a zone of partial mixing. Please clarify what EPA means by "zone of partial mixing";
- Receiving water quality monitoring should not be required during times when the facility is not discharging;
- Allow facilities one year to develop a monitoring plan that would be reviewed and approved by EPA to ensure the appropriate monitoring is being conducted to meet EPA objectives;
- Allow facilities in close proximity to each other to collaborate and collect a single sample upstream of the group. Allow facilities that are in close proximity to collect a single downstream sample. DEQ is willing to work with EPA to decide when collaborative monitoring approaches would be appropriate;
- The rationale used to exempt Epicenter Aquaculture from receiving water monitoring (because the receiving water is a canal) should be applied to facilities in the WLA permit. According to IDAPA 58.01.02.101.02, man-made waters are to be protected for the use for which they were developed, unless designated in Sections 110 through 160. Facilities that discharge to man-made waters, should not be required to sample the ambient water quality of the canal or drainage ditch. Furthermore, facilities that discharge to man-made waters will need permission to discharge from the owners of the man-made waters. DEQ is willing to assist EPA in making man-made water determinations; and
- Allow other factors (such as size of facility) to be considered when determining the frequency at which a discharger has to monitoring the receiving water quality.

Page 52 VII.D. Why does EPA use Canadian risk-based standards to evaluate PCB contamination rather than their own recently revised Sediment Evaluation Framework Guidance? This guidance is now used to regulate dredged sediment projects in Idaho. The values in Table 7-1 of the Draft Sediment Evaluation Framework are based on 2003 Washington state sediment quality

guidelines. These were developed for freshwater habitats in the northwest for sensitive benthic organisms.

In addition, DEQ suggests that if there are any ESA requirements related to the collection of sediment samples in water bodies that support listed species, EPA should provide additional guidance in the permit speaking to any such requirements. For example, the permit should indicate what agency(ies) the permittee is required to contact prior to conducting sediment sampling to ensure they have fulfilled any applicable ESA requirements associated with collecting sediment samples in waters supporting listed species.

App. B Page 15 II.B.1.b — The statement "IDEQ has determined for purposes of setting target loads for ambient water-quality-limited streams that 52 mg/L TSS or less would not impair designated uses" is taken out of context. DEQ does not have a specific guidance that set a specific target to be applied on a statewide basis. In addition, DEQ does not have a numeric criterion for TSS. It is likely that the 52 mg/L TSS target load was developed for a specific watershed in Idaho. DEQ recommends removing this statement and requests that EPA provide DEQ with the source of this information.

App. B Page 18 II.B.1.e — DEQ agrees that temperature limits for the two warm water facilities discharging to Jacks Creek in the Bruneau subbasin are not necessary. Please refer to the EPA-approved Bruneau Subbasin TMDL (2001).

App. B Page 19 II.B.1.f — In order to conduct a reasonable potential analysis, EPA must have an estimate of receiving water stream flow (unless EPA determines to not consider dilution when conducting a reasonable potential analysis). In addition, in order for DEQ to consider granting a mixing zone for particular constituents, DEQ must have a reasonable estimate of the critical flow of the receiving waters. DEQ is willing to work with the facilities on a case-by-case basis to determine what type of data would satisfy flow information needs for the mixing zone analysis.

App. B Page 25 II.C.4.a — After reviewing the 1999 permit and associated materials (Fact Sheet, EPA Response to Comments, and Memorandum to the Administrative Record – "Technology-based limits for warm water aquaculture facilities and changes in limits for cold water aquaculture facilities, Section VI.C *Aquaculture Facilities*"), there is insufficient information available for readers to understand the development of the technology-based limit for TP of 0.2 mg/L for warm water facilities. Information that would be useful includes the source of data (i.e. number of facilities), long-term average (mean of the data), and coefficient of variation. Please provide this information. Furthermore, EPA should justify why data from one facility sufficiently represents all of the facilities.

App. B Page 32 III.A — DEQ believes it is inappropriate to group the fish processing facilities when determining average concentrations because these facilities use different combinations of technologies to treat their processing wastewater. The technologies used directly relate to the technologically achievable concentrations in the discharge. This is recognized for other industries in that the Code of Federal Regulations stipulate different technology based standards for similar dischargers, such as the SSC 13 Industries, which essentially do the same basic job but use different control processes. DEQ would like EPA to justify its rationale for grouping these four facilities together.

EPA indicates that based on data submitted over the last permit cycle, the coefficient of variation (CV) for TP discharged from fish processing facilities is 0.561. On page 39 of the

Fact Sheet, EPA indicates that the CV of the discharge data from this sector (fish processing facilities) is 1.194. Please explain this discrepancy.

App. B Page 33-34 III.A.2.c

Are the MDL and AML TP limits for the Clear Springs Foods (CSF) Processing Plant Holding Ponds net or gross?

Why does EPA use different flows when calculating the MDL (4.44 MGD) and AML (3.87 MGD) TP limits for CSF Processing Plant Holding Ponds?

The background TP concentration in the aquifer is approximately 0.02 mg/L. Given the flow rates in the calculation of loads from the holding ponds, the background loading would be:

- At 4.44 MGD, TP loading = 0.74 lbs/day; and
- At 3.87 MGD, TP loading = 0.64 lbs/day.

The 0.2 lbs/day (AML) and 0.7 lbs/day (MDL) are less than the background loadings. Please explain the rationale.

Why did EPA omit a load allocation for TSS for the CSF processing plant holding ponds?

App. B Page 37-39 III.B

Idaho water quality standards (IDAPA 58.01.02.060) allow DEQ to determine the applicability of mixing zones. Similar to the 1999 GAP, EPA should include a statement that indicates permittees can ask DEQ for a mixing zone to ease their end-of-pipe effluent limitations.

App. B Page 41 III.C.3

EPA indicates that "Where the technology-based limits are selected, they are also retained under the anti-backsliding provisions of Section 402 (o) of the CWA, though their units have been converted to lbs/day." The 1999 permit did not have TP limits for fish processors; therefore, the anti-backsliding provisions are not applicable for this parameter.

General

According to 40 CFR 125.3(d)(3)(v), in setting case-by-case limitations, the permit writer must consider the cost of achieving such effluent limitations for best available technology requirements. The fact sheet does not contain an economic analysis for fish processors to achieve the best-professional-judgment (BPJ)-technology based limit (TBL) for TP. At a minimum, EPA should provide this analysis for the newly developed BPJ-TBLs for non-conventional parameters.

General

DEQ appreciates that the permits contain a reopener clause and would like to emphasize that EPA should strive to include newly approved WLAs into the permit. Allowing a facility to continue to discharge loads greater than approved WLAs is not protective of water quality standards. On the other hand, continuing to force effluent limitations based on previously developed WLAs that are more stringent than revised WLAs would be over-protective and may cause unnecessary burdens on the facilities.

General

For some of the tables, the footnotes in the table are not corresponding to footnote descriptions at the end of the table. For example, Table 10 of the fact sheet has a footnote numbered as "7", yet there is no description for footnote 7 at the end of the table. EPA should carefully review all of the tables to be sure that these errors are corrected.

It appears to DEQ that pollutant trading my be precluded by the use of a technology based water quality effluent limit. Is this the case and is this consistent with EPA guidance?