

SUMMARY OF REGULATIONS FOR SEAWEED HARVESTING ALONG THE WEST COAST OF NORTH AMERICA (2005)

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It is important to note that a similar report was created by Dr. Gayle Hansen and Thomas Mumford, which summarizes seaweed-harvesting regulations for Mexico, California, Oregon, Washington, and British Columbia for 1994/1995. The 1994/1995 report is available online at: <http://oregonstate.edu/~hanseng/Regulations%20Paper.pdf> and also contains a brief introduction to the issue at hand, intertidal seaweed harvest. This report is an updated summary of regulations as many have changed since the publication of the original document. Regulations change often and are dispersed in a variety of locations and formats; therefore, this may not necessarily be a complete or current summary of regulations. Sources utilized in the preparation of this document are cited below each summary. Please consult with appropriate authorities and landowners before conducting any collecting.

ALASKA

Ownership of intertidal and subtidal lands: the state owns lands from the mean high tide out to 3 geographical miles (Title 11, Part 6, Chapter 62).

1.) Commercial

- ☆ Permits are required for processors, buyers, and harvesters of aquatic plants and aquatic plant farmers (issued by Alaska Fish & Game).
- ☆ Information contained within permit must include:
 - Species, method
- ☆ Limitations:
 - Area may be restricted to one or more fishing districts
 - Harvest is by mechanical cutting or handpicking only
 - Plants must be removed from the water at the time of harvest
 - If used in the herring spawn industry (as a substrate), additional restrictions may apply (see below)

2.) Personal Use

- ☆ "Personal use" is defined as "the taking, attempting to take or possession of finfish, shellfish or aquatic plants by an individual Alaskan for consumption as food or use as bait by that individual or his immediate family."
- ☆ Alaska sport fishing licenses are required for personal collection of aquatic plants (unless a person is under 16 or over 60 years of age).
- ☆ Sport fishing licenses are valid for one year and are not transferable to another person.
- ☆ Sport fishing licenses cost:
 - \$15.00 yearly for residents of Alaska (those people that have resided in state for the preceding 12 consecutive months)
 - \$100.00 yearly for non-residents. 1, 3, 7, and 14-day licenses may also be purchase for \$10, \$20, \$30, and \$50 respectively.

3.) Scientific or Educational Collecting

- ☆ A fish resource permit is required and will be issued only for legitimate research or educational activities
 - The Commercial Fisheries Management and Development Division of Alaska Department of Fish and Game review permits.
 - A collection report is required and must be submitted to the office that issued the permit within 30 days after the expiration date of the permit, unless an earlier date is specified. The report must include:
 - ☆ Numbers of each species collected, date and place taken, disposition of the specimens, and, if applicable, sex, life state, age, lengths and weights, or any other information required in the permit
 - ☆ A completion report detailing the results and findings of any data analysis for the project, if not submitted with the collection report, must be submitted within 6 months of permit expiration.
 - ☆ Source: <http://www.cf.adfg.state.ak.us/geninfo/permits/frp/frpolicy.pdf> (accessed on 8/29/05).
- ☆ Alaska State Parks has a separate “Special Use Permit” which must be obtained to conduct scientific study, collection or educational research on park property.

4.) Herring-spawn-on kelp licenses and restrictions are very complicated and vary from region to region. Permits are required and there are a variety of fees involved. A summary of new regulations can be found online at: <http://www.cf.adfg.state.ak.us/region1/pdfs/herring/Fmr05-11.pdf> (accessed 8/29/2005).

Enforcement & Violations: Alaska Department of Fish and Game

Reference: Alaska Fish and Game website, Fish and Game code (Title 5, Part 1&2), and Alaska State Parks website.

BRITISH COLUMBIA, CANADA

1.) Commercial

- ☆ A license is required to harvest marine plants for commercial purposes
 - Only Canadian citizens, persons who have or are serving in the Canadian Armed Forces; or persons lawfully admitted to Canada as permanent residents are entitled to apply for and obtain a license
 - Licenses do not grant the privilege of harvesting on privately owned intertidal land or land leased from Land and Water British Columbia.
 - *No more than 20%* of the total biomass of a marine plant bed may be harvested
 - Most levels are set well below this maximum
 - A royalty of \$10.00 - \$100.00 (Canadian) per ton wet weight harvested is levied, depending on the species harvested. In addition, there is a licensing fee of \$110 (Canadian) annually.
 - Records must be kept which include quantity and species of all marine plants along with the locality where harvest occurred. These records must be submitted monthly.
- ☆ *Macrocystis integrifolia*

- Kelp fronds or stalks must be severed cleanly, tears or partial tears of the holdfast from the substrate is prohibited; only individual fronds are to be cut
- Must not be harvested in water deeper than 5 feet below the surface at any time
- ☆ *Nereocystis luetkeana*
 - Each blade must be cut a minimum of 20 cm from the bulb.
 - No harvest of bulb or stipe
- ☆ *Iridaea cordata* and *Gigartina exasperate*
 - Thallus must be severed cleanly, tears or partial tears of the holdfast from the substrate is prohibited
 - Substrate must not be unduly disturbed, use of apparatus that overturns the substrate is prohibited
 - Fronds must be longer than 10 cm in length to be cut
- ☆ *Laminaria* and *Alaria*
 - Each blade must be cut no closer than 10 cm distal from the base of the plant
- ☆ *Egregia*
 - Only branches longer than 50 cm may be cut
 - The branch must be at least 5 cm distal of the first

2.) Personal

- ☆ No permits or special requirements for personal, noncommercial use. Collection is not permitted in specially managed areas such as Ecological Reserves, Marine Reserves, Provincial Parks, and Federal Parks.

3.) Scientific

- ☆ Research activities in parks and protected areas, including: collection; monitoring; survey and inventory; and, other research require a permit
 - Park-use permit: research & education permits are administered by the Ministry of Water, Land and Air Protection (there is no associated fee)
 - Available online at:
http://wlapwww.gov.bc.ca/pasb/application_pdfs/res_educ_perm_app.pdf
(accessed 8/31/05)

Enforcement & Violations: The Ministry of Agriculture and Lands (Commercial), Fisheries and Ocean Canada (Spawn-On-Kelp), Ministry of Water, Land and Air Protection (protected areas).
Reference: Ministry of Agriculture and Lands, Fisheries and Aquaculture website. Ministry of Water, Land and Air Protection, BC Parks website.

WASHINGTON STATE

Ownership of intertidal and subtidal lands: *Over 60% of Washington's intertidal areas are privately owned.*

1.) Commercial Use (RCW 79.96.210)

- ☆ Commercial harvest of seaweed from aquatic lands (including privately owned tidelands) is prohibited, except:
 - upon mutual approval by WA DNR and WDFW, *Macrocystis* may be commercially harvested for use in the herring spawn-on-kelp fishery

2.) Personal Use (RCW 79.96.210)

- ☆ Limit of 10 pounds per person (unless otherwise limited by WA DNR and WDFW)
- ☆ A personal use shellfish and seaweed license is required for all persons over 15 years of age for collection of seaweed for personal use from state waters or offshore waters including national park beaches and must be displayed while harvesting.
- ☆ Shellfish and Seaweed licenses cost
 - \$7 yearly for residents
 - \$20 yearly for non-residents
 - \$5 yearly for seniors
 - A 2-day personal use license can be issued for \$6 for residents or nonresidents
- ☆ It is illegal to harvest seaweed if herring eggs are attached
- ☆ State agencies may prevent harvest of any species of marine aquatic plant from lands under their control, ownership, or management
 - All **State Park** beaches are closed to seaweed harvest except Fort Flagler, Fort Ebey, and Fort Worden State Parks which are open to seaweed harvest from April 16-May 15 only (during posted park hours) and special State Park rules apply
 - Seaweed shall be harvested using the following techniques:
 - The leaves of bull kelp (*Nereocystis*) will be cut no closer than twenty-four inches (61 cm) above the bulb, and short stemmed kelps such as sugar wrack (*Laminaria*) and wing kelp (*Alaria*) are to be cut no closer than twelve inches (30 cm) above the anchor point.
 - Only a knife or similar instrument may be used to harvest seaweed. Tearing the plant and use of tined instruments such as rakes or forks is prohibited.
 - The limit weight is ten pounds wet weight (fresh-picked before cleaning) per person per day, and drying or partial drying is prohibited prior to weighing. Each harvester must use a scale to determine when the harvest limit has been reached.
 - Each harvester must use their own container. Multiple limits may not be combined in the same container.
 - WA State Parks has the authority to take immediate action to reduce harvest levels if there is evidence of environmental damage and any changes will be posted for the public to see.
- ☆ Titlow Beach Marine Preserve is *closed to all harvest*.

3.) Scientific & Educational Use

WA State Parks requires a permit for *scientific collection* on their lands, which includes state parks but also the Seashore Conservation Area. The Seashore Conservation Area is defined as “all lands now or hereafter under state ownership or control lying between Cape Disappointment and Leadbetter Point; between Toke Point and the South jetty on Point Chehalis; and between Damon Point and the Makah Indian Reservation and occupying the area between the line of ordinary high tide and the line of extreme low tide.” Collection is only allowed for demonstrable scientific purposes and it must also be demonstrated that collection cannot be adequately conducted on non state park property.

Enforcement & Violations:

Washington Department of Fish and Wildlife and law enforcement authorities are those responsible for enforcement. Violations of RCW 79.96.210 are considered a misdemeanor. Those in violation of these laws are liable to the state (if they own the tidelands) or the private landowner (if they are trespassing) for treble the amount of the damages. These may include: the market value of the use, occupancy, or things removed, had the use, occupancy, or removal been authorized; and any damages caused by injury to the land, publicly owned personal property or publicly owned improvement, including the costs of restoration. In addition, the person is liable for reimbursing the state (or private party) for reasonable costs, including but not limited to, administrative costs, survey costs to the extent they are not included in damages awarded for restoration costs, and reasonable attorneys' fees and other legal costs (RCW 79.02.300).

Sport fishing regulations can be found online at:

<http://wdfw.wa.gov/fish/regs/2005/2005sportregs.pdf> (accessed 8/29/2005).

References:

- ☆ Tom Mumford, PhD. Washington State Department of Natural Resources, Aquatic Resources Division, 1111 Washington Street SE, Olympia, WA 98504
- ☆ Washington State sport fishing regulations, online (see above)
- ☆ Bill Jolly, Washington State Parks, Environmental Program Manager, Olympia, WA

OREGON

Ownership of intertidal and subtidal lands: *All coastal lands between the vegetation line and mean low water are part of Oregon's Ocean Shore Recreation Area and thus are held in trust for the public.*

1.) Commercial

- ☆ Department of State Lands (DSL) permits commercial leasing of state owned *submerged* lands for kelp and other seaweeds (ORS 274.885)
 - Submerged lands are defined as lands "lying below the line of ordinary low water of all navigable waters within the boundaries of this state."
 - Persons collecting less than 2,000 pounds of kelp per year from *submerged* lands for *personal consumption* do not require a lease from DSL (ORS 274.865).
- ☆ No commercial activities are permitted within the Ocean Shore Recreation Area, which includes all *intertidal areas* (vegetative line to extreme low tide) except by special permit issued by Oregon Parks and Recreation Department (OAR 736-021-0130).
 - Fees or other requirements may be associated with any permit issued for non-traditional park activities (if the area is adjacent to a park) or for removal of a natural product from the ocean shore (all other sections of the Ocean Shore Recreation Area).

2.) Personal

- ☆ Persons collecting less than 2,000 pounds of kelp per year from *submerged* lands for *personal consumption* do not require a lease from DSL (ORS 274.865).

3.) Scientific

- ☆ Oregon Parks & Recreation Department requires a Scientific Research Permit for all activities that involve specimen collection, field work or that have the potential to

damage natural resources on lands owned and managed by the Department (which includes the Ocean Shore Recreation Area).

- ☆ Permit information can be found online at:
<http://egov.oregon.gov/OPRD/NATRES/permitting.shtml>

Enforcement & Violations: Oregon Parks & Recreation Department, Department of State Lands.

CALIFORNIA

Ownership of intertidal and subtidal lands: *The State Lands Commission owns title to the intertidal and subtidal lands below the mean high tide line.*

1.) Commercial

General Regulations:

- ☆ All commercial collecting of kelp or other aquatic plants for profit requires a license for that purpose
 - Commercial harvest license fee of \$100, valid for one year. Also, every person harvesting must pay a royalty, of not less than five cents per ton of wet kelp or wet aquatic plants harvested.
 - Require a harvest log and entry of weights (by approved method, of wet plants) immediately after delivery to the place of business or elsewhere. Information must include persons or firms to which the plants are sold. The book is open for inspection at all times by the Fish and Game department
 - Monthly reporting by licensee of all weights (wet weights) harvested
- ☆ The fish and game commission may at any time close harvest if it finds that harvest will destroy or impair the beds or the supply of any food for fish (for a period not to exceed one year)
- ☆ The commission may cancel a permit at any time if laws are broken or if harvest occurs in closed areas (for a period not to exceed one year)
- ☆ The commission may lease exclusive rights to harvest kelp beds with a deposit of not less than \$40/square mile. Lease terms will not exceed 20 years. Lease areas may not exceed 25 square miles or 50 percent of the total kelp resource area whichever is greater. Leased kelp is also subject to the royalties described above.
- ☆ No eel grass (*Zostera*) or surf grass (*Phyllospadix*) may be cut or disturbed
- ☆ No collection is allowed in marine life refuges or specially designated aquatic parks

Macrocystis and Nereocystis (giant and bull kelp) harvesting requirements

- ☆ Must be harvested by cutting, except if removed loose
- ☆ Must be harvested at a depth of less than 4 ft below surface water (at time of cutting)
- ☆ Certain areas are closed to harvest, see CA Fish and Game Code
- ☆ In addition to the license fee, harvesters must pay a royalty of \$1.71 per ton (2,000 lbs.) of wet kelp harvested

Harvesting of agar-bearing plants (*Gelidium*, *Pterocladia*, *Gracilaria*, *Iridaea*, *Gloiopeltis* and *Gigartina*)

- ☆ Must be harvested by cutting, except if removed loose
- ☆ Must be cut no closer than two inches to the holdfast
- ☆ No holdfast may be removed or disturbed

- ☆ No abalone may be harvested at the same time nor may abalone harvesting equipment be in ones possession
- ☆ One must also obtain a kelp drying permit from the Department of Fish and Game
- ☆ Royalties are \$17.00 per wet ton (2,000) for all agar-bearing seaweeds

Harvesting of edible marine plants (*Porphyra*, *Laminaria*, *Monostrema* and other species utilized fresh or preserved as human food)

- ☆ Must be harvested by cutting or picking, except that loose/drift plants may be collected
- ☆ No abalone may be harvested at the same time nor may abalone harvesting equipment be in ones possession
- ☆ If collecting bull kelp for human consumption, the limit is 2 tons (4,000 lbs) per year and the entire plant must be harvested
- ☆ The royalty for edible seaweeds is \$24 per wet ton (2,000) harvested from waters other than San Francisco Bay and Tomales Bay

2.) Personal

- ☆ For marine aquatic plants for which take is authorized, the bag limit is 10 pounds wet weight in the aggregate
- ☆ All harvest in marine life refuges, marine reserves, ecological reserves, national parks or state underwater parks is prohibited. See CA Ocean Fishing Regulations book for more information and area boundaries
- ☆ No eel grass (*Zostera sp.*), surf grass (*Phyllospadix sp.*) or sea palm (*Postelsia sp.*) may be cut or disturbed.

3.) Scientific

- ☆ The fish and game commission may grant permits for scientific or experimental purposes
 - Permits can be found online at:
 - <http://www.dfg.ca.gov/licensing/pdffiles/fg1379.pdf> (accessed 8/31/05)
- ☆ Fees for residents are \$49.59, non-residents: 165.25, and students \$16.50
- ☆ No collections may be made in any Marine Protected Area, including the following: State Marine Reserve, State Marine Conservation Area, State Marine Park, State Reserve, Marine Life Refuge, Fish Refuge, Wildlife Area, State Game Refuge, or Ecological Reserve without additional written permission.
- ☆ Limit is 10 pounds wet weight in the aggregate and take must be via hand and hand tools.
- ☆ Eel grass, surf grass, and sea palm may not be taken.
- ☆ Required to submit a report of specimens collected within 30 days of permit expiration.

Enforcement and Violations

California Department of Fish and Game, Marine Resources Division. California Ocean Fishing Regulations can be found online at:

<http://www.dfg.ca.gov/mrd/oceanfish2005.pdf> (accessed 1/19/06)

Reference: California Department of Fish and Game, Marine Resources Division website.

SUMMARY OF REGULATIONS FOR SEAWEED HARVESTING IN OTHER STATES AND COUNTRIES (2005)

HAWAII

1.) Commercial

- ☆ Individuals or vessels engaged in taking, selling or offering for sale any marine life for commercial purposes (including charter fishing services) must obtain a Commercial Marine License.
 - License fee \$50 (resident) and \$200 (nonresident). Dup. \$10.
 - Must submit a monthly report to the Department of Land and Natural Resources on marine life taken.
 - Failure or refusal to submit a monthly catch report shall be cause for revocation of the commercial marine license. Violators are also subject to fines of \$25 to \$500, and/or imprisonment of five to thirty days.
- ☆ Collection of *Limu sp.* (ogo)
 - Limited to 10/lbs/day per marine licensee
 - No commercial taking on Maui

2.) Personal

- ☆ Generally no collection is allowed in regulated fishing areas such as refuges and Marine Life Conservation Districts (see http://www.hawaii.gov/dlnr/dar/fish_regs/index.htm for information about specific areas).
- ☆ Collection of *Limu sp.* (ogo)
 - Take of the holdfast (part attaching to a rock or other surface) is prohibited

- Take is prohibited when it is covered with reproductive nodes or bumps
- Limit of 1 lb/person/day for home consumption

3.) Scientific

- ☆ A scientific collecting permit from the Department of Land & Natural Resources, Division of Aquatic Resources is required
 - Available online at:
 - <http://www.hawaii.gov/dlnr/dar/pubs/SCP%20application.pdf> (accessed 8/31/05)
- ☆ An activity report must be submitted to the DAR within one month of permit expiration.

Enforcement & Violations: Hawaii Department of Land & Natural Resources, DAR. There is an informers fee whereby one half of the fine imposed and collected in cases where the defendant has been convicted for a violation may be paid to the person giving the information leading to the arrest of the person so convicted.

Reference: Hawaii Department of Land & Natural Resources Department of Aquatic Resources website.

MAINE

1.) Commercial

- ☆ A seaweed permit is required for any person wishing to harvest, possess, ship, transport or sell seaweed
 - An employee or immediate relation of a seaweed permit holder may harvest, possess or transport seaweed for commercial purposes with a *supplemental* seaweed permit
 - One does not need to obtain a permit to collect/sell seaweed which has detached naturally and is dead
- ☆ Fees are:
 - \$50 for residents, \$200 for nonresidents
 - \$25 for a resident supplemental permit, \$50 for a nonresident supplemental permit
 - Fees are deposited into a Seaweed Management Fund which is then used for seaweed related management and research
- ☆ Harvesters must report harvesting activity for all seaweed species with records kept daily and reports mailed monthly (within 10 days of the end of the month)
 - Information includes dates, harvest area, methods, harvest time, species, and pounds landed (wet)
- ☆ *Ascophyllum nodosum* (rockweed) restrictions
 - The lowest lateral branches must remain undisturbed and attached to the main stalk of the rockweed that is attached to the substrate
 - A minimum of 16 inches of the rockweed must remain above the holdfast

- ☆ The Commission (Department of Marine Resources) has emergency rule making authority so that they can close an area at any time.

2.) Personal

- ☆ No permit is required if one collects less than 50 pounds of seaweed a day for noncommercial purposes or if the seaweed has detached naturally and is dead

3.) Scientific

- ☆ The Department of Marine Resources issues special licenses for scientific collections.
- ☆ A nonrefundable, filing fee of \$50 is required, except for research activity by organizations financed in whole or part by state funding. This fee is not required for subsequent renewals of the same research.
- ☆ The annual fee for a special license is \$25, plus \$10 for each individual after the first individual listed on the permit.

Enforcement and Violations: Maine Department of Marine Resources.

References: Maine Department of Marine Resources website. Jill Fegley, PhD, Corning School of Ocean Studies at Maine Maritime Academy.

NEW HAMPSHIRE

1.) Commercial

- ☆ Sale is prohibited outside the state
- ☆ Same rules as personal, listed below

2.) Personal

- ☆ Seaweeds may be collected and taken from the seashore below the high water mark during the day
- ☆ No seaweed may be piled below the high water mark to be hauled away
- ☆ Up to 3 bushels of growing rockweed or sea moss may be cut or taken by residents or summer residents
- ☆ Do not detach or injure the roots of the seaweed when cutting

4.) Scientific

- ☆ Unknown

New Hampshire fishing rules (Saltwater Fishing Digest) can be found online at:

http://www.wildlife.state.nh.us/Fishing/Fishing_PDFs/SW_Fishing_Digest_05.pdf (accessed 8/31/05)

Enforcement and Violations: New Hampshire fish and game conservation officers and all state and local police officers enforce all laws relative to the collecting, carrying away, uprooting, cutting, taking, piling and selling of seaweed, rockweed, flats-weed, and sea moss.

Reference: New Hampshire fishing digest (see above) and Chapter 207 of Fish and Game Laws (Section 207:54).

INDIA

1.) Commercial

- ☆ Permits are required from the Department of Forests and Department of Wildlife for industrial scale harvesting. However, most harvest is by coastal fisher folk (small scale) and done illegally (without a permit)
- ☆ There are limits and times specified for harvesting (according to statutory rules)
- ☆ Limits are decided by the availability of standing stocks from each zone
- ☆ Harvesting is done by hand picking
- ☆ Harvest is recommended only after spore shedding is done to ensure successive recruitment of species in each locality
- ☆ If it is found that particular species are declining, certain measures are imposed to limit their deterioration for rapid revival.

Agencies responsible: Department of Forests and Department of Wildlife under the Ministry of Environment and Forests.

Reference: C R K Reddy, Marine Algae and Marine Environment Discipline
Central Salt and Marine Chemicals Research Institute, Bhavnagar 364 002, India

AUSTRALIA

VICTORIA

1.) Commercial

- ☆ Collection is prohibited in Marine Protected Areas.

2.) Personal

- ☆ Collection is prohibited in Marine Protected Areas.

3.) Scientific

- ☆ Permits from Parks Victoria are required where collection is in a Marine Protected Area

Agencies responsible: Department of Sustainability and Environment (DSE) and Parks Victoria (where collection is in a Marine Protected Area)

Reference: Alecia Bellgrove PhD, School of Ecology and Environment, Deakin University, Australia.

NEW SOUTH WALES

3.) Scientific

- ☆ Permits are required in all of New South Wales

Agencies Responsible: New South Wales Fisheries

SOUTH AUSTRALIA

3.) Scientific

- ☆ Permits are required for collection anywhere in SA from the Department of Environment and Heritage. Permits are issued for one year and may be renewed. Progress reports are required.

- ☆ Permits are available online at:

http://www.environment.sa.gov.au/biodiversity/pdfs/scientific_permit_application.pdf

(accessed 8/31/05)

Agencies Responsible: DSE equivalent

IRELAND

1.) Commercial

- ☆ Permits are required. A foreshore (land and seabed between high water of ordinary or medium tides and the 12 mile limit) must be obtained (€150) from the Department of the Marine and Natural Resources.
- ☆ Currently, only hand-harvesting is permitted
 - Mechanical harvest must obtain consent from the minister and licensing would undergo a long process of review (this has not yet occurred).
- ☆ The industry self-regulates sustainable practice of *Ascophyllum* (one of the two commercially harvested species)
 - A stump of 15 cm is left for regeneration
 - Harvesting is revisited in 4-5 years to allow time for regeneration
- ☆ Maerl, the other commercially harvested species is not considered renewable and there is an annual limit of \$8000 tonnes.

Agencies Responsible: The Department of the Marine and Natural Resources

Reference: Dr Stefan Kraan, Irish Seaweed Centre, Martin Ryan Institute, National University of Ireland, Galway. Ireland