ANTIDEGRADATION REVIEW

NPDES Permit # IDG010000
Idaho Concentrated Animal Feeding Operations (CAFOs) General Permit

Idaho Department of Environmental Quality
December 1, 2011

Antidegradation Overview

In March 2011, Idaho incorporated new provisions addressing antidegradation implementation in the Idaho Code. The new antidegradation provisions are in Idaho Code § 39-3603. At the same time, Idaho adopted antidegradation implementation procedures in the Idaho water quality standards (WQS). The Idaho Department of Environmental Quality (DEQ) submitted the antidegradation implementation procedures to the U.S. Environmental Protection Agency (EPA) for approval on April 15, 2011. On August 18, 2011, EPA approved the implementation procedures.

Idaho's antidegradation policy (IDAPA 58.01.02.051) requires that existing uses of all waters in the state be maintained and protected (Tier 1 protection). The Department (DEQ) presumes most waters in the state will support cold water aquatic life and primary and secondary contact recreation beneficial uses; therefore waters that have not yet been designated shall be protected for these presumed uses and a Tier 1 level of protection will be given (IDAPA 58.01.02.101.01). In addition, where the quality of water is better than that required to maintain beneficial uses, then DEQ must assure that no degradation will occur unless, after allowing an opportunity for public comment and intergovernmental coordination, degradation is deemed to be necessary to accommodate important economic or social development (Tier 2 protection) (IDAPA 58.01.02.51.02). The third level of protection applies to water bodies that have been designated outstanding resource waters (ORW's) and requires activities to not cause a lowering of water quality (Tier 3 protection) (IDAPA 58.01.02.051.03; 58.01.02.052.07).

DEQ is employing a water body by water body approach to implementing Idaho's antidegradation policy. This approach means that any water body fully supporting its beneficial uses will be considered high quality (Idaho Code § 39-3603(2)(b)(i)). Any water body not fully supporting its beneficial uses will be provided Tier 1 protection for that use, unless specific circumstances warranting Tier 2 protection are met (Idaho Code § 39-3603(2)(b)(iii)). The most recent federally approved Integrated Report (IR) and supporting data are used to determine support status and the tier of protection (Idaho Code § 39-3603(2)(b)).

Pollutants of Concern

The following pollutants of concern are associated with discharges from CAFOs: nutrients as Total Phosphorus (TP), Total Nitrogen (N), Nitrate Nitrogen, Ammonia Nitrogen; total suspended solids (TSS); five-day biological oxygen demand (BOD_5); pH; *E. coli* and temperature. Under the CAFO GP, all discharges must be sampled and analyzed for these pollutants in accordance with EPA approved methods for water analysis listed in 40 CFR Part 136. [40 CFR 122.41]

Receiving Water Body Level of Protection

The CAFO GP provides coverage to facilities throughout the entire State of Idaho. Because of the statewide applicability, all of the jurisdictional waters within Idaho could potentially receive discharges either directly or indirectly from facilities covered under the CAFO GP. As previously mentioned, DEQ uses a water body by water body approach when determining the level of antidegradation protection a water body will receive.

All waters in Idaho that receive precipitation-related storm water discharges from facilities authorized in the CAFO GP will receive, at minimum, Tier 1 antidegradation protection because Idaho's antidegradation policy applies to all state waters. Water bodies that fully support their aquatic life or recreational uses are considered to be "high quality waters" and will receive Tier 2 antidegradation protection. Although Idaho does not currently have any outstanding resource waters (ORWs) designated, it is possible that a water body could be designated as an ORW during the life of this permit. Because of this potential, this antidegradation review will also assess whether the permit complies with the outstanding resource water requirements of Idaho's antidegradation policy.

Protection and Maintenance of Existing Uses (Tier 1 Protection)

As noted above, a Tier 1 review is performed for all new or reissued permits or licenses, applies to all waters subject to the jurisdiction of the CWA, and requires a showing that existing uses and the level of water quality necessary to protect existing uses shall be maintained and protected. In order to protect and maintain designated and existing beneficial uses, a permitted discharge must comply with narrative and numeric criteria of the Idaho WQS, as well as other provisions of the WQS such as Section 055, which addresses water quality limited waters.

Water bodies not supporting existing or designated beneficial uses must be identified as water quality limited, and a total maximum daily load (TMDL) must be prepared for those pollutants causing impairment. A central purpose of TMDLs is to establish wasteload allocations for point source discharges, which are set at levels designed to help restore the water body to a condition that supports existing and designated beneficial uses. Discharge permits must contain limitations that are consistent with wasteload allocations in the approved TMDL. A permit with effluent limitations consistent with TMDL wasteload allocations will provide the level of water quality necessary to support existing and designated uses and therefore satisfies Tier 1 antidegradation requirements.

The limitations and requirements contained in the CAFO GP will ensure compliance with the narrative and numeric criteria in the Idaho WQS. In addition to the limitations and requirements currently in the permit, the permit provides for an additional opportunity for comments to further ensure compliance with WQS. In addition to submitting a Notice of Intent (NOI) to EPA, Idaho State Department of Agriculture (ISDA), and Idaho State Department of Environmental Quality (DEQ), all applicants will be required to submit a Nutrient Management Plan (NMP) to EPA for approval. This plan must be developed by a certified specialist and shall consider all potential sources of nutrients. The NOI, NMP, and draft terms of the NMP to be incorporated into the permit, will be made available for a thirty (30) day public comment, providing interested parties an opportunity to further address potential additional impacts to waters of the state. Additionally, as set forth in the CAFO GP, EPA shall seek input from the appropriate DEQ regional office in determining whether a new discharger or new source proposing to discharge to an impaired

water body will contribute to the existing impairment and whether additional limits or controls are necessary for the discharger to comply with the impaired waters and TMDL provisions in Idaho WQS (IDAPA 58.01.02.055). Therefore, the permit ensures compliance with any applicable WLA in any applicable TMDL.

Protection of High-Quality Waters (Tier 2 Protection)

As indicated previously, water bodies that fully support their beneficial uses will be provided Tier 2 protection. As such, the quality of these waters must be maintained and protected, unless it is deemed necessary to accommodate important economic or social development. For a reissued permit or license, the effect on water quality is determined by looking at the difference in water quality that would result from the activity or discharge as authorized in the current permit and the water quality that would result from the activity or discharge as proposed in the reissued permit or license (IDAPA 58.01.02.052.04.a). For a new permit or license, the effect on water quality is determined by reviewing the difference between the existing receiving water quality and the water quality that would result from the activity or discharge as proposed in the new permit or license (IDAPA 58.01.02.052.04.a).

DEQ believes the new CAFO GP is as stringent, or more stringent, than the existing CAFO GP. Therefore, existing activities or discharges currently covered by the existing CAFO GP should not cause degradation, as long as the activity or discharge in not expanding.

DEQ also believes there likely will be no significant degradation as a result of new or expanded activities seeking coverage under the CAFO GP. The new CAFO GP only authorizes precipitation-related storm water discharges from facilities that are designed, constructed, operated, and maintained to contain all manure, litter, process wastewater, and the runoff and direct precipitation from the 25-year, 24-hour flood event. The CAFO GP requires the submittal and EPA approval of a Nutrient Monitoring Plan (NMP). The NMP will must be developed in accordance with the Idaho NRCS, conservation Practice Standard Code 590 contained in *Natural Resource Conservation Service Field Office Technical Guide*. EPA will develop site-specific permit terms based on the information provided in the NMP, input from the appropriate DEQ regional office, and pertinent comments received during the public notice period. The NMP will specifically identify and describe practices that will be implemented to ensure compliance with effluent limitations and additional requirements of the permit. The permitee will be required to comply with the site specific permit terms as established by EPA.

The proposed final CAFO GP also requires the implementation of additional best management practices (BMP's) to prevent discharges and runoff related to land application activities, including a provision which prohibits liquid land applications during the wet weather season. Discharges from land applications areas are only permitted as a result of precipitation events; the CAFO GP prohibits discharges from land application areas during dry weather conditions. The NMP will also address land application rates in either a numeric or a narrative approach. Land application rates will depend on site-specific criteria and will not exceed the crops ability to uptake the nutrients. Furthermore, soil sampling in areas receiving nutrient additions (land applications) will be taken annually to develop a nutrient budget (IDAPA 02.04.14 and IDAPA 02.04.15).

In the event that precipitation-related storm water discharges do occur, the permitee will be required to take discharge samples, which will be analyzed in accordance with EPA approved methods, for all of the pollutants of concern. Monitoring results will be retained on-site and be made available to EPA.

To further ensure the prevention of surface and ground water contamination, permitted facilities seeking termination of coverage under the CAFO GP will be required to adhere to environmentally-sound procedures, consistent with NRCS Practice Standard Code 360, for closing the facility.

In sum, the effluent limitations and associated requirements contained in the CAFO GP, including EPA-approval of a NMP, are designed to ensure compliance with the narrative and numeric criteria in the WQS and are more protective than the previous permit. Therefore, DEQ has determined that as long as CAFO facilities operate consistent with the terms of the NPDES permit and 401 Certification, there is reasonable assurance that the permit will protect and maintain existing and designated beneficial uses and there will be no degradation or adverse change in water quality.

Protection of Outstanding Resource Waters (Tier 3 Protection)

Idaho's antidegradation policy requires that the quality of outstanding resource waters be maintained and protected from the impacts of point source discharges. No water bodies in Idaho have been designated as outstanding resource waters to date; however, it is possible that waters may become designated during the term of the CAFO GP. Because of this possibility, DEQ has evaluated whether the proposed final CAFO GP complies with the ORW antidegradation provision.

As a condition of this certification, DEQ is requiring any applicant proposing to discharge to an ORW to obtain an individual NPDES permit from EPA. This requirement complies with Idaho's antidegradation provisions concerning ORWs.