PACIFIC MARINE FISHERIES COMMISSION

528 S.W. MILL STREET
PORTLAND, OREGON 97201
PHONE (503) 229-5840

MEMORANDUM

18 November, 1983

TO: Tag Coordinators

FROM: Ken Johnson, Regional Mark Coordinator

SUBJECT: I. Adipose Clip Policy for Columbia Basin Steelhead
II. New NWIFC Tag Coordinator and Agency Code

I. Attached is the final agreement on desequestering the adipose fin clip on Columbia Basin steelhead in order that the mark can be used to identify harvestable stocks. Note that the LV mark has replaced the adipose clip as the flag for coded-wire tagged steelhead released in the Columbia Basin. The new policy is not without problems, as noted in the attached five letters. However, the general consensus is that the potential benefits for management outweigh the concerns.

It will be proposed at the upcoming Mark Meeting (early February, 1984) that this new policy be extended to include the entire coast and Puget Sound. Therefore, please give some thought to the resultant impact this action would have. Any input prior to the Mark Meeting will be welcomed.

II. Gary Graves recently informed me that the Northwest Indian Fisheries Commission (NWIFC) now has funding available to take a more active role in the coordination of tribal CWT studies. To accommodate this increased role, Terry Wright (NWIFC) will replace Gary as the Tag Coordinator for all tribal tagging and recovery operations. In addition, Chris Marlowe (NWIFC Data Manager) will assume responsibility for CWT data processing and transmission to PMFC and other interested agencies.

To facilitate this coordination, NWIFC requested and has been assigned a separate agency code (code 21) for tribal tagging programs. NWIFC tribes will commence using agency code 21 for this winter's tagging operations.

KJ:fc

Attachments: As above

PACIFIC MARINE FISHERIES COMMISSION

Memorandum •

REPRESENTING THE STATES OF
ALASKA, CALIFORNIA, IDAHO, OREGON AND WASHINGTON

528 S.W. Mill Street, Portland, OR 97201
Phone: (503) 229-5840

DATE: 3 November, 1983

TO: General Distribution

FROM: Lawrence D. Six, Executive Director

SUBJECT: Policy for Marking Harvestable Steelhead Stocks in the Columbia Basin.

Idaho, Oregon, Washington, and Federal agencies (USFWS, NMFS) on the Columbia River recently agreed to desequester the adipose mark on Columbia Basin steelhead in order that it can be used as a sport fishery management tool to identify harvestable stocks while protecting wild stocks and developing hatchery stocks. An integral part of this agreement is that the left ventral (LV) fin mark will replace the adipose clip as the flag for coded-wire tagged steelhead in the Columbia Basin in order to meet on-going research needs. The revised policy (effective September 15, 1983) and justification for the change are attached.

Note that the policy does not require the agencies to adipose-clip all harvestable stocks; rather it permits marking of selected stocks, on a case-by-case basis, without the added cost of tagging. Moreover, the policy provides a means of providing some protection in the sport fisheries for weak hatchery stocks. Each agency will determine which of their stocks will be adipose clipped and which ones should be protected.

The policy change will pose some problems for research programs currently in progress because of the overlap of returning tagged and untagged steelhead with the adipose clip during 1985 and 1986 (see Section V and Table 1 of the policy statement). Concerned agencies are confident that the sampling problems can be resolved with some additional effort during this transitional period.

Agencies were also requested to comment on other actual and potential problems resulting from the policy change. These letters are attached with the policy statement and discuss a variety of different problems. However, with the exception of the Indian Tribes (see Phil Roger and Gary Graves letters), the overall consensus is that the potential benefits of the policy change outweigh the concerns, and the production of wild stocks in particular will be enhanced by using the adipose clip for management.

LDS/JKJ:fec

Attachments:
1) Policy for marking harvestable steelhead
2) Letter from Wally Steucke, USFWS (8/31/83)
3) Letter from Gary Graves, NWIFC (9/14/83)
4) Letter from Donn Park, NMFS (9/26/83)
5) Letter from Dale Evans, NMFS (9/27/83)
6) Letter from Phil Roger, CRITFC (10/7/83)

Attachment 1

LAWRENCE D. SIX
EXECUTIVE DIRECTOR

TREASURER
G. L. FISHER

PACIFIC MARINE FISHERIES COMMISSION

528 S.W. MILL STREET
PORTLAND, OREGON 97201
PHONE (503) 229-5840

Policy for Marking Harvestable Steelhead Stocks in the Columbia Basin 15 September 1983

I. Introduction:

Representatives of Idaho, Oregon, and Washington State agencies met in Portland, Oregon on August 26, 1983 to consider the proposal that the Adipose fin clip on steelhead be desequestered as a flag for coded-wire tagged steelhead in the Columbia Basin, in order that the mark might be used to identify harvestable stocks while protecting wild stocks and weak hatchery stocks. The resultant policy change to the existing regional fin mark agreements, and justification for the change are provided below.

II. Steelhead Policy:

The Adipose-only fin mark for steelhead originating in the Columbia River system (including all Oregon, Washington, and Idaho tributaries) is reserved for marking harvestable fish, effective September 15, 1983.

Concurrently, the left ventral (LV) fin mark (single or in combination with any other fin clip) is now reserved as a flag for identifying Columbia basin steelhead bearing coded-wire tags that should be recovered from coordinated sampling programs. This means the LV mark can no longer be used on Columbia steelhead without a coded-wire tag.

III. Justification for Revised Adipose Policy

Enhancement of native steelhead stocks is a mutual high priority for all State and Federal fishery agencies concerned with steelhead resources of the Columbia Basin. Stock by stock management capabilities will be enhanced materially if recreational fishermen can identify harvestable stocks readily by some external mark. Regulations then can permit retention of only fish so marked, requiring the release of unmarked fish representing stocks not strong enough to sustain harvest. Major sport fisheries have been closed for years because of the absence of any such selective harvesting mechanism.

A review of alternative marks indicates that the Adipose-only fin clip is the best possible mark for accomplishing these management goals:

1) The mark is the easiest and quickest applied of the various fin marks and therefore can be applied with the least cost.

2) The adipose fin exhibits the least regeneration, and does not impair fish ability to swim or maneuver as may other fin clips.

3) The mark is highly recognizable and is usually visible to the angler before the fish is netted, gaffed, or brought under control.

4) The consensus is that all other single or combination fin-marks entail higher mortality than the adipose clip. However, little data exists to demonstrate the degree to which this is true for steelhead.

IV. Need for Alternative CWT Flag

Use of the adipose clip for a steelhead management tool in the Columbia basin necessitates that another fin mark be sequestered exclusively for coded-wire tag usage in order that research needs also can continue to be met. The LV mark was viewed as the best alternative CWT flag since:

1) Ventral fin clips are thought to be the next least debilitating to the recipient fish in term of survival, swimming and maneuverability, and stress.

2) The ventrals are the next easiest fins to clip, and;

3) The LV mark would be more easily viewed (over the RV mark) at fish ladder counting stations on Columbia River dams.

V. Expected Retroactive Impact

For selective harvest purposes, Idaho, Oregon and possibly Washington plan to adipose clip 1983 brood steelhead without insertion of coded-wire tags. These fish will be marked during the fall of 1983 and released in the spring of 1984. These releases will result in an overlap of returning adipose-clipped tagged and untagged stocks during 1985 and 1986 (see Table 1). The overlap will be problematic only in 1986 when Ad + CWT and Ad-only fish will be confounded in the fishery sampling process due to their similar relative sizes. In 1985, the 1-salt Ad-only fish can be readily separated by size from the 2- and 3-salt Ad-CWT fish.

Consultation with various agencies with CWT studies currently underway (NMFS, FWS, IDFG, ODFW, WDG) indicate that this transition period should not pose too many problems to researchers. Many programs rely on rack returns and terminal stream recoveries for necessary data, where magnetic tag detectors can assist in tag retrieval.

Since most of the fishery tag recoveries occur in the Zone 6 Indian fishery, the recovery problem will be greatest there. The total number of fish landed in this fishery has ranged between 4,200 and 5,900 during the past four years. However, since the proposed Ad-only marking program for harvestable stocks will just be starting in 1983, many returning hatchery fish in 1985 and 1986 will not be marked, nor of

course, will returning wild fish. Returning 1983 brood ("1-salt") Ad-only untagged fish in 1985 should be recognizable on the basis of size alone from the tagged 1981 and 1982 broods, as noted above.

There will be an additional work load on field personnel and the ODFW head lab to process extra heads, particularly in 1986. However, the number is unlikely to exceed 1,000-2,000 heads at maximum. Furthermore, the new omni-directional tube tag detectors are very accurate and can rapidly separate those heads lacking tags, thus eliminating the need for additional processing.

Table 1. Expected Overlap for Adipose-clipped Tagged and Untagged Steelhead Broods Returning to the Columbia Basin[1]

	Brood Year	Release Year	Principal Years of Return 1982	1983	1984	1985	1986	1987	1988	Total Tagged
Adipose + CWT	80	81	x	x	x					987,000
	81	82		x	x	x (3-Salt)				457,000
	82	83			x	x (2-Salt)	x (3-Salt)			680,500
Adipose only	83	84				x (1-Salt)	x (2-Salt)	x		
	84	85					x (1-Salt)	x	x	

[1]Assuming that the 1983 brood is the first to be released without tags in 1984.

Attachment 2

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Regional Office
500 NE Multnomah St., Suite 1692
Portland, OR 97232

August 31, 1983

Mr. Ken Johnson
Pacific Marine Fisheries Commission
528 S.W. Mill Street
Portland OR 97201

Dear Mr. Johnson:

I would like to take this opportunity to clarify our concerns regarding the proposal to adipose-clip hatchery steelhead without concurrent coded-wire tagging (CWT) in the Columbia Basin. While we support the significant benefites to be gained in the management of wild steelhead stocks, there are also several potential conflicts with our hatchery programs.

The U.S. Fish and Wildlife Service is extensively involved in evaluations of hatchery rearing practices throughout the Columbia River basin. Attachment 1 of your August 23, 1983 memo lists 15 steelhead tags groups released from Dworshak National Fish Hatchery (NFH) in 1981-82. We have identified two other tag groups from the 1981 brood year which are not shown on your table. The codes for these groups are 5-5-30 and 5-10-25. In addition to these fish, four tag groups from the 1982 brood year were released from Dworshak NFH in 1983. The tag codes from these groups are 5-13-49, 5-13-50, 5-13-51 and 5-13-52. Three groups from the same brood year were released at Hagerman NFH with tag codes 5-13-33, 5-13-34 and 10-24-60. As you know, some recovery information will be lost in mixed stock fisheries in the mainstem Columbia River and in the Snake and Clearwater river sport fisheries. However, our hatchery personnel have indicated that recoveries at the hatchery will allow them to complete analysis of these tag groups.

Three other Fish and Wildlife Service tag groups from the 1980 brood year are listed on your summary table. They are 5-3-36 and 5-7-29 from Warm Spring NFH and 5-10-60 from Nelson Springs on the Yakima River system. Discussion with our coordinators indicate that terminal area recoveries will again be adequate to complete the analysis of these tagging studies.

Our greatest concern this year involves the stress and potential mortality involved in fin clipping steelhead at Dworshak NFH. These fish suffered significant mortality this summer due to the viral disease IHN. Juvenile steelhead brought into the facility from Kooskia NFH are also suffering from this disease and we are very concerned that additional handling and stress due to fin marking could result in additional losses. Fish and Wildlife Service personnel will continue discussion with Idaho Department of Fish and Game representatives in an effort to resolve this problem.

A number of new steelhead CWT studies are anticipated at Dworshak and other Idaho hatcheries which will apparently involve multiple fin clips which will result in increased mortality. No CWT studies are presently planned at our other Columbia River hatcheries. Although we have serious concerns about the fish health impacts of fin clipping steelhead, the potential benefits in effective management of wild steelhead stocks outweigh these concerns and we concur with the proposal.

Thank you for this opportunity to provide comment .

Sincerely,

Wally Steucke

WS:dem

cc: John Varley, Dworshak FAO
Wayne Olson, Dworshak NFH
Curt Burley, Vancouver FAO

Attachment 3

Northwest Indian Fisheries Commission

September 14, 1983

Mr. Ken Johnson
Pacific Marine Fisheries Commission
528 S.W. Mill Street
Portland, OR 97201

Dear Ken:

I have reviewed the proposal you distributed concerning the desequestering of the adipose fin clip for use with coded-wire tagged steelhead, and have the following comments.

Although the Northwest Indian Fisheries Commission's member Tribes do not fish the Columbia River, we are currently conducting coded-wire tag experiments and have a major code-wire tag base steelhead management program on Washington coastal rivers. The use of the adipose clip for the majority of the Columbia River hatchery fish will definitely create an impact on these programs due to the straying of Columbia River fish into Washington coastal rivers. Our primary concern is the cost associated with handling additional no-tag recoveries. This may well run into hundreds of additional steelhead which must be sampled, but of no use to the studies. Who should absorb the cost of these additional recoveries? The alternative of using a different fin clip as a flag is unacceptable because it too would involve additional costs as well as increased mortalities.

We are also concerned about the practicality of using the adipose clip as a management tool for the separation of hatchery and wild fish. It would appear to us that it would have fairly limited application only for recreational fisheries where a high level of enforcement is maintained.

Thank you for the opportunity to comment on this proposal.

Sincerely,

GARY GRAVES
Assistant Chief, Fishery Services

GG:sm

cc: Mark Committee

Attachment 4

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest & Alaska Fisheries Center
Coastal Zone & Estuarine Studies Division
2725 Montlake Boulevard East
Seattle, Washington 98112

September 26, 1983 F/NWC:DLP

Dr. Ken Johnson
Pacific Marine Fisheries Commission
528 S.W. Mill Street
Portland, Oregon 97201

Dear Ken:

Thank you for the opportunity to comment on your 6 September 1983 memo on Policy Recommendation for Marking Harvestable Steelhead Stocks in the Columbia River Basin.

We have reviewed the policy recommendations and see no major problems or impacts. We will have some extra work to retrieve tags from steelhead stocks, especially in the Zone 6 fisheries in the next two years. However, benefits to management should outweigh these minor impacts.

Again, thank you for the opportunity to comment on this policy.

Sincerely yours,

Donn L. Park

Donn L. Park
CWT Coordinator,
National Marine Fisheries Service

Attachment 5

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
ENVIRONMENTAL & TECHNICAL SERVICES DIVISION
847 NE 19th AVENUE, SUITE 350
PORTLAND, OREGON 97232
(503) 230-5400

September 27, 1983 F/NWR5:RRV

Mr. Ken Johnson
Regional Mark Coordinator
Pacific Marine Fisheries Commission
528 S.W. Mill Street
Portland, Oregon 97201

Dear Ken,

This letter is in response to your request for comments regarding desequestering the adipose-only clip for use with coded wire tags in Columbia River steelhead. We concur with the desire to identify stronger steelhead stocks for harvest as a means of protecting weaker wild runs. This desequestering will not affect the Environmental and Technical Services Division since we have not funded tagging of any steelhead nor presently plan any.

We however do have several concerns about the use of the adipose clip with no wire tag in steelhead. The major concern is the loss or increased difficulty in obtaining information on catches of steelhead in the marine fisheries, particularly catches by foreign fleets. The use of the left ventral clip with coded wire tag insertion on steelhead would allow this information to be collected but with considerable increased difficulty. Fishery samplers are presently conditioned to the adipose clip as a flag for the presence of a coded wire tag. Examination of catches for ventral clips would slow the sampling process. When sampling becomes frenzied, examination for a missing ventral would likely become a low priority. Thus we would expect the occasional catch of a left-ventral-marked steelhead to go unnoticed more often than an adipose clip.

We are also concerned about the potential increased mortality to coded wire tagged steelhead with use of the left ventral clip as a flag. It is generally believed ventral clips cause higher post-release marking mortality than the adipose clip. The cost and additional mortality from handling and marking steelhead stocks targeted for harvest is also of concern.

We understand the desirability of the ad-only clip for identification of target stocks. It is generally considered to be the least detrimental to survival, its absence is readily observable by the fishing public, and the adipose fin is the easiest and quickest, thus the cheapest, fin to remove. In weighing these benefits and the management flexibility of targeting specific steelhead stocks for harvest against the potential loss of fish and information, our decision is to not object to desequestering the adipose clip for steelhead.

Sincerely,

for Dale R. Evans
Division Chief

Attachment 6

October 7, 1983

Ken Johnson, Regional Mark Coordinator
Pacific Marine Fisheries Commission
528 S.W. Mill St.
Portland, Oregon 97201

Dear Ken,

Persuant to our phone conversation and your letter of 6 September, 1983, I have a few further comments on desequestering the adipose fin clip on steelhead in the Columbia River basin. The case for or against desequestering can not be adaquately made from the information presently available to me and, therefore, I have not presented it to our Commission. The following comments are my own, are general in nature, and do not represent an official policy position of CRITFC or its member tribes.

1. An additional cost will be incurred by research projects using coded wire tags. This results from greater handling time in tagging fish, higher mortality to tagged fish, and increased tag recovery costs due to Columbia River steelhead straying into areas where the adipose clip is still sequestered.

2. The definition of native or wild fish is unclear and there is probably no concensus on this term. I doubt that a fish produced by naturally spawning parents from a hatchery has the same value in maintaining overall genetic diversity as the progeny of fish native to a particular stream for many generations. Desequestering the adipose clip will protect these truly native stocks only if it is combined

with marking all hatchery fish released and planting of hatchery fish in areas where uncaught adults will not interbreed with native fish. There is no indication of such a program in your letter or in the proposal itself.

3. The full benefits of desequestering as described may be realized only in a few areas. Preservation of important native fish gene pools will require a low harvest rate on native populations and a high harvest rate on any hatchery fish present. Uncaught hatchery fish which interbreed with the native population will dilute the native gene pool. The actual amount of dilution will depend on the relative fecundity of the two populations, the degree to which they are genetically different, and the actual harvest rates which occur.

4. Unless all hatchery production is marked, fishermen will have to release fish they might otherwise keep. Marking all of the hatchery release, however, will increase the cost of hatchery programs and increase the mortality of hatchery fish.

5. The full benefit of using the adipose clip as a management tool will be realized only in those areas where there is a high level of public acceptance of the program or where a high level of enforcement or fishery monitoring occurs. These conditions may be met in only a few areas or will require substantial increases in monitoring and enforcement costs.

6. It appears the same or better protection of native gene

pools could be obtained be managing streams exclusively for either hatchery or native fish production without the added complication and cost of desequestering the adipose mark.

7. The status of steelhead harvest in the treaty Indian fishery is presently being discussed by the states and tribes. A decision on desequestering should be deferred until after a final decision is reached on the harvest issue, as these two topics are interrelated.

The advisability of desequestering the adipose clip cannot be determined separately from plans for its application as a management tool. I have seen no basin wide description of how the desequestered adipose clip will be used and cannot, therefore, reach a conclusion on this matter. My feeling at this time is that there has been no demonstration of a need for desequestering the adipose clip that cannot be met equally well by much less costly changes in fishing regulations. Unless a more compelling case is made, it is premature to desequester the adipose clip at this time.

I will be happy to discuss this problem further with any interested individuals and to review additional information which may be available. I will also be happy to refer this issue to our Commission at such time as information for full and complete consideration becomes available, if you wish.

Yours truly,

Phil Roger