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Proposed Thermal Marks for Brood Year 2014 Salmon in Alaska

By

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Abstract

In Alaska, mass-marking of salmon using otolith thermal marking is an effective research and management tool applicable to a variety of situations. For brood year 2014, approximately 65 million sockeye, 827 million pink salmon, 677 million chum, 10 million Coho, and 8 million Chinook salmon will be marked at 27 different hatcheries using 89 thermal marks, three dry marks, and one strontium mark.

Keywords: otolith, thermal marking, salmon, Alaska

Introduction

In Alaska, thermal marking is used to provide information about the contribution of hatchery fish, primarily pink, chum and sockeye salmon, to commercial and cost-recovery fisheries during the summer fishing season. Because most fisheries are managed on the basis of wild stocks, fishery managers subtract the estimated hatchery catch from total catch and use that information to structure the fisheries. Hatchery operators are most interested in their own production and use thermal marking to estimate how their fish contribute to traditional fisheries and to terminal harvests. In addition, thermal marks are being used to determine the origin of juvenile and immature salmon collected during surveys in the Gulf of Alaska by the National Marine Fisheries Service and as part of the Bering Sea and Aleutian Island Salmon Investigative Study (BASIS) program.

Plan for 2014 brood year stocks

The proposed thermal marks for brood year 2014 salmon are listed in Table 1. We plan to mark approximately 65 million sockeye, 827 million pink salmon, 677 million chum, 10 million Coho, and 8 million Chinook salmon at 27 different hatcheries using 89 thermal marks, three dry marks, and one strontium mark.

The proposed otolith plan includes scheduled changes. Some marks are on an every other year cycle, while others rotate on a three-year cycle. Thermal mark patterns are presented in both the RBr notation (Munk and Geiger 1998), as well as well as in the Uniform Hatch Code notation (Johnson et al. 2006).

References

Johnson, W.F., R.P. Josephson, T.R. Frawley, and D.S. Oxman 2006. Revised web-based North Pacific salmon otolith mark directory. (NPAFC Doc. 971). 39p. Alaska Dept. Fish and Game, Juneau Alaska

Munk, K.M. and Geiger, H.J. 1998. Thermal marking of otoliths: the “RBr” coding structure of thermal marks. (NPAFC Doc. 367). 19 p. Alaska Dept. of Fish and Game, Juneau Alaska.

Table 1. Summary of thermal mark codes to be applied to Alaska hatchery salmon in brood year 2014.

SPECIES: SOCKEYE

| ID# | MARK TYPE | BROOD YEAR | RELEASE YEAR | SPECIES | STATE/ PROVINCE | REGION RELEASE | AGENCY | FACILITY | STOCK |
|---------|-----------|------------|--------------|---------|-----------------|----------------|--------|--------------|------------------|
| AK14-01 | S | 2014 | 2015 | Sockeye | Alaska | Southcentral | PWSA | Gulkana | Gulkana |
| AK14-02 | T | 2014 | 2015 | Sockeye | Alaska | Southcentral | CIAA | Trail Lakes | Bear Lk |
| AK14-03 | T | 2014 | 2016 | Sockeye | Alaska | Southcentral | PWSA | Main Bay | Main Bay |
| AK14-04 | T | 2014 | 2016 | Sockeye | Alaska | Southcentral | PWSA | Main Bay | Main Bay |
| AK14-05 | T | 2014 | 2016 | Sockeye | Alaska | Southcentral | PWSA | Main Bay | Main Bay |
| AK14-06 | T | 2014 | 2016 | Sockeye | Alaska | Southcentral | PWSA | Main Bay | Main Bay |
| AK14-07 | T | 2014 | 2016 | Sockeye | Alaska | Southcentral | PWSA | Main Bay | Main Bay |
| AK14-08 | T | 2014 | 2015 | Sockeye | Alaska | Southcentral | CIAA | Trail Lakes | English Bay Lk |
| AK14-09 | T | 2014 | 2015 | Sockeye | Alaska | Southcentral | CIAA | Trail Lakes | Hazel Lk |
| AK14-10 | T | 2014 | 2015 | Sockeye | Alaska | Southcentral | CIAA | Trail Lakes | English Bay Lk |
| AK14-11 | T | 2014 | 2015 | Sockeye | Alaska | Southeast | DIPC | Snettisham | S-Tatsamenie Lk |
| AK14-12 | T | 2014 | 2015 | Sockeye | Alaska | Southeast | DIPC | Snettisham | S-Tahtlan Lk |
| AK14-13 | T | 2014 | 2016 | Sockeye | Alaska | Southeast | DIPC | Snettisham | Snettisham |
| AK14-14 | T | 2014 | 2016 | Sockeye | Alaska | Southcentral | CIAA | Trail Lakes | Bear Lk |
| AK14-15 | T | 2014 | 2015 | Sockeye | Alaska | Southcentral | CIAA | Trail Lakes | Hidden Lk |
| AK14-16 | T | 2014 | 2016 | Sockeye | Alaska | Southcentral | CIAA | Trail Lakes | English Bay Lk |
| AK14-17 | T | 2014 | 2015 | Sockeye | Alaska | Southcentral | CIAA | Trail Lakes | SHELL LK |
| AK14-18 | T | 2014 | 2016 | Sockeye | Alaska | Southeast | DIPC | Snettisham | Snettisham |
| AK14-19 | T | 2014 | 2015 | Sockeye | Alaska | Southeast | DIPC | Snettisham | S-Tahtlan Lk |
| AK14-20 | T | 2014 | 2015 | Sockeye | Alaska | Southcentral | CIAA | Trail Lakes | English Bay Lk |
| AK14-21 | T | 2014 | 2015 | Sockeye | Alaska | Southeast | DIPC | Snettisham | S-Tatsamenie Lk |
| AK14-22 | T | 2014 | 2015 | Sockeye | Alaska | Southeast | DIPC | Snettisham | Snettisham |
| AK14-23 | T | 2014 | 2016 | Sockeye | Alaska | Southeast | DIPC | Snettisham | Snettisham |
| AK14-24 | T | 2014 | 2016 | Sockeye | Alaska | Southeast | DIPC | Snettisham | Snettisham |
| AK14-25 | T | 2014 | 2015 | Sockeye | Alaska | Southeast | DIPC | Snettisham | King Salmon Lake |
| AK14-26 | D | 2014 | 2015 | Sockeye | Alaska | Westward | KRAA | Pillar Creek | Saltery |
| AK14-27 | D | 2014 | 2015 | Sockeye | Alaska | Westward | KRAA | Pillar Creek | Saltery |
| AK14-28 | D | 2014 | 2015 | Sockeye | Alaska | Westward | KRAA | Kitoi Bay | Kitoi bay |

| ID# | MARK NAME | STAGE | ESIMATED RELEASE | HATCH CODE | RBr CODE | PRE-HATCH GRAPHIC | POST-HATCH GRAPHIC | MARKING SYSTEM | TEMP SHIFT DIRECTION |
|---------|---------------------|--------------|------------------|------------|----------------|-------------------|--------------------|----------------|----------------------|
| AK14-01 | GULKANA14 | Emergent Fry | 22,000,000 | HS1 | 2:1.S1 | | | Immersion | |
| AK14-02 | TRAILLAKES14A | Emergent Fry | 2,400,000 | 3,2H | 1:1.3,2.2 | | | Boiler | Up |
| AK14-03 | MBH14A | Smolt | 2,380,000 | 5H3 | 1:1.5+2.3 | | | | |
| AK14-04 | MBH14B | Smolt | 2,380,000 | 5H2,2 | 1:1.5+2.2,3.2 | | | | |
| AK14-05 | MBH14C | Smolt | 2,380,000 | 5H5 | 1:1.5+2.5 | | | | |
| AK14-06 | MBH14D | Smolt | 2,380,000 | 5H3,3 | 1:1.5+2.3,3.3 | | | | |
| AK14-07 | MBH14E | Smolt | 2,380,000 | 5H | 1:1.5 | | | | |
| AK14-08 | PENINSULA14SOCKEYE | Emergent Fry | 3,500,000 | 2,2H | 1:1.2,2.2 | | | Boiler | Up |
| AK14-09 | HAZEL14 | Fed Fry | 1,500,000 | 3,3H3 | 1:1.3,2.3+3.3 | | | Boiler | Up |
| AK14-10 | ENGLISHBAY14 | Presmolt | 150,000 | 4H | 1:1.4 | | | Boiler | Up |
| AK14-11 | TATSAMENIE14 | Emergent Fry | 800,000 | 3n,5H | 1:1.3n,2.5 | | | Chiller | Down |
| AK14-12 | TUYA14 | Emergent Fry | 1,200,000 | 6H | 1:1.6 | | | Chiller | Down |
| AK14-13 | SPEELARM14A | Smolt | 8,000,000 | 5H | 1:1.5 | | | Chiller | Down |
| AK14-14 | TRAILLAKES14B | Smolt | 2,000,000 | 1,3H | 1:1.1,2.3 | | | Boiler | Up |
| AK14-15 | HIDDENLAKE14 | Emergent Fry | 530,000 | 2,1,2H | 1:1.2,2.1,3.2 | | | Boiler | Up |
| AK14-16 | PORTGRAHAM14SOCKEYE | Smolt | 300,000 | 2,4,2H | 1:1.2,2.4,3.2 | | | Boiler | Up |
| AK14-17 | SHELLLAKE14 | Fed Fry | 500,000 | 4,4,2H | 1:1.4,2.4,3.2 | | | | |
| AK14-18 | SPEELARM14B | Smolt | 1,000,000 | 3n,4,3H | 1:1.3n,2.4,3.3 | | | Chiller | Down |
| AK14-19 | TAHLTAN14 | Emergent Fry | 2,000,000 | 3,2n,2H | 1:1.3,2.2n,3.2 | | | Chiller | Down |
| AK14-20 | TUTKA14 | Emergent Fry | 530,000 | 4,2H | 1:1.4,2.2 | | | Boiler | Up |
| AK14-21 | TATSAMENIE14ER | Fingerling | 200,000 | 6,2H | 1:1.6,2.2 | | | Chiller | Down |
| AK14-22 | SWEETHEART14 | Emergent Fry | 500,000 | 5,2H | 1:1.5,2.2 | | | Chiller | Down |
| AK14-23 | SPEELARM14C | Smolt | 1,000,000 | 4n,4H | 1:1.4n,2.4 | | | Chiller | Down |
| AK14-24 | SPEELARM14D | Smolt | 1,000,000 | 5,4nH | 1:1.5,2.4n | | | | |
| AK14-25 | KINGSALMON14 | Smolt | 250,000 | 4,6H | 1:1.4,2.6 | | | | |
| AK14-26 | KODIAK14 | Smolt | 2,000,000 | 4,3,3H | 1:1.4,2.3,3.3 | | | | |
| AK14-27 | KODIAK14A | Smolt | 650,000 | 4,4H | 1:1.4,2.4 | | | | |
| AK14-28 | KITOI14 | Smolt | 850,000 | 5,4H | 1:1.5,2.4 | | | | |

Table 1 (continued). Summary of thermal mark codes to be applied to Alaska hatchery salmon in brood year 2014.

SPECIES: PINK

| ID# | MARK TYPE | BROOD YEAR | RELEASE YEAR | SPECIES | STATE/ PROVINCE | REGION RELEASE | AGENCY | FACILITY | STOCK |
|---------|-----------|------------|--------------|---------|-----------------|----------------|--------|------------------|------------------|
| AK14-29 | T | 2014 | 2015 | Pink | Alaska | Southcentral | PWSA | A F Koernig | A F Koernig |
| AK14-30 | T | 2014 | 2015 | Pink | Alaska | Southcentral | PWSA | A F Koernig | A F Koernig |
| AK14-31 | T | 2014 | 2015 | Pink | Alaska | Southcentral | PWSA | Wally Noerenberg | Wally Noerenberg |
| AK14-32 | T | 2014 | 2015 | Pink | Alaska | Southeast | KAKE | Gunnuk Creek | Gunnuk Cr |
| AK14-33 | T | 2014 | 2015 | Pink | Alaska | Southeast | SJ | Sheldon Jackson | Indian R |
| AK14-34 | T | 2014 | 2015 | Pink | Alaska | Southeast | AKI | Port Armstrong | Port Armstrong |
| AK14-35 | T | 2014 | 2015 | Pink | Alaska | Southeast | AKI | Port Armstrong | Port Armstrong |
| AK14-36 | T | 2014 | 2015 | Pink | Alaska | Southcentral | VFDA | Solomon Gulch | Solomon Gulch |
| AK14-37 | T | 2014 | 2015 | Pink | Alaska | Southcentral | PWSA | Cannery Creek | Cannery Cr |
| AK14-38 | T | 2014 | 2015 | Pink | Alaska | Southcentral | PWSA | Wally Noerenberg | Wally Noerenberg |
| AK14-39 | T | 2014 | 2015 | Pink | Alaska | Southcentral | CIAA | Tutka Bay | English Bay Lk |
| AK14-40 | T | 2014 | 2015 | Pink | Alaska | Southcentral | CIAA | Tutka Bay | Port Graham |
| AK14-41 | T | 2014 | 2015 | Pink | Alaska | Southcentral | CIAA | Tutka Bay | Bruin Bay |

| ID# | MARK NAME | STAGE | ESIMATED RELEASE | HATCH CODE | RBr CODE | PRE-HATCH GRAPHIC | POST-HATCH GRAPHIC | MARKING SYSTEM | TEMP SHIFT DIRECTION |
|---------|------------------|---------|------------------|------------|---------------|-------------------|--------------------|----------------|----------------------|
| AK14-29 | AFK14A | Fed Fry | 90,000,000 | 4H3 | 1:1.4+2.3 | | | | |
| AK14-30 | AFK14B | Fed Fry | 90,000,000 | 4H | 1:1.4 | | | | |
| AK14-31 | WNH14PINKB | Fed Fry | 70,000,000 | 8H | 1:1.8 | | | | |
| AK14-32 | KAKE14PINK | Fed Fry | 5,000,000 | 1,2,1H | 1:1.1,2.2,3.1 | | | Chiller | Down |
| AK14-33 | SJ14PINK | Fed Fry | 100,000 | 4,1H | 1:1.4,2.1 | | | Chiller | Down |
| AK14-34 | PORTARMSTRONG14 | Fed Fry | 85,000,000 | 3H | 1:1.3 | | | Ambient | Up |
| AK14-35 | PORTARMSTRONG14A | Fed Fry | 25,000,000 | 3,5H | 1:1.3,2.5 | | | | |
| AK14-36 | SGH14 | Fed Fry | 200,000,000 | 6H | 1:1.6 | | | | |
| AK14-37 | CCH14 | Fed Fry | 140,000,000 | 3,3H | 1:1.3,2.3 | | | | |
| AK14-38 | WNH14PINKA | Fed Fry | 120,000,000 | 8H3 | 1:1.8+2.3 | | | | |
| AK14-39 | TUTKA14PINK | Fed Fry | 500,000 | 5,3H | 1:1.5,2.3 | | | | |
| AK14-40 | PORTGRAHAM14 | Fed Fry | 500,000 | 5H3 | 1:1.5+2.3 | | | | |
| AK14-41 | PAINT14 | Fed Fry | 500,000 | 3H5 | 1:1.3+2.5 | | | | |

Table 1 (continued). Summary of thermal mark codes to be applied to Alaska hatchery salmon in brood year 2014.

SPECIES: CHUM

| ID# | MARK TYPE | BROOD YEAR | RELEASE YEAR | SPECIES | STATE/ PROVINCE | REGION | RELEASE | AGENCY | FACILITY | STOCK |
|---------|-----------|------------|--------------|---------|-----------------|--------------|---------|--------|-----------------------|------------------|
| AK14-42 | T | 2014 | 2015 | Chum | Alaska | Southeast | | SJ | Sheldon Jackson | Indian R |
| AK14-43 | T | 2014 | 2015 | Chum | Alaska | Southeast | | KAKE | Gunnuk Creek | Gunnuk Cr |
| AK14-44 | T | 2014 | 2015 | Chum | Alaska | Southeast | | AKI | Port Armstrong | Port Armstrong |
| AK14-45 | T | 2014 | 2015 | Chum | Alaska | Southeast | | NSRA | Medvejie | Medvejie |
| AK14-46 | T | 2014 | 2015 | Chum | Alaska | Southeast | | NSRA | Medvejie | Medvejie |
| AK14-47 | T | 2014 | 2015 | Chum | Alaska | Southcentral | | PWSA | Wally Noerenberg | Wally Noerenberg |
| AK14-48 | T | 2014 | 2015 | Chum | Alaska | Southeast | | NSRA | Medvejie | Hidden Falls |
| AK14-49 | T | 2014 | 2015 | Chum | Alaska | Southeast | | NSRA | Hidden Falls | Hidden Falls |
| AK14-50 | T | 2014 | 2015 | Chum | Alaska | Southeast | | NSRA | Hidden Falls | Hidden Falls |
| AK14-51 | T | 2014 | 2015 | Chum | Alaska | Southeast | | NSRA | Medvejie | Medvejie |
| AK14-52 | T | 2014 | 2015 | Chum | Alaska | Southeast | | NSRA | Medvejie | Medvejie |
| AK14-53 | T | 2014 | 2015 | Chum | Alaska | Southcentral | | PWSA | AFK | Wally Noerenberg |
| AK14-54 | T | 2014 | 2015 | Chum | Alaska | Southeast | | DIPC | Macaulay | Macaulay |
| AK14-55 | T | 2014 | 2015 | Chum | Alaska | Southeast | | DIPC | Macaulay | Macaulay |
| AK14-56 | T | 2014 | 2015 | Chum | Alaska | Southcentral | | PWSA | Wally Noerenberg | Wally Noerenberg |
| AK14-57 | T | 2014 | 2015 | Chum | Alaska | Southeast | | NSRA | Hidden Falls | Hidden Falls |
| AK14-58 | T | 2014 | 2015 | Chum | Alaska | Southeast | | NSRA | Hidden Falls | Hidden Falls |
| AK14-59 | T | 2014 | 2015 | Chum | Alaska | Southeast | | NSRA | Hidden Falls | Hidden Falls |
| AK14-60 | T | 2014 | 2015 | Chum | Alaska | Southeast | | SSRA | Neets Bay | Neets Bay |
| AK14-61 | T | 2014 | 2015 | Chum | Alaska | Southeast | | SSRA | Neets Bay | Neets Bay |
| AK14-62 | T | 2014 | 2015 | Chum | Alaska | Southeast | | SSRA | Neets Bay | Neets Bay |
| AK14-63 | T | 2014 | 2015 | Chum | Alaska | Southeast | | SSRA | Neets Bay | Neets Bay |
| AK14-64 | T | 2014 | 2015 | Chum | Alaska | Southeast | | SSRA | Neets Bay | Neets Bay |
| AK14-65 | T | 2014 | 2015 | Chum | Alaska | Southeast | | SSRA | Neets Bay | Neets Bay |
| AK14-66 | T | 2014 | 2015 | Chum | Alaska | Southeast | | SSRA | Neets Bay | Neets Bay |
| AK14-67 | T | 2014 | 2015 | Chum | Alaska | Western | | NSED | Norton Sound Hatchery | Solomon R |
| AK14-68 | T | 2014 | 2015 | Chum | Alaska | Southeast | | NSRA | 17 Mi Stream Incub | Chilkat Lk |
| AK14-69 | T | 2014 | 2015 | Chum | Alaska | Westward | | KRAA | Kitoi Bay | Sturgeon R |
| AK14-70 | T | 2014 | 2015 | Chum | Alaska | Westward | | KRAA | Kitoi Bay | Sturgeon R |
| AK14-71 | T | 2014 | 2015 | Chum | Alaska | Southeast | | MIC | Tamgas Creek | Carroll R |

| ID# | MARK NAME | STAGE | ESIMATED RELEASE | HATCH CODE | RBr CODE | PRE-HATCH GRAPHIC | POST-HATCH GRAPHIC | MARKING SYSTEM | TEMP SHIFT DIRECTION |
|---------|---------------------|-----------|------------------|------------|-------------------|-------------------|--------------------|-----------------------|----------------------|
| AK14-42 | SJ14CHUM | Fed Fry | 100,000 | 6,1H | 1:1.6,2.1 | | | Heater | Up |
| AK14-43 | KAKE14 | Fed Fry | 25,000,000 | 4n,2H | 1:1.4n,2.2 | | | Chiller | Down |
| AK14-44 | PORTARMSTRONG14CHUM | Fed Fry | 30,000,000 | 3H3 | 1:1.3+2.3 | | | Ambient and Load Bank | Up |
| AK14-45 | DEEPINLETMV14 | Fed Fry | 28,000,000 | 3,3,3H | 1:1.3,2.3,3.3 | | | | |
| AK14-46 | DEEPINLETMV14LL | Fed Fry | 8,000,000 | 6,3,2H | 1:1.6,2.3,3.2 | | | | |
| AK14-47 | WNH14A | Fed Fry | 77,000,000 | 3,4nH | 1:1.3,2.4n | | | | |
| AK14-48 | DEEPINLETHF14 | Fed Fry | 22,000,000 | 4n,3,2nH | 1:1.4n,2.3,3.2n | | | Lake Intakes | Up |
| AK14-49 | HIDDENFALLS14 | Fed Fry | 33,000,000 | 3,2n,2nH | 1:1.3,2.2n,3.2n | | | Lake Intakes | Up |
| AK14-50 | HIDDENFALLS14LL | Fed Fry | 9,000,000 | 3,2n,4nH | 1:1.3,2.2n,3.4n | | | Lake Intakes | |
| AK14-51 | BEARCOVE14 | Fed Fry | 14,000,000 | 4,2,2H | 1:1.4,2.2,3.2 | | | Heater | Up(5-9) |
| AK14-52 | BEARCOVE14LL | Fed Fry | 6,000,000 | 5n,4H | 1:1.5n,2.4 | | | | |
| AK14-53 | WNH14B | Fed Fry | 31,100,000 | 1,2,3H | 1:1.1,2.2,3.3 | | | | |
| AK14-54 | DIPAC14 | Fed Fry | 100,000,000 | 4H | 1:1.4 | | | Boiler | Up |
| AK14-55 | PELICAN14 | Unfed Fry | 500,000 | 7H | 1:1.7 | | | | |
| AK14-56 | WNH14C | Fed Fry | 42,900,000 | 1,3,3H | 1:1.1,2.3,3.3 | | | | |
| AK14-57 | TAKATZ14 | Fed Fry | 33,000,000 | 3,5,3H | 1:1.3,2.5,3.3 | | | Lake Intakes | Up |
| AK14-58 | TAKATZ14LL | Fed Fry | 18,000,000 | 3,5nH | 1:1.3,2.5n | | | Lake Intakes | Up |
| AK14-59 | SECOVE14 | Fed Fry | 10,000,000 | 4,3,3H | 1:1.4,2.3,3.3 | | | Lake Intakes | |
| AK14-60 | ANITABAY14 | Fed Fry | 22,000,000 | 3,2,4H | 1:1.3,2.2,3.4 | | | Boiler | Up |
| AK14-61 | KENDRICK14 | Fed Fry | 2,000,000 | 6,2H | 1:1.6,2.2 | | | Boiler | Up |
| AK14-62 | NEETSBBAY14SUM | Fed Fry | 60,000,000 | 4,4H4 | 1:1.4,2.4+3.4 | | | Boiler | Up |
| AK14-63 | NEETSBBAY14FALL | Fed Fry | 20,000,000 | 4,2,2H4 | 1:1.4,2.2,3.2+4.4 | | | Boiler | Up |
| AK14-64 | NAKATINLET14SUM | Fed Fry | 8,000,000 | 3,2,3H | 1:1.3,2.2,3.3 | | | Boiler | Up |
| AK14-65 | KENDRICKLL14 | Fed Fry | 28,000,000 | 4,1,2,1H | 1:1.4,2.1,3.2,4.1 | | | Boiler | Up |
| AK14-66 | NAKATINLET14FALL | Fed Fry | 8,000,000 | 3,4,1H4 | 1:1.3,2.4,3.1+4.4 | | | Boiler | Up |
| AK14-67 | NORTON14CHUM | Eyed Egg | 400,000 | 1,4H | 1:1.1,2.4 | | | Moist Air | |
| AK14-68 | CHILKAT14 | Fed Fry | 1,212,003 | 3,2,5nH | 1:1.3,2.2,3.5n | | | | |
| AK14-69 | KITOI14CHUM | Fed Fry | 15,000,000 | 3,4,2H | 1:1.3,2.4,3.2 | | | | |
| AK14-70 | KITOI14CHUMA | Fed Fry | 15,000,000 | 3,4,4H | 1:1.3,2.4,3.4 | | | | |
| AK14-71 | TAMGAS14 | Fed Fry | 10,000,000 | 4H3 | 1:1.4+2.3 | | | | |

Table 1 (continued). Summary of thermal mark codes to be applied to Alaska hatchery salmon in brood year 2014.

SPECIES: COHO

| ID# | MARK TYPE | BROOD YEAR | RELEASE YEAR | SPECIES | STATE/ PROVINCE | REGION RELEASE | AGENCY | FACILITY | STOCK |
|---------|-----------|------------|--------------|---------|-----------------|----------------|--------|------------------------|------------------|
| AK14-72 | T | 2014 | 2015 | Coho | Alaska | Southcentral | PWSA | Wally Noerenberg | Wally Noerenberg |
| AK14-73 | T | 2014 | 2015 | Coho | Alaska | Southcentral | CIAA | Trail Lakes | Bear Lk |
| AK14-74 | T | 2014 | 2016 | Coho | Alaska | Southcentral | CIAA | Trail Lakes | Bear Lk |
| AK14-75 | T | 2014 | 2016 | Coho | Alaska | Southcentral | ADFG | William Jack Hernandez | Ship Cr |
| AK14-76 | T | 2014 | 2016 | Coho | Alaska | Southcentral | VFDA | Solomon Gulch | Solomon Gulch |
| AK14-77 | T | 2014 | 2016 | Coho | Alaska | Southcentral | ADFG | William Jack Hernandez | Bear Lk |
| AK14-78 | T | 2014 | 2016 | Coho | Alaska | Southeast | NSRA | Medvejie | Salmon Lk 113-41 |
| AK14-79 | T | 2014 | 2016 | Coho | Alaska | Sotheast | PWHA | Klawock | Klawock Lk |
| AK14-80 | T | 2014 | 2015 | Coho | Alaska | Western | NSED | Norton Sound Hatchery | Snake R |
| AK14-81 | T | 2014 | 2015 | Coho | Alaska | Southeast | SSRA | Neets Bay | Neets Bay |
| AK14-82 | T | 2014 | 2015 | Coho | Alaska | Western | SUNAQ | Sunaq Tribe | Buskin Lk |

| ID# | MARK NAME | STAGE | ESIMATED RELEASE | HATCH CODE | RBr CODE | PRE-HATCH GRAPHIC | POST-HATCH GRAPHIC | MARKING SYSTEM | TEMP SHIFT DIRECTION |
|---------|--------------------|--------------|------------------|------------|-----------|-------------------|--------------------|----------------|----------------------|
| AK14-72 | WNNH14COHO | Smolt | 1,000,000 | 3H | 1:1.3 | | | | |
| AK14-73 | TRAILLAKES14SMCOHO | Emergent Fry | 555,000 | 2,6H | 1:1.2,2.6 | | | Boiler | Up |
| AK14-74 | BEARLAKE14COHO | Smolt | 555,000 | 4,4H | 1:1.4,2.4 | | | | |
| AK14-75 | COOKINLET14COHO | Smolt | 655,000 | 1,5H | 1:1.1,2.5 | | | Boiler | Up |
| AK14-76 | SGH14COHO | Smolt | 1,950,000 | 6H | 1:1.6 | | | | |
| AK14-77 | RESURRECTION14COHO | Smolt | 240,000 | 2,4H | 1:1.2,2.4 | | | Boiler | Up |
| AK14-78 | DEEPINLET14COHO | Smolt | 225,000 | 4H | 1:1.4 | | | | |
| AK14-79 | KLAWOCK14COHO | Smolt | 4000000 | 4,2H | 1:1.4,2.2 | | | | |
| AK14-80 | NORTON14COHO | Eyed Egg | 200,000 | 2,3H | 1:1.2,2.3 | | | Moist Air | |
| AK14-81 | NAKAT14COHO | Smolt | 600,000 | 2,5H | 1:1.2,2.5 | | | | |
| AK14-82 | BUSKIN14 | Eyed Egg | 100,000 | 3,4H | 1:1.3,2.4 | | | Moist Air | |

SPECIES: CHINOOK

| ID# | MARK TYPE | BROOD YEAR | RELEASE YEAR | SPECIES | STATE/ PROVINCE | REGION RELEASE | AGENCY | FACILITY | STOCK |
|---------|-----------|------------|--------------|---------|-----------------|----------------|--------|------------------------|--------------------------|
| AK14-83 | T | 2014 | 2016 | Chinook | Alaska | Southeast | NSRA | Hidden Falls | Hidden Falls |
| AK14-84 | T | 2014 | 2016 | Chinook | Alaska | Southeast | NSRA | Medvejie | Medvejie |
| AK14-85 | T | 2014 | 2016 | Chinook | Alaska | Southeast | SSRA | Whitman Lake | Whitman Lk |
| AK14-86 | T | 2014 | 2016 | Chinook | Alaska | Southeast | NSRA | Medvejie | Medvejie |
| AK14-87 | T | 2014 | 2015 | Chinook | Alaska | Southcentral | ADFG | William Jack Hernandez | Cook Inlet |
| AK14-88 | T | 2014 | 2015 | Chinook | Alaska | Southcentral | ADFG | William Jack Hernandez | Ship Cr |
| AK14-89 | T | 2014 | 2015 | Chinook | Alaska | Southcentral | ADFG | William Jack Hernandez | Ship Cr |
| AK14-90 | T | 2014 | 2015 | Chinook | Alaska | Southcentral | ADFG | William Jack Hernandez | Deception Cr Stock |
| AK14-91 | T | 2014 | 2015 | Chinook | Alaska | Southcentral | ADFG | William Jack Hernandez | Crooked Cr 221-60 |
| AK14-92 | T | 2014 | 2014 | Chinook | Alaska | Western | NSED | Norton Sound Hatchery | Unalakleet R+Old Woman R |
| AK14-93 | T | 2014 | 2015 | Chinook | Alaska | Southcentral | CVTC | Chickaloon Village CIF | Moose Cr |

| ID# | MARK NAME | STAGE | ESIMATED RELEASE | HATCH CODE | RBr CODE | PRE-HATCH GRAPHIC | POST-HATCH GRAPHIC | MARKING SYSTEM | TEMP SHIFT DIRECTION |
|---------|--------------------|----------|------------------|------------|-------------------|-------------------|--------------------|----------------|----------------------|
| AK14-83 | HIDDENFALLS14CHIN | Smolt | 650,000 | 4,2H | 1:1.4,2.2 | | | Lake Intakes | Up |
| AK14-84 | GREENLAKE14CHIN | Smolt | 2,500,000 | 3,3nH | 1:1.3,2.3n | | | | |
| AK14-85 | WHITMAN14CHIN | Smolt | 1,475,000 | 1,5H | 1:1.1,2.5 | | | Boiler | Up |
| AK14-86 | MEDVEJIE14CHIN | Smolt | 550,000 | 4,1H | 1:1.4,2.1 | | | | |
| AK14-87 | COOKINLET14CHIN | Smolt | 1,211,000 | 2,3H | 1:1.2,2.3 | | | Boiler | Up |
| AK14-88 | SHIPCREEK14CHINS | Smolt | 210,000 | 2,3H3,3 | 1:1.2,2.3+3.3,4.3 | | | Boiler | Up |
| AK14-89 | SHIPCREEK14CHINL | Smolt | 145,000 | 2,3H2,2 | 1:1.2,2.3+3.2,4.2 | | | Boiler | Up |
| AK14-90 | PWS14CHIN | Smolt | 315,000 | 2,4H | 1:1.2,2.4 | | | Boiler | Up |
| AK14-91 | RESURRECTION14CHIN | Smolt | 212,000 | 2,5H | 1:1.2,2.5 | | | Boiler | Up |
| AK14-92 | SOUTHRIVER14 | Eyed Egg | 240,000 | 6,2H | 1:1.6,2.2 | | | Moist Air | |
| AK14-93 | CHICKALOON14 | Eyed Egg | 100,000 | 3,2H | 1:1.3,2.2 | | | Moist Air | |