

Invasive Species Fact Sheet

Grass carp, Ctenopharyngodon idella

General Description

Grass carp are large, freshwater fish belonging to the minnow family. They have an oblong body, round belly, and wide head. Adult grass carp are olivebrown on their backs and brassy or silvery on their sides, with white to yellow bellies. Grass carp have large, round scales that are outlined in black with a dark spot at the base. Grass carp have long, serrated, pharyngeal (throat)



Grass carp
Photo by Michigan Sea Grant

teeth that are used to chop and grind aquatic vegetation, which is their primary food source. Grass carp can grow to nearly 5 feet long and weigh up to 99 pounds. Grass carp closely resemble black carp, but can be distinguished by their lighter coloration and serrated, pharyngeal teeth.

Current Distribution

Through private stocking permits issued by the California Department of Fish and Wildlife (CDFW), triploid (sterile) grass carp are legally stocked in California in irrigation canals and golf course ponds for the purpose of aquatic vegetation control. Grass carp have been illegally introduced to California on numerous occasions over the years, with most attempts unsuccessful or resulting in eradication by CDFW. One wild, non-sterile population of grass carp is known to be present in a small, private pond in Siskiyou County. However, the pond does not provide suitable conditions for successful reproduction and CDFW is working with the landowner to ensure the population is contained. Grass carp were introduced to the United States in the 1960s, and have since been reported in 45 states, with reproducing populations present in the Mississippi River drainage and the Trinity River in Texas. Grass carp are native to large rivers of eastern Asia, from China and Russia to Thailand. They have been introduced all over the world, including Canada, Mexico, Central America, South America, Africa, Greater Antilles, the Pacific Islands, Europe, and throughout Asia outside of their natural range.

Habitat Preference

Grass Carp prefer shallow, abundantly vegetated waters of lakes, ponds, and backwaters of large rivers. They require riverine environments with long reaches, high water volume, turbulent flow, and warm water temperatures (66 to 84 °F) to successfully reproduce. Grass carp can tolerate a wide range of water temperatures (near freezing during the winter and near 100°F during the summer), low oxygen levels, and brackish water.

Pathways

In 1963, grass carp were introduced into the U.S. for aquaculture in Arkansas. They were later released into an Arkansas lake and the Arkansas River in the early 1970s and quickly spread to the Mississippi River drainage and established reproducing populations. In the U.S, they continue to be distributed via aquaculture operations, illegal and legal stocking for aquatic vegetation control and research, and escapement/release from isolated waterbodies to open waters. Grass carp are on California's list of restricted animals and cannot be imported, transported, or possessed without a permit.

Impacts

Grass carp have a ravenous appetite for plants and can quickly reduce or eliminate large quantities of aquatic vegetation from waterbodies, which can lead to the alteration or loss of habitat for native species, reduction in food availability for waterfowl, and increased occurrences of algal blooms. While feeding, grass carp disturb sediment and muddy waters, which can impact spawning habitat for native fish. Grass carp carry diseases that are transmittable to other fish and are believed to be the main vector for Asian tapeworms.

Actions Taken if Found

Per California Code of Regulations (Title 14), any grass carp taken in Siskiyou and Shasta counties, within the Sacramento River drainage above and including Lake Shasta, **shall be killed immediately** by removing the head. CDFW shall be contacted as soon as possible and within 24 hours by calling (888) 334-2258. If found elsewhere, contact the CDFW Invasive Species Program at (866) 440-9530 or Invasives@wildlife.ca.gov to report your observation.

Invasive Species Fact Sheet - Ctenopharyngodon idella

References

Dill, W.A. and A.J. Cordone. 1997. *History and Status of Introduced Fishes in California, 1871-1996.* C.W. Haugen (Ed.). California Department of Fish and Game Fish Bulletin 178.

Global Invasive Species Database. 7 October 2010. *Ctenopharyngodon idella (fish)*. Retrieved 22 May 2012 from http://www.issg.org/database/species/ecology.asp?si=369&fr=1&sts=&lang=EN.

Imperial Irrigation District. June 1998. Fact Sheet: Aquatic Weed Control and Sterile Grass Carp. Retrieved 22 May 2012 from the U.C. Davis California Aquaculture website: http://aqua.ucdavis.edu/DatabaseRoot/pdf/IID6-98.PDF.

McGinnis, S.M. 2006. Field Guide to Freshwater Fishes of California. Revised Edition. Berkeley: University of California Press.

Moyle, P.B. 2002. Inland Fishes of California. Revised and Expanded. Berkeley: University of California Press.

Nico, L.G., J.D. Williams, and H.L. Jerks. 2005. *Black Carp: Biological Synopsis and Risk of an Introduced Fish*. American Fisheries Society Special Publication 32. Bethesda: American Fisheries Society.

Nico, L.G., P.L. Fuller, P.J. Schofield, and M.E. Neilson. 15 March 2012. *Ctenopharyngodon idella*. Retrieved 22 May 2012 from the U.S. Geological Survey Nonindigenous Aquatic Species Database: http://nas.er.usgs.gov/queries/FactSheet.aspx?speciesID=514.

Schofield, P.J., J.D. Williams, L.G. Nico, P. Fuller, and M.R. Thomas. 2005. Foreign Nonindigenous Carps and Minnows (Cyprinidae) in the United States – A Guide to their Identification, Distribution, and Biology. U.S. Geological Survey Scientific Investigations Report 2005-5041.

University of California California Fish Website. *Grass Carp.* Retrieved 22 May 2012 from http://calfish.ucdavis.edu/species/.

State of California The Resources Agency DEPARTMENT OF FISH AND GAME 1416 Ninth Street Sacramento, California 95814

Inland Fisheries - Informational Leaflet No. 45

INSTRUCTIONS FOR OBTAINING PERMITS TO STOCK TRIPLOID GRASS CARP

Triploid grass carp have been demonstrated to have the potential to control aquatic nuisance plants in waters. Chapter 5, Article 4 of the Fish and Game Code provides that the Department of Fish and Game may use its management authority to provide for the long-term health of the ecosystem in the state including the aquatic ecosystem, and in that context, manage grass carp either through control of movement, eradication of populations, acquisition of habitat and any other action that the department finds will maintain the biological diversity and the long term, overall health of the state's environment. The department shall undertake the management of grass carp in a manner that is consistent with provisions of this code and for the purposes of this section the department shall define management as handling, controlling, destroying, or moving species. The Legislature does not intend for this section to provide a right for the use of triploid grass carp if the department finds that use of the species poses an unacceptable risk to the state's existing ecosystem.

HOW TO OBTAIN PERMIT

The department may issue a permit to allow for the use of artificially introduced triploid grass carp. A permit is required for each stocking location (non-contiguous pieces of property). Completed applications (attached) and the required fees (check or money order payable to the Department of Fish and Game) should be submitted to the Department's regional office in whose region the fish will be stocked.

The Department will issue a permit only to those persons, organizations, or agencies that own or have legal controlling authority over the water body proposed to be stocked. A homeowner's association is considered a business organization, for the purposes of this application. A telephone contact number, e-mail address, or FAX number is necessary in order to schedule an initial site inspection.

TRIPLOID GRASS CARP

Triploid grass carp are those triploid grass carp that have been rendered sterile immediately after the eggs have been fertilized. Each individual fish is required to be checked to ensure that a third, triploid, set of chromosomes has been retained, preventing further reproduction by that individual fish. Documented certification of triploidy to ensure sterility is required and each fish must be tagged to identify the fish as the property of the owner.

Providers of triploid grass carp for use under this article shall provide certification acceptable to the department of triploidy and disease-free conditions for all fish introduced.

APPLICATION CONSIDERATIONS

<u>Description of the Water(s) to be Stocked</u>

The applicant must indicate on the application the water body ownership status and provide information regarding the watershed, water source, water body type/principal use, and public access. This information is deemed necessary for determining whether the use of grass carp is an appropriate means of aquatic vegetation management or control. The location, size, and use of the water body will be used to determine how many grass carp to stock. The inclusion of water quality data is not mandatory, but may help anticipate and alleviate management problems in the water body.

A hand-drawn or commercially produced map is acceptable. The map should include the following details and information:

- a. Location of the property in relation to nearest major streets or highways
- b. Property boundaries
- c. Nearest river, stream, or other freshwater system
- d. Location of each water body within the property (please label each with name or identification number)
- e. Points where water enters each water body, if any
- f. Points where water leaves each water body, if any
- g. Locations of fish containment barriers, if any

Item a. is required for inspection. In addition, please provide explicit written directions so that the site may be readily found by a person who is unfamiliar with the area.

<u>Description of the Aquatic Vegetation Problem</u>

The applicant must describe on the application the aquatic vegetation problem in the subject water body, please include the following information, if possible: 1) reason why the vegetation is considered a problem; 2) how long the problem has persisted; 3) vegetation control methods used in the past; 4) any other information which you consider pertinent. Attach additional pages if more space is needed. You may also include photograph showing the extent of vegetation coverage in the subject water body.

List the names of the various types of aquatic vegetation observed in the subject water body, if known. Relative abundance of each plant type should be expressed as the percentage of the water body's surface area covered by that plant, at the height of the growing season (i.e., July or August). In the last column, indicate where each type was primarily found: a) along the shore; b) in the middle of the water body; 3) dispersed

throughout the water body.

Processing (Administrative) Fee

Pursuant to Section 6454 of the Fish and Game Code, the department shall charge the following fees to defray costs incurred in the initiation and implementation of the Triploid Grass Carp Program:

An application processing fee for each permit varies each year and is adjusted by a cost of living factor. The processing fee is nonrefundable and for 2005, the application processing fee is \$50.

If the application is approved, a stocking fee of \$15.00 for each fish, plus an annual renewal fee: \$7.50 for each fish will be charged to the permittee.

Note: The stocking fees will be assessed upon initial stocking and at any subsequent time that additional fish are added. Renewal fees are based on the number of fish remaining in the pond. The renewal fee is based on the presumption that no fish have been removed from the pond unless the permittee can provide proof acceptable to the Department that fish have died or have been removed from the pond.

Renewal and Expiration

All permits expire on December 31 and permits must be renewed by March 1 of the following year. If permit renewal fees are not received by the department on or before March 1, the department may eradicate all grass carp present in ponds for which permits have lapsed.

Record of licensure

Under Section 238.6, Title 14, California Code of Regulations, the Department of Fish and Game is authorized to collect information from applicants to maintain a record of licensure. All information requested on the application is mandatory unless otherwise indicated. An applicant's name and city of residence may be provided to the public if requested. Other personal information submitted on this application may be released for law enforcement purposes, pursuant to court order, or for official natural resources management purposes. An applicant may obtain a copy of his/her license records from the records custodian at the regional office where the permit was issued.

DEPARTMENT OF FISH AND GAME Regional Offices

Northern Region- Region 1 601 Locust Street Redding, CA 96001 (530) 225-2300

Del Norte Shasta
Humboldt Siskiyou
Lassen Tehama
Modoc Trinity

Northern Central Region – Region 2 1701 Nimbus Road Rancho Cordova, CA 95670 (916) 358-2900

Alpine **Plumas** Amador Sacramento Butte San Joaquin Calaveras Sierra Colusa Solano El Dorado Sutter Glenn Yolo Placer Yuba

Central Coast Region P.O. Box 47 Yountville, CA 94599 (707) 944-5500

Alameda San Benito
Contra Costa San Francisco
Lake San Luis Obispo
Marin San Mateo
Mendocino Santa Clara
Monterey Santa Cruz
Napa Sonoma

Central Region- Region 4 1234 Shaw Avenue Fresno, CA 93710 (559) 243-4005

Fresno Merced Kern Stanislaus Kings Tulare Madera Tuolumne Mariposa

South Coast Region – Region 5 4665 Lampson Avenue Los Alamitos, CA 90702 (858) 467-4201

Los Angeles San Diego Santa Barbara Orange Ventura

Inland Deserts Region 3602 Inland Empire Boulevard, Suite C220 Ontario, California 91764 (909) 484-0167

Mono Inyo San Bernardino Riverside Imperial

Title 14, Fish and Game Code of Regulations regarding the permitting of Triploid Grass Carp

238.6 Triploid Grass Carp Stocking.

Pursuant to Section 6450 of the Fish and Game Code, the department may issue permits to stock triploid grass carp.

- (a) Purpose for Stocking. This section provides for the introduction of triploid grass carp, solely for the purpose of managing and controlling nuisance submerged aquatic plants, only within the counties of Imperial, Riverside, and San Bernardino.
- (b) To Whom Issued. Triploid grass carp stocking permits may be issued to a person, organization, or agency, to control or eradicate nuisance submerged aquatic plants, only within those waters under their control.
- (1) Triploid grass carp stocking permits are not transferrable to persons, organizations, or agencies other than the permittee, except in the event that ownership of, or legal control over a water body named in the permit is transferred from the permittee to another person, organization, or agency. In this event, the permittee shall notify the department in writing within 10 (ten) days of the transaction. In addition, the permittee shall be responsible for informing the new owner of, or party assuming legal control over that water body, that triploid grass carp have been stocked therein. For the remaining term of the existing permit, said permit shall be transferred to the new owner of, or party assuming legal control over said water body, provided that said party agrees in writing to comply with the terms and conditions specified in this section. After expiration of the existing permit, the party assuming permittee status shall be required to renew the grass carp permit pursuant to subsection 238.6(e)(3)(B).
- (2) Grass carp programs approved by the department on or before June 1, 1995 shall be exempt from the provisions of this section. Such programs shall be allowed to continue operations under a Private Stocking Permit (Form FG 749-(revised 5/93)), provided that the permittee furnishes proof of prior approval.
- (c) Limitations.
- (1) No permits shall be issued to stock grass carp in any major drainage or water having an open freshwater connection to other waters of the state (e.g., streams, rivers, lakes, or reservoirs).
- (2) No permit shall be issued for grass carp introductions within the 100-year flood plain, as defined by the Federal Emergency Management Agency (FEMA), or local agency responsible for flood control, with the following exceptions:
- (A) Grass carp introductions may be permitted within closed basins, including that of the Salton Sea, subject to the conditions stated in subsections (c)(3) and (4), below.
- (B) Along the Colorado River and in basins where the 100-year flood plain zones have not been defined, permit approval shall be based upon department evaluations.
- (3) For water bodies open to public angling, or those located within residential-area golf courses, triploid grass carp introductions shall be limited to those waters which have been determined by the department to be secure from removal or escape of grass carp. Until January 1, 1999, the Department shall not issue any permit for use of grass carp in waters located within condominium areas of any residential area which the Department has not determined to be secure from the removing of grass carp to unauthorized waters, except at three locations within the area authorized pursuant to this subdivision. The three locations shall be selected by the department in consultation with the Imperial Irrigation District. The limitation to three locations is necessary to enable monitoring of human-induced movement of grass carp to unauthorized waters and to permit the evaluation of the impact of the experiment. The results of the evaluation shall be reported to the Legislature before the use of grass carp is authorized in other similar waters.
- (4) No permit shall be issued for grass carp introductions into waters inhabited by plants or animals designated as threatened, endangered, or species of special concern.
- (5) Only those grass carp which have been verified as free of diseases and parasites may be stocked under the provisions of this section. In addition, the Department shall:
- (A) restrict grass carp introductions to those grass carp that have been rendered sterile immediately after the eggs have been fertilized.
- (B) require individual fish to be checked to ensure that a third, triploid, set of chromosomes has been retained, preventing further reproduction by that individual fish,
 - (C) limit aquatic plant pest control programs using grass carp to the use of sterile triploid grass carp with documented certification of triploidy to ensure sterility.
 - (6) Each triploid grass carp shall be implanted with serially-numbered tags provided or approved by the Department.
 - (7) The department may limit the number and minimum size of triploid grass carp to be stocked in any proposed water. The number of triploid grass carp stocked may not exceed that specified on the permit, unless the permittee has obtained a department approved amendment to said permit.
 - (8) Security measures acceptable to the department shall be in place before triploid grass carp may be introduced into permitted waters. Such devices may include, but are not limited to, the following: fenced enclosures, locked gates, controlled access, and bird netting.
 - (9) Wherever barriers or screens are required to contain triploid grass carp within a proposed stocking site, the design for such structures must be approved by the department, and said structures shall be installed by the applicant prior to issuance of the Triploid Grass Carp Stocking Permit.

- (10) Prior to stocking, permittee shall post prominent notices at each stocking site declaring the penalties for unauthorized removal of triploid grass carp.
- (11) The permittee shall not place triploid grass carp in waters other than those specified in the permit.
- (d) Permits.
- (1) The term of the permit shall be one calendar year or remaining portion of the year.
- (2) An amendment to change permit conditions may be issued by the department at any time during the term of the permit upon written request by the permittee, provided that such changes are consistent with the provisions of this section.
- (3) The permittee shall retain a copy of the triploid grass carp stocking permit while grass carp are present in the permitted water. Said permit shall be available for presentation on request of any department employee.
- (4) The department shall deny an application to stock triploid grass carp in any water body, if such proposed stocking is inconsistent with the provisions of this section.
- (e) Application procedure. Applications shall be submitted on a form (Application for Triploid Grass Carp Stocking Permit for Aquatic Plant Management, FG 749-TGC (12/96), which is incorporated by reference herein) supplied by the department and may be filed with the department at any time. All applications shall be sent to the address indicated on the form and shall be submitted with appropriate application and inspection fees (see subsection (b)(3) below).
- (1) Application Requirements. The applicant shall provide the following information, when requesting said permit, as well as when renewing an existing permit:
- (A) Name, address, and affiliation of applicant.
- (B) Location of the proposed stocking site.
- (C) Number and type of water bodies to be stocked, and their sizes, in acres, or in square feet for waters less than one acre.
- (D) Source of water supply and locations of water outlets, if applicable.
- (E) A description of aquatic plant management problems, including but not limited to:
- 1. Type(s) of aquatic vegetation present, relative abundance of each, expressed as percentage of surface coverage, at the peak of the growing season.
- 2. Desired vegetation quantity or coverage.
- (F) Number of triploid grass carp requested.
- (G) Existing water quality data for the proposed water, if any.
- (2) Inspection.
- (A) Initial Inspection of Proposed Waters. All waters proposed for triploid grass carp stocking shall be subject to inspection by the department, to verify stocking is consistent with the provisions and limitations of this section, and to determine the number of triploid grass carp to stock.
- (B) Periodic Follow-Up Inspections. All waters stocked with triploid grass carp shall be subject to inspection by department employees.
- (3) Fees. The application and inspection fees shall be paid to the department at the time the Triploid Grass Carp Stocking Permit application is filed.
- (A) Pursuant to Section 6454 of the Fish and Game Code, the department shall charge the following fees to defray costs incurred in the initiation and implementation of the Triploid Grass Carp Program:
- 1. Stocking fee: \$15.00/fish, and
- 2. Annual renewal fee: \$7.50/fish

Note: The stocking fees will be assessed upon initial stocking and at any subsequent time that additional fish are added. Renewal fees are based on the number of fish remaining in the pond. The renewal fee is based on the presumption that no fish have been removed from the pond unless the permittee can provide proof acceptable to the Department that fish have died or have been removed from the pond.

- (B) All permits expire on December 31. Permits must be renewed by March 1 of the following year. If permit renewal fees are not received by the department on or before March 1, the department may eradicate all grass carp present in ponds for which permits have lapsed.
- (f) Annual Reports.
- (1) On or before March 1 of each year following the first year after triploid grass carp have been stocked, all permittees shall submit to the department a report documenting the progress of the aquatic vegetation control program in the permitted water. This report shall be submitted on a form furnished by the department (Triploid Grass Carp Stocking Permit Annual Report Form (FG 749-Rep (12/96)), which is incorporated by reference herein.
- (2) Pursuant to Fish and Game Code subsection 6453(b), the permittee shall continue to submit annual reports until five

years after the use of grass carp to control aquatic plant pests is terminated, unless acceptable evidence is provided to the department that all grass carp have been removed from the water.

- (3) Permit amendments to stock triploid grass carp in excess of the number specified in the original permit shall be denied if the permittee fails to submit such reports.
- (a) No live triploid grass carp shall leave the permittee's waters without advance approval in writing from the department.
- (h) Permit Revocation.
- (1) The department may revoke a Triploid Grass Carp Stocking Permit at any time upon its determination that the permittee has not complied with the terms and conditions of the permit, or if grass carp are used in any manner that is inconsistent with the provisions of this section.

FISH AND GAME CODE SECTION 6440-6460

- 6440. The Legislature finds and declares that triploid grass carp have the potential to control aquatic nuisance plants in non-public waters allowing for reduced chemical control but that the threat that grass carp pose to aquatic habitat may outweigh its benefits. It is the intent of this section to allow the Department of Fish and Game to use its management authority to provide for the long-term health of the ecosystem in the state including the aquatic ecosystem, and in that context, manage grass carp either through control of movement, eradication of populations, acquisition of habitat and any other action that the department finds will maintain the biological diversity and the long term, overall health of the state's environment. The department shall undertake the management of grass carp in a manner that is consistent with provisions of this code and for the purposes of this section the department shall define management as handling, controlling, destroying, or moving species. The Legislature does not intend for this section to provide a right for the use of triploid grass carp if the department finds that use of the species poses an unacceptable risk to the state's existing ecosystem.
- 6450. The department shall adopt regulations that provide for the control of aquatic plant pests using artificially introduced triploid grass carp under a permit issued by the department. The regulations shall do all of the following:

(a) Restrict triploid grass carp introductions to those triploid grass carp that have been rendered sterile immediately after

the eggs have been fertilized.

(b) Require individual fish to be checked to ensure that a third, triploid, set of chromosomes has been retained,

preventing further reproduction by that individual fish.

(c) Limit aquatic plant pest control programs using triploid grass carp to the use of sterile triploid grass carp with documented certification of triploidy to ensure sterility.

(d) Require the identification by tagging of individual fish as the property of each owner.

(e) Require the posting of notices at stocked bodies of water declaring the penalties for removing triploid grass carp. (f) Limit the permits for the use of triploid grass carp in waters on golf courses located in residential areas to those

waters that are determined by the department to be secure from the removal of triploid grass carp to unauthorized waters.

(g) Provide for management of the triploid grass carp populations in a manner consistent with the provisions of this code where the department finds that such actions will benefit the long-term health of the state's biodiversity as a whole.

(h) Until January 1, 1999, the regulations shall not authorize the issuance of permits for the use of triploid grass carp in

- waters located within condominium areas of any residential area for which a permit may not be issued pursuant to subdivision (f) except at three locations within the area authorized pursuant to this subdivision. The three locations shall be selected by the department in consultation with the Imperial Irrigation District. The limitation to three locations is necessary to enable monitoring of human-induced movement of triploid grass carp to unauthorized waters and to permit the evaluation of the impact of the experiment. The results of the evaluation shall be reported to the Legislature before the use of triploid grass carp is authorized in other similar waters.
- 6451. All providers of triploid grass carp for use under this article shall provide certification acceptable to the department of triploidy and disease-free conditions for all fish introduced.
- 6452. Prior to receiving a permit from the department to use triploid grass carp, the potential user shall provide to the department all of the information required by the department, including, but not limited to, the following:

(a) The type of waterway to be stocked.

(b) The site has no connections to adjacent fresh water systems.
(c) All aquatic plant management problems, including, but not limited to, the following:
(1) The acres of aquatic plants, by species, at the peak of growing season.
(2) The desired vegetation quantity or coverage.
(3) The number and size of triploid grass carp recommended.
(4) All constitute plant or animal species within the waterway to be stocked and any core.

- (4) All sensitive plant or animal spečies within the waterway to be stocked and any connected waterways.
- 6453. (a) On or before March 1 of each year following the first year after triploid grass carp introduction, the permittee shall provide to the department all of the information required by the department, including, but not limited to, the following:

(1) The number and size of triploid grass carp recommended for the waterway stocked. (2) The number and size of triploid grass carp stocked in the waterway.

(3) The acres of aquatic plants, by species, at the peak of the growing season in the year prior to introduction of triploid

grass carp in the waterway stocked.

(4) The acres of aquatic plants, by species, at the peak of the current year growing season.

(b) The annual report shall be submitted until five years after the use of triploid grass carp to control aquatic plant pests is terminated, unless evidence acceptable to the department is provided that all triploid grass carp have been removed from the waterway.

- (c) On or before June 1 of each year, the department shall report to the appropriate policy and fiscal committees of the Legislature a summary of the use of triploid grass carp use for aquatic plant pest control compiled from information from permittees annual reports received pursuant to subdivision (a).
- 6454. The department shall establish permit and inspection fees sufficient to recover, but not exceed, the initial and ongoing costs of the program under this article.
- 6455. The department shall impose conditions in the permit to use triploid grass carp under this article that it finds necessary to prevent escape of the triploid grass carp from the targeted area. The conditions shall include, but are not limited to, the following:
- (a) No permit shall be issued for the use of triploid grass carp in waters with an open fresh water connection to other waters of the state.
- (b) Any waters in which triploid grass carp are used under thisarticle shall be under the control of the permittee. In addition, barriers to fish movement acceptable to the department shall be in place before introduction of triploid grass carp under this article. Movement of triploid grass carp to areas outside the control of the permittee is prohibited.

(c) Any waters in which triploid grass carp are used under this article shall have sufficient dissolved oxygen and suitable

vegetation for consumption to sustain the introduced triploid grass carp, as determined by the department.

(d) Except within closed basins, including the Salton Sea, no permit shall be issued for the use of triploid grass carp

within the 100-year flood plain.

- (e) Any person or persons engaging in the introduction of triploid grass carp into any area, or in the transfer of triploid grass carp from one site to another, without a permit from the department shall be punished by a fine of not more than five thousand dollars (\$5,000), by imprisonment in the county jail for not more than one year, or by both that fine and imprisonment.
- 6456. Nothing in this article shall be construed as restricting grass carp programs approved by the department on or before June 1, 1995.
- 6457. Because of its experience and continuing involvement with hydrilla control programs, the implementation of Sections 6450 and 6454 shall be carried out in consultation with the Department of Food and Agriculture.
- 6459. (a) In the report required by subdivision (c) of Section 6453, beginning in 1998, the department shall report to the appropriate policy and fiscal committees of the Legislature its findings with respect to whether the use of triploid grass carp for aquatic pest plant control may be expanded in six more southern California counties or statewide. The finding shall be based on documented and verifiable evidence.
- (b) If the department finds in the report required by subdivision (c) of Section 6453 that the use of triploid grass carp may be expanded to six more counties, beginning January 1 of the following year, the department shall authorize the use of triploid grass carp for aquatic pest plant control in the counties of San Diego, Orange, Los Angeles, Kern, Ventura, and Santa Barbara.
- (c) If the department finds in the report required by subdivision (c) of Section 6453 that the use of triploid grass carp may be expanded to statewide, beginning January 1 of the following year, the department shall authorize the use of triploid grass carp for aquatic pest plant control statéwide.

(d) If the department finds in the report required by subdivision (c) of Section 6453 that the use of triploid grass carp should not be expanded to six more counties or statewide, the department shall reconsider that finding in the next year's

(e) If the department's annual report is, for any reason, not submitted on or before June 1 of the year due, it shall be conclusively deemed to be the finding of the department that effective June 1 of that year, the use of triploid grass carp to control aquatic plant pests should be expanded statewide.

(f) Notwithstanding subdivisions (b) and (c), the department may limit permit applications to no more than 150 per fiscal year, and may prioritize the processing of permit applications for purposes of administrative and cost efficiencies.

6460. If the department obtains documented and verifiable evidence of escapements of triploid grass carp permitted under this article into unauthorized waters, the unauthorized use of grass carp, or threats to fish and wildlife and their habitats as the result of this program, it may, upon a written finding by the director to that effect, suspend the permit issuance process authorized by this article. If the situation is local, the suspension may be limited to that area whose waters, habitat, and fish and wildlife resources are threatened. The suspension shall last until the director makes a written finding that the threat has been abated.