

WATERMASTER



The Cascade and Teton Newsletter for Weed Free Irrigation Canals

Winter 2014



Dale Carpenter

Joe Vassios

Greetings from Dale Carpenter, Joe Vassios, and United Phosphorus, Inc. (UPI)! We are delighted to introduce you to the first edition of our newsletter, Watermaster. Since 2010, UPI's landmark products, Cascade and Teton, have provided irrigation canal managers with highly

effective new tools for aquatic weed and algae control. Through this newsletter, we hope to provide yet another useful tool--one that will keep you informed of new developments in irrigation canal weed and algae management. Future editions will contain information related to current research, troublesome new species, industry news, and information on regulatory developments that impact aquatic herbicide and algicide use in the Western United States.

In this edition, Dr. Cody Gray provides information on horned pondweed, one of the most widespread aquatic weed species in Western irrigation canals. You can also read an update from Stephen Burkholder on the status of the Federal NPDES permits for aquatic pesticide applications.

We look forward to seeing you at the various trainings and conferences that UPI will be attending throughout the winter and spring. Please feel free to contact Joe at Joseph.Vassios@uniphos.com if you have any questions or suggestions regarding the newsletter. We would love to hear from you!

Sincerely,

Joe Vassios, PhD, Southwest Territory Manager
Joseph.Vassios@uniphos.com
Cell: 719-740-9291

Dale Carpenter, Northwest Territory Manager
Dale.Carpenter@uniphos.com
Cell: 208-860-1867

NPDES Permit Update

Stephen Burkholder, Project Biologist

The murky waters have subsided, and a clear picture of the state and federal requirement to have a National Pollutant Discharge Elimination System (NPDES) permit for discharges of aquatic herbicides to Waters of the United States (WOUS) has emerged. Court decisions and United States Environmental Protection Agency (USEPA) actions recognize that, even when applied in accordance with a Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) label, aquatic

herbicide residues may be considered pollutants when discharged over, near or directly to WOUS, and therefore require an NPDES permit.

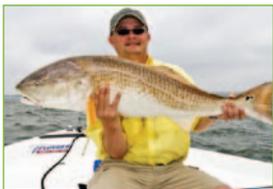
Most Western states have adopted permits for weed and algae control at the state level; permits in Idaho and New Mexico are administered by USEPA. Some states have thresholds of a minimum number of acres or linear miles that receive treatment before a permit is necessary. The permit is beneficial because it offers a degree of protection against citizen lawsuits by environmental advocacy groups for actual or perceived violations of the Clean Water Act.

Permit compliance requirements range from paperwork documenting aquatic herbicide use, to water quality monitoring and reporting. Make sure to check with your state environmental agency prior to next season's applications to understand the steps necessary to obtain and comply with an NPDES permit.

About the Author: Stephen Burkholder is a Project Biologist with Blankinship and Associates, Inc. The firm is regularly retained by the irrigation, flood control and water storage community.

When Moss isn't just Moss... It could be Horned Pondweed

Cody Gray, Field Development Representative



Horned pondweed (*Zannichellia palustris* L.) is a native, submersed aquatic plant species. Horned

pondweed acts as an annual species in western US irrigation canals, but can become perennial in nature should canals remain filled with water. Horned pondweed reproduces via seed and vegetatively from rhizomes. It can be found in still or slow-moving fresh and brackish water, and it occurs commonly in many irrigation canals in the western US.

Horned pondweed is often confused with sago pondweed [*Stuckenia pectinatus* (L.)

Borner]--but the following quick facts can help you tell the difference. Horned pondweed has opposite, sessile leaves, while sago pondweed has alternate, sheathed leaves. The leaves of horned pondweed are very narrow (less than 1 mm wide). Sago pondweed leaves are wider than those of horned pondweed. Another distinguishing characteristic between the two species is the fruiting structures. Horned pondweed has sessile flowers that grow in the leaf axils at the nodes--producing a fruiting structure that resembles a tiny pea pod. On the other hand, sago pondweed produces an emergent, floating flower spike. Additionally, sago pondweed produces tubers in the soil substrate, where horned pondweed will only produce rhizomes.

When identifying weed species found in your irrigation canals, look closely for the small fruiting structures in the axils of the leaves. If you see small seed pods, then you are likely looking at horned pondweed. Here's another tip

if you are examining plants in the water: horned pondweed has a very bright green, almost neon appearance.



UPCOMING EVENTS

IWUA, January 21-23, Boise, ID
CWSS, January 22-24, Monterey, CA
NIOI, February 12-14, Boise, ID
Utah Water Users Association,
March 17-19, St. George, UT
WAPMS, March 31 - April 2, Reno, NV

We want to hear from you! Please send your feedback to us at Joseph.Vassios@uniphos.com.