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Canadian Highseas Salmon Surveys: CWT Recoveries from Juvenile Chinook and Coho Salmon on the Continental Shelf off British Columbia and Southeast Alaska from 1998 to 2003

by

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ABSTRACT

Morris, J. F.T., M. Trudel, D.W. Welch, M. E. Thiess, and T. B. Zubkowski. 2004. Canadian Highseas Salmon Surveys: CWT Recoveries from Juvenile Chinook and Coho salmon on the Continental Shelf off British Columbia and Southeast Alaska from 1998 to 2003. (NPAFC Doc. 823), 35 p.

In this document, a summary is presented of the coded-wire tag (CWT) recoveries on the Canadian Highseas Salmon surveys conducted between 1998 and 2003. Juvenile chinook and coho salmon from the Columbia-Snake River system appeared to undertake a directed and rapid northward migration in the spring and quickly dispersed along the continental shelf from Washington State to Alaska. Some chinook stocks from Oregon to southern BC established residence on the west coast of Vancouver Island in the fall. Juvenile chinook originating from southeast Alaskan hatcheries were captured in the straits of southeast Alaska during the fall. Overall, these results showed juvenile salmon generally undertook a northward migration and utilised the continental shelf as a migration highway.

INTRODUCTION

Coded-wire tags (CWT's) have been primarily used by fisheries biologists and managers to assess harvest rates and the status of Pacific salmon (*Oncorhynchus spp.*) stocks ranging from California to Alaska. In addition to providing essential demographic parameters like marine survival and exploitation rates, CWT's can be used to infer the ocean distribution and migration of specific stocks of salmon (Pearcy and Fisher 1988; Fisher and Pearcy 1995; Weitkamp and Neely 2002; Myers et al. 2003). In this document, we summarize the CWT recoveries reported by Welch et al. (2002a-b, 2003, 2004a-j) for juvenile coho and chinook salmon caught during the Canadian Highseas Salmon surveys from 1998 to 2003. We also contrast and discuss the migration of juvenile salmon originating from the Columbia River and Snake River, Oregon, Washington, British Columbia, and Alaska during their first year at sea.

SURVEY METHODS

The Canadian Highseas Salmon program has been conducting juvenile salmon surveys with a surface trawl from the west coast of Vancouver Island to southeast Alaska since 1998 to determine ocean migration speeds and routes along the continental shelf, stock compositions within regions, and growth rates and other bioenergetic parameters between northern and southern regions.

The Canadian Highseas Salmon program has completed 20 surveys from 1998 to 2003 on the CCGS *W.E. Ricker*, and one survey on a commercial trawler, the *F.V. Ocean Selector*, in June, 2002.

The CCGS *W.E. Ricker* towed a model 240 mid-water trawl on the surface at around 5 knots (2.6 m s^{-1}) which, in good sea conditions typically achieved a mouth opening of approximately 28 m wide by 16 m deep. In most cases, the trawl was towed for 15 or 30 minutes.

The *F.V. Ocean Selector* towed a commercial mid-water trawl which was modified for juvenile salmon fishing by the attachment of the intermediate section and codend cut from the model 240 mid-water trawl. The *F.V. Ocean Selector* achieved the required mouth opening but was only capable of towing this modified mid-water trawl at a headrope depth of 9 m below the surface.

DATA

CWT Recoveries from 1998 to 2003

Table 1 reports the details on all the coded wire tag (CWT) chinook and coho salmon caught on the surveys from 1998 to 2003. Reported information includes: the coded wire tag number, the assigned fish number, species common name, the date and region of recovery, the fork length (mm) at capture, the release area, the name of the agency and hatchery that released the tagged fish, the brood year, and dates of first and second hatchery releases.

In this report, juvenile chinook and coho were defined as salmon in their first spring, summer, and fall in the ocean (age X.0), and in their first winter in the ocean (age X.1). Adults and immature salmon included all older age groups (age X.1 or older in the spring, summer, and fall, and age X.2 in the winter).

Table 1 also includes all the CWT recoveries from adult chinook and coho, as well as the CWT recoveries that were made off Oregon and Washington on a collaborative survey with NMFS in 1999.

The Highseas Salmon program's abbreviations for the recovery regions in Tables 1 are:

ISEA	Inside straits of Southeast Alaska
SEA	offshore Southeast Alaska
DE	Dixon Entrance
HS	Hecate Strait
IBC	Inside channels on the central coast of British Columbia
QCSD	Queen Charlotte Sound
VI	west coast of Vancouver Island
IVI	Inlets on the west coast of Vancouver Island
JF	Juan du Fuca Strait
WA	Washington
OR	Oregon

The abbreviations for the release areas in Table 1 are those of the Regional Mark Information System (RMIS).

RESULTS AND DISCUSSION

A total of 250 CWT chinook and 128 CWT coho were recovered during the Canadian Highseas Salmon surveys from 1998 to 2003 (Table 1). Juvenile salmon CWT recoveries ranged from Juan de Fuca Strait on the west coast of Vancouver Island (WCVI) to Icy Strait in southeast Alaska (Figure 1-13). All were captured on the continental shelf (Figure 1-13). Most juvenile salmon CWT recoveries were on the WCVI (66%) and in southeast Alaska (18%), but this probably reflects the disproportionately greater fishing effort of the Canadian Highseas Salmon surveys in these areas.

It must be noted that all the chinook and coho caught at sea should be systematically examined for CWT's regardless of the presence or absence of the adipose fin, since about 16% of the CWT chinook and 38% of the CWT coho still had their adipose fin. If only those salmon missing the adipose fin are screened, then it is obvious that some stocks will be misrepresented.

Juvenile chinook and coho salmon from the Columbia-Snake River system appeared to undertake a directed and rapid northward migration in the spring, and quickly dispersed along the continental shelf from Washington State to Alaska (Figure 1-2). Some of these Columbia-Snake River juvenile chinook and coho established residence and stayed on the continental shelf of WCVI into the fall and winter (Figure 1). None of these were caught in the inlets of WCVI. All

the Columbia-Snake River CWT juvenile chinook on the WCVI in the fall were age 1.0 stream ecotypes that averaged around 300 mm in fork length.(Table 1)

Juvenile coho from the west coast of Washington and Oregon, and the Puget Sound-Hood Canal region appeared on the west coast of British Columbia as early as the spring of their first year at sea (Figure 4-5). Some Washington juvenile coho established residence on the WCVI and continue to stay into the fall and winter (Figure 4).

Juvenile chinook from the WCVI hatcheries established residence on the shelf and in the inlets of WCVI during fall and winter (Figure 6). These were age 0.0 ocean ecotypes that averaged 182 mm in fork length (Table 1). The distinct onshore-offshore distribution on the WCVI between age 0.0 chinook from the WCVI and 1.0 chinook from the Columbia River and Snake River may represent a size segregation, with larger fish being caught further offshore than smaller fish (Figures 1 and 6).

It has been reported that WCVI chinook are frequently caught on the continental shelf of central Alaska and in the Bering Sea on both commercial and fisheries research vessels (Myers et al. 2003). This suggests that WCVI chinook have a northward migration. However, the results obtained in this study suggest that this migration is initiated following their first winter at sea as they were still present in the inlets of WCVI in February and March.

Juvenile chinook from southeast Alaskan hatcheries were captured in the straits of southeast Alaska during the fall. All these fish were age 1.0 stream ecotype which is consistent with Orsi and Jaenicke (1996). These juvenile salmon averaged 279 mm in fork length and were generally smaller than the age 1.0 Columbia River chinook caught off WCVI, possibly because southeast Alaska chinook smolts migrate to sea later than southern stocks. No CWT juvenile chinook originating from southeast Alaska were captured during the winter even though juvenile chinook have been consistently caught in Sumner Strait on all the winter surveys conducted by the Canadian Highseas Salmon program. This suggests that the stream ecotype juvenile chinook are moving out of the straits of southeast Alaska sometime between November and January.

Overall, these results are consistent with previous studies conducted on the ocean migration of juvenile salmon that showed juvenile salmon generally undertake a northward migration and utilise the continental shelf as a migration highway (Hartt and Dell 1986; Welch et al. 2002c). However, the timing of this migration is still uncertain for most stocks. Alternative approaches to CWT's such as acoustic tags may enhance our knowledge on the ocean migration of juvenile salmon by providing stock-specific data on the timing, direction, cruising speed, and range (Welch et al. 2004).

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Table 1. CWT's recovered on CCGS W.E. RICKER surveys to the Gulf of Alaska from 1998 to 2003.

CWT	Fish Number	Species	Recovery Date	Recovery Region	Recovery Fork Length (mm)	Release Area	Release Agency	Hatchery	Brood Year	Date of First Release	Date of Last Release	Age
T630995	HS200235-DE05-124-002	CHINOOK	25-Aug-02	DE	284	UPCR	WDFW	WELLS	2000	15-Apr-02	30-Apr-02	1.0
T184654	HS200304-DE01-124-001	CHINOOK	23-Feb-03	DE	286	COBC	CDFO	SNOOTLI CR	2001			0.1
T630178	HS200114-DE01-124-001	CHINOOK	16-Jun-01	DE	328	UPCR	WDFW	WILD	1999	01-May-00	31-May-00	0.1
T092256	HS9816-019-124-001	CHINOOK	17-Jun-98	DE	225	CECR	ODFW	UMATILLA	1996		08-Mar-98	1.0
T630343	HS9816-028-124-001	CHINOOK	18-Jun-98	DE	189	LOCR	WDFW	LEWIS R	1996	22-Mar-98	22-Mar-98	1.0
T093436	HS200238-DE01-124-001	CHINOOK	27-Oct-02	DE	310	SNAK	ODFW	LOOKINGGLASS	2000		15-Apr-02	1.0
T630634	HS200016-X02-124-002	CHINOOK	03-Jul-00	HS	207	LOCR	WDFW	LEWIS R	1998	21-Mar-00	21-Mar-00	1.0
T092320	HS9816-017-124-001	CHINOOK	04-Jun-98	HS	220	LOCR	ODFW	MARION FORKS	1996	02-Mar-98	03-Mar-98	1.0
T053513	HS200114-H02-124-001	CHINOOK	15-Jun-01	HS	182	CECR	FWS	CARSON NFH	1999	19-Apr-01	19-Apr-01	1.0
T054456	HS9914-X02-124-004	CHINOOK	22-Jun-99	HS	206	CECR	FWS	WARM SPRINGS NFH	1997	04-Mar-99	04-Mar-99	1.0
T054948	HS9914-X03-124-012	CHINOOK	22-Jun-99	HS	222	UPCR	FWS	WINTHROP NFH	1997	15-Apr-99	15-Apr-99	1.0
T092510	HS9914-X06-124-001	CHINOOK	22-Jun-99	HS	228	LOCR	ODFW	CLACKAMAS	1997		17-Mar-99	1.0
T092631	HS9914-X03-124-003	CHINOOK	22-Jun-99	HS	255	LOCR	ODFW	CLACKAMAS	1997		17-Mar-99	1.0
T103522	HS9914-X06-124-002	CHINOOK	22-Jun-99	HS	175	SNAK	IDFG	RAPID R	1997	18-Mar-99	26-Apr-99	1.0
T103533	HS9914-X07-124-002	CHINOOK	22-Jun-99	HS	189	SNAK	IDFG	RAPID R	1997	18-Mar-99	26-Apr-99	1.0
T105138	HS9914-X07-124-003	CHINOOK	22-Jun-99	HS	192	SNAK	IDFG	CLEARWATER	1997	12-Apr-99	15-Apr-99	1.0
T630610	HS9914-X03-124-002	CHINOOK	22-Jun-99	HS	222	UPCR	WDFW	EASTBANK	1997	12-Apr-99	26-Apr-99	1.0
T210221	HS200114-SM01-124-002	CHINOOK	14-Jun-01	IBC	335	STIL	TULA	BERNIE GOBIN	1999	10-May-00	10-May-00	0.1
T183913	HS9913-WHALE01-124-001	CHINOOK	29-May-99	IBC	105	COBC	CDFO	KITIMAT R	1998	03-May-99	06-May-99	0.0
T184631	HS200136-IBC21-124-003	CHINOOK	03-Nov-01	IBC	203	WCVI	CDFO	ROBERTSON CR	2000	24-May-01	24-May-01	0.0
T183945	HS200336-IBC03-124-009	CHINOOK	15-Oct-03	IBC	312	JNST	CDFO	QUINSAM R	2001	08-May-03	14-May-03	1.0
T631550	HS200336-IBC03-124-011	CHINOOK	15-Oct-03	IBC	284	UPCR	WDFW	SIMILKAMEEN	2001	28-Apr-03	29-Apr-03	1.0
T182246	HS200136-RI04-124-001	CHINOOK	16-Oct-01	IBC	168	COBC	CDFO	SNOOTLI CR	2000	30-May-01	30-May-01	0.0
T054415	HS200235-ISEA03-124-007	CHINOOK	24-Aug-02	ISEA	252	UPCR	FWS	LEAVENWORTH	2000	22-Apr-02	22-Apr-02	1.0
T090119	HS200235-ISEA07-124-001	CHINOOK	24-Aug-02	ISEA	329	LOCR	ODFW	WILLAMETTE	2000		19-Apr-02	1.0
T184562	HS200205-ISEA01-124-003	CHINOOK	10-Mar-02	ISEA	334	NASK	CDFO	TERRACE	1999	25-Apr-01	27-Apr-01	1.1
T040549	HS200238-ISEA01-124-003	CHINOOK	01-Nov-02	ISEA	274	SEAK	ADFG	WILD	2000	21-Apr-02	12-May-02	1.0

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CWT	Fish Number	Species	Recovery Date	Recovery Region	Recovery Fork Length (mm)	Release Area	Release Agency	Hatchery	Brood Year	Date of First Release	Date of Last Release	Age
T044827	HS200238-ISEA02-124-001	CHINOOK	01-Nov-02	ISEA	283	SEAK	NSRA	HIDDEN FALLS	2000	03-Jun-02	03-Jun-02	1.0
T036247	HS200238-ISEA04-124-004	CHINOOK	01-Nov-02	ISEA	463	SEAK	NMFS	LITTLE PORT WALTER	1999	18-May-01	18-May-01	1.1
T040457	HS200238-ISEA23-124-007	CHINOOK	06-Nov-02	ISEA	252	SEAK	ADFG	WILD	2000	06-Oct-01	10-Oct-01	1.0
T040497	HS200238-ISEA25-124-003	CHINOOK	06-Nov-02	ISEA	265	SEAK	SSRA	CRYSTAL LAKE	2000	06-Jun-02	07-Jun-02	1.0
T040518	HS200238-ISEA28-124-008	CHINOOK	07-Nov-02	ISEA	291	SEAK	SSRA	CRYSTAL LAKE	2000	07-Jun-02	07-Jun-02	1.0
T470120	HS200238-ISEA28-124-007	CHINOOK	07-Nov-02	ISEA	293	SEAK	MIC	TAMGAS CREEK	2000	24-May-02		1.0
T040747	HS200336-ISEA07-124-001	CHINOOK	20-Oct-03	ISEA	265	SEAK	SSRA	CRYSTAL LAKE	2001	27-May-03	27-May-03	1.0
T044817	HS200034-X14-124-001	CHINOOK	20-Oct-00	ISEA	598	SEAK	NSRA	HIDDEN FALLS	1996	29-May-98	29-May-98	1.2
T044852	HS200034-X22-124-006	CHINOOK	21-Oct-00	ISEA	291	SEAK	NSRA	HIDDEN FALLS	1998	24-May-00	24-May-00	1.0
T036242	HS200034-X27-124-002	CHINOOK	22-Oct-00	ISEA	296	SEAK	NMFS	LITTLE PORT WALTER	1998	18-May-00	18-May-00	1.0
T040180	HS200136-ISEA11-124-016	CHINOOK	22-Oct-01	ISEA	268	SEAK	SSRA	CRYSTAL LK/ANITA BAY	1999	23-May-01	23-May-01	1.0
T044663	HS200034-X27-124-003	CHINOOK	22-Oct-00	ISEA	302	SEAK	NSRA	HIDDEN FALLS	1998	24-May-00	24-May-00	1.0
T044663	HS200034-X27-124-004	CHINOOK	22-Oct-00	ISEA	307	SEAK	NSRA	HIDDEN FALLS	1998	24-May-00	24-May-00	1.0
T044663	HS200034-X27-124-005	CHINOOK	22-Oct-00	ISEA	286	SEAK	NSRA	HIDDEN FALLS	1998	24-May-00	24-May-00	1.0
T044663	HS200034-X27-124-001	CHINOOK	22-Oct-00	ISEA	278	SEAK	NSRA	HIDDEN FALLS	1998	24-May-00	24-May-00	1.0
T503123	HS200034-X26-124-003	CHINOOK	22-Oct-00	ISEA	232	SEAK	DIPC	GASTINEAU	1998	09-Jun-00	09-Jun-00	1.0
T503123	HS200034-X24-124-001	CHINOOK	22-Oct-00	ISEA	228	SEAK	DIPC	GASTINEAU	1998	09-Jun-00	09-Jun-00	1.0
T036241	HS200034-X32-124-017	CHINOOK	23-Oct-00	ISEA	280	SEAK	NMFS	LITTLE PORT_WALTER	1998	18-May-00	18-May-00	1.0
T040161	HS200034-X31-124-009	CHINOOK	23-Oct-00	ISEA	273	SEAK	DIPC	GASTINEAU	1998	02-Jun-00	02-Jun-00	1.0
T040246	HS200034-X31-124-027	CHINOOK	23-Oct-00	ISEA	259	SEAK	DIPC	GASTINEAU	1998	02-Jun-00	02-Jun-00	1.0
T044852	HS200034-X31-124-011	CHINOOK	23-Oct-00	ISEA	269	SEAK	NSRA	HIDDEN FALLS	1998	24-May-00	24-May-00	1.0
T044852	HS200034-X31-124-010	CHINOOK	23-Oct-00	ISEA	279	SEAK	NSRA	HIDDEN FALLS	1998	24-May-00	24-May-00	1.0
T040395	HS200136-ISEA22-124-001	CHINOOK	26-Oct-01	ISEA	266	SEAK	DIPC	MACAULAY	1999	14-Jun-01	14-Jun-01	1.0
T040423	HS200034-X33-124-003	CHINOOK	26-Oct-00	ISEA	297	SEAK	KTHC	DEER MOUNTAIN	1998	15-May-00	15-May-00	1.0
T040393	HS200136-ISEA26-124-012	CHINOOK	27-Oct-01	ISEA	252	SEAK	DIPC	MACAULAY	1999	12-Jun-01	12-Jun-01	1.0
T036249	HS200136-ISEA29-124-004	CHINOOK	28-Oct-01	ISEA	315	SEAK	NMFS	LITTLE PORT WALTER	1999	18-May-01	18-May-01	1.0
T040157	HS200136-ISEA29-124-002	CHINOOK	28-Oct-01	ISEA	244	SEAK	DIPC	MACAULAY	1999	01-Jun-01	13-Jun-01	1.0

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CWT	Fish Number	Species	Recovery Date	Recovery Region	Recovery Fork Length (mm)	Release Area	Release Agency	Hatchery	Brood Year	Date of First Release	Date of Last Release	Age
T036245	HS200136-ISEA36-124-003	CHINOOK	29-Oct-01	ISEA	304	SEAK	NMFS	LITTLE PORT WALTER	1999	18-May-01	18-May-01	1.0
T036246	HS200136-ISEA36-124-008	CHINOOK	29-Oct-01	ISEA	305	SEAK	NMFS	LITTLE PORT WALTER	1999	18-May-01	18-May-01	1.0
T040188	HS200136-ISEA36-124-035	CHINOOK	29-Oct-01	ISEA	254	SEAK	SSRA	CRYSTAL LAKE	1999	29-May-01	29-May-01	1.0
T040422	HS200136-ISEA36-124-040	CHINOOK	29-Oct-01	ISEA	445	SEAK	ADFG	CRYSTAL LAKE	1998	18-May-00	18-May-00	1.1
T036247	HS200136-ISEA43-124-001	CHINOOK	30-Oct-01	ISEA	293	SEAK	NMFS	LITTLE PORT WALTER	1999	18-May-01	18-May-01	1.0
T184758	HS200304-IVI04-124-007	CHINOOK	14-Feb-03	IVI	228	WCVI	CDFO	NITINAT R	2001	13-Jun-02	13-Jun-02	0.1
T185012	HS200304-IVI15-124-004	CHINOOK	19-Feb-03	IVI	227	WCVI	CDFO	ROBERTSON CR	2001	01-Jun-02	05-Jun-02	0.1
T184340	HS200205-IVI04-124-005	CHINOOK	02-Mar-02	IVI	225	WCVI	CDFO	CONUMA R	2000	12-May-01	22-May-01	0.1
T184541	HS200109-X05-124-001	CHINOOK	10-Mar-01	IVI	207	WCVI	CDFO	ROBERTSON CR	1999	08-May-00	03-Jun-00	0.1
T182215	HS200109-X13-124-001	CHINOOK	11-Mar-01	IVI	206	WCVI	CDFO	CONUMA R	1999	29-May-00	29-May-00	0.1
T182215	HS200109-X13-124-002	CHINOOK	11-Mar-01	IVI	238	WCVI	CDFO	CONUMA R	1999	29-May-00	29-May-00	0.1
T184516	HS200109-X21-124-001	CHINOOK	12-Mar-01	IVI	220	WCVI	CDFO	CONUMA R	1999	08-May-00	30-May-00	0.1
T092925	HS200109-X20-124-020	CHINOOK	12-Mar-01	IVI	362	CECR	ODFW	BONNEVILLE	1998		09-Mar-00	1.1
T184360	HS200136-IVI01-124-003	CHINOOK	09-Oct-01	IVI	186	WCVI	CDFO	NITINAT R	2000	06-Jun-01	06-Jun-01	0.0
T184360	HS200136-IVI01-124-008	CHINOOK	09-Oct-01	IVI	191	WCVI	CDFO	NITINAT R	2000	06-Jun-01	06-Jun-01	0.0
T184559	HS200136-IVI01-124-002	CHINOOK	09-Oct-01	IVI	164	WCVI	CDFO	NITINAT R	2000	22-Jun-01	24-Jun-01	0.0
T184632	HS200136-IVI01-124-001	CHINOOK	09-Oct-01	IVI	182	WCVI	CDFO	ROBERTSON CR	2000	25-May-01	25-May-01	0.0
T184636	HS200136-IVI02-124-001	CHINOOK	09-Oct-01	IVI	163	WCVI	CDFO	ROBERTSON CR	2000	28-May-01	28-May-01	0.0
T182334	HS200336-IVI06-124-002	CHINOOK	10-Oct-03	IVI	138	WCVI	CDFO	GOLD R	2002	27-May-03	27-May-03	0.0
T184529	HS200136-IVI06-124-001	CHINOOK	10-Oct-01	IVI	139	WCVI	CDFO	CONUMA R	2000	14-May-01	14-May-01	0.0
T185136	HS200336-IVI09-124-016	CHINOOK	10-Oct-03	IVI	164	WCVI	CDFO	ROBERTSON CR	2002	28-May-03	03-Jun-03	0.0
T185410	HS200336-IVI06-124-001	CHINOOK	10-Oct-03	IVI	163	WCVI	CDFO	CONUMA R	2002	03-Jun-03	13-Jun-03	0.0
T185410	HS200336-IVI09-124-004	CHINOOK	10-Oct-03	IVI	185	WCVI	CDFO	CONUMA R	2002	03-Jun-03	13-Jun-03	0.0
T185410	HS200336-IVI09-124-011	CHINOOK	10-Oct-03	IVI	165	WCVI	CDFO	CONUMA R	2002	03-Jun-03	13-Jun-03	0.0
T184721	HS200336-IVI17-124-009	CHINOOK	12-Oct-03	IVI	184	WCVI	CDFO	MARBLE R	2002	13-Jun-03	13-Jun-03	0.0
T184721	HS200336-IVI18-124-001	CHINOOK	13-Oct-03	IVI	180	WCVI	CDFO	MARBLE R	2002	13-Jun-03	13-Jun-03	0.0
T185009	HS200238-IVI03-124-026	CHINOOK	17-Oct-02	IVI	147	WCVI	CDFO	ROBERTSON CR	2001	01-Jun-02	05-Jun-02	0.0

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CWT	Fish Number	Species	Recovery Date	Recovery Region	Recovery Fork Length (mm)	Release Area	Release Agency	Hatchery	Brood Year	Date of First Release	Date of Last Release	Age
T185012	HS200238-IVI01-124-012	CHINOOK	17-Oct-02	IVI	153	WCVI	CDFO	ROBERTSON CR	2001	01-Jun-02	05-Jun-02	0.0
T185019	HS200238-IVI06-124-026	CHINOOK	17-Oct-02	IVI	150	WCVI	CDFO	SAN JUAN R	2001			0.0
T184750	HS200238-IVI08-124-001	CHINOOK	20-Oct-02	IVI	173	WCVI	CDFO	CONUMA R	2001	06-May-02	06-May-02	0.0
T184751	HS200238-IVI11-124-001	CHINOOK	20-Oct-02	IVI	212	WCVI	CDFO	CONUMA R	2001	15-May-02	15-May-02	0.0
T184752	HS200238-IVI08-124-002	CHINOOK	20-Oct-02	IVI	164	WCVI	CDFO	CONUMA R	2001	28-May-02	28-May-02	0.0
T184751	HS200238-IVI15-124-002	CHINOOK	21-Oct-02	IVI	257	WCVI	CDFO	CONUMA R	2001	15-May-02	15-May-02	0.0
T092817	HS9938-HH05-124-003	CHINOOK	02-Oct-99	OR	194	NOOR	ODFW	SALMON R	1998	18-Aug-99	20-Aug-99	0.0
T092637	HS9938-HH10-124-005	CHINOOK	02-Oct-99	OR	426	SOOR	ODFW	INDIAN CR POND(STEP)	1997		11-Sep-98	0.1
T630519	HS9938-HH15-124-006	CHINOOK	02-Oct-99	OR	339	LOCR	WDFW	LEWIS R	1997	15-Mar-99	15-Mar-99	1.0
T630611	HS9938-HH10-124-003	CHINOOK	02-Oct-99	OR	344	UPCR	COOP	WELLS DAM SP CHANNEL	1997	15-Apr-99	21-May-99	1.0
T630611	HS9938-AB01-124-001	CHINOOK	03-Oct-99	OR	351	UPCR	COOP	WELLS DAM SP CHANNEL	1997	15-Apr-99	21-May-99	1.0
T630995	HS200235-T05-124-001	CHINOOK	19-Aug-02	QCSD	250	UPCR	WDFW	WELLS	2000	15-Apr-02	30-Apr-02	1.0
T092821	HS200016-T06-124-002	CHINOOK	02-Jul-00	QCSD	208	SNAK	ODFW	LOOKINGGLASS	1998		18-Apr-00	1.0
T092319	HS9816-001-124-008	CHINOOK	02-Jun-98	QCSD	210	LOCR	ODFW	MARION FORKS	1996	02-Mar-98	03-Mar-98	1.0
T054955	HS9816-013-124-016	CHINOOK	03-Jun-98	QCSD	171	CECR	FWS	WARM SPRINGS NFH	1996	15-Apr-98	15-Apr-98	1.0
T055005	HS9816-013-124-018	CHINOOK	03-Jun-98	QCSD	189	CECR	FWS	WARM SPRINGS NFH	1996	08-Oct-97	15-Apr-98	1.0
T055010	HS9816-013-124-014	CHINOOK	03-Jun-98	QCSD	212	CECR	FWS	WARM SPRINGS NFH	1996	08-Oct-97	15-Apr-98	1.0
T092320	HS9816-013-124-005	CHINOOK	03-Jun-98	QCSD	219	LOCR	ODFW	MARION FORKS	1996	02-Mar-98	03-Mar-98	1.0
T630343	HS9816-013-124-010	CHINOOK	03-Jun-98	QCSD	209	LOCR	WDFW	LEWIS R	1996	22-Mar-98	22-Mar-98	1.0
T182246	HS200136-QCST01-124-011	CHINOOK	04-Nov-01	QCST	189	COBC	CDFO	SNOOTLI CR	2000	30-May-01	30-May-01	0.0
T054033	HS200316-109-2-124-009	CHINOOK	27-Aug-03	SEA	254	CECR	FWS	CARSON NFH	2001	16-Apr-03	16-Apr-03	1.0
T054448	HS200316-109-2-124-010	CHINOOK	27-Aug-03	SEA	246	CECR	FWS	WARM SPRINGS NFH	2001	16-Apr-03	16-Apr-03	1.0
T093530	HS200316-109-2-124-015	CHINOOK	27-Aug-03	SEA	264	LOCR	ODFW	WILLAMETTE	2001		25-Feb-03	1.0
T093642	HS200316-109-3-124-004	CHINOOK	27-Aug-03	SEA	270	SNAK	ODFW	IRRIGON	2001	01-Apr-03	15-Apr-03	1.0
T093660	HS200316-109-2-124-001	CHINOOK	27-Aug-03	SEA	245	SNAK	ODFW	IRRIGON	2001	01-Apr-03	15-Apr-03	1.0
T108773	HS200316-109-3-124-001	CHINOOK	27-Aug-03	SEA	261	SNAK	IDFG	RAPID R	2001	17-Mar-03	25-Apr-03	1.0
T631448	HS200316-109-2-124-004	CHINOOK	27-Aug-03	SEA	238	UPCR	WDFW	CHIWAHA	2001	21-Apr-03	30-Apr-03	1.0

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T054949	HS200016-FI01-124-001	CHINOOK	04-Jul-00	SEA	212	UPCR	FWS	WINTHROP NFH	1998	10-Apr-00	10-Apr-00	1.0
T093023	HS200114-FI02-124-009	CHINOOK	17-Jun-01	SEA	253	LOCR	ODFW	MCKENZIE	1999	05-Feb-01	12-Mar-01	1.0
T093142	HS200114-SE01-124-002	CHINOOK	19-Jun-01	SEA	238	LOCR	ODFW	MCKENZIE	1999		07-Mar-01	1.0
T631032	HS200114-SE04-124-007	CHINOOK	19-Jun-01	SEA	517	CRGN	WDFW	TURTLE ROCK	1998	18-Apr-00	20-Jun-00	1.1
T630606	HS200114-SE04-124-017	CHINOOK	19-Jun-01	SEA	715	CRGN	COOP	TURTLE ROCK	1997	21-Apr-99	21-Apr-99	1.2
T183905	HS9913-B03-124-001	CHINOOK	24-May-99	SEA	342	COBC	CDFO	KITIMAT R	1997		05-May-98	0.1
T183211	HS9913-B04-124-001	CHINOOK	24-May-99	SEA	365	NASK	CDFO	TOBOGGAN CR CDP	1996	23-Apr-98	05-May-98	1.1
T054526	HS9938-FI10-124-001	CHINOOK	10-Oct-99	SEA	307	UPCR	FWS	WINTHROP NFH	1997	15-Apr-99	15-Apr-99	1.0
T631102	HS200034-FI01-124-002	CHINOOK	17-Oct-00	SEA	330	UPCR	WDFW	CHIWAHA	1998	10-Apr-00	10-Apr-00	1.0
T630696	HS200235-VI07-124-001	CHINOOK	17-Aug-02	VI	330	CECR	WDFW	KLICKITAT	2000	08-Mar-02	10-Mar-02	1.0
T184751	HS200304-IVI08-124-002	CHINOOK	18-Feb-03	VI	254	WCVI	CDFO	CONUMA R	2001	15-May-02	15-May-02	0.1
T054246	HS200016-E03-124-023	CHINOOK	01-Jul-00	VI	169	UPCR	FWS	LEAVENWORTH	1998	18-Apr-00	18-Apr-00	1.0
T054614	HS200016-E03-124-017	CHINOOK	01-Jul-00	VI	188	UPCR	FWS	WINTHROP NFH	1998	10-Apr-00	10-Apr-00	1.0
T054931	HS200016-E03-124-014	CHINOOK	01-Jul-00	VI	209	UPCR	FWS	WINTHROP NFH	1998	10-Apr-00	10-Apr-00	1.0
T054949	HS200016-E04-124-004	CHINOOK	01-Jul-00	VI	189	UPCR	FWS	WINTHROP NFH	1998	10-Apr-00	10-Apr-00	1.0
T105502	HS200016-E02-124-014	CHINOOK	01-Jul-00	VI	229	SNAK	IDFG	RAPID R	1998	15-Mar-00	04-Apr-00	1.0
T631032	HS200016-E02-124-012	CHINOOK	01-Jul-00	VI	222	CRGN	WDFW	TURTLE ROCK	1998	18-Apr-00	20-Jun-00	1.0
T631061	HS200016-E04-115-013	CHINOOK	01-Jul-00	VI	200	UPCR	WDFW	WELLS	1998	18-Apr-00	12-May-00	1.0
T631061	HS200016-E02-124-010	CHINOOK	01-Jul-00	VI	225	UPCR	WDFW	WELLS	1998	18-Apr-00	12-May-00	1.0
T631102	HS200016-E03-124-020	CHINOOK	01-Jul-00	VI	198	UPCR	WDFW	CHIWAHA	1998	10-Apr-00	10-Apr-00	1.0
T631148	HS200016-E03-124-005	CHINOOK	01-Jul-00	VI	207	UPCR	WDFW	SIMILKAMEEN	1998	13-Apr-00	26-Apr-00	1.0
T631151	HS200016-E04-124-007	CHINOOK	01-Jul-00	VI	217	UPCR	WDFW	DRYDEN POND	1998	01-May-00	31-May-00	1.0
T631151	HS200016-E04-124-002	CHINOOK	01-Jul-00	VI	222	UPCR	WDFW	DRYDEN POND	1998	01-May-00	31-May-00	1.0
T631151	HS200016-E04-115-001	CHINOOK	01-Jul-00	VI	213	UPCR	WDFW	DRYDEN POND	1998	01-May-00	31-May-00	1.0
T631151	HS200016-E03-124-019	CHINOOK	01-Jul-00	VI	225	UPCR	WDFW	DRYDEN POND	1998	01-May-00	31-May-00	1.0
T631151	HS200016-E04-124-003	CHINOOK	01-Jul-00	VI	202	UPCR	WDFW	DRYDEN POND	1998	01-May-00	31-May-00	1.0
T631151	HS200016-E03-124-003	CHINOOK	01-Jul-00	VI	202	UPCR	WDFW	DRYDEN POND	1998	01-May-00	31-May-00	1.0

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T631151	HS200016-E03-124-001	CHINOOK	01-Jul-00	VI	206	UPCR	WDFW	DRYDEN POND	1998	01-May-00	31-May-00	1.0
T631251	HS200016-E03-124-025	CHINOOK	01-Jul-00	VI	192	UPCR	YAKA	CLE ELUM	1998	15-Mar-00	31-May-00	1.0
T631251	HS200016-E03-124-024	CHINOOK	01-Jul-00	VI	190	UPCR	YAKA	CLE ELUM	1998	15-Mar-00	31-May-00	1.0
T092851	HS200016-T08-124-002	CHINOOK	02-Jul-00	VI	186	CECR	ODFW	ROUND BUTTE	1998		09-May-00	1.0
T105507	HS200016-T08-124-001	CHINOOK	02-Jul-00	VI	201	SNAK	IDFG	MCCALL	1998	03-Apr-00	06-Apr-00	1.0
T630469	HS200118-015-124-001	CHINOOK	28-Jul-01	VI	255	UPCR	WDFW	SIMILKAMEEN	1999	11-Apr-01	25-Apr-01	1.0
T212942	HS9816-011-124-002	CHINOOK	03-Jun-98	VI	307	MPS	MUCK	WHITE R	1996	05-Jun-97	12-Jun-97	0.1
T053716	HS9816-012-124-003	CHINOOK	03-Jun-98	VI	175	SNAK	FWS	DWORSKAT NAT	1996	25-Mar-98	25-Mar-98	1.0
T054963	HS9816-012-124-016	CHINOOK	03-Jun-98	VI	165	CECR	FWS	WARM SPRINGS NFH	1996	08-Oct-97	15-Apr-98	1.0
T092260	HS9816-012-124-015	CHINOOK	03-Jun-98	VI	208	CECR	ODFW	UMATILLA	1996		08-Mar-98	1.0
T104905	HS9816-012-124-007	CHINOOK	03-Jun-98	VI	180	SNAK	IDFG	RAPID R	1996	16-Mar-98	28-Apr-98	1.0
T105126	HS9816-012-124-006	CHINOOK	03-Jun-98	VI	169	SNAK	IDFG	MCCALL	1996	29-Mar-98	06-Apr-98	1.0
T630163	HS9816-012-124-010	CHINOOK	03-Jun-98	VI	209	SNAK	WDFW	LYONS FERRY	1996	03-Apr-98	16-Apr-98	1.0
T630468	HS200215-EP01-124-015	CHINOOK	17-Jun-02	VI	392	UPCR	WDFW	WELLS	1999	16-Apr-01	07-May-01	1.1
T630474	HS200215-EP04-124-010	CHINOOK	17-Jun-02	VI	450	UPCR	WDFW	DRYDEN POND	1999	27-Apr-01	27-Apr-01	1.1
T093120	HS200114-T07-124-001	CHINOOK	21-Jun-01	VI	179	CECR	ODFW	ROUND BUTTE	1999	23-Apr-01	14-May-01	1.0
T184638	HS200114-VI04-124-007	CHINOOK	24-Jun-01	VI	85.000	WCVI	CDFO	ROBERTSON CR	2000	28-May-01	28-May-01	0.0
T630164	HS200114-VI02-124-047	CHINOOK	24-Jun-01	VI	326	SKAG	WDFW	MARBLEMOUNT	1999	09-May-00	03-Jun-00	0.1
T630177	HS200114-VI03-124-008	CHINOOK	24-Jun-01	VI	325	CRGN	WDFW	TURTLE ROCK	1999	05-Jul-00	05-Jul-00	0.1
T210105	HS200114-VI05-124-013	CHINOOK	24-Jun-01	VI	478	MPS	PUYA	VOIGHTS CR	1998	07-Jun-99	14-Jun-99	0.2
T630921	HS200114-VI05-124-012	CHINOOK	24-Jun-01	VI	543	MPS	UW	PORTAGE BAY	1998	01-May-99	31-May-99	0.2
T053914	HS9914-T07-124-001	CHINOOK	24-Jun-99	VI	186	SNAK	FWS	KOOSKIA NFH	1997	06-Apr-99	09-Apr-99	1.0
T092557	HS9914-T07-124-002	CHINOOK	24-Jun-99	VI	208	CECR	ODFW	ROUND BUTTE	1997	12-Apr-99	05-May-99	1.0
T093140	HS200114-VI03-124-004	CHINOOK	24-Jun-01	VI	227	LOCR	ODFW	MCKENZIE	1999		08-Mar-01	1.0
T103522	HS9914-T07-124-004	CHINOOK	24-Jun-99	VI	183	SNAK	IDFG	RAPID R	1997	18-Mar-99	26-Apr-99	1.0
T630377	HS200114-VI03-124-001	CHINOOK	24-Jun-01	VI	206	UPCR	WDFW	METHOW	1999	17-Apr-01	17-Apr-01	1.0
T630378	HS200114-VI03-124-007	CHINOOK	24-Jun-01	VI	175	UPCR	WDFW	METHOW	1999	17-Apr-01	17-Apr-01	1.0

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T630476	HS200114-VI03-124-006	CHINOOK	24-Jun-01	VI	214	SNAK	WDFW	LYONS FERRY	1999	02-Apr-01	24-Apr-01	1.0
T630476	HS200114-VI04-124-004	CHINOOK	24-Jun-01	VI	212	SNAK	WDFW	LYONS FERRY	1999	02-Apr-01	24-Apr-01	1.0
T630740	HS9914-T07-124-003	CHINOOK	24-Jun-99	VI	196	UPCR	WDFW	CHIWAHA	1997	19-Apr-99	26-Apr-99	1.0
T631061	HS200114-VI02-124-009	CHINOOK	24-Jun-01	VI	482	UPCR	WDFW	WELLS	1998	18-Apr-00	12-May-00	1.1
T053932	HS9914-C06-124-002	CHINOOK	25-Jun-99	VI	199	CECR	FWS	LTL WHITE SALMON NFH	1997	20-Apr-99	20-Apr-99	1.0
T054212	HS9914-C01-124-005	CHINOOK	25-Jun-99	VI	174	SNAK	FWS	DWORSKAK NAT	1997	08-Apr-99	08-Apr-99	1.0
T054255	HS9914-C01-124-010	CHINOOK	25-Jun-99	VI	177	UPCR	FWS	LEAVENWORTH	1997	19-Apr-99	19-Apr-99	1.0
T054457	HS9914-C01-124-013	CHINOOK	25-Jun-99	VI	185	CECR	FWS	WARM SPRINGS NFH	1997	04-Mar-99	04-Mar-99	1.0
T054460	HS9914-C03-124-002	CHINOOK	25-Jun-99	VI	187	CECR	FWS	CARSON NFH	1997	20-Apr-99	20-Apr-99	1.0
T054460	HS9914-C01-124-012	CHINOOK	25-Jun-99	VI	189	CECR	FWS	CARSON NFH	1997	20-Apr-99	20-Apr-99	1.0
T054526	HS9914-C06-124-003	CHINOOK	25-Jun-99	VI	205	UPCR	FWS	WINTHROP NFH	1997	15-Apr-99	15-Apr-99	1.0
T092616	HS9914-C01-124-002	CHINOOK	25-Jun-99	VI	188	SNAK	ODFW	LOOKINGGLASS	1997	16-Mar-99	16-Apr-99	1.0
T103210	HS9914-C02-124-003	CHINOOK	25-Jun-99	VI	176	SNAK	IDFG	CLEARWATER	1997	07-Apr-99	07-Apr-99	1.0
T103523	HS9914-C04-124-004	CHINOOK	25-Jun-99	VI	156	SNAK	IDFG	RAPID R	1997	18-Mar-99	26-Apr-99	1.0
T105122	HS9914-C02-124-005	CHINOOK	25-Jun-99	VI	152	SNAK	IDFG	MCCALL	1997	05-Apr-99	08-Apr-99	1.0
T105128	HS9914-C02-124-004	CHINOOK	25-Jun-99	VI	174	SNAK	IDFG	MCCALL	1997	05-Apr-99	08-Apr-99	1.0
T105128	HS9914-C01-124-011	CHINOOK	25-Jun-99	VI	175	SNAK	IDFG	MCCALL	1997	05-Apr-99	08-Apr-99	1.0
T105132	HS9914-C01-124-004	CHINOOK	25-Jun-99	VI	147	SNAK	IDFG	CLEARWATER	1997	19-Mar-99	19-Mar-99	1.0
T105138	HS9914-C03-124-001	CHINOOK	25-Jun-99	VI	175	SNAK	IDFG	CLEARWATER	1997	12-Apr-99	15-Apr-99	1.0
T630606	HS9914-C01-124-007	CHINOOK	25-Jun-99	VI	249	CRGN	COOP	TURTLE ROCK	1997	21-Apr-99	21-Apr-99	1.0
T630610	HS9914-C04-124-001	CHINOOK	25-Jun-99	VI	215	UPCR	WDFW	EASTBANK	1997	12-Apr-99	26-Apr-99	1.0
T630611	HS9914-C04-124-002	CHINOOK	25-Jun-99	VI	211	UPCR	COOP	WELLS DAM SP CHANNEL	1997	15-Apr-99	21-May-99	1.0
T630612	HS9914-C02-124-006	CHINOOK	25-Jun-99	VI	197	UPCR	WDFW	EASTBANK	1997	27-Apr-99	27-Apr-99	1.0
T630613	HS9914-C01-124-014	CHINOOK	25-Jun-99	VI	179	UPCR	WDFW	METHOW	1997	15-Apr-99	30-Apr-99	1.0
T630613	HS9914-C02-124-001	CHINOOK	25-Jun-99	VI	172	UPCR	WDFW	METHOW	1997	15-Apr-99	30-Apr-99	1.0
T630614	HS9914-C02-124-002	CHINOOK	25-Jun-99	VI	159	UPCR	WDFW	METHOW	1997	19-Apr-99	20-Apr-99	1.0
T630614	HS9914-C04-124-003	CHINOOK	25-Jun-99	VI	181	UPCR	WDFW	METHOW	1997	19-Apr-99	20-Apr-99	1.0

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T630863	HS9914-C01-124-009	CHINOOK	25-Jun-99	VI	159	UPCR	YAKA	WA PROD AREA UPCR	1997	01-Apr-99	01-Apr-99	1.0
T630936	HS9914-C06-124-001	CHINOOK	25-Jun-99	VI	196	UPCR	WDFW	CARLTON REARING POND	1997	15-Apr-99	25-Apr-99	1.0
T104944	HS9914-C09-124-001	CHINOOK	26-Jun-99	VI	202	SNAK	IDFG	MCCALL	1997	05-Apr-99	08-Apr-99	1.0
T630634	HS200016-SS03-124-003	CHINOOK	30-Jun-00	VI	311	LOCR	WDFW	LEWIS R	1998	21-Mar-00	21-Mar-00	1.0
T630860	HS200016-SS08-124-010	CHINOOK	30-Jun-00	VI	492	SNAK	WDFW	LYONS FERRY	1997	01-Apr-99	13-Apr-99	1.1
T184701	HS200205-EP01-124-012	CHINOOK	01-Mar-02	VI	250	WCVI	CDFO	CLAYOQUOT	2000	25-May-01	25-May-01	0.1
T093249	HS200205-VI03-124-009	CHINOOK	02-Mar-02	VI	215	LOCR	ODFW	SOUTH SANTIAM	2000	29-Oct-01	05-Nov-01	0.1
T184340	HS200205-VI03-124-014	CHINOOK	02-Mar-02	VI	262	WCVI	CDFO	CONUMA R	2000	12-May-01	22-May-01	0.1
T184360	HS200205-VI03-124-024	CHINOOK	02-Mar-02	VI	238	WCVI	CDFO	NITINAT R	2000	06-Jun-01	06-Jun-01	0.1
T184556	HS200205-VI03-124-023	CHINOOK	02-Mar-02	VI	262	WCVI	CDFO	NITINAT R	2000	18-May-01	18-May-01	0.1
T093135	HS200109-X07-124-025	CHINOOK	10-Mar-01	VI	235	LOCR	ODFW	MCKENZIE	1999		07-Nov-00	0.1
T182135	HS200109-X07-124-027	CHINOOK	10-Mar-01	VI	245	FRTH	CDFO	CHEHALIS R	1999	05-Jun-00	06-Jun-00	0.1
T184517	HS200109-X07-124-021	CHINOOK	10-Mar-01	VI	244	WCVI	CDFO	NITINAT R	1999	06-Jun-00	07-Jun-00	0.1
T630171	HS200109-X07-124-026	CHINOOK	10-Mar-01	VI	240	MPS	WDFW	SOOS CREEK	1999	09-May-00	31-May-00	0.1
T630173	HS200109-X09-124-011	CHINOOK	10-Mar-01	VI	243	NOOK	WDFW	SAMISH	1999	25-May-00	25-May-00	0.1
T054522	HS200109-X16-124-005	CHINOOK	11-Mar-01	VI	252	CECR	FWS	WARM SPRINGS NFH	1999	28-Sep-00	18-Apr-01	0.1
T182215	HS200109-X16-124-004	CHINOOK	11-Mar-01	VI	253	WCVI	CDFO	CONUMA R	1999	29-May-00	29-May-00	0.1
T631061	HS200109-X16-124-003	CHINOOK	11-Mar-01	VI	345	UPCR	WDFW	WELLS	1998	18-Apr-00	12-May-00	1.1
T631061	HS200109-X15-124-030	CHINOOK	11-Mar-01	VI	360	UPCR	WDFW	WELLS	1998	18-Apr-00	12-May-00	1.1
T631061	HS200109-X16-124-002	CHINOOK	11-Mar-01	VI	402	UPCR	WDFW	WELLS	1998	18-Apr-00	12-May-00	1.1
T631148	HS200109-X16-124-001	CHINOOK	11-Mar-01	VI	340	UPCR	WDFW	SIMILKAMEEN	1998	13-Apr-00	26-Apr-00	1.1
T630610	HS200109-X15-124-031	CHINOOK	11-Mar-01	VI	622	UPCR	WDFW	EASTBANK	1997	12-Apr-99	26-Apr-99	1.2
T631025	HS200109-X15-124-029	CHINOOK	11-Mar-01	VI	403	SNAK	NEZP	LYONS FERRY	1997	03-Jun-99	03-Jun-99	1.2
T630163	HS9913-VI02-124-001	CHINOOK	19-May-99	VI	358	SNAK	WDFW	LYONS FERRY	1996	03-Apr-98	16-Apr-98	1.1
T182161	HS200034-LP01-124-001	CHINOOK	04-Oct-00	VI	171	WCVI	CDFO	ROBERTSON CR	1999	29-May-00	03-Jun-00	0.0
T182724	HS9938-VI01-124-002	CHINOOK	05-Oct-99	VI	172	WCVI	CDFO	NITINAT R	1998		20-May-99	0.0
T182725	HS9938-VI03-124-002	CHINOOK	05-Oct-99	VI	223	WCVI	CDFO	NITINAT R	1998		09-Jun-99	0.0

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T183433	HS9938-VI01-124-003	CHINOOK	05-Oct-99	VI	167	WCVI	CDFO	ROBERTSON CR	1998		31-May-99	0.0
T183747	HS9938-VI01-124-001	CHINOOK	05-Oct-99	VI	189	WCVI	CDFO	NITINAT R	1998		02-Jun-99	0.0
T183747	HS9938-VI03-124-003	CHINOOK	05-Oct-99	VI	216	WCVI	CDFO	NITINAT R	1998		02-Jun-99	0.0
T183748	HS9938-VI03-124-001	CHINOOK	05-Oct-99	VI	231	WCVI	CDFO	NITINAT R	1998	12-May-99	02-Jun-99	0.0
T183750	HS9938-VI01-124-005	CHINOOK	05-Oct-99	VI	185	WCVI	CDFO	NITINAT R	1998	23-Jun-99	24-Jun-99	0.0
T183750	HS9938-VI01-124-004	CHINOOK	05-Oct-99	VI	182	WCVI	CDFO	NITINAT R	1998	23-Jun-99	24-Jun-99	0.0
T630610	HS9938-VI04-124-005	CHINOOK	05-Oct-99	VI	308	UPCR	WDFW	EASTBANK	1997	12-Apr-99	26-Apr-99	1.0
T630611	HS9938-VI04-124-001	CHINOOK	05-Oct-99	VI	319	UPCR	COOP	WELLS DAM SP CHANNEL	1997	15-Apr-99	21-May-99	1.0
T630611	HS9938-VI04-124-004	CHINOOK	05-Oct-99	VI	283	UPCR	COOP	WELLS DAM SP CHANNEL	1997	15-Apr-99	21-May-99	1.0
T630612	HS9938-VI04-124-003	CHINOOK	05-Oct-99	VI	314	UPCR	WDFW	EASTBANK	1997	27-Apr-99	27-Apr-99	1.0
T630612	HS9938-VI04-124-002	CHINOOK	05-Oct-99	VI	247	UPCR	WDFW	EASTBANK	1997	27-Apr-99	27-Apr-99	1.0
T630454	HS9938-C02-124-001	CHINOOK	06-Oct-99	VI	328	SNAK	WDFW	LYONS FERRY	1997	12-Apr-99	15-Apr-99	1.0
T630611	HS9938-C01-124-001	CHINOOK	06-Oct-99	VI	308	UPCR	COOP	WELLS DAM SP CHANNEL	1997	15-Apr-99	21-May-99	1.0
T630611	HS9938-C03-124-001	CHINOOK	06-Oct-99	VI	298	UPCR	COOP	WELLS DAM SP CHANNEL	1997	15-Apr-99	21-May-99	1.0
T182215	HS200034-K01-124-006	CHINOOK	07-Oct-00	VI	176	WCVI	CDFO	CONUMA R	1999	29-May-00	29-May-00	0.0
T183162	HS9938-K02-124-001	CHINOOK	07-Oct-99	VI	233	WCVI	CDFO	CONUMA R	1998		14-May-99	0.0
T183910	HS9819-R098-124-014	CHINOOK	07-Oct-98	VI	219	WCVI	CDFO	TOFINO PIP	1997	29-May-98	29-May-98	0.0
T183204	HS9819-R091-124-010	CHINOOK	07-Oct-98	VI	258	FRTH	CDFO	PENNY CDP	1996	17-Apr-98	17-Apr-98	1.0
T630124	HS9819-R091-124-012	CHINOOK	07-Oct-98	VI	300	UPCR	WDFW	TURTLE ROCK	1996	15-Apr-98	05-May-98	1.0
T630134	HS9819-R091-124-011	CHINOOK	07-Oct-98	VI	293	UPCR	WDFW	WELLS	1996	15-Apr-98	24-Apr-98	1.0
T630220	HS9819-R098-124-036	CHINOOK	07-Oct-98	VI	259	UPCR	WDFW	SIMILKAMEEN	1996	13-Mar-98	18-Mar-98	1.0
T630610	HS9938-K03-124-001	CHINOOK	07-Oct-99	VI	305	UPCR	WDFW	EASTBANK	1997	12-Apr-99	26-Apr-99	1.0
T630610	HS9938-K2.5-124-002	CHINOOK	07-Oct-99	VI	294	UPCR	WDFW	EASTBANK	1997	12-Apr-99	26-Apr-99	1.0
T630612	HS9938-K3.5-124-002	CHINOOK	07-Oct-99	VI	282	UPCR	WDFW	EASTBANK	1997	27-Apr-99	27-Apr-99	1.0
T630613	HS9938-K2.5-124-001	CHINOOK	07-Oct-99	VI	279	UPCR	WDFW	METHOW	1997	15-Apr-99	30-Apr-99	1.0
T631013	HS200034-K02-124-001	CHINOOK	07-Oct-00	VI	379	SNAK	NEZP	LYONS FERRY	1998	01-Apr-00	12-Apr-00	1.0
T630995	HS200238-VI03-124-001	CHINOOK	20-Oct-02	VI	313	UPCR	WDFW	WELLS	2000	15-Apr-02	30-Apr-02	1.0

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T631061	HS200016-CA05-124-001	CHINOOK	27-Jun-00	WA	220	UPCR	WDFW	WELLS	1998	18-Apr-00	12-May-00	1.0
T631061	HS200016-CA05-124-002	CHINOOK	27-Jun-00	WA	237	UPCR	WDFW	WELLS	1998	18-Apr-00	12-May-00	1.0
T630153	HS9938-WA05-124-005	CHINOOK	04-Oct-99	WA	211	HOOD	WDFW	GEORGE ADAMS	1998	12-May-99	12-May-99	0.0
T630632	HS9938-WA01-124-002	CHINOOK	04-Oct-99	WA	195	HOOD	WDFW	GEORGE ADAMS	1998	12-May-99	12-May-99	0.0
T105123	HS9938-WA05-124-009	CHINOOK	04-Oct-99	WA	231	SNAK	IDFG	MCCALL	1997	07-Oct-98	08-Oct-98	1.0
T630611	HS9938-WA05-124-013	CHINOOK	04-Oct-99	WA	305	UPCR	COOP	WELLS DAM SP CHANNEL	1997	15-Apr-99	21-May-99	1.0
T631025	HS9938-WA01-124-007	CHINOOK	04-Oct-99	WA	198	SNAK	NEZP	LYONS FERRY	1997	03-Jun-99	03-Jun-99	1.0
T182620	HS9818-D02-115-005	COHO	29-Aug-98	DE	419	GST	CDFO	CAPILANO R	1995	27-May-97	28-May-97	1.1
T281621	HS9914-D03-115-001	COHO	19-Jun-99	DE	485	NASK	AFSP	WILD	1996	06-May-98	05-Jun-98	1.1
T180263	HS9913-WHALE01-115-031	COHO	29-May-99	IBC	144	COBC	CDFO	KITIMAT R	1997	17-Apr-99	30-Apr-99	1.0
T210401	HS200336-IBC03-115-001	COHO	15-Oct-03	IBC	350	SPS	SUQ	SOUTH SOUND NET PENS	2001	01-May-03	01-May-03	1.0
T631345	HS200136-RI03-115-001	COHO	16-Oct-01	IBC	251	MPS	WDFW	SOOS CREEK	1999	24-Apr-01	24-Apr-01	1.0
T084316	HS200136-IBC06-115-001	COHO	17-Oct-01	IBC	266	JNST	CDFR	WILD	1999	13-Apr-01	01-Jun-01	1.0
T050284	HS200336-IBC14-115-005	COHO	24-Oct-03	IBC	390	NWC	FWS	QUINULT NFH -COOK C	2001	15-Apr-03	23-Apr-03	1.0
T093230	HS200235-ISEA05-115-004	COHO	24-Aug-02	ISEA	290	SOOR	ODFW	COLE RIVERS	2000	13-Mar-02	18-Mar-02	1.0
T044810	HS9818-CS2-115-009	COHO	31-Aug-98	ISEA	275	SEAK	SSRA	BURNETT INLET	1996	01-Jun-98	30-Jun-98	1.0
T040226	HS9913-X02-115-020	COHO	26-May-99	ISEA	140	SEAK	SSRA	NAKAT INLET	1997	23-May-99	23-May-99	1.0
T503105	HS200034-X23-115-002	COHO	21-Oct-00	ISEA	284	SEAK	DIPC	GASTINEAU	1998	07-Jun-00	07-Jun-00	1.0
T503105	HS200034-X26-115-003	COHO	22-Oct-00	ISEA	270	SEAK	DIPC	GASTINEAU	1998	07-Jun-00	07-Jun-00	1.0
T210224	HS200109-X05-115-001	COHO	10-Mar-01	IVI	358	MPS	MUCK	KETA CREEK	1998	02-May-00	02-May-00	1.1
T184235	HS200109-X21-115-013	COHO	12-Mar-01	IVI	366	JNST	CDFO	QUINSAM R	1998	23-May-00	23-May-00	1.1
T210175	HS200205-JF02-115-007	COHO	27-Feb-02	JF	317	NOOK	LUMM	SKOOKUM CR	1999	23-May-01	01-Jun-01	1.1
T210177	HS200205-JF02-115-004	COHO	27-Feb-02	JF	302	NOOK	LUMM	LUMMI SEA PONDS	1999	23-May-01	23-May-01	1.1
T210177	HS200205-JF01-115-001	COHO	27-Feb-02	JF	320	NOOK	LUMM	LUMMI SEA PONDS	1999	23-May-01	23-May-01	1.1
T210196	HS200205-JF02-115-008	COHO	27-Feb-02	JF	318	MPS	COOP	ELLIOTT BY TRIBAL NP	1999	10-Jun-01	10-Jun-01	1.1
T210196	HS200205-JF02-115-002	COHO	27-Feb-02	JF	340	MPS	COOP	ELLIOTT BY TRIBAL NP	1999	10-Jun-01	10-Jun-01	1.1
T630365	HS200205-JF02-115-006	COHO	27-Feb-02	JF	375	LOCR	WDFW	COWLITZ SALMON	1999	30-Apr-01	30-Apr-01	1.1

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T631357	HS200205-JF02-115-005	COHO	27-Feb-02	JF	311	MPS	WDFW	SOOS CREEK	1999	09-Apr-01	18-Apr-01	1.1
T631358	HS200205-JF02-115-003	COHO	27-Feb-02	JF	293	MPS	WDFW	SOOS CREEK	1999	09-Apr-01	18-Apr-01	1.1
T182936	HS9817-J01-115-006	COHO	16-Jul-98	JS	195	GST	CDFO	BIG QUALICUM R	1996	05-May-98	26-May-98	1.0
T183416	HS9817-J02-115-014	COHO	16-Jul-98	JS	202	GST	CDFO	NANAIMO R CDP	1996	08-May-98	08-May-98	1.0
T213056	HS9817-J01-115-008	COHO	16-Jul-98	JS	205	MPS	COOP	ELLIOT BAY TRIBAL NP	1996	11-Jun-98	11-Jun-98	1.0
T092005	HS9938-HH01-115-001	COHO	02-Oct-99	OR	659	SOOR	ODFW	ROCK CREEK	1996		04-May-98	1.1
T636249	HS9817-T03-115-014	COHO	18-Jul-98	QCSD	230	GRAY	WDFW	WILD	1996	15-Apr-98	21-Apr-98	1.0
T055031	HS9816-013-115-002	COHO	03-Jun-98	QCSD	199	NWC	FWS	MAKAH NFH ON SOOES R	1996	14-Apr-98	15-Apr-98	1.0
T630539	HS9816-013-115-001	COHO	03-Jun-98	QCSD	232	LOCR	WDFW	FALLERT CR	1996	01-Apr-98	19-Apr-98	1.0
T092334	HS9914-T06-115-012	COHO	23-Jun-99	QCSD	238	LOCR	ODFW	YOUNGS BAY NET PENS	1997		28-Apr-99	1.0
T182719	HS9914-T01-115-001	COHO	23-Jun-99	QCSD	182	GST	CDFO	QUINSAM R	1997		12-May-99	1.0
T040196	HS200118-088-115-002	COHO	13-Aug-01	SEA	258	SEAK	SSRA	NEETS BAY	1999	01-Jun-01	01-Jun-01	1.0
T630574	HS200118-086-115-002	COHO	13-Aug-01	SEA	282	NWC	WDFW	SOLDUC	1999	11-Apr-01	11-Apr-01	1.0
T631191	HS200316-109-1-115-013	COHO	27-Aug-03	SEA	267	LOCR	WDFW	LEWIS R	2001	07-May-03	10-May-03	1.0
T631367	HS200316-109-3-115-008	COHO	27-Aug-03	SEA	275	LOCR	WDFW	LEWIS R	2001	07-May-03	10-May-03	1.0
T631533	HS200316-109-1-115-006	COHO	27-Aug-03	SEA	262	WILP	WDFW	FORKS CR	2001	01-Apr-03	09-Apr-03	1.0
T053732	HS9817-B04-115-002	COHO	21-Jul-98	SEA	241	LOCR	ODFW	YOUNGS BAY NET PENS	1996		01-May-98	1.0
T630535	HS9817-B03-115-004	COHO	21-Jul-98	SEA	276	LOCR	WDFW	NORTH TOUTLE	1996	01-Apr-98	30-Apr-98	1.0
T183105	HS9938-FI2.5-115-007	COHO	10-Oct-99	SEA	315	COBC	CDFO	SNOOTLI CR	1997		19-May-99	1.0
T183507	HS9938-FI10-115-001	COHO	10-Oct-99	SEA	284	NASK	CDFO	KITSUMKALUM	1997	01-Jun-99	30-Jun-99	1.0
T183515	HS9938-FI05-115-001	COHO	10-Oct-99	SEA	289	NASK	CDFO	TOBOGGAN CR CDP	1997	12-May-99	01-Jun-99	1.0
T050379	HS200118-057-115-003	COHO	05-Aug-01	VI	246	HOOD	FWS	QUILCENE NFH	1999	01-May-01	01-May-01	1.0
T210196	HS200118-060-115-002	COHO	05-Aug-01	VI	248	MPS	COOP	ELLIOTT BY TRIBAL NP	1999	10-Jun-01	10-Jun-01	1.0
T630288	HS200118-065-115-008	COHO	06-Aug-01	VI	361	GRAY	WDFW	BINGHAM CR	1999	01-May-01	15-May-01	1.0
T631105	HS200118-069-115-004	COHO	07-Aug-01	VI	279	JUAN	ELWA	LOWER ELWHA	1999	17-Apr-01	15-May-01	1.0
T050592	HS200235-EP03-115-005	COHO	15-Aug-02	VI	279	HOOD	FWS	QUILCENE NFH	2000	25-Apr-02	25-Apr-02	1.0
T630287	HS200235-EP04-115-004	COHO	15-Aug-02	VI	259	SPS	WDFW	SOUTH SOUND NET PENS	2000	15-May-02	30-May-02	1.0

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T631287	HS200235-EP03-115-002	COHO	15-Aug-02	VI	265	STIL	WDFW	WALLACE R	2000	03-May-02	03-May-02	1.0
T631070	HS200235-VI02-115-007	COHO	17-Aug-02	VI	259	WILP	WDFW	FORKS CREEK	2000	09-May-02	09-May-02	1.0
T631287	HS200235-VI02-115-004	COHO	17-Aug-02	VI	270	STIL	WDFW	WALLACE R	2000	03-May-02	03-May-02	1.0
T630296	HS200205-VI02-115-001	COHO	27-Feb-02	VI	289	MPS	WDFW	VOIGHTS CR	1999	15-Apr-01	30-Apr-01	1.1
T630914	HS200016-E02-115-033	COHO	01-Jul-00	VI	204	UPCR	WDFW	CHIWAHA	1999	01-May-00	15-May-00	0.0
T630914	HS200016-E03-115-022	COHO	01-Jul-00	VI	216	UPCR	WDFW	CHIWAHA	1999	01-May-00	15-May-00	0.0
T054247	HS200016-E04-115-008	COHO	01-Jul-00	VI	218	LOCR	FWS	EAGLE CREEK NFH	1998	17-May-00	17-May-00	1.0
T055142	HS200016-E04-115-003	COHO	01-Jul-00	VI	242	NWC	FWS	QUINALT NFH-COOK C	1998	18-Apr-00	19-Apr-00	1.0
T055142	HS200016-E04-115-004	COHO	01-Jul-00	VI	197	NWC	FWS	QUINALT NFH-COOK C	1998	18-Apr-00	19-Apr-00	1.0
T055216	HS200016-E04-115-017	COHO	01-Jul-00	VI	192	NWC	FWS	QUINALT NFH-COOK C	1998	18-Apr-00	19-Apr-00	1.0
T055216	HS200016-E03-115-017	COHO	01-Jul-00	VI	176	NWC	FWS	QUINALT NFH-COOK C	1998	18-Apr-00	19-Apr-00	1.0
T055216	HS200016-E02-115-081	COHO	01-Jul-00	VI	239	NWC	FWS	QUINALT NFH-COOK C	1998	18-Apr-00	19-Apr-00	1.0
T092661	HS200016-E04-115-014	COHO	01-Jul-00	VI	230	SOOR	ODFW	ROCK CREEK	1998		28-Apr-00	1.0
T092707	HS200016-E03-115-026	COHO	01-Jul-00	VI	257	LOCR	ODFW	SANDY	1998	10-Apr-00	10-Apr-00	1.0
T092720	HS200016-E04-115-015	COHO	01-Jul-00	VI	205	UPCR	ODFW	SANDY	1998		24-May-00	1.0
T092915	HS200016-E02-115-022	COHO	01-Jul-00	VI	221	CECR	ODFW	OXBOW OR	1998		05-Mar-00	1.0
T182727	HS200016-E04-115-012	COHO	01-Jul-00	VI	216	WCVI	CDFO	NITINAT R	1998	15-May-00	16-May-00	1.0
T210220	HS200016-E04-115-002	COHO	01-Jul-00	VI	218	JUAN	ELWA	LOWER ELWHA	1998	28-Apr-00	24-May-00	1.0
T630913	HS200016-E04-115-007	COHO	01-Jul-00	VI	198	LOCR	WDFW	LEWIS R	1998	15-May-00	15-May-00	1.0
T630913	HS200016-E04-115-018	COHO	01-Jul-00	VI	200	LOCR	WDFW	LEWIS R	1998	15-May-00	15-May-00	1.0
T631103	HS200016-E04-115-005	COHO	01-Jul-00	VI	212	NWC	QDNR	SALMON R FISH CULTURE	1998	10-Apr-00	01-May-00	1.0
T631146	HS200016-E04-115-010	COHO	01-Jul-00	VI	200	LOCR	WDFW	COWLITZ SALMON	1998	01-May-00	31-May-00	1.0
T631216	HS200016-E04-115-006	COHO	01-Jul-00	VI	211	NWC	WDFW	SOLDUC	1998	03-Apr-00	03-Apr-00	1.0
T631225	HS200016-E02-115-001	COHO	01-Jul-00	VI	235	LOCR	WDFW	KALAMA FALLS	1998	05-Apr-00	05-Apr-00	1.0
T631230	HS200016-E04-115-011	COHO	01-Jul-00	VI	227	NWC	WDFW	SOLDUC	1998	03-Apr-00	03-Apr-00	1.0
T631231	HS200016-E04-115-009	COHO	01-Jul-00	VI	218	NWC	WDFW	SOLDUC	1998	03-Apr-00	03-Apr-00	1.0
T631239	HS200016-E04-115-016	COHO	01-Jul-00	VI	208	GRAY	WDFW	WILD	1998	15-May-00	01-Jun-00	1.0

Table 1. CWT's recovered on CCGS W.E. RICKER surveys to the Gulf of Alaska from 1998 to 2003.

CWT	Fish Number	Species	Recovery Date	Recovery Region	Recovery Fork Length (mm)	Release Area	Release Agency	Hatchery	Brood Year	Date of First Release	Date of Last Release	Age
T183857	HS200016-E02-115-065	COHO	01-Jul-00	VI	484	JNST	CDFO	QUINSAM R	1997	12-May-99	27-May-99	1.1
T210138	HS200016-E01-115-034	COHO	01-Jul-00	VI	510	MPS	MUCK	KETA CR	1997	11-May-99	11-May-99	1.1
T630809	HS200016-E02-115-066	COHO	01-Jul-00	VI	575	STIL	WDFW	WALLACE R	1997	05-May-99	05-May-99	1.1
T630810	HS200016-E02-115-054	COHO	01-Jul-00	VI	560	STIL	WDFW	WALLACE R	1997	11-May-99	11-May-99	1.1
T630823	HS200016-E03-115-025	COHO	01-Jul-00	VI	239	LOCR	WDFW	ELOCHOMAN	1997	04-Apr-00	15-May-00	2.0
T181727	HS200118-023-115-001	COHO	29-Jul-01	VI	907	FRTH	CDFO	WILD	1998	01-May-00	11-May-00	1.1
T055031	HS9816-012-115-012	COHO	03-Jun-98	VI	199	NWC	FWS	MAKAH NFH ON SOOES R	1996	14-Apr-98	15-Apr-98	1.0
T092004	HS9816-012-115-005	COHO	03-Jun-98	VI	226	SOOR	ODFW	ROCK CREEK	1996		01-Apr-98	1.0
T213062	HS9816-012-115-002	COHO	03-Jun-98	VI	285	MPS	COOP	AGATE PASS SEA PENS	1996	23-Apr-98	09-May-98	1.0
T050371	HS200114-EP02-115-019	COHO	23-Jun-01	VI	210	NWC	FWS	QUINAULT NFH -COOK C	1999	10-Apr-01	20-Apr-01	1.0
T050375	HS200114-EP01-115-010	COHO	23-Jun-01	VI	188	NWC	FWS	QUINAULT NFH -COOK C	1999	10-Apr-01	20-Apr-01	1.0
T092959	HS200114-EP02-115-029	COHO	23-Jun-01	VI	210	NOOR	ODFW	SALMON R	1999	30-Apr-01	10-May-01	1.0
T093013	HS200114-EP02-115-017	COHO	23-Jun-01	VI	203	LOCR	CEDC	CEDC YOUNGS BAY NET	1999	03-May-01	07-May-01	1.0
T093159	HS200114-EP01-115-011	COHO	23-Jun-01	VI	213	LOCR	ODFW	OXBOW	1999	16-Apr-01	17-Apr-01	1.0
T183645	HS200114-EP02-115-004	COHO	23-Jun-01	VI	169	WCVI	CDFO	ROBERTSON CR	1999	14-May-01	15-May-01	1.0
T210198	HS200114-EP03-115-002	COHO	23-Jun-01	VI	196	NWC	QDNR	SALMON R FISH CULTURE	1999	17-Apr-01		1.0
T630575	HS200114-EP02-115-014	COHO	23-Jun-01	VI	205	NWC	QDNR	SALMON R FISH CULTURE	1999	17-Apr-01		1.0
T631208	HS200114-EP03-115-006	COHO	23-Jun-01	VI	208	WILP	WDFW	FORKS CREEK	1999	05-Apr-01	12-Apr-01	1.0
T093013	HS200114-VI04-124-003	COHO	24-Jun-01	VI	199	LOCR	CEDC	CEDC YOUNGS BAY NET	1999	03-May-01	07-May-01	1.0
T631062	HS200114-VI04-115-007	COHO	24-Jun-01	VI	177	LOCR	WDFW	NORTH TOUTLE	1999	08-May-01	08-May-01	1.0
T053946	HS9914-C02-115-032	COHO	25-Jun-99	VI	212	LOCR	ODFW	YOUNGS BAY NET PENS	1997		19-May-99	1.0
T092425	HS9914-C01-115-001	COHO	25-Jun-99	VI	199	CECR	ODFW	CASCADE	1997	26-Mar-99	02-Apr-99	1.0
T210125	HS9914-C02-115-033	COHO	25-Jun-99	VI	200	NWC	QDNR	WILD	1997	22-Mar-99	11-Jun-99	1.0
T210139	HS9914-C02-115-031	COHO	25-Jun-99	VI	205	NWC	QDNR	SALMON R FISH CULTURE	1997	27-Apr-99	27-Apr-99	1.0
T630530	HS9914-C02-115-002	COHO	25-Jun-99	VI	222	LOCR	WDFW	DEEP R NET PENS	1997	13-May-99	13-May-99	1.0
T630558	HS9914-C02-115-001	COHO	25-Jun-99	VI	220	LOCR	WDFW	LEWIS R	1997	01-Apr-99	18-Apr-99	1.0
T630562	HS9914-C01-115-002	COHO	25-Jun-99	VI	197	GRAY	WDFW	BINGHAM CR	1997	01-Apr-99	15-Apr-99	1.0

Table 1. CWT's recovered on CCGS W.E. RICKER surveys to the Gulf of Alaska from 1998 to 2003.

CWT	Fish Number	Species	Recovery Date	Recovery Region	Recovery Fork Length (mm)	Release Area	Release Agency	Hatchery	Brood Year	Date of First Release	Date of Last Release	Age
T630817	HS9914-C02-115-003	COHO	25-Jun-99	VI	201	WILP	WDFW	FORKS CREEK	1997	11-Apr-99	15-Apr-99	1.0
T630818	HS9914-C03-115-001	COHO	25-Jun-99	VI	196	NWC	QDNR	SALMON R FISH CULTURE	1997	27-Apr-99	27-Apr-99	1.0
T630830	HS9914-C01-115-003	COHO	25-Jun-99	VI	212	LOCR	WDFW	BINGHAM CR	1997	01-Apr-99	15-Apr-99	1.0
T630924	HS9914-C04-115-001	COHO	25-Jun-99	VI	201	NWC	WDFW	SOLDUC	1997	01-Apr-99	01-Apr-99	1.0
T055126	HS200016-SS02-115-014	COHO	30-Jun-00	VI	200	HOOD	SKOK	QUILCENE BAY SEA PEN	1998	15-May-00	15-May-00	1.0
T055142	HS200016-SS05-115-010	COHO	30-Jun-00	VI	204	NWC	FWS	QUINAULT NFH-COOK C	1998	18-Apr-00	19-Apr-00	1.0
T055205	HS200016-SS01-115-003	COHO	30-Jun-00	VI	180	HOOD	FWS	QUILCENE NFH	1998	10-May-00	10-May-00	1.0
T182951	HS200016-SS04-115-002	COHO	30-Jun-00	VI	475	FRTH	CDFO	WILD	1997	01-May-99	24-May-99	1.1
T183858	HS200016-SS07-115-001	COHO	30-Jun-00	VI	470	JNST	CDFO	QUINSAM R	1997	12-May-99	27-May-99	1.1
T210138	HS200016-SS03-115-019	COHO	30-Jun-00	VI	428	MPS	MUCK	KETA CR	1997	11-May-99	11-May-99	1.1
T054450	HS200034-LP03-115-011	COHO	04-Oct-00	VI	271	UPCR	FWS	WA PROD AREA UPCR	1998	31-May-00	31-May-00	1.0
T054504	HS200034-LP03-115-008	COHO	04-Oct-00	VI	320	UPCR	FWS	WA PROD AREA UPCR	1998	31-May-00	31-May-00	1.0
T630922	HS200034-LP03-115-010	COHO	04-Oct-00	VI	339	SPS	WDFW	SOUTH SOUND NET PENS	1998	15-May-00	19-May-00	1.0
T631223	HS200034-LP03-115-009	COHO	04-Oct-00	VI	287	STIL	WDFW	WALLACE R	1998	02-May-00	02-May-00	1.0
T182915	HS9938-VI04-115-009	COHO	05-Oct-99	VI	301	WCVI	CDFO	CONUMA R	1997		28-May-99	1.0
T183823	HS200034-EP01-115-008	COHO	05-Oct-00	VI	289	WCVI	CDFO	TOFINO	1998	27-Jun-99	27-Jun-99	1.0
T636214	HS9938-C03-115-001	COHO	06-Oct-99	VI	283	GRAY	PUYA	VOIGHTS CR	1997	22-Apr-99	25-May-99	1.0
T213046	HS9938-C03-115-008	COHO	06-Oct-99	VI	636	JUAN	ELWA	LOWER ELWHA	1996	04-May-98	04-May-98	1.1
T182331	HS9938-K02-115-002	COHO	07-Oct-99	VI	316	WCVI	CDFO	NITINAT R	1997		17-May-99	1.0
T182957	HS9819-R098-115-020	COHO	07-Oct-98	VI	258	WCVI	CDFO	SAN JUAN R CDP	1996	11-May-98	11-May-98	1.0
T213056	HS9819-R098-115-044	COHO	07-Oct-98	VI	271	MPS	COOP	ELLIOT BAY TRIBAL NP	1996	11-Jun-98	11-Jun-98	1.0
T631130	HS200034-K01-115-003	COHO	07-Oct-00	VI	295	LOCR	WDFW	COWLITZ SALMON	1998	01-May-00	31-May-00	1.0
T636207	HS9819-R092-115-008	COHO	07-Oct-98	VI	238	CECR	WDFW	KLICKITAT	1996	17-Apr-98	06-Jun-98	1.0
T183937	HS200136-VI21-115-001	COHO	13-Oct-01	VI	255	GST	CDFO	BIG QUALICUM R	1999	14-May-01	06-Jun-01	1.0
T210366	HS200238-EP04-115-002	COHO	18-Oct-02	VI	321	NWC	QDNR	WILD	2000	30-May-02	07-Jun-02	1.0
T051331	HS9938-WA04-115-001	COHO	04-Oct-99	WA	308	HOOD	SKOK	QUILCENE BAY SEA PEN	1997	08-Jun-99	08-Jun-99	1.0
T630557	HS9938-WA03-115-002	COHO	04-Oct-99	WA	700	NWC	QDNR	SALMON R FISH CULTURE	1996	24-Apr-98	24-Apr-98	1.1

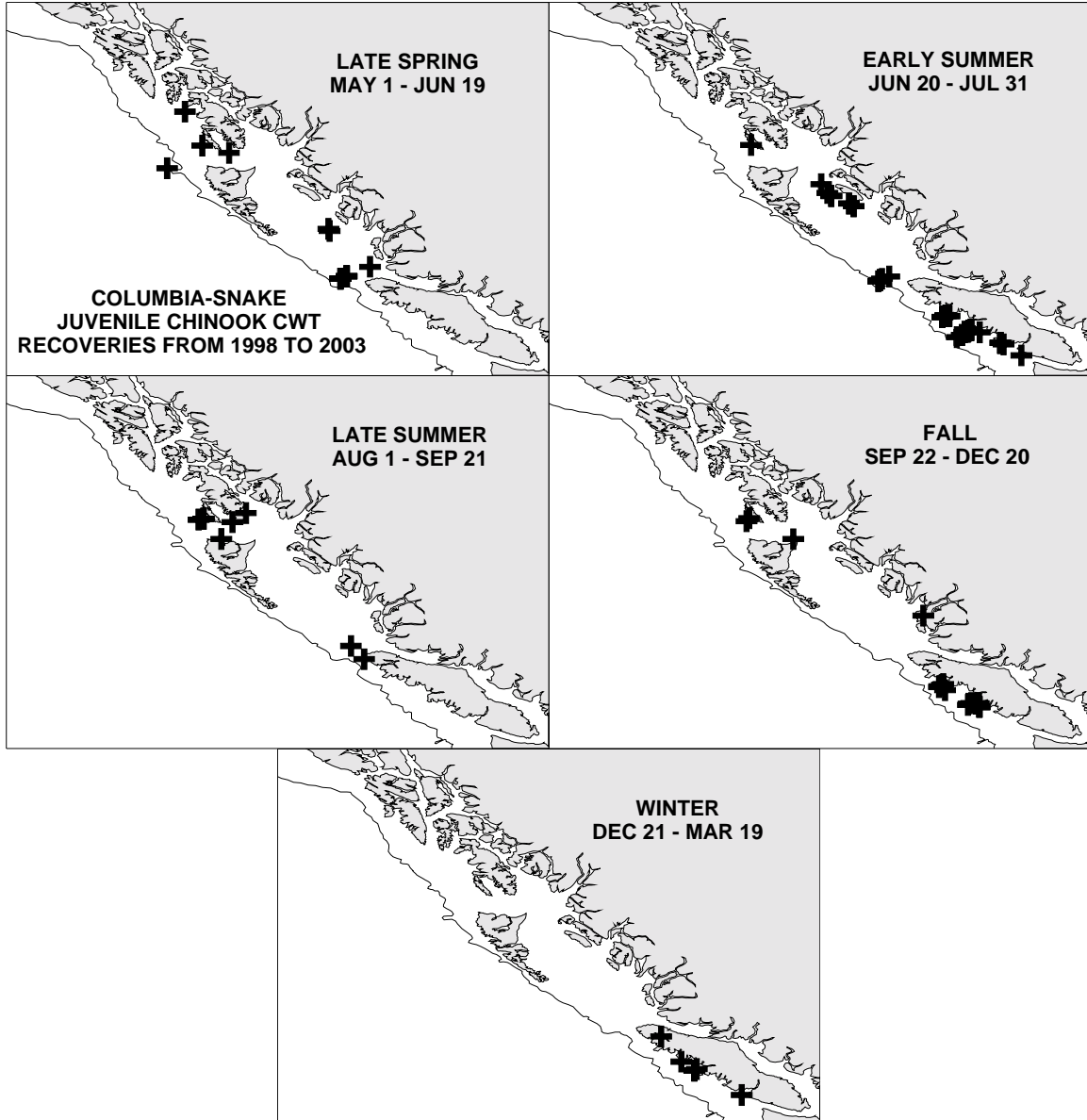


Figure 1. Recovery positions of juvenile chinook with CWT's from the Columbia River and Snake River basins on the CCGS *W.E. Ricker* surveys to the Gulf of Alaska from 1998 to 2003. Total CWT recoveries over the six years are displayed by season. All the CWT juvenile chinook were age 1.0, stream ecotypes from May 1 to the fall. The CWT juvenile chinook off Vancouver Island in the winter were a mixture of age 1.1 stream ecotypes and age 0.1 ocean ecotypes.

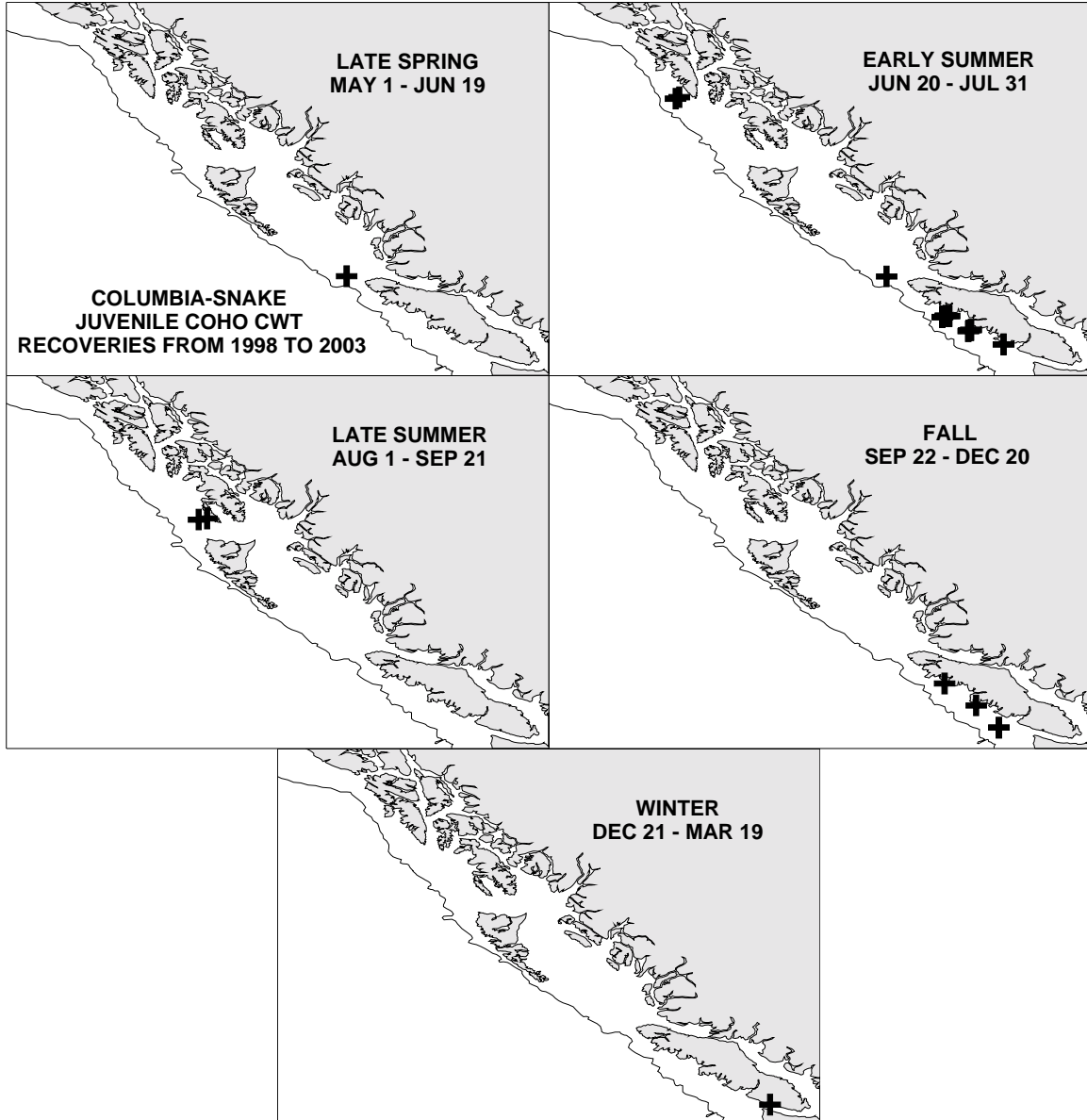


Figure 2. Recovery positions of juvenile coho with CWT's from the Columbia River and Snake River basins on the CCGS *W.E. Ricker* surveys to the Gulf of Alaska from 1998 to 2003. Total CWT recoveries over the six years are displayed by season. Almost all the CWT juvenile coho from May 1 to Dec 21 were age 1.0, and the one CWT juvenile coho off Vancouver Island in the winter was age 1.1.

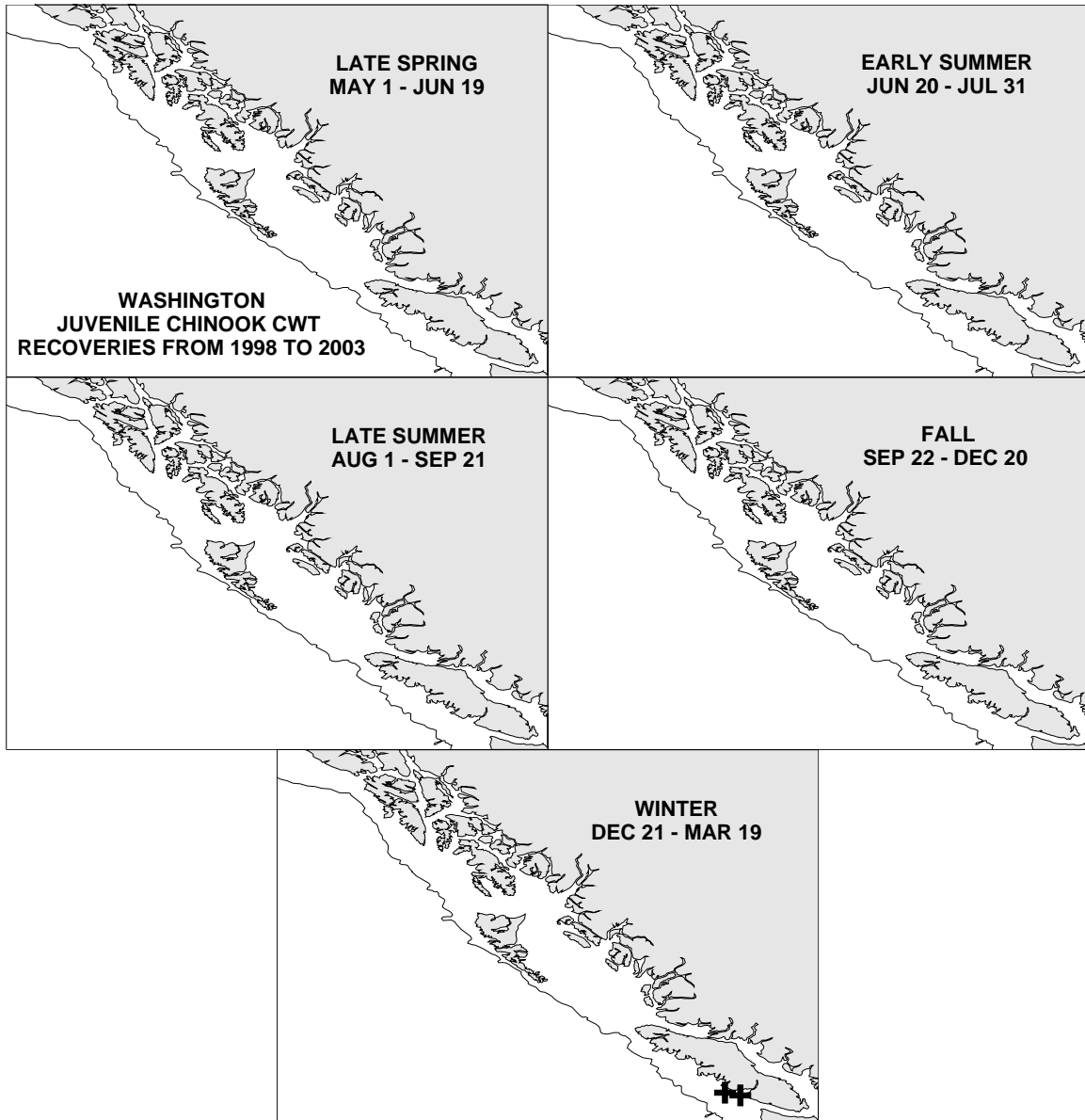


Figure 3. Recovery positions of juvenile chinook with CWT's from the west coast of Washington State and Puget Sound on the *CCGS W.E. Ricker* surveys to the Gulf of Alaska from 1998 to 2003. Total CWT recoveries over the six years are displayed by season. Both the CWT juvenile chinook off Vancouver Island in the winter were age 0.1 ocean ecotypes.

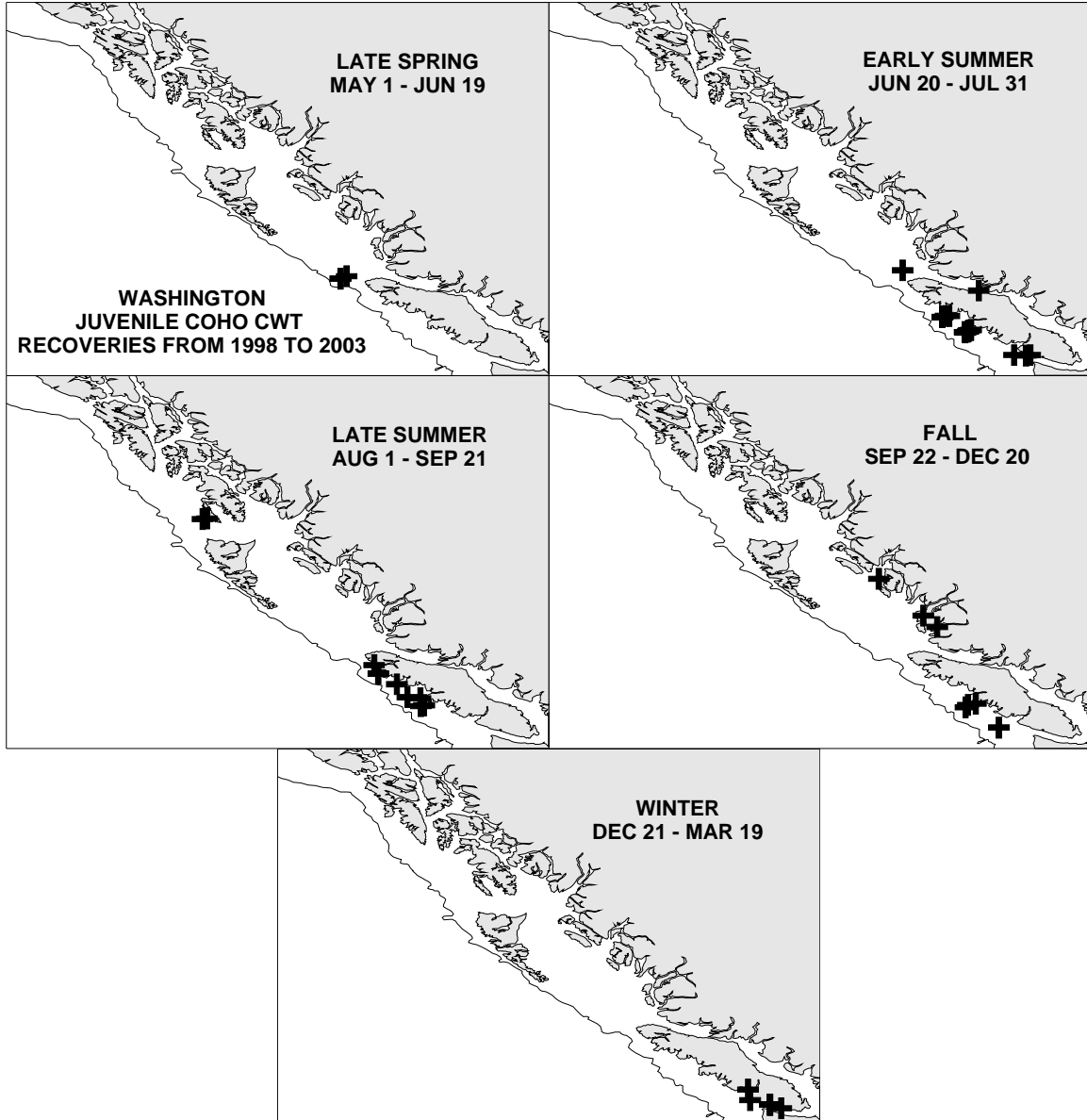


Figure 4. Recovery positions of juvenile coho with CWT's from the west coast of Washington State, Puget Sound, and Hood Canal on the *CCGS W.E. Ricker* surveys to the Gulf of Alaska from 1998 to 2003. Total CWT recoveries over the six years are displayed by season. All the CWT juvenile coho from May 1 to Dec 21 were age 1.0, and the CWT juvenile coho in Juan de Fuca Strait and off Vancouver Island in the winter were age 1.1.

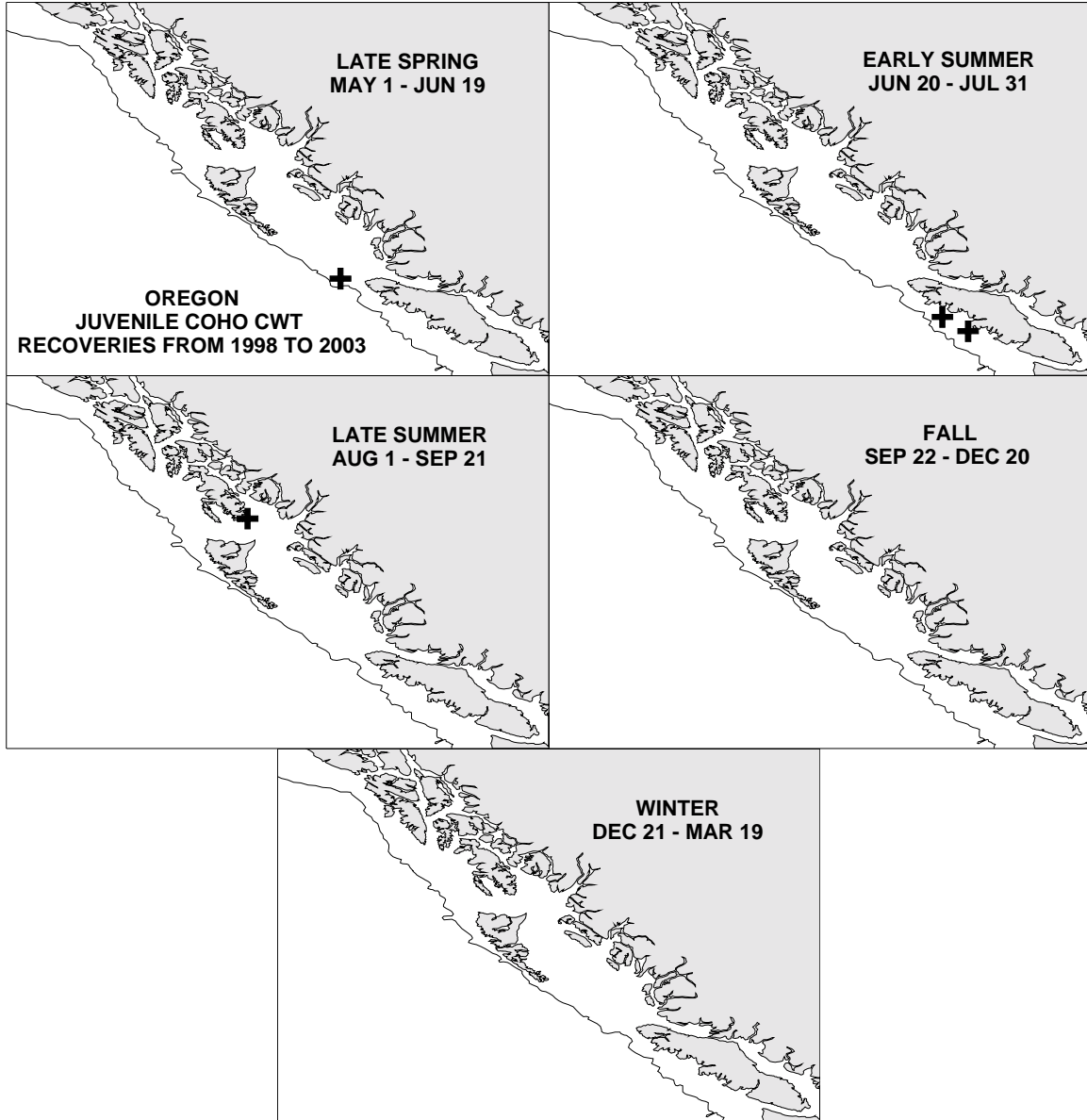


Figure 5. Recovery positions of juvenile coho with CWT's from the west coast of Oregon State on the *CCGS W.E. Ricker* surveys to the Gulf of Alaska from 1998 to 2003. Total CWT recoveries over the six years are displayed by season. All the CWT juvenile coho were age 1.0.

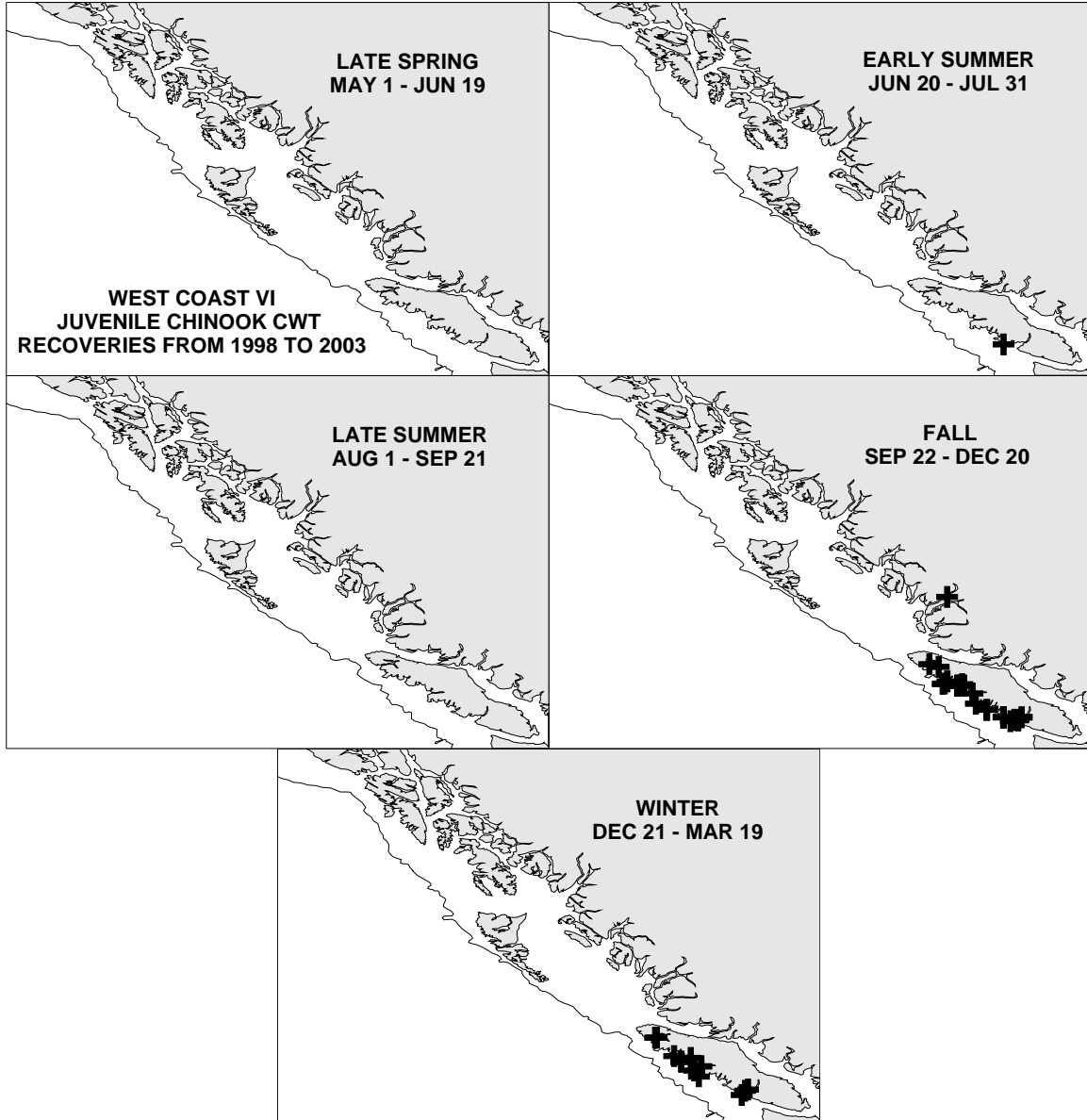


Figure 6. Recovery positions of juvenile chinook with CWT's from the west coast of Vancouver Island on the *CCGS W.E. Ricker* surveys to the Gulf of Alaska from 1998 to 2003. Total CWT recoveries over the six years are displayed by season. All the CWT juvenile chinook recovered off the west coast of Vancouver Island and from August 1 to the end of the fall were age 0.0 ocean ecotypes, and age 0.1 ocean ecotypes in the winter.

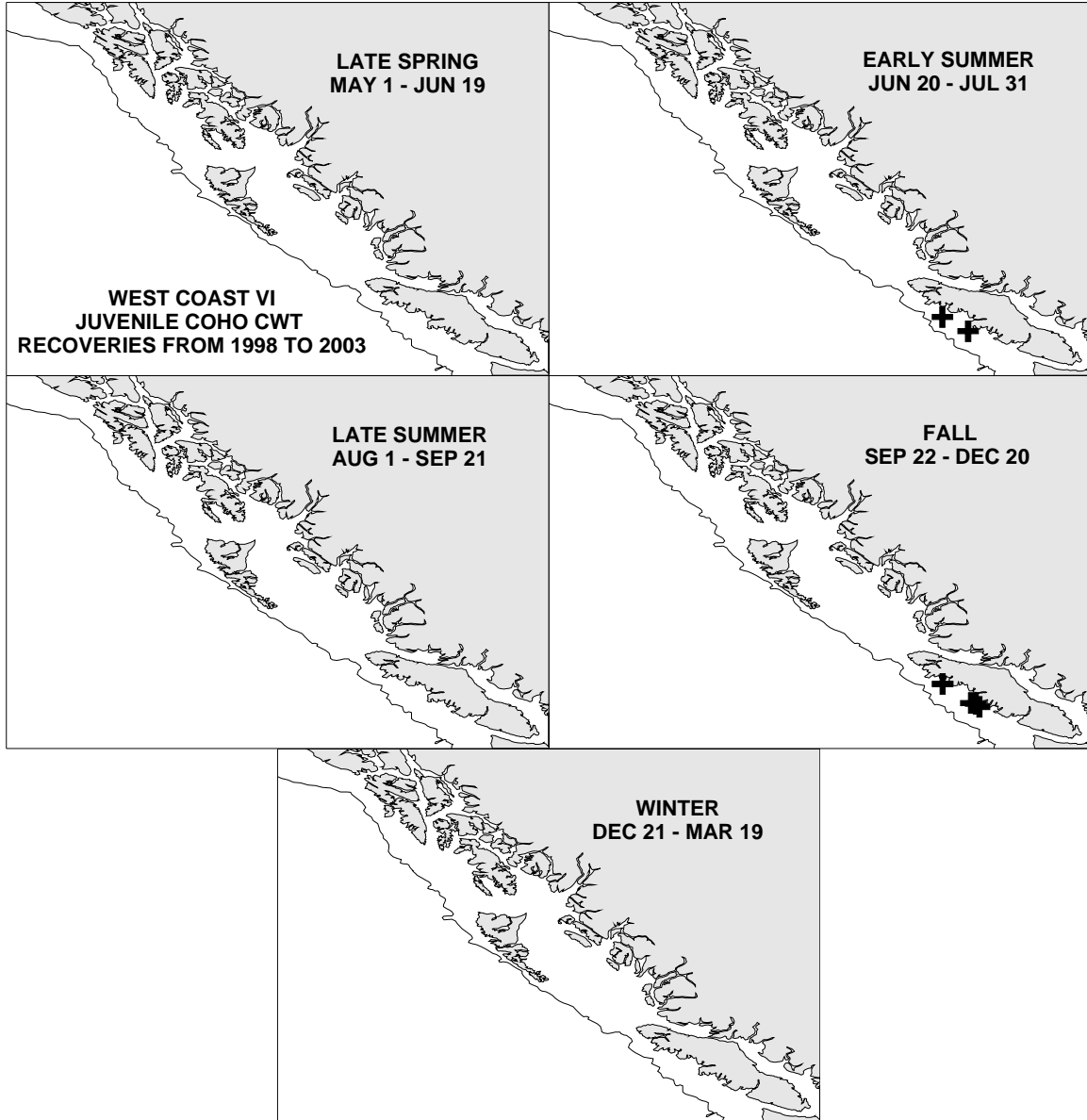


Figure 7. Recovery positions of juvenile coho with CWT's from the west coast of Vancouver Island on the *CCGS W.E. Ricker* surveys to the Gulf of Alaska from 1998 to 2003. Total CWT recoveries over the six years are displayed by season. All the CWT juvenile coho were age 1.0.

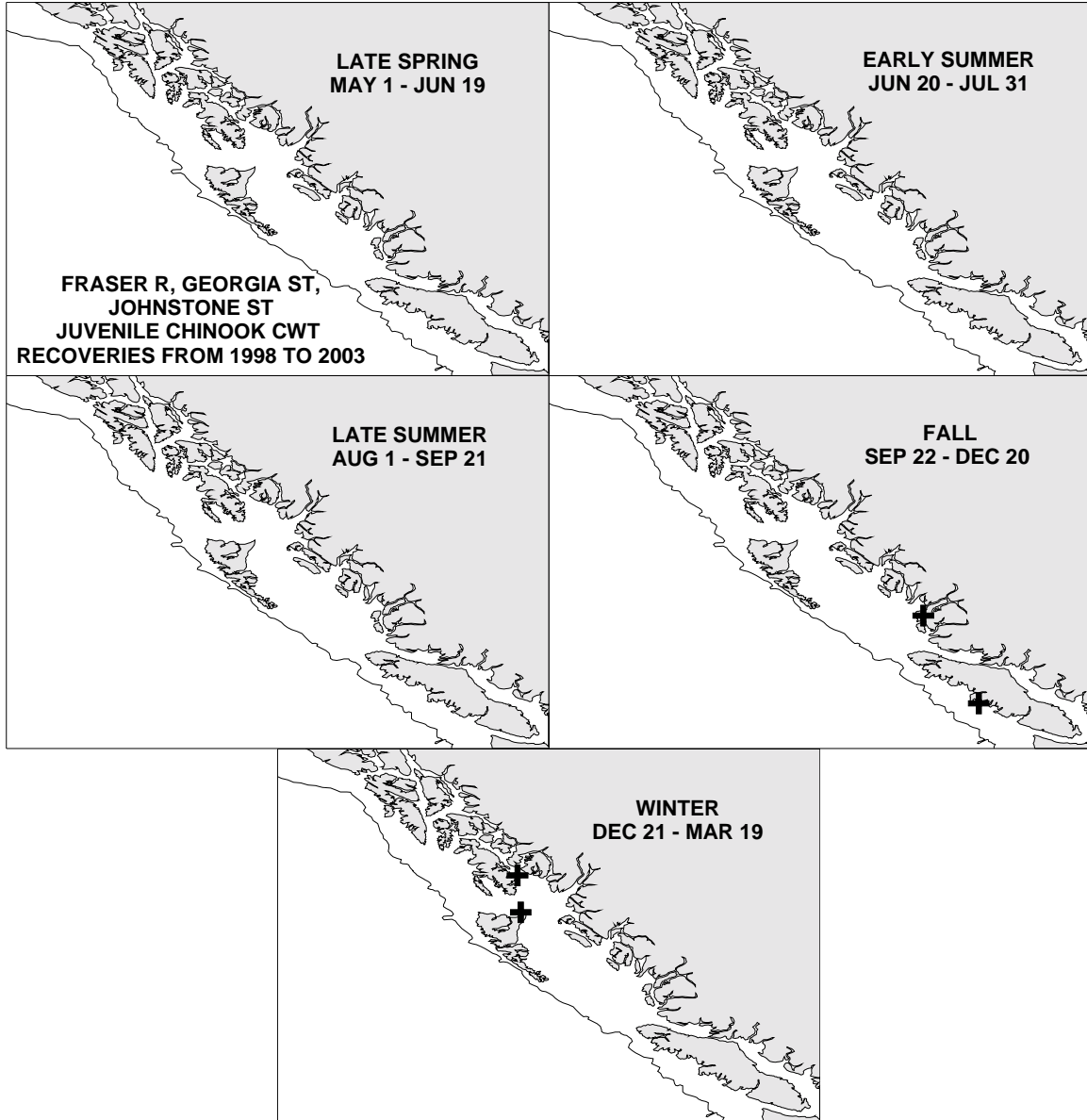


Figure 8. Recovery positions of juvenile chinook with CWT's from the Fraser - Thompson rivers, Georgia Strait, and Johnstone Strait on the CCGS *W.E. Ricker* surveys to the Gulf of Alaska from 1998 to 2003. Total CWT recoveries over the six years are displayed by season.

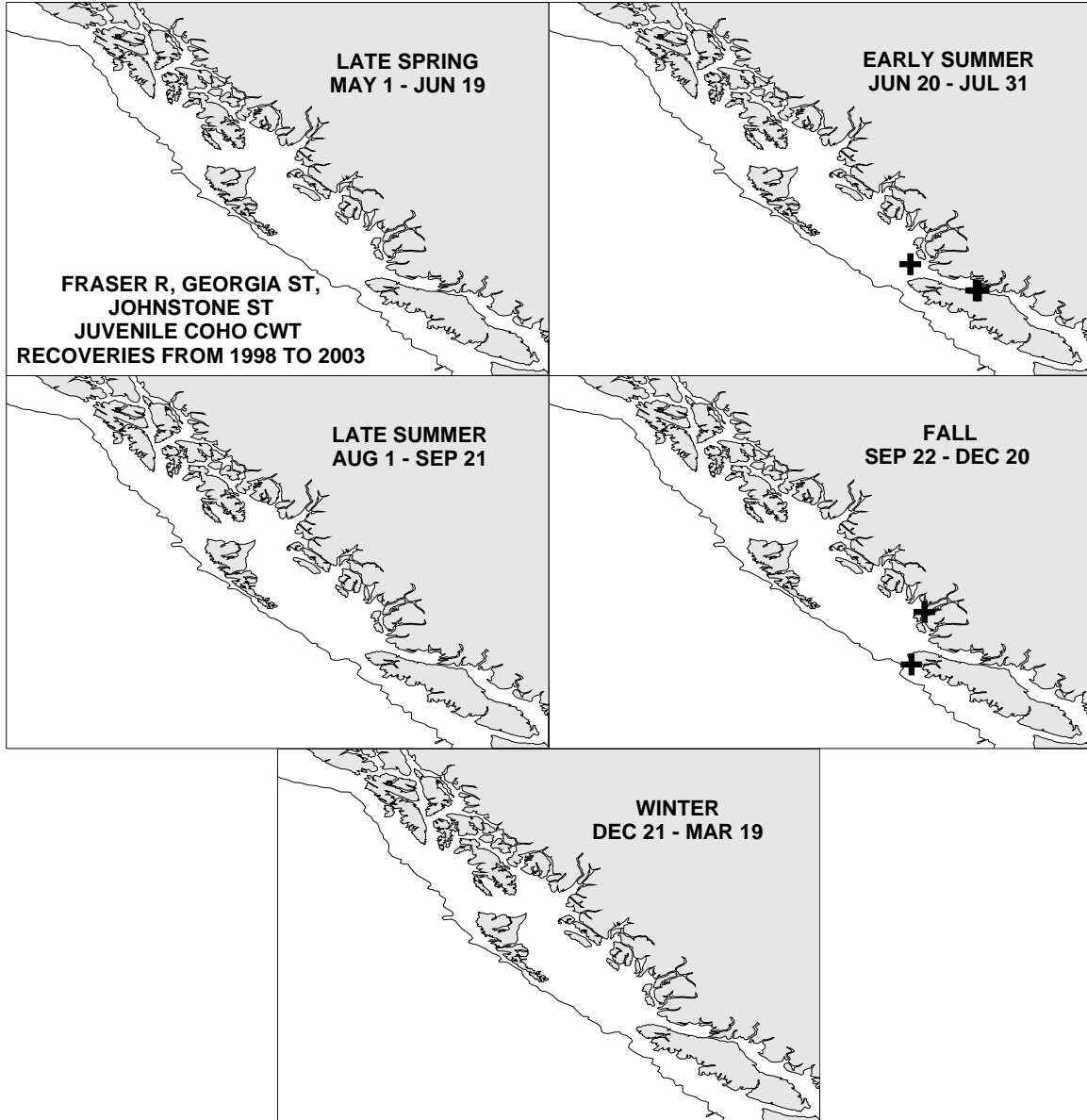


Figure 9. Recovery positions of juvenile coho with CWT's from the Fraser - Thompson rivers, Georgia Strait, and Johnstone Strait on the CCGS *W.E. Ricker* surveys to the Gulf of Alaska from 1998 to 2003. Total CWT recoveries over the six years are displayed by season.

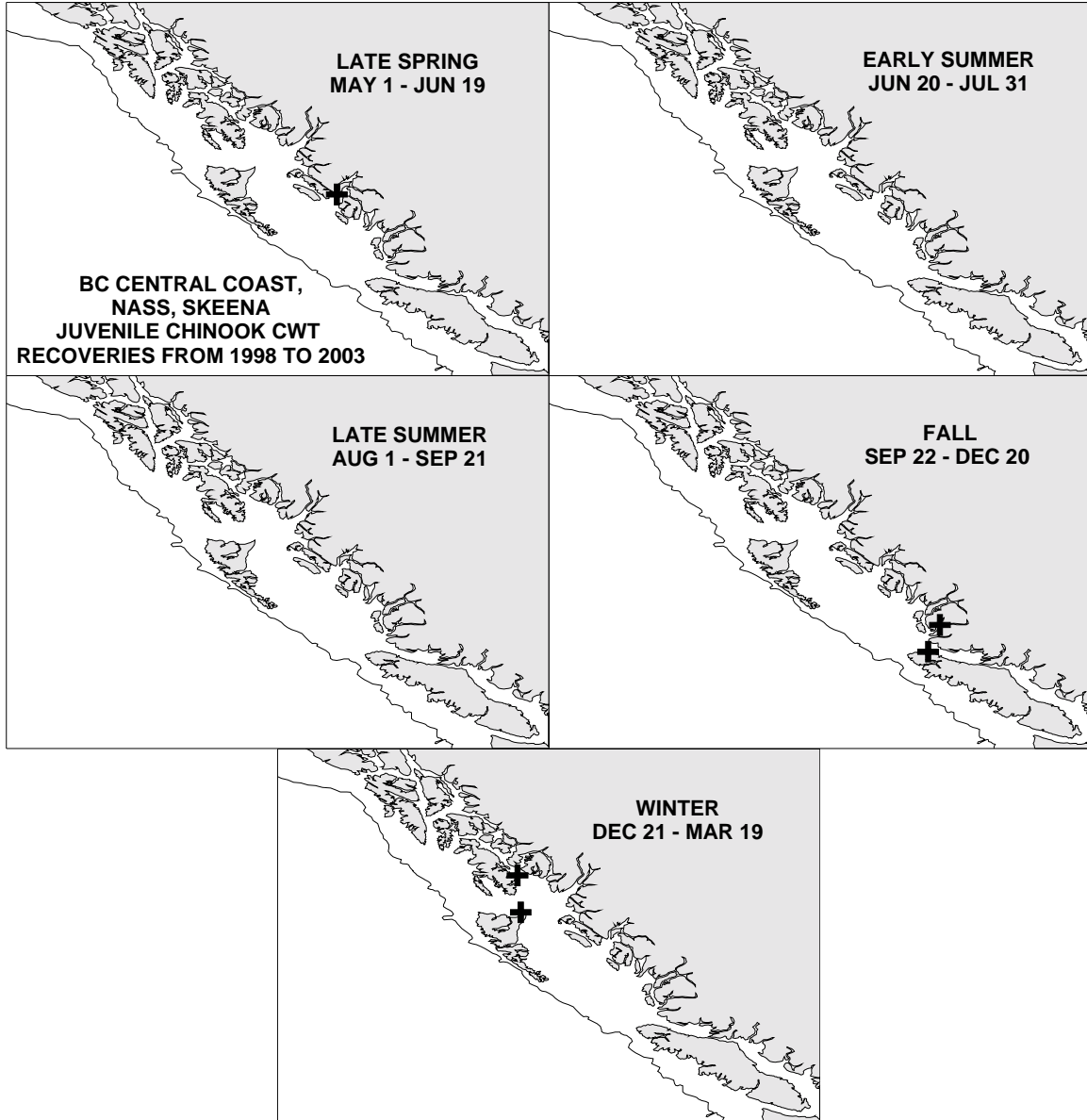


Figure 10. Recovery positions of juvenile chinook with CWT's from the central coast of British Columbia, and the Nass and Skeena rivers on the CCGS *W.E. Ricker* surveys to the Gulf of Alaska from 1998 to 2003. Total CWT recoveries over the six years are displayed by season.

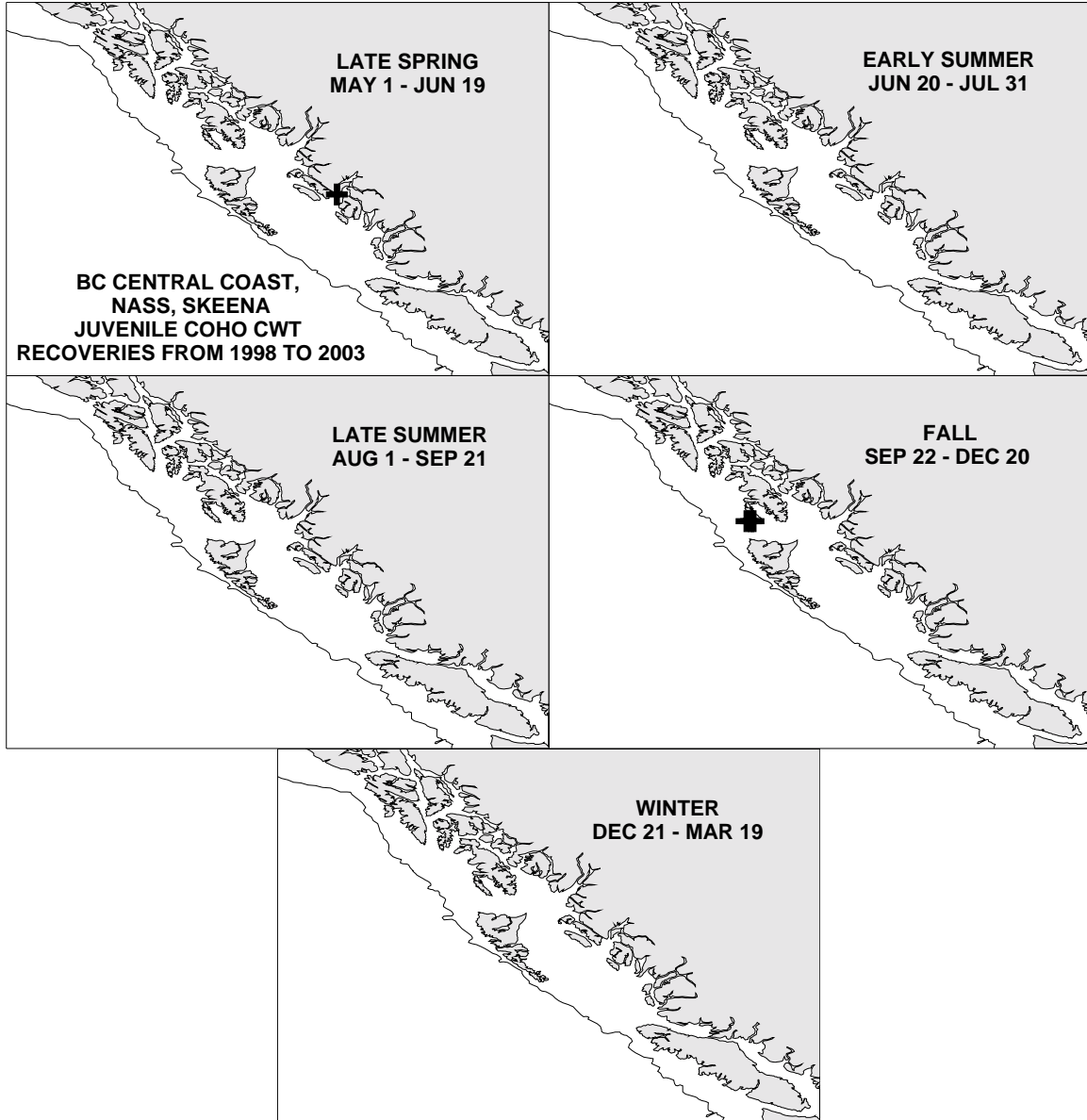


Figure 11. Recovery positions of juvenile coho with CWT's from the central coast of British Columbia, and the Nass and Skeena rivers on the CCGS *W.E. Ricker* surveys to the Gulf of Alaska from 1998 to 2003. Total CWT recoveries over the six years are displayed by season.

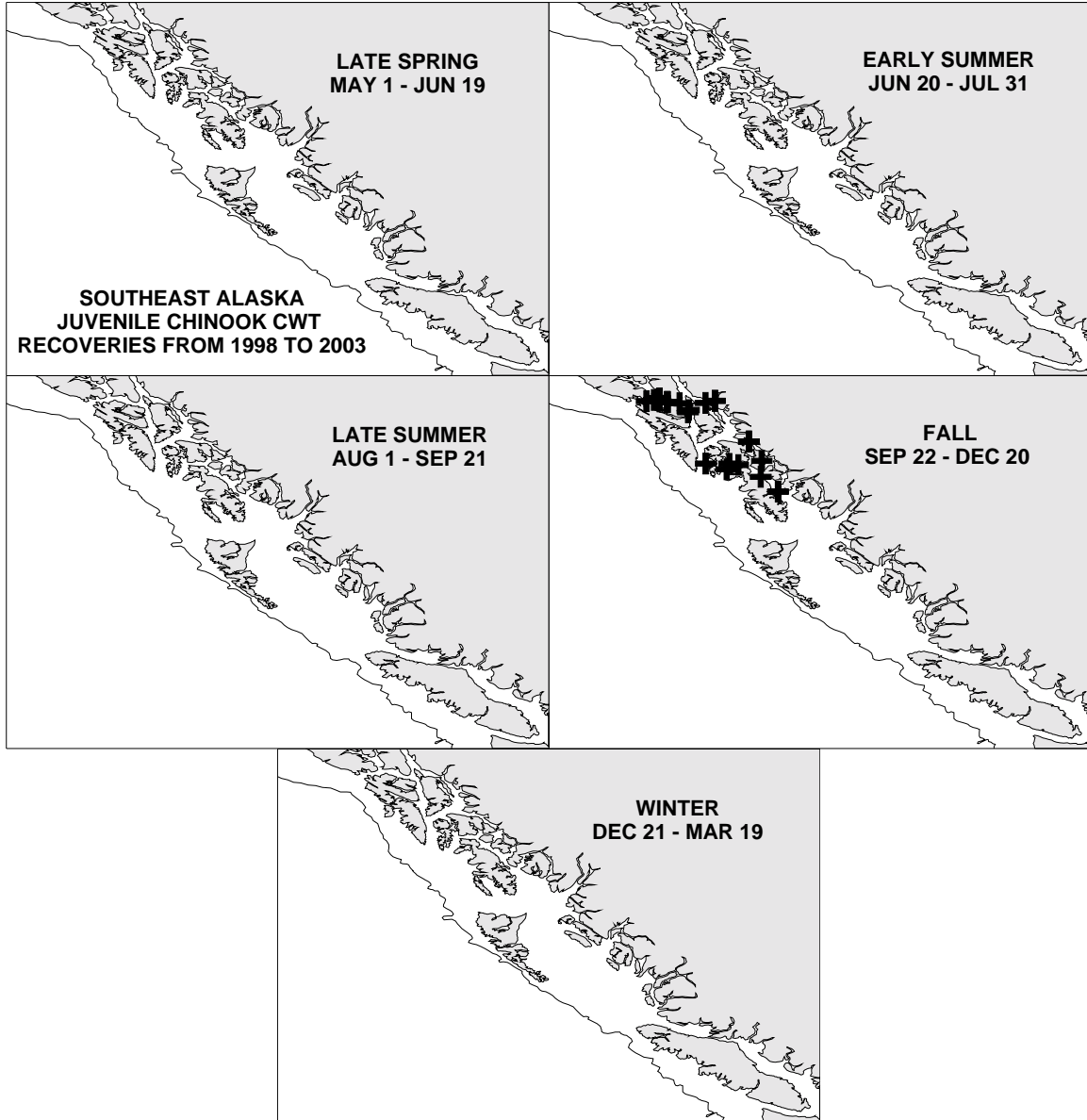


Figure 12. Recovery positions of juvenile chinook with CWT's from Southeast Alaska on the CCGS *W.E. Ricker* surveys to the Gulf of Alaska from 1998 to 2003. Total CWT recoveries over the six years are displayed by season. All the CWT juvenile chinook caught on the inside straits of Southeast Alaska in the fall were age 1.0 stream ecotypes.

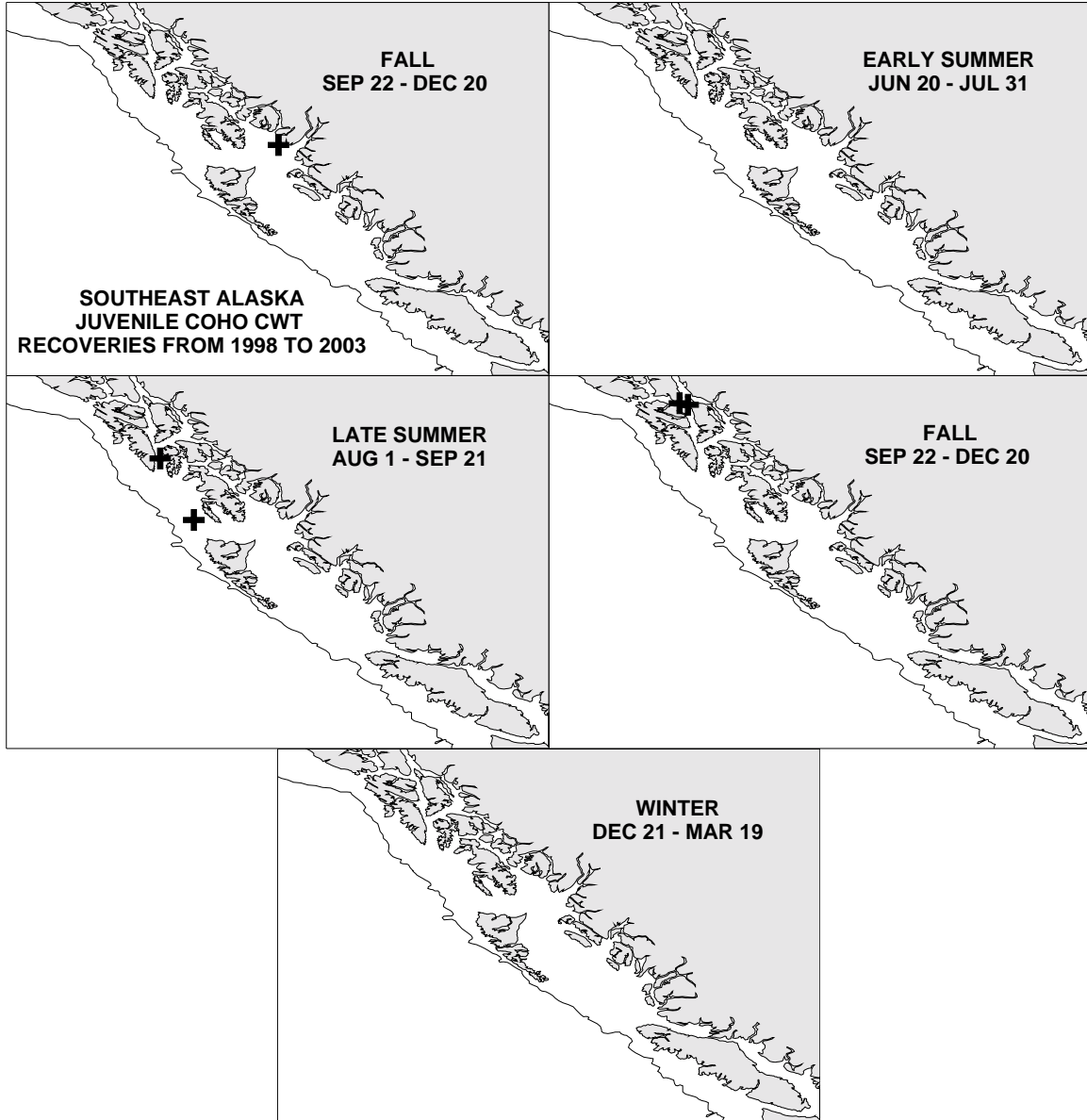


Figure 13. Recovery positions of juvenile coho with CWT's from Southeast Alaska on the CCGS *W.E. Ricker* surveys to the Gulf of Alaska from 1998 to 2003. Total CWT recoveries over the six years are displayed by season.