

ADDENDUM

**FACT SHEET FOR THE
DRAFT MODIFICATION OF THE
AQUATIC PLANT AND ALGAE MANAGEMENT
NPDES GENERAL PERMIT**

NOVEMBER 2018

DEPARTMENT OF ECOLOGY

Permit Modification

The Washington State Department of Ecology (Ecology) proposes to modify the Aquatic Plant and Algae Management General Permit. The permit is a joint National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge General Permit issued on March 2, 2016. The permit will expire on March 31, 2021. This addendum supplements the March, 2016 Fact Sheet available at the following link.

<https://ecology.wa.gov/Asset-Collections/Doc-Assets/Water-quality/Freshwater/Water-Quality-Permits/Aquatic-Pesticides-Permits/APAMfactsheet>

The permit regulates the use of pesticides and other products applied to manage aquatic nuisance plants, aquatic noxious weeds, aquatic quarantine-listed weeds, algae, and phosphorous inactivation in freshwaters. The permit covers activities that result in a discharge of herbicides, algaecides, adjuvants, marker dyes, shading products, biological water clarifiers, or phosphorous inactivation products (collectively “chemicals”) into fresh waterbodies of the state of Washington. The permit also covers shoreline and roadside/ditch bank emergent vegetation management activities where chemicals may enter the water.

The scope of this permit modification is to include additional active ingredients so Permittees have more tools to manage aquatic weeds, algae, and nutrients. The active ingredients Ecology included were assessed in the 2017 Supplemental Environmental Impact Statement and have been requested by Permittees.

Ecology worked with staff of other state agencies—listed below—to identify potential impacts from the proposed active ingredients and determine permit conditions to mitigate the potential impacts.

- Washington State Department of Agriculture (WSDA)
- Washington State Department of Fish and Wildlife (WDFW)
- Washington State Department of Health (DOH)

Summary of Permit Modifications

Ecology modified Special Condition S4 – The Application of Products, in the permit. Each modification is discussed below. The added text is shown in blue (**added text**) and the removed text is shown-as red strikethrough (~~removed text~~).

S4. THE APPLICATION OF PRODUCTS

Special Condition S4.B – Table 2

Ecology added twelve adjuvants to, and removed two adjuvants from, Table 2 – Listed Adjuvants, in Special Condition S4.B. The draft permit contains the most up-to-date list of adjuvants approved for aquatic use by the WSDA.

Table 2: Listed Adjuvants

Adjuvant (Trade Name)/State Registration Number			
800 Plus/37686-18005	Agri-Dex™/5905-50094	AgriSolutions Inergy®/1381-13001	Antero-EA/2935-18001
Atmos™/1381-13006	Avor/9349-16011	Bond™/34704-04003	Brandt Magnify/48813-15003
Break-Thru SP 133/56630-15001	Breeze®/1381-13007	Bronc Max™/2935-03005	Bronc® Plus Dry/2935-12005
Bronc Plus Dry-EDT™/2935-03002	Chempro A-10/46059-16001	Choice Trio/34704-15003	Cide-Kick IIM®/99940/12001
Class Act NG™/1381-01004	Competitor™/2935-04001	Cut-Rate™/2935-06001	Cygnets Plus™/105114-50001
Denali-EA™/2935-15006	DestinyHC™/1381-09002	Droplex™/1381-12001	Dyne-Amic™/5905-50071
Fast Break®/1381-50006	Forge/46661-15002	Fraction™/45989-06001	Glacier-EA/2935-16001
Hasten-EA™/2935-15003	Interlock™/1381-05004	Kinetic™/5905-11004	Level 7™/1381-05002
LI-700™/34704-04007	Liberate™/34704-04008	MSO Concentrate/34704-04009	MSO Concentrate with Leci-Tech/34704-07001
NIS-EA™/2935-14001	One-Ap XL™/45989-02001	Phase/34704-05007	Pro AMS Plus™/71058-50001
Rainier-EA™/2935-15001	Renegade-EA™/2935-15002	Sinker™/5905-05001	Sphere 7/73127-10008
Spray-Rite™/7001-09003	Spreader 90/34704-05002	Superb HC™/1381-06003	Syl-Tac-EA™/2935-15004
Tactic™/34704-05008	Trail Blazer/91327-15009	Trapline Pro/86806-16003	Tronic™/45989-06003
Turbulence®/1381-13008	Winfield Solutions Inergy®/1381-13002	Yardage™/52467-13001	

Special Condition S4.D.7.e

In Special Condition S4.D.7.e, Ecology updated the contact information and the procedure to request the development of alternate timing windows.

- e. Permittees may consult with Ecology and WDFW to develop alternate timing windows if necessary so long as the new treatment windows do not adversely impact priority species and habitats.

Requests for the development of an alternate timing window must be submitted to ~~Contact Julie Henning of WDFW at Julie.Henning@dfw.wa.gov and apampreposttreat@ecy.wa.gov aquaticpesticideperm@ecy.wa.gov~~. When Ecology receives the request, staff will consult the WDFW for their determination on the appropriate work window for the waterbody where the alternate timing window was requested. ~~to request development of alternative timing windows. In the event that the email contacts become out of date, Ecology will provide updated contact information.~~

Special Condition S4.D – Table 3

Ecology added three herbicides (aminopyralid, florpyrauxifen-benzyl, and topramezone) and one algaecide (sodium carbonate peroxyacetic acid), and information about their use restrictions, to Table 3. In addition, Ecology made one change to the use restrictions for the algaecide sodium carbonate peroxyhydrate. The changes to Table 3 are included on the next page.

Table 3: Specific Restrictions on the Application of Herbicides and Algaecides for Control Projects

Active Ingredient ¹	Subject to Timing	Restrictions/ Advisories	Treatment Limitations	Other Specific Restrictions
<i>Aminopyralid</i>	No for fish - check timing table for other priority species.	48-hour re-entry restriction post-treatment (in the treated area)	Do not apply: <ul style="list-style-type: none"> ➤ To emergent or shoreline vegetation along undeveloped areas of surface waterbodies. ➤ In habitats where native vegetation restoration is desired (e.g., mitigation sites, riparian areas, and natural corridors). 	If soil or dead plants in treated areas are being removed, consult the product label to determine appropriate soil and plant disposal methods.
<i>Florpyrauxifen-benzyl</i>	No for fish - check timing table for other priority species.	None	None	None
<i>Sodium carbonate peroxyacetic acid</i>	No for fish - check timing table for other priority species.	None	Do not treat plants growing on the shore.	None
<i>Sodium carbonate peroxyhydrate</i>	No for fish - check timing table for other priority species.	None Swimming advisory during treatment, and for 2-hours post-treatment (in the treated area)	Do not treat plants growing on the shore.	None
<i>Topramezone</i>	No for fish - check timing table for other priority species.	None	None	None

¹ = The full chemical name for each active ingredient is included in Appendix A – Definitions.

Special Condition S4.D – Table 4

Ecology added two phosphorous inactivation chemicals (lanthanum-modified bentonite clay and powdered iron), and information about their use restrictions, to Table 4. The changes to Table 4 are included below.

Table 4: Specific Restrictions on Application of Products for Inactivation of Phosphorous

Phosphorous Inactivation Products	Subject to Timing	Restrictions/ Advisories	Treatment Limitations	Other Specific Restrictions
Lanthanum-Modified Bentonite Clay	No for fish - check timing table for other priority species.	None	Do not apply to water bodies: <ul style="list-style-type: none"> ➤ With flowing water or aeration systems. ➤ Stocked with grass carp. 	In waterbodies with low alkalinity (< 20 mg/L), a jar test must be completed prior to treatment to identify proper dosing levels.
Powdered Iron	No for fish - check timing table for other priority species.	None	<ul style="list-style-type: none"> ➤ Powdered iron must be applied to the water surface as a slurry. ➤ Do not apply where anoxic conditions (zero percent dissolved oxygen) may occur, including anoxic conditions created by applications of herbicide and algaecide. 	A jar test must be completed prior to a treatment to identify proper dosing levels.

APPENDIX A – DEFINITIONS

Ecology added the full chemical name for aminopyralid, florpyrauxifen-benzyl, and topramezone in Appendix A – Definitions.

Rationale for Permit Modifications

The following text explains why modifications were made to permit requirements in the Aquatic Plant and Algae Management General Permit.

S4. THE APPLICATION OF PRODUCTS

Special Condition S4.B – Table 2

Ecology revised Table 2 in Special Condition S4.B to reflect the current list of aquatic adjuvants registered by the WSDA. Since the permit was issued in 2016, the WSDA registered twelve adjuvants for aquatic use and canceled registration for two adjuvants. The permit modification provided Ecology an opportunity to ensure the list of adjuvants allowed in the permit is current with those registered by the WSDA.

Special Condition S4.D.7.e

If a Permittee wants to develop alternate timing windows they must consult staff from Ecology. Since the permit was issued in 2016, the name and contact information for staff from Ecology and the WDFW changed.

To avoid the permit listing outdated contact information, Ecology decided that Permittees should contact Ecology to start the discussion. Ecology staff will then consult the WDFW staff for their determination on the appropriate work window for the waterbody where the alternate timing window was requested. Special Condition S4.D.7.e now states the new email address for the Ecology contact and the new process for requesting the alternate timing windows.

Special Condition S4.D – Table 3

Ecology added three herbicides (aminopyralid, florpyrauxifen-benzyl, and topramezone) and one algaecide (sodium carbonate peroxyacetic acid) to Table 3 in Special Condition S4.D, so that Permittees are authorized to use additional tools to control aquatic plants and algae. Two of these chemicals are not appropriate for use in certain situations, so Ecology also included use restrictions in Table 3.

- Aminopyralid (herbicide)

After consultation with Permittees, Ecology decided to include aminopyralid in the permit during the modification. Aminopyralid is a herbicide used to control aquatic weeds. It was assessed in the 2017 Supplemental Environmental Impact Statement along with the other proposed chemicals for potential inclusion in the aquatic pesticide general permits. Due to its long-term persistence and activity in the soil in riparian areas after treatment occurs, Aminopyralid may prevent native dicot regrowth in treated areas.

Ecology is required to protect all beneficial uses of a waterbody. Preventing the regrowth of native vegetation, potentially for years, impacts the habitat functions of the riparian area of a waterbody. This is a long-term impact not currently contemplated by the short-term water quality modification under which herbicide discharges are allowed in the permit.

Ecology imposed use restrictions on aminopyralid because it has a long half-life in soils, which is likely to lead to long-term inhibition of desired species such as native dicots. For this reason, Ecology restricted its application along undeveloped areas of surface waterbodies and in habitats where native vegetation restoration is desired, such as in mitigation sites, riparian areas, and natural corridors. Aminopyralid is not subject to timing windows for fish because it has a low toxicity to non-target species including fish.

- Florpyrauxifen-benzyl (herbicide)

Florpyrauxifen-benzyl has a low toxicity to non-target species including fish, therefore it is not subject to timing windows for fish. Ecology did not restrict the use of florpyrauxifen-benzyl because it has a low risk of non-target impacts to native plants and other organisms.

- Sodium carbonate peroxyacetic acid (algaecide)

Sodium carbonate peroxyacetic acid is acutely toxic to aquatic life, as is sodium carbonate peroxyhydrate, which has a long history of use under the permit. However, due to the limited exposure time before the product dissipates, little non-target impacts are expected. Additionally, rapid recovery of exposed non-target organisms to pre-treatment levels is expected. Due to limited impacts and expected recovery, sodium carbonate peroxyacetic acid is not subject to treatment timing windows.

In the sign templates provided with the permit, Ecology recommends a swimming advisory during treatment and for 2-hours post treatment.

- Sodium carbonate peroxyhydrate (algaecide)

Sodium carbonate peroxyhydrate has a long history of use under the permit. Ecology did not change the requirements related to sodium carbonate peroxyhydrate, but did correct an error in Table 3 in the permit. Previously, Table 3 included a swimming advisory for sodium carbonate peroxyhydrate. Ecology revised Table 3 so that no restrictions are listed. The sign templates provided with the permit continue to recommend a swimming advisory during treatment and for 2-hours post treatment.

- Topramezone (herbicide)

Topramezone has a low toxicity to non-target species including fish, therefore it is not subject to timing windows for fish. Ecology did not restrict the use of topramezone because it has a low risk of non-target impacts to native plants and other organisms.

Special Condition S4.D – Table 4

Ecology added two phosphorous inactivation chemicals (lanthanum-modified bentonite clay and powdered iron) to Table 4 in Special Condition S4.D. These chemicals are not approved for use in all situations, so Ecology included use restrictions in Table 4.

- Lanthanum-modified bentonite clay
Lanthanum-bentonite clay has a low toxicity to non-target species including fish, therefore it is not subject to timing windows for fish.
- Powdered iron
Powdered iron has a low toxicity to non-target species including fish, therefore it is not subject to timing windows. Powdered iron will bind phosphorous in conditions where oxygen is present (aerobic conditions, greater than zero percent dissolved oxygen saturation in sediment pore water). However, when conditions become anaerobic or anoxic (low to no oxygen present), the powdered iron will release the phosphorous it had previously bound. The released phosphorous is available as a nutrient for algae and plant growth. To prevent pulse releases of previously bonded phosphorous, Ecology restricted the use of powdered iron in waterbodies where anoxic conditions occur.

The Permittee must also determine the dissolved oxygen levels of the water column. If the dissolved oxygen levels are \geq zero percent saturation, then the Permittee may conduct the treatment. To prevent bonded phosphorous from being released back into the water column, Ecology added a restriction to prevent a Permittee from conducting a treatment in a waterbody that has anoxic/anaerobic conditions.

APPENDIX A – DEFINITIONS

Appendix A – Definitions

Ecology included definitions for the three chemicals added to Table 3.