Purpose of Chapter 6

The information presented in this chapter highlights some of the more significant environmentally sensitive areas within the GRP region that could be impacted as a result of an oil spill. Consistent with the overall purpose of the GRP's, this information is only intended to provide a level of detail required during the initial phase of spill response. During an actual event, additional resource information will be available from the resource trustee agencies supporting the Environmental Unit in the Planning Section. Specific resource concerns for areas that already have designated protection strategies in Chapter 4 of the GRP may be found in the "Resources Protected" column in the matrix describing the individual strategies.

The information provided in Chapter 6 is intended for use in:

- Preparing an initial ICS 232 form (Resources-at-Risk summary) for Incident Command
- Identifying those sites where it may be necessary to implement Flight Restriction Zones in order to prevent disturbance/injury to sensitive wildlife species.
- Identifying sensitive shoreline habitats to assist SCAT teams in their initial assessments and to help personnel in the Environmental Unit in developing appropriate cleanup strategies.

Chapter 6 consists of two sets of maps and tables - one for wildlife and the other for fish, shellfish and selected sensitive marine habitats. These data are presented separately, both for ease of reading and because each of the two data sets has slightly different applications within the context of spill response.

The wildlife maps and tables present information on the location and seasonal sensitivity of key wildlife resources. Types of data included here are concentration areas for waterfowl, marine birds and shorebirds; seabird colonies; nesting areas for sensitive species such as eagles, herons and falcons; and marine mammal haulout sites. This information is intended for the rapid identification of areas where significant wildlife oiling impacts could be anticipated and to denote areas where flight restriction zones may be required to protect sensitive wildlife. Each site depicted on these maps is identified by a unique number in order to facilitate the process of communicating Flight Restriction Zone recommendations to the Operations Section in ICS. The tables accompanying the wildlife maps present information on the season(s) during which sites may be particularly sensitive to disturbance.

The fish/shellfish/marine habitat maps present general information on the location of baitfish spawning beaches, herring spawning areas, streams used by anadromous salmonids, hardshell clam concentrations, and kelp and eelgrass beds. This information will be most useful to personnel involved in assessing initial risks to fish and shellfish resources and to those conducting initial beach reconnaissance, pending availability of more detailed resource information and the formation of SCAT teams.

Because the operational uses of this information differ from those of the wildlife data, individual site identification numbers have not been assigned. Tables associated with these maps will identify the seasonal sensitivity of each resource. In addition, notes accompanying each table will provide information on the general distribution and seasonal sensitivity of those resources that are not mapped but may occur anywhere in the GRP region (ex. juvenile salmonids in shallow nearshore waters).

6. Sensitive Resource Description

6.1. Chapter Overview

Despite major alterations to the Columbia River over the past hundred years, it still provides habitat to hundreds of species of fish and wildlife. Fortunately, several National Wildlife Refuges exist along its course to protect pockets of natural habitat. A brief summary of fish and wildlife found in the lower Willamette and Columbia Rivers follows - more detailed information and maps on particular wildlife concentration areas can be found in Section 6.6

6.2. Fish

From the tiny sandroller to the mighty white sturgeon, the lower Columbia/Willamette River system hosts a remarkable array of fish species. Populations of some species have been devastated by hydroelectric dams, overfishing, and habitat alterations. In particular, a number of salmonid stocks have been listed or proposed for listing as threatened or endangered under the federal Endangered Species Act. However, other fish species are coming back and providing some of the best recreational fishing in the nation. Chinook salmon, steelhead, walleye, large-mouthed and small-mouthed bass, white sturgeon, American shad, and smelt are just a few of the popular recreational species. Some of these fish are also commercially harvested in gillnets.

6.3. Wildlife

Mammals

Many species of mammals abound along unaltered shorelines and on islands in the lower Columbia River and lower Willamette River. Harbor seals are quite common and increasing in numbers in the Columbia River estuary. California sea lions, which are also on the increase, can be found from the estuary to Bonneville Dam as they follow the fish runs.

The endangered Columbia white-tailed deer is now limited to the mainland and islands near Puget Island. Elk and black-tailed deer occur in many localities along the river. Other mammals likely to be seen include river otter, mink, beaver, muskrat, nutria, raccoon, and coyote. Numerous species of other small mammals abound in the appropriate habitats bordering the rivers.

Birds

Besides being known as a premier waterfowl hunting area, the lower Columbia River and portions of the Willamette River are quite famous as a birdwatching destination., Outstanding birding locations include Astoria, Ilwaco, Ridgefield National Wildlife Refuge, and Sauvie Island. During the winter, the lower Columbia River hosts hundreds of thousands of ducks, geese, and swans. Some of the species of waterfowl most likely to be seen include Tundra swan, five subspecies of Canada goose, green-winged teal, mallard, northern pintail, American widgeon, ring-necked duck, lesser scaup, common goldeneye, bufflehead, hooded merganser, and common merganser. Other waterbirds found in winter include loons, grebes, cormorants, and gulls. During spring and fall migration, these same birds are accompanied by numerous shorebirds and terns. One of the most impressive migrants, the sandhill crane, can be found at Ridgefield National Wildlife Refuge. Raptors are abundant also – the lower Columbia River is an excellent location to view bald eagles, northern harriers, red-tailed hawks, peregrine falcons, and merlins.

While most species head north for the breeding season, many birds nest along the Columbia River as well. Colony nesting species include Brandt's and double-crested cormorants, Caspian terns, western and ring-billed

gulls, and great blue herons. Other birds that breed here include bald eagles, osprey, the Great Basin subspecies of Canada goose, mallards, and many species of songbirds.

6.4. Flight Restriction Zones/ Sensitive Wildlife

Flight restriction zones have been designated in the GRP to minimize disturbance to certain wildlife species. An identified location could represent a heron colony or the individual nest of a sensitive species such as bald eagle. While some zones may be restricted year around, others will be in effect only during the months listed in the matrix.

The no-fly bubble is the area within a 1,500 foot radius and below 1,000 feet in altitude around the location.

All aircraft, including those from the government, contractors or media, are expected to avoid these zones when restrictions are in effect. In the event that one of these zones must be entered during a spill response in the lower Columbia River, clearance must be obtained from the Washington Department of Fish and Wildlife (WDF&W) and the United States Fish and Wildlife Service (USFWS.

During oil spills, pilots are also asked to avoid disturbing any large concentrations of birds and other wildlife. By keeping a safe distance or altitude, pilots can prevent the accidental hazing of unaffected wildlife into oiled areas and minimize the risk of aircraft/ bird collisions.

6.5. Hazing

Hazing or directed harassment, is a method used to drive or herd wildlife out of an area where they are at risk of becoming oiled. Hazing techniques include the use of visual and audio devices, personnel for herding, vessels and aircraft. In the right circumstances it can be an effective tool for protecting some wildlife species. In other cases it can be disastrous as unaffected wildlife can be driven into oiled areas, or forced to abandon nests or young.

Before hazing can begin for all species of wildlife in the Dalles Pool, clearance must be obtained from the Washington Department of Fisheries and Wildlife and the United States Fish and Wildlife Service. All hazing efforts during a spill will be directed by these agencies. The deliberate harassment of wildlife without first securing permission from these agencies is a violation of Federal and State laws.

The following information must be provided for a determination on whether hazing might be authorized in a given situation.

1. Description of the situation where hazing authorization is being sought
2. Location to be hazed
3. Species of wildlife to be hazed and number of animals
4. Methods and equipment used
5. Date and time of hazing
6. Name, phone number, radio frequency, pager number and the amount of hazing experience of the individual requesting permission

The responsible agencies will evaluate each request on a case by case basis. All hazing of marine mammals, threatened and endangered species, and all hazing by aircraft will be performed only under authority and general supervision of WDF&W, USFWS, NMFS or persons designated by these agencies. Representatives of these agencies can be contacted through the planning section of the Unified Command System during the spill event.

LOWER COLUMBIA RIVER WILDLIFE RESOURCES

River Mile 141-151												PERIOD OF SENSITIVITY								
Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WLC-1	Eagle Creek					Yes		Yes												
WLC-2	Pierce Ranch National Wildlife Refuge			Yes				Yes												
WLC-3	Pierce Island					Yes		Yes												

LOWER COLUMBIA RIVER FISHERY RESOURCES

River Mile 141-151												PERIOD OF SENSITIVITY								
Code	Location	Winter Steelhead	Summer Steelhead	Spring Chinook	Summer Chinook	Fall Chinook	Coho Salmon	Chum Salmon	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
FLC-1	Bonneville Tributaries						D													
FLC-2	Hamilton Creek	U						D												
FLC-3	Hardy Creek							H												

* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance

Sensitive season - Minimize seasonal disturbance

FISH STOCK STATUS

C - CRITICAL
D - DEPRESSED
H - HEALTHY
U - UNKNOWN

LOWER COLUMBIA RIVER - RIVER MILE 141-151

FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES

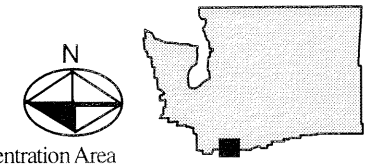
1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations

Sensitive Species Nesting

Wildlife Concentration Area

Boat Launch

Town or City



STEVENSON

WASHINGTON

CASCADE LOCKS

BRIDGE OF THE GODS

FLC-2

BONNEVILLE DAM

GREENLEAF SLOUGH

WLC-1

FLC-1

BRADFORD IS.

FLC-3

WLC-2

HAMILTON CREEK

ROBINS IS.

EAGLE CREEK

HAMILTON ISLAND

OREGON

IVES ISLAND

OREGON

WLC-3

MOFFETT CREEK

River Flow

LOWER COLUMBIA RIVER WILDLIFE RESOURCES

River Mile 134-141

Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WLC-4	Skamania					Yes		Yes												
WLC-5	Franz Lake National Wildlife Refuge			Yes				Yes												

* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance

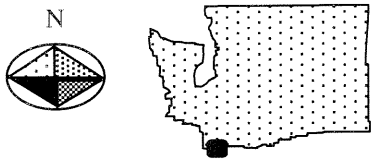
Sensitive season - Minimize overflight disturbance

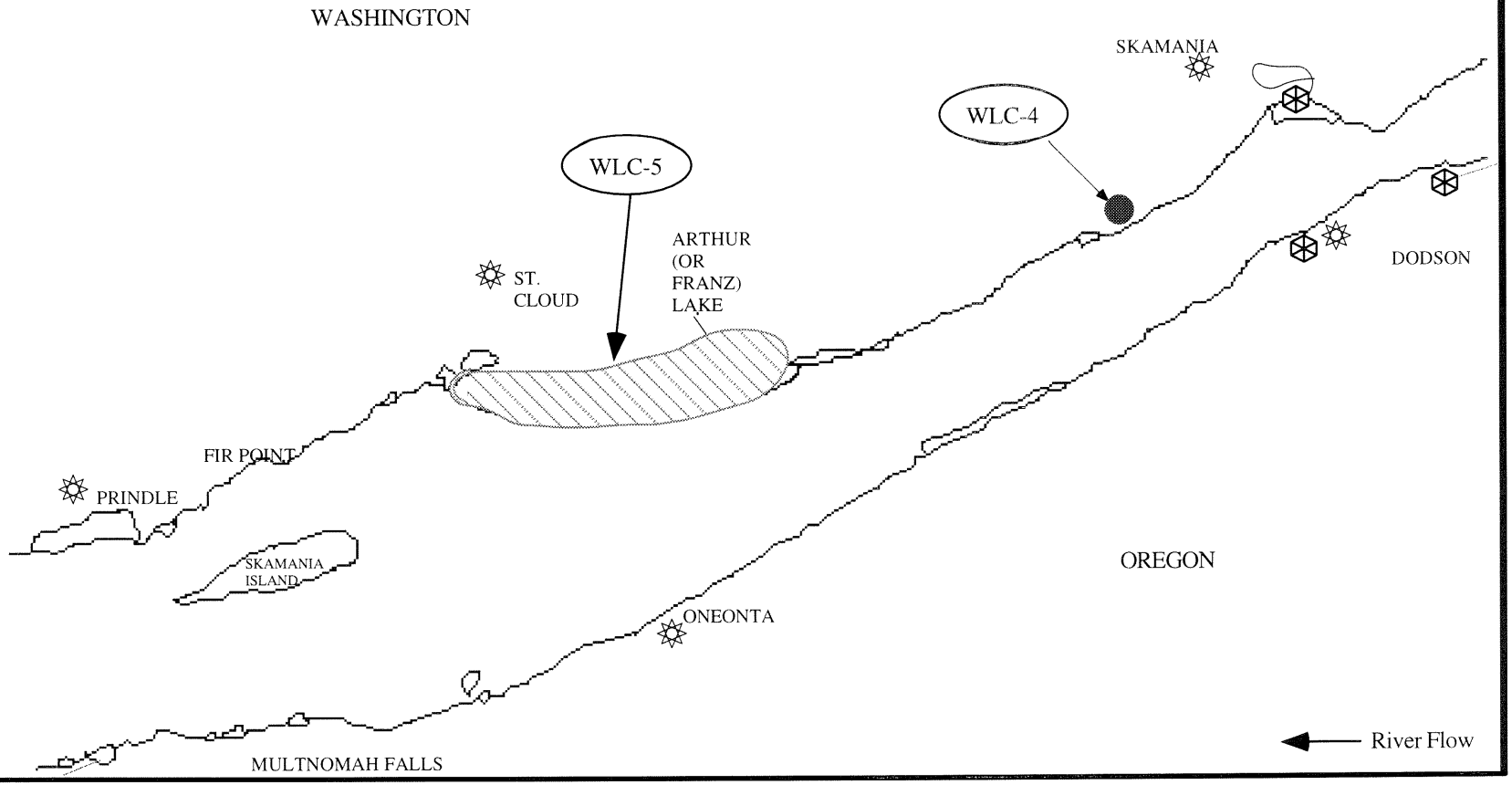
LOWER COLUMBIA RIVER - RIVER MILE 134-141

FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES

1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations

Boat Launch | Town or City | Sensitive Species Nesting | Wildlife Concentration Area





LOWER COLUMBIA RIVER WILDLIFE RESOURCES

River Mile 128-134

Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WLC-6	Sand Island Slough			Yes				Yes												

* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance

Sensitive season - Minimize overflight disturbance

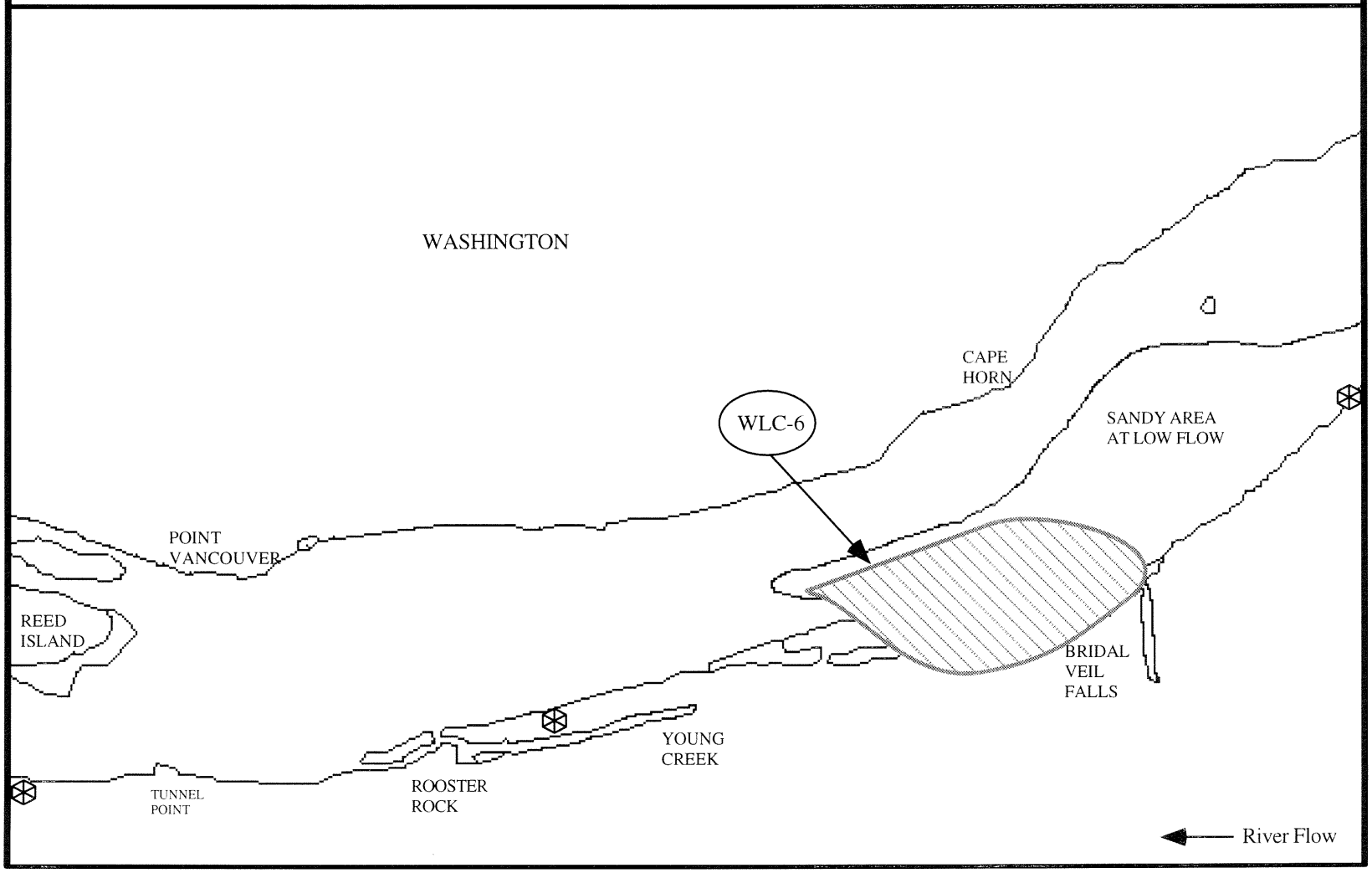
LOWER COLUMBIA RIVER - RIVER MILE 128-134

FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES

1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations

Sensitive Species Nesting Wildlife Concentration Area

Boat Launch Town or City



LOWER COLUMBIA RIVER WILDLIFE RESOURCES

River Mile 119-128

Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WLC-7	Reed Island					Yes		Yes												
WLC-8	Gary, Flag, & Chatlam Islands					Yes		Yes												
WLC-9	East of Camas					Yes		Yes												

LOWER COLUMBIA RIVER FISHERY RESOURCES

River Mile 119-128

Code	Location	Winter Steelhead	Summer Steelhead	Spring Chinook	Summer Chinook	Fall Chinook	Coho Salmon	Chum Salmon	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
FLC-4	Washougal River	U	U			H	D													
FLC-5	West Fork Washougal River	U	U																	

* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance

Sensitive season - Minimize seasonal disturbance

FISH STOCK STATUS

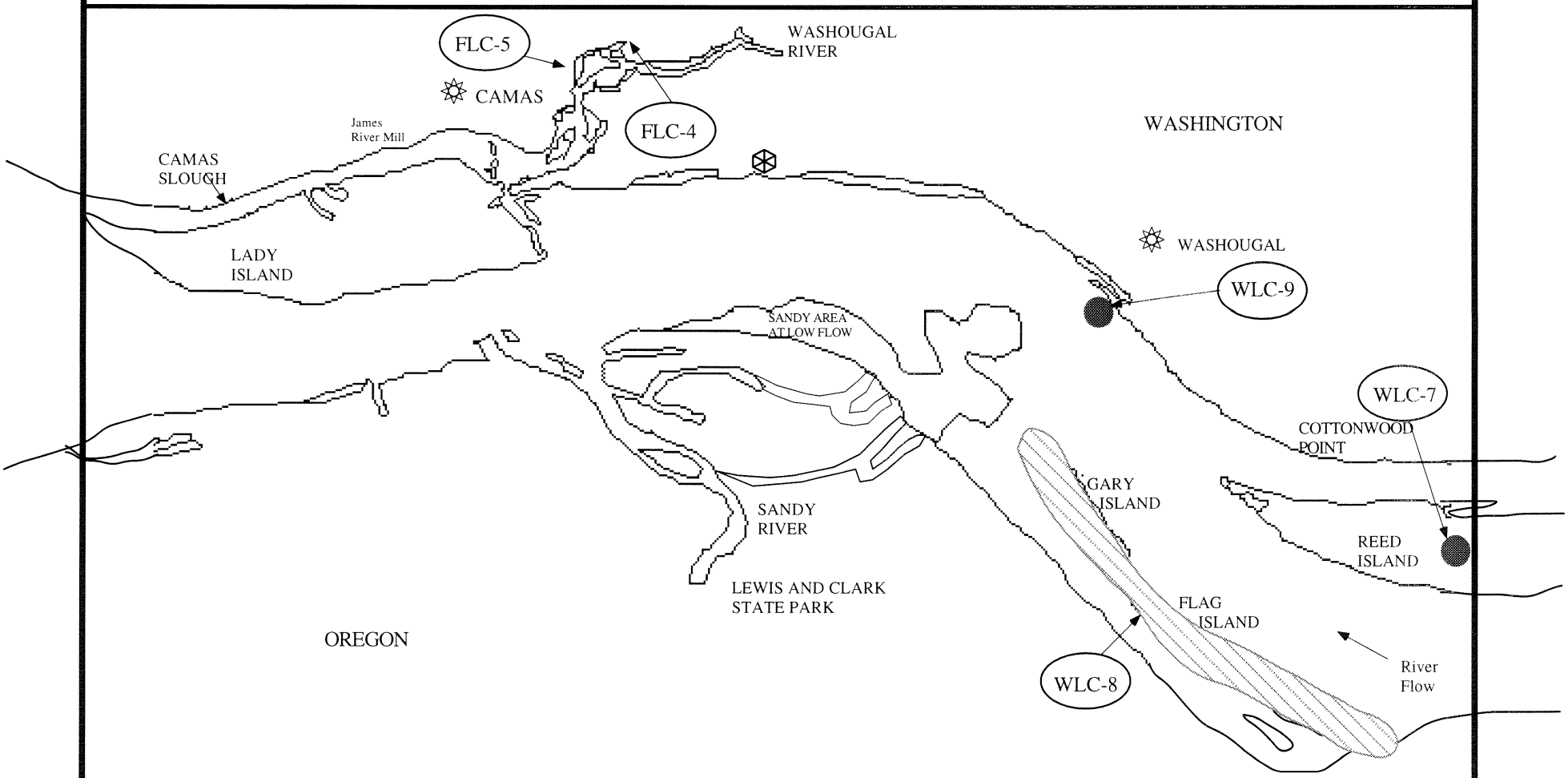
C - CRITICAL
D - DEPRESSED
H - HEALTHY
U - UNKNOWN

LOWER COLUMBIA RIVER - RIVER MILE 119-128

FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES

1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations

Boat Launch Town or City Sensitive Species Nesting Wildlife Concentration Area



LOWER COLUMBIA RIVER WILDLIFE RESOURCES

River Mile 110-119

Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WLC-10	Ackerman Island					Yes		Yes												
WLC-11	Government Island			Yes		Yes		Yes												

* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance

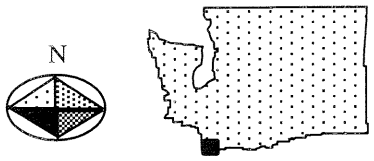
Sensitive season - Minimize overflight disturbance

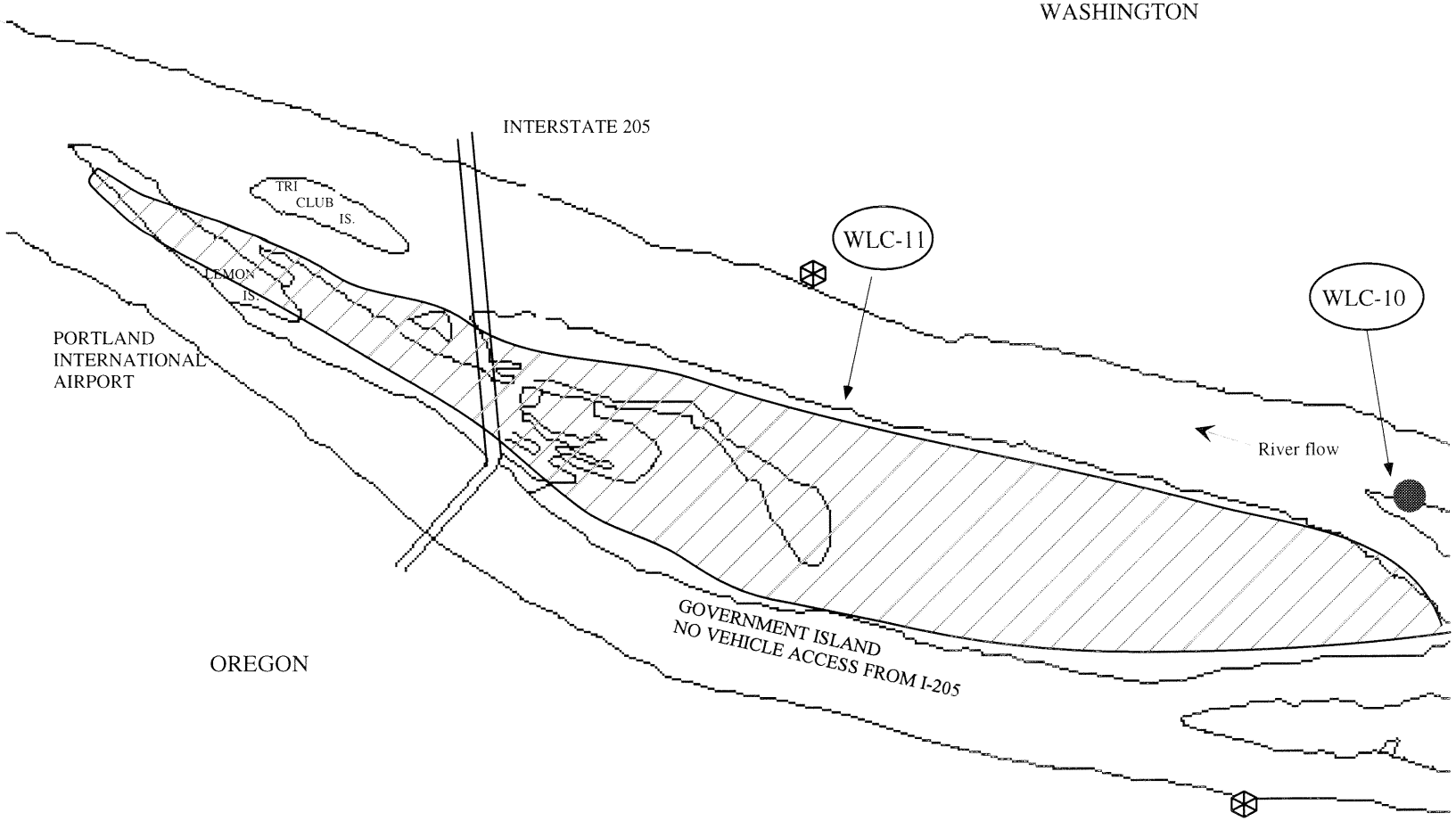
LOWER COLUMBIA RIVER - RIVER MILE 110-119

FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES

1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations

Boat Launch | Town or City | Sensitive Species Nesting | Wildlife Concentration Area





LOWER COLUMBIA RIVER WILDLIFE RESOURCES

River Mile 104-110

Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WLC-12	West of Lieser Point					Yes		Yes												
WLC-13	Tomahawk Island					Yes		Yes												

* FLIGHT AND GROUND ENTRY RESTRICTIONS

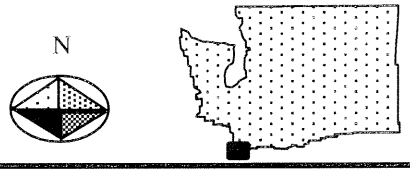
Flights below 1000 feet require clearance

Sensitive season - Minimize overflight disturbance

LOWER COLUMBIA RIVER - RIVER MILE 104-110

FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES

1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations



Frenchman Bar Park

TIDEWATER

PORT OF VANCOUVER

WASHINGTON

VANCOUVER

HAYDEN ISLAND

BURLINGTON NORTHERN RAILROAD SWING BRIDGE

INTERSTATE 5 LIFT BRIDGES

NORTH PORTLAND HARBOR

WLC-12

RYAN POINT

HAYDEN BAY

COLUMBIA RIVER

River Flow

Boat Launch

Town or City

Sensitive Species Nesting

Wildlife Concentration Area

PORTLAND INTERNATIONAL AIRPORT (WEST END)

OREGON

WLC-13

LOWER WILLAMETTE RIVER FISH & WILDLIFE RESOURCES

Willamette River Mile 21-26

Code	Location	Turtles	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WWR-1	Tualatin River					Yes														
WWR-2	Willamette Falls				Yes															
WWR-3	Clackamette Park			Yes																
WWR-4	Clackamette Island					Yes		Yes												
WWR-5	Meldrum Slough					Yes														
WWR-6	Cedar Island	Yes																		
WWR-7	Lake Oswego	Yes		Yes																

LOWER WILLAMETTE RIVER FISHERY RESOURCES

Willamette River Mile 21-26

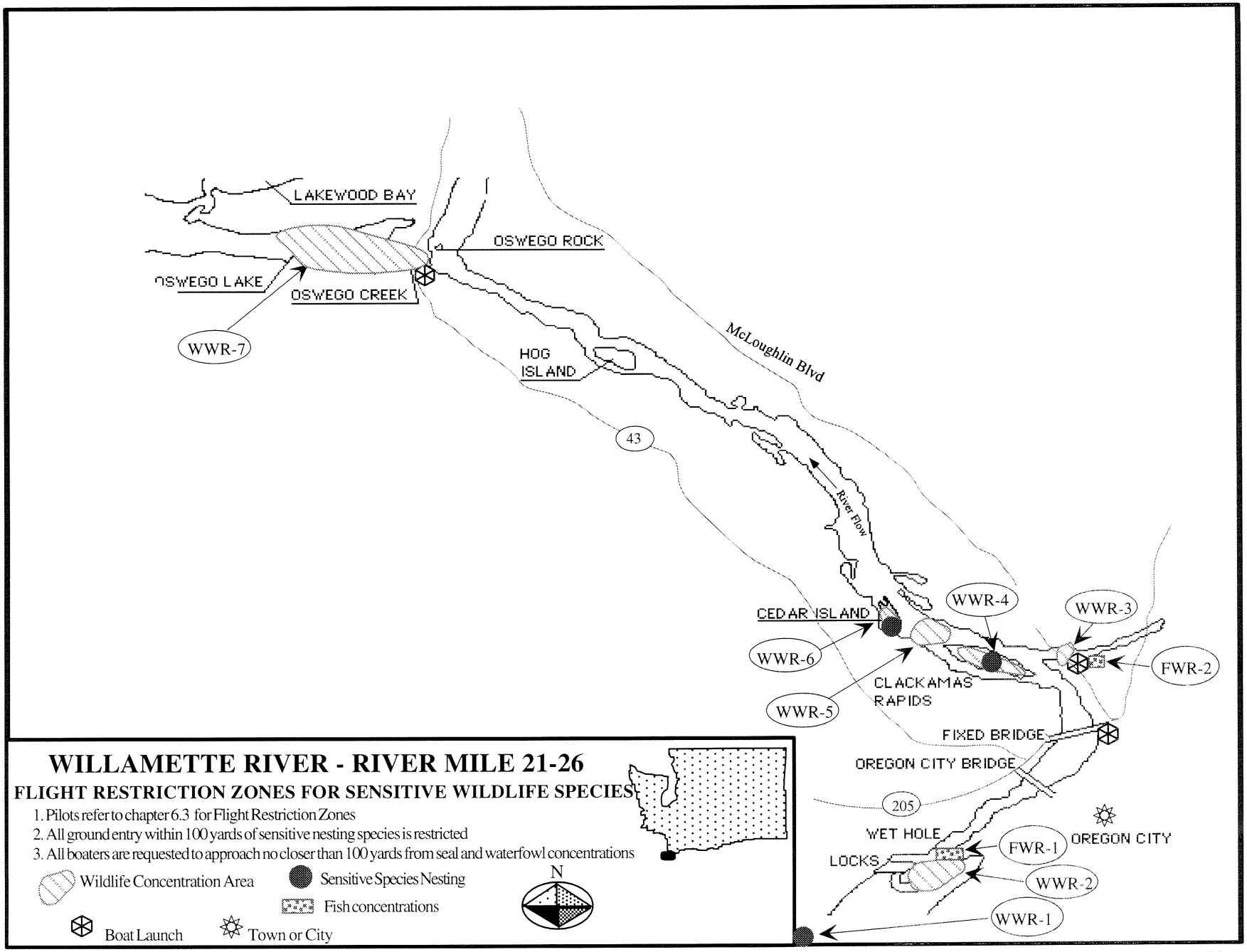
PERIOD OF SENSITIVITY

Code	Location	Winter Steelhead	Summer Steelhead	Spring Chinook	Summer Chinook	Fall Chinook	Coho Salmon	Sockeye Salmon	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
FWR-1	Willamette Falls Fish Ladder	Yes	Yes	Yes		Yes	Yes	Yes												
FWR-2	Clackamas River Cove/Lagoon	Yes		Yes																

* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance

Sensitive season - Minimize overflight disturbance


LAKEWOOD BAY
OSWEGO ROCK
OSWEGO LAKE
OSWEGO CREEK
WWR-7
HOG ISLAND
McLoughlin Blvd
43
River Flow
CEDAR ISLAND
WWR-4
WWR-3
WWR-6
FWR-2
CLACKAMAS RAPIDS
WWR-5
FIXED BRIDGE
OREGON CITY BRIDGE
205
WET HOLE
OREGON CITY
FWR-1
LOCKS
WWR-2
WWR-1
WILLAMETTE RIVER - RIVER MILE 21-26
FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES
1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations
Wildlife Concentration Area
Sensitive Species Nesting
Fish concentrations
Boat Launch
Town or City
N

LOWER WILLAMETTE RIVER FISH & WILDLIFE RESOURCES

Willamette River Mile 16-20

Code	Location	Turtles	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WWR-8	Kellogg Lake	Yes		Yes		Yes														

LOWER WILLAMETTE RIVER FISHERY RESOURCES

Willamette River Mile 16-20

PERIOD OF SENSITIVITY

Code	Location	Winter Steelhead	Summer Steelhead	Spring Chinook	Summer Chinook	Fall Chinook	Coho Salmon	Sockeye Salmon	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
FWR-3	Kellogg Creek	Yes					Yes													
FWR-4	Johnson Creek	Yes				Yes														

* FLIGHT AND GROUND ENTRY RESTRICTIONS

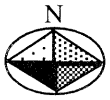
Flights below 1000 feet require clearance

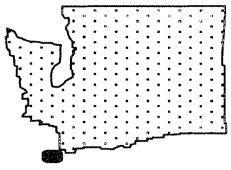
Sensitive season - Minimize overflight disturbance

WILLAMETTE RIVER - RIVER MILE 16-20

FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES

1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations





Boat Launch Town or City Wildlife Concentration Area Sensitive Species Nesting Fish concentrations

SELLWOOD BRIDGE

99E

PORTARBOUR MARINA

YACHT SERVICES INC.

POWERS PARK

JOHNSON CREEK

FWR-4

River Flow

43

FWR-3

KELLOG LAKE

WWR-8

ELK ROCK ISLAND

SOUTHERN PACIFIC R.R. BRIDGE

LOWER WILLAMETTE RIVER FISH & WILDLIFE RESOURCES

Willamette River Mile 11-16

Code	Location	Turtles	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WWR-9	Crystal Springs Lake (inland)	Yes		Yes																
WWR-10	Oaks Bottom			Yes																
WWR-11	East side of Ross Island/East bank Willamette					Yes		Yes												
WWR-12	West side of Ross Island					Yes		Yes												
WWR-13	West side of Ross Island					Yes		Yes												
WWR-14	Fremont Bridge					Yes		Yes												

LOWER WILLAMETTE RIVER FISHERY RESOURCES

Willamette River Mile 11-16

PERIOD OF SENSITIVITY

Code	Location	Winter Steelhead	Summer Steelhead	Spring Chinook	Summer Chinook	Fall Chinook	Coho Salmon	Sockeye Salmon	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
FWR-5	OMSI/River Place			Yes																

* FLIGHT AND GROUND ENTRY RESTRICTIONS

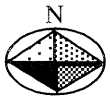
Flights below 1000 feet require clearance

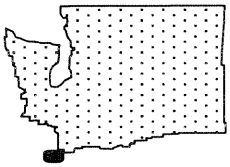
Sensitive season - Minimize overflight disturbance

WILLAMETTE RIVER - RIVER MILE 11-16

FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES

1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations





Boat Launch | Town or City | Wildlife Concentration Area | Sensitive Species Nesting | Fish concentrations

WWR-14
FREMONT BRIDGE
BUNGE ELEVATOR
BROADWAY BRIDGE
LOUIS DREYFUS ELEVATOR
STEEL BRIDGE
84
BURNSIDE BRIDGE
Portland
MORRISON BRIDGE
HAWTHORNE BRIDGE
River Flow
FWR-5
99E
MARQUAM BRIDGE
ROSS ISLAND BRIDGE
WWR-13
WWR-11
I-5
ROSS ISLAND
WWR-12
HARD TACK ISLAND
WWR-10
WWR-9
STEVENS POINT
OREGON YACHT CLUB

LOWER WILLAMETTE RIVER FISH & WILDLIFE RESOURCES

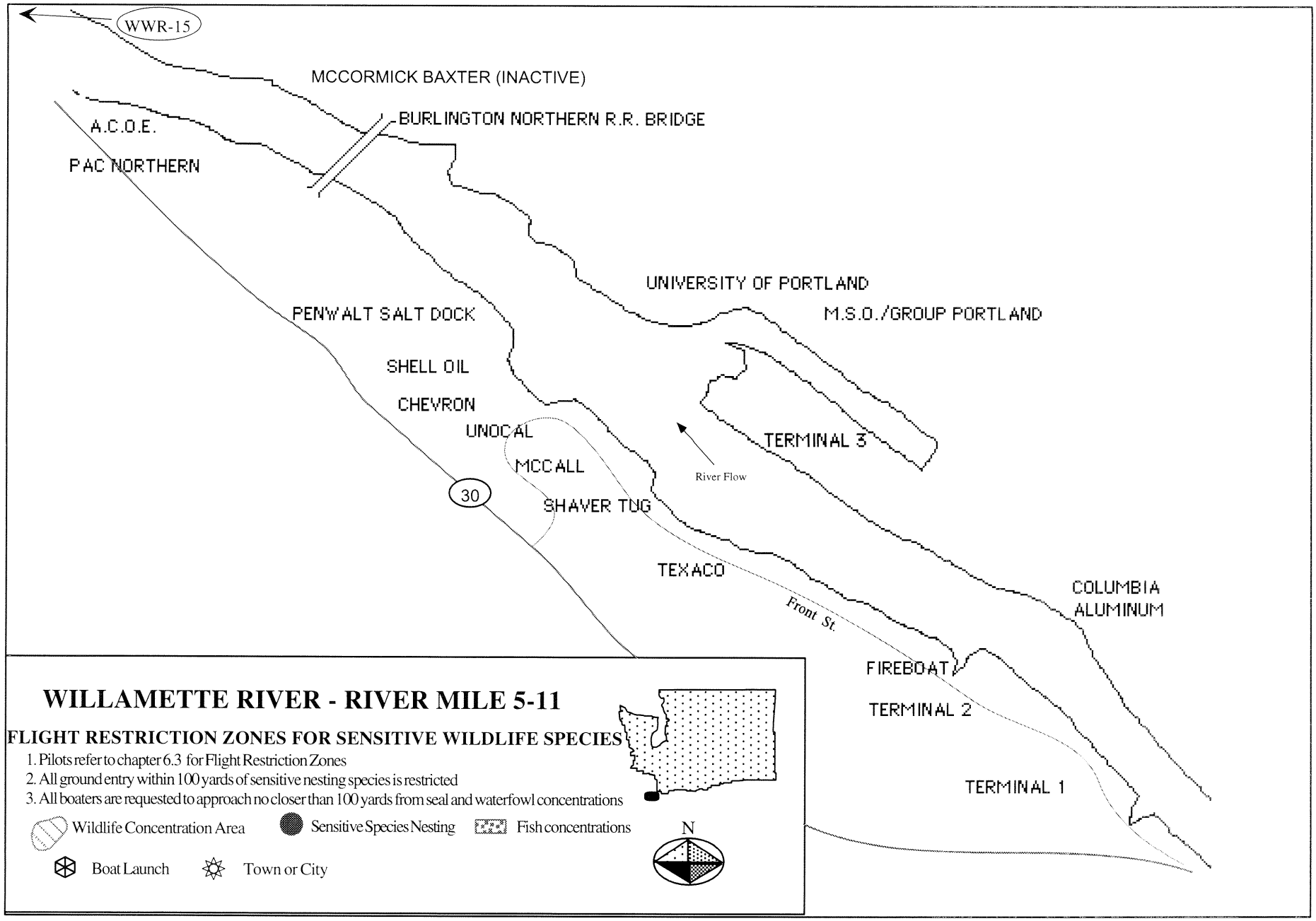
Willamette River Mile 5-11

Code	Location	Turtles	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WWR-15	St. John's Bridge					Yes		Yes												

* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance

Sensitive season - Minimize overflight disturbance


WWR-15
MCCORMICK BAXTER (INACTIVE)
BURLINGTON NORTHERN R.R. BRIDGE
A.C.O.E.
PAC NORTHERN
UNIVERSITY OF PORTLAND
M.S.O./GROUP PORTLAND
PENWALT SALT DOCK
SHELL OIL
CHEVRON
UNOCAL
MCCALL
SHAVER TUG
30
River Flow
TERMINAL 3
TEXACO
Front St.
COLUMBIA ALUMINUM
FIREBOAT
TERMINAL 2
TERMINAL 1
WILLAMETTE RIVER - RIVER MILE 5-11
FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES
1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations
Wildlife Concentration Area
Sensitive Species Nesting
Fish concentrations
Boat Launch
Town or City
N

LOWER WILLAMETTE RIVER FISH & WILDLIFE RESOURCES

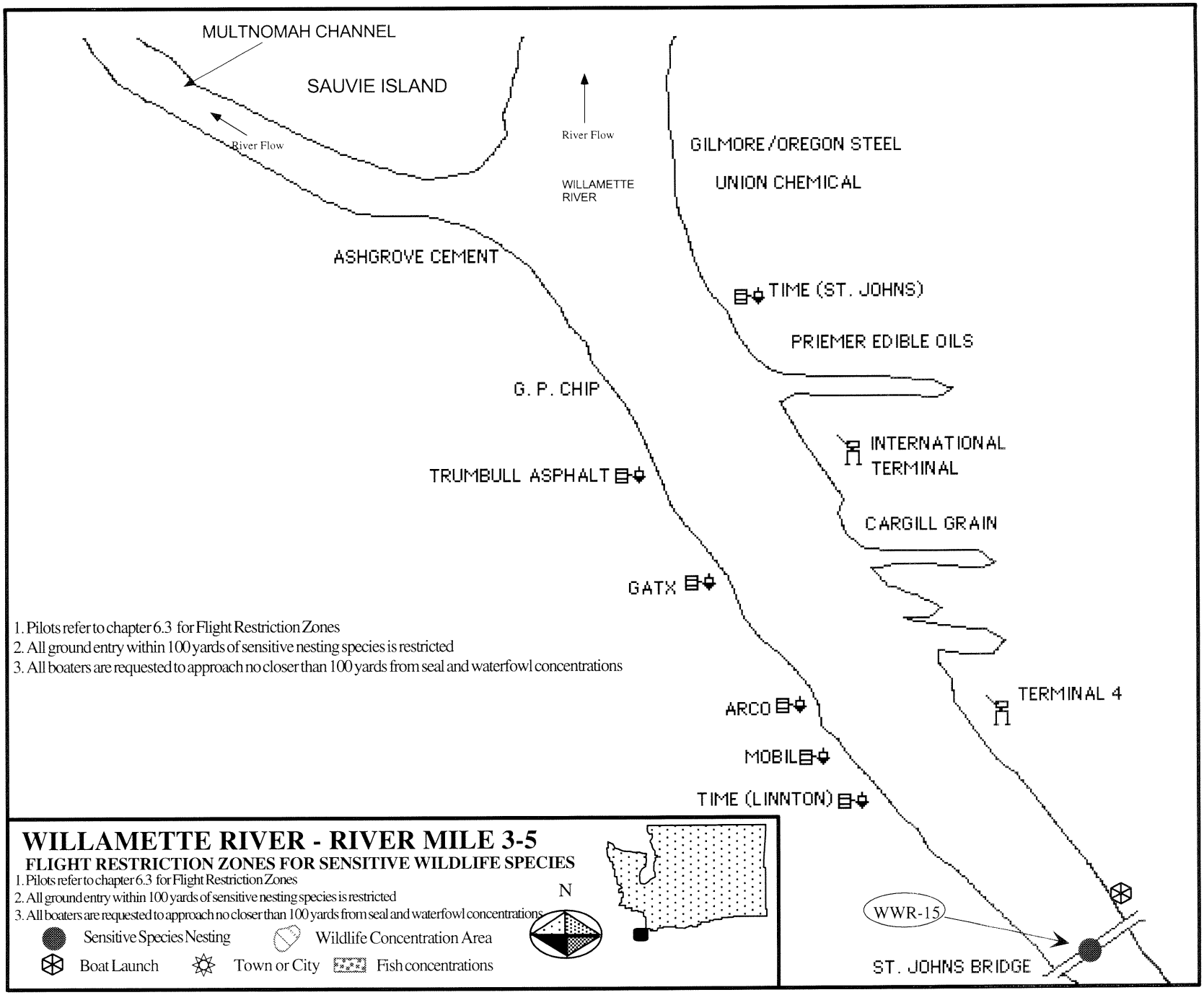
Willamette River Mile 3-5

Code	Location	Turtles	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WWR-15	St. John's Bridge					Yes		Yes												

* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance

Sensitive season - Minimize overflight disturbance


MULTNOMAH CHANNEL
SAUVIE ISLAND
River Flow
River Flow
WILLAMETTE RIVER
GILMORE/OREGON STEEL
UNION CHEMICAL
ASHGROVE CEMENT
TIME (ST. JOHNS)
PRIEMER EDIBLE OILS
G. P. CHIP
INTERNATIONAL TERMINAL
TRUMBULL ASPHALT
CARGILL GRAIN
GATX
1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations
TERMINAL 4
ARCO
MOBIL
TIME (LINNTON)
WILLAMETTE RIVER - RIVER MILE 3-5
FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES
1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations
N
Sensitive Species Nesting
Wildlife Concentration Area
Boat Launch
Town or City
Fish concentrations
WWR-15
ST. JOHNS BRIDGE

LOWER COLUMBIA RIVER FISH & WILDLIFE RESOURCES

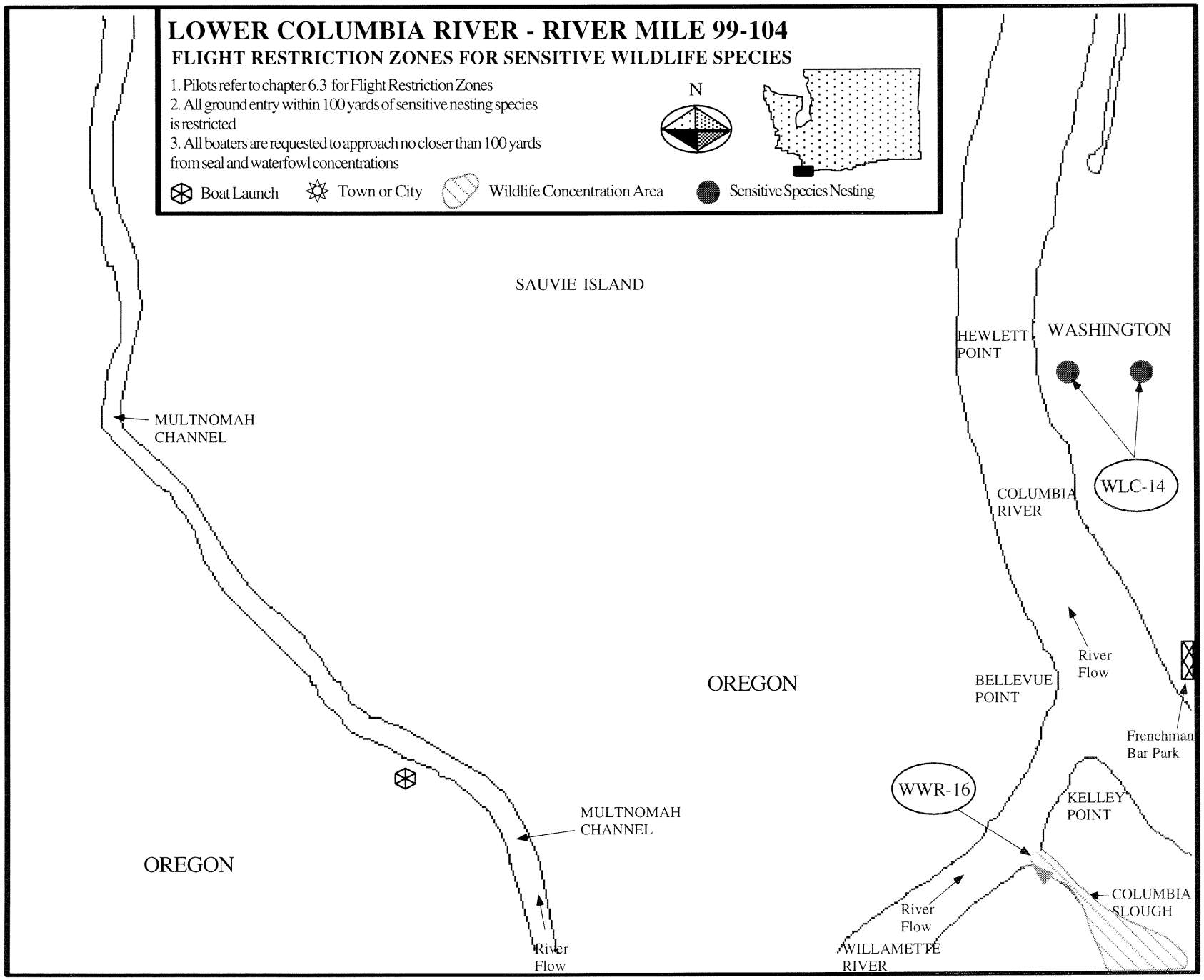
River Mile 99-104

Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WWR-16	Columbia Slough					Yes		Yes												
WLC-14	Hewlett Point					Yes		Yes												

* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance

Sensitive season - Minimize overflight disturbance


LOWER COLUMBIA RIVER - RIVER MILE 99-104
FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES
1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations
N
Boat Launch
Town or City
Wildlife Concentration Area
Sensitive Species Nesting
SAUVIE ISLAND
MULTNOMAH CHANNEL
MULTNOMAH CHANNEL
OREGON
OREGON
River Flow
HEWLETT POINT
WASHINGTON
WLC-14
COLUMBIA RIVER
River Flow
BELLEVUE POINT
Frenchman Bar Park
WWR-16
KELLEY POINT
COLUMBIA SLOUGH
River Flow
WILLAMETTE RIVER

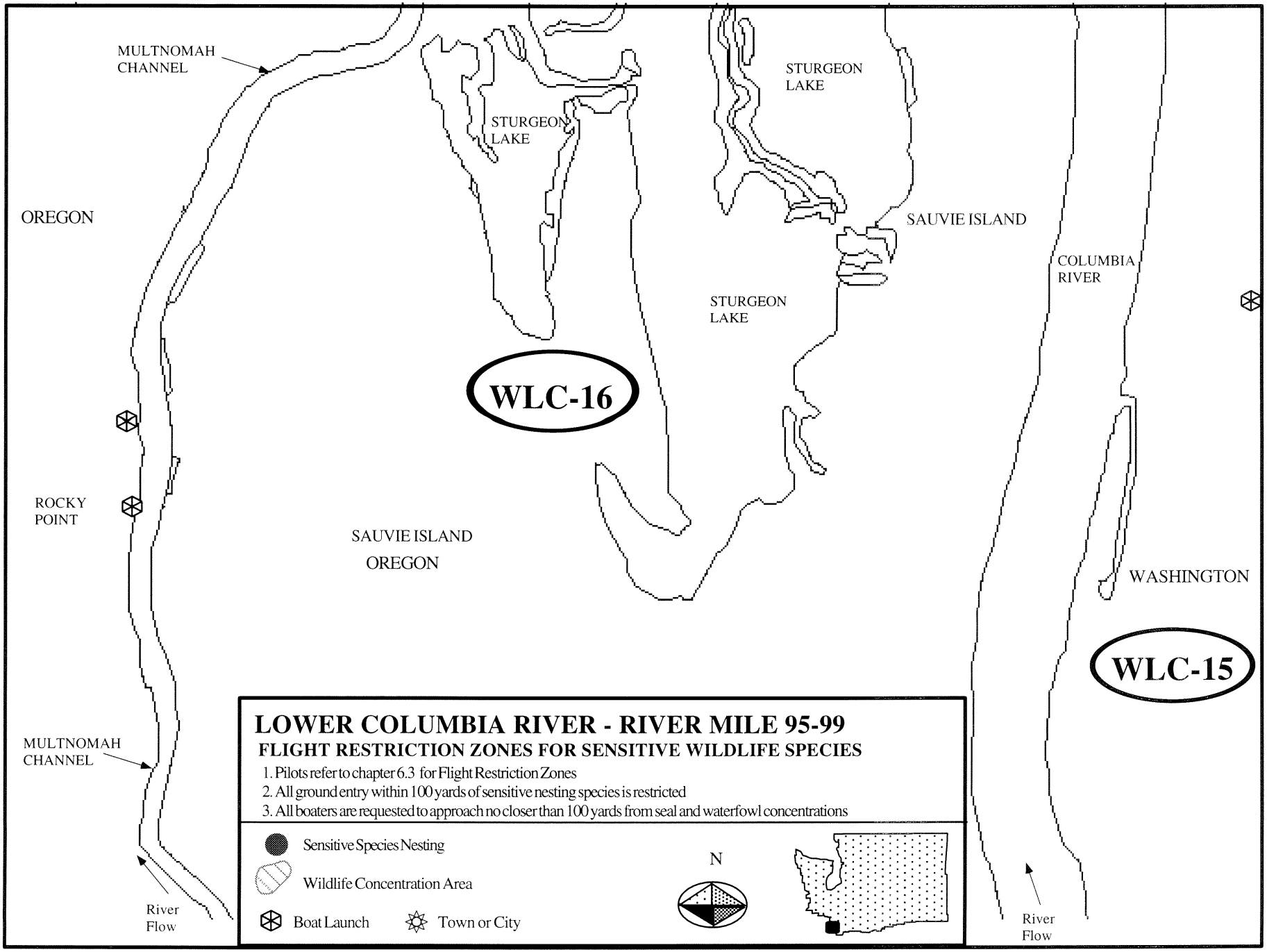
LOWER COLUMBIA RIVER WILDLIFE RESOURCES

River Mile 95-99												PERIOD OF SENSITIVITY								
Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WLC-15	Vancouver Lake area			Yes		Yes		Yes												
WLC-16	Sturgeon Island area					Yes		Yes												

* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance

Sensitive season - Minimize overflight disturbance



LOWER COLUMBIA RIVER - RIVER MILE 95-99

FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES

1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations

LOWER COLUMBIA RIVER WILDLIFE RESOURCES

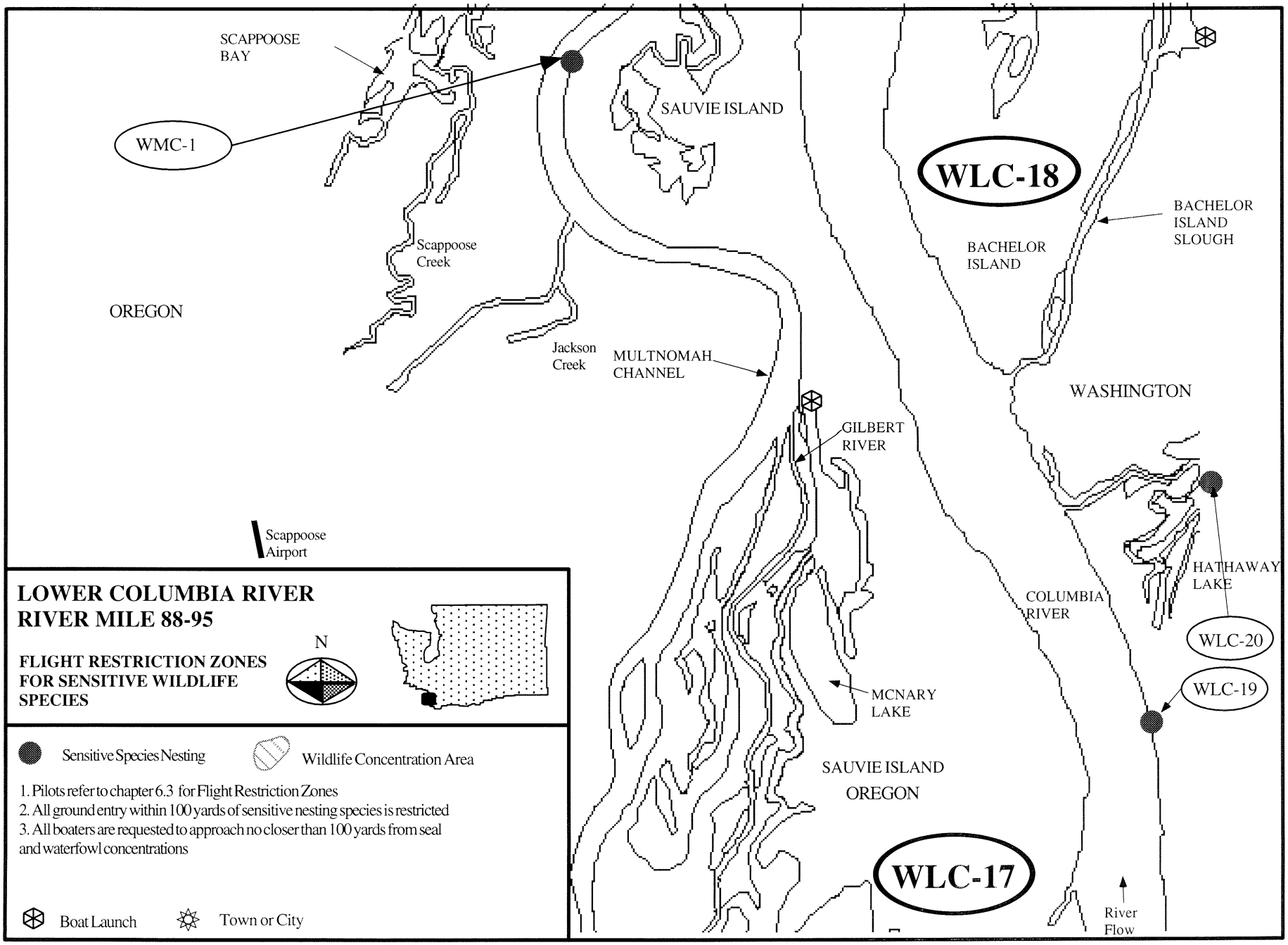
River Mile 88-95

Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
									PERIOD OF SENSITIVITY											
WLC-17	McNary Lake area			Yes		Yes	Yes	Yes												
WLC-18	Bachelor Island			Yes		Yes	Yes	Yes												
WLC-19	Lake River					Yes		Yes												
WLC-20	Bachelor Island Slough					Yes		Yes												
WMC-1	Cunningham Slough					Yes		Yes												

* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance

Sensitive season - Minimize overflight disturbance


SCAPPOOSE BAY
WMC-1
SAUVIE ISLAND
WLC-18
BACHELOR ISLAND SLOUGH
BACHELOR ISLAND
Scappoose Creek
OREGON
Jackson Creek
MULTNOMAH CHANNEL
WASHINGTON
GILBERT RIVER
Scappoose Airport
HATHAWAY LAKE
COLUMBIA RIVER
WLC-20
WLC-19
MCNARY LAKE
SAUVIE ISLAND
OREGON
WLC-17
River Flow
LOWER COLUMBIA RIVER
RIVER MILE 88-95
FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES
N
Sensitive Species Nesting
Wildlife Concentration Area
1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations
Boat Launch
Town or City

LOWER COLUMBIA RIVER WILDLIFE RESOURCES

River Mile 82-88												PERIOD OF SENSITIVITY								
Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WLC-21	Lewis River					Yes		Yes												
WLC-22	South of Goerig Slough					Yes		Yes												
WLC-23	Southeast of Goerig Slough					Yes		Yes												
WLC-24	Deer Island			Yes				Yes												

LOWER COLUMBIA RIVER FISHERY RESOURCES

River Mile 82-88												PERIOD OF SENSITIVITY								
Code	Location	Winter Steelhead	Summer Steelhead	Spring Chinook	Summer Chinook	Fall Chinook	Coho Salmon	Chum Salmon	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
FLC-6	Salmon Creek	D					D													
FLC-7	Lewis River	D		H		H	D													
FLC-8	East Fork Lewis River	D	U			H	D													
FLC-9	North Fork Lewis River		D																	

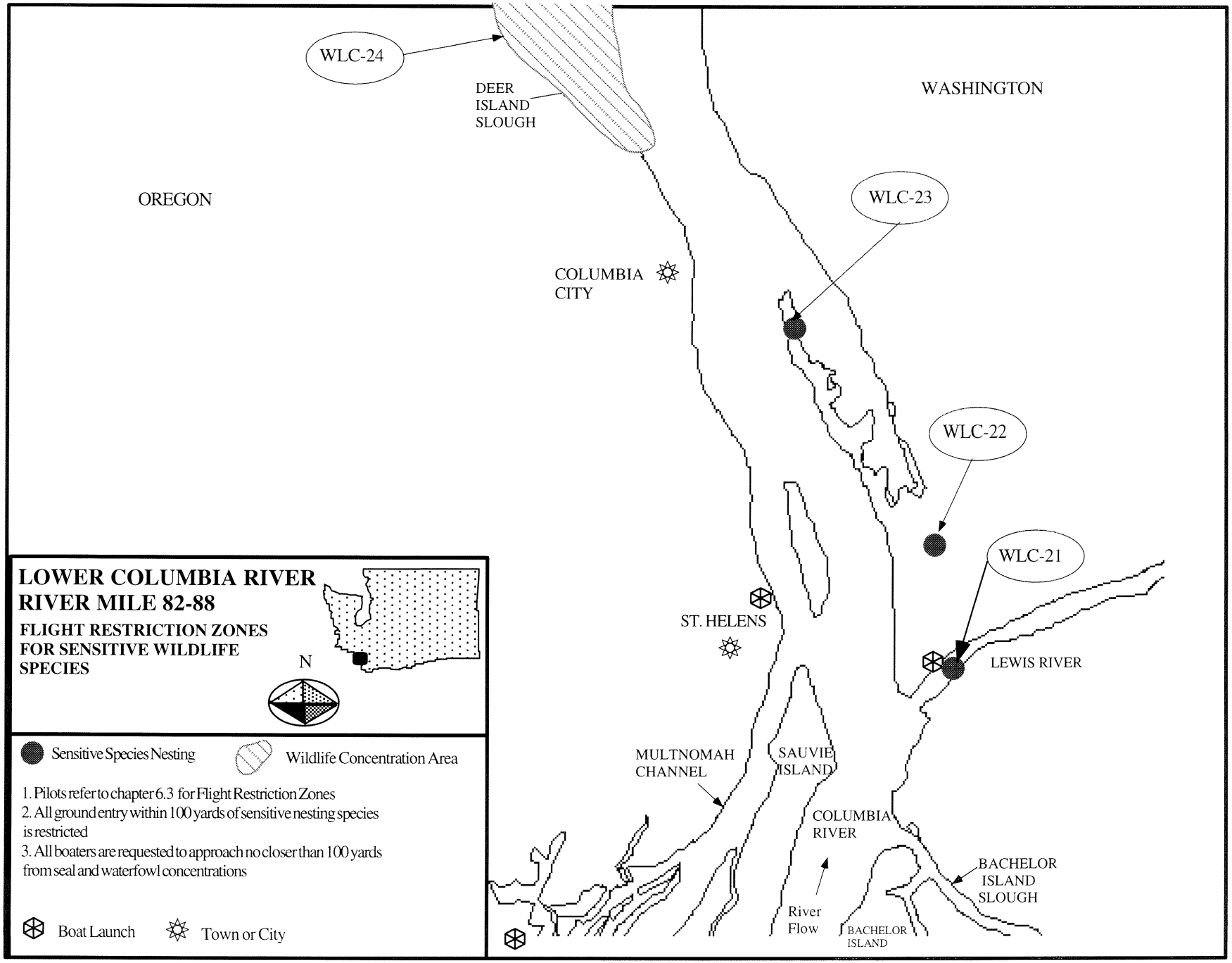
* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance

Sensitive season - Minimize seasonal disturbance

FISH STOCK STATUS

C - CRITICAL
D - DEPRESSED
H - HEALTHY
U - UNKNOWN


WLC-24
DEER ISLAND SLOUGH
WASHINGTON
OREGON
WLC-23
COLUMBIA CITY
WLC-22
WLC-21
ST. HELENS
LEWIS RIVER
MULTNOMAH CHANNEL
SAUVIE ISLAND
COLUMBIA RIVER
BACHELOR ISLAND SLOUGH
River Flow
BACHELOR ISLAND
LOWER COLUMBIA RIVER
RIVER MILE 82-88
FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES
N
Sensitive Species Nesting
Wildlife Concentration Area
1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations
Boat Launch
Town or City

LOWER COLUMBIA RIVER WILDLIFE RESOURCES

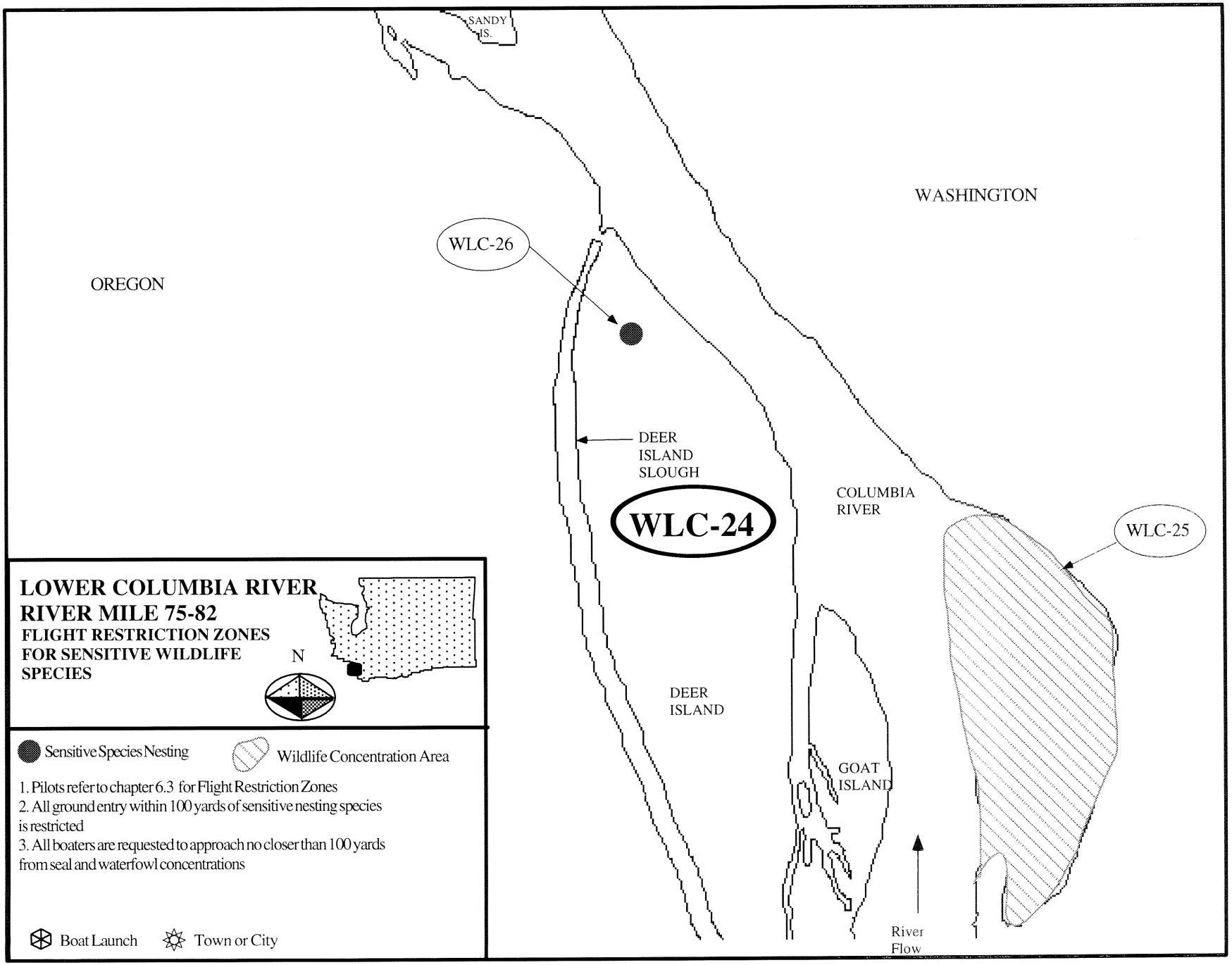
River Mile 76-82

Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
									PERIOD OF SENSITIVITY											
WLC-24	Deer Island			Yes				Yes												
WLC-25	Martin and Burke Islands			Yes				Yes												
WLC-26	Deer Island					Yes		Yes												

* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance

Sensitive season - Minimize overflight disturbance


SANDY IS.
WASHINGTON
OREGON
WLC-26
DEER ISLAND SLOUGH
WLC-24
COLUMBIA RIVER
WLC-25
DEER ISLAND
GOAT ISLAND
River Flow
LOWER COLUMBIA RIVER
RIVER MILE 75-82
FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES
N
Sensitive Species Nesting
Wildlife Concentration Area
1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations
Boat Launch
Town or City

LOWER COLUMBIA RIVER WILDLIFE RESOURCES

River Mile 70-75												PERIOD OF SENSITIVITY							
Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WLC-27	Goble					Yes		Yes												
WLC-28	Cottonwood Island					Yes		Yes												
WLC-29	Carrolls Channel			Yes				Yes												
WLC-30	Cottonwood Island					Yes		Yes												

LOWER COLUMBIA RIVER FISHERY RESOURCES

River Mile 70-75												PERIOD OF SENSITIVITY							
Code	Location	Winter Steelhead	Summer Steelhead	Spring Chinook	Summer Chinook	Fall Chinook	Coho Salmon	Chum Salmon	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
FLC-10	Kalama River	H	D	H		H	D													

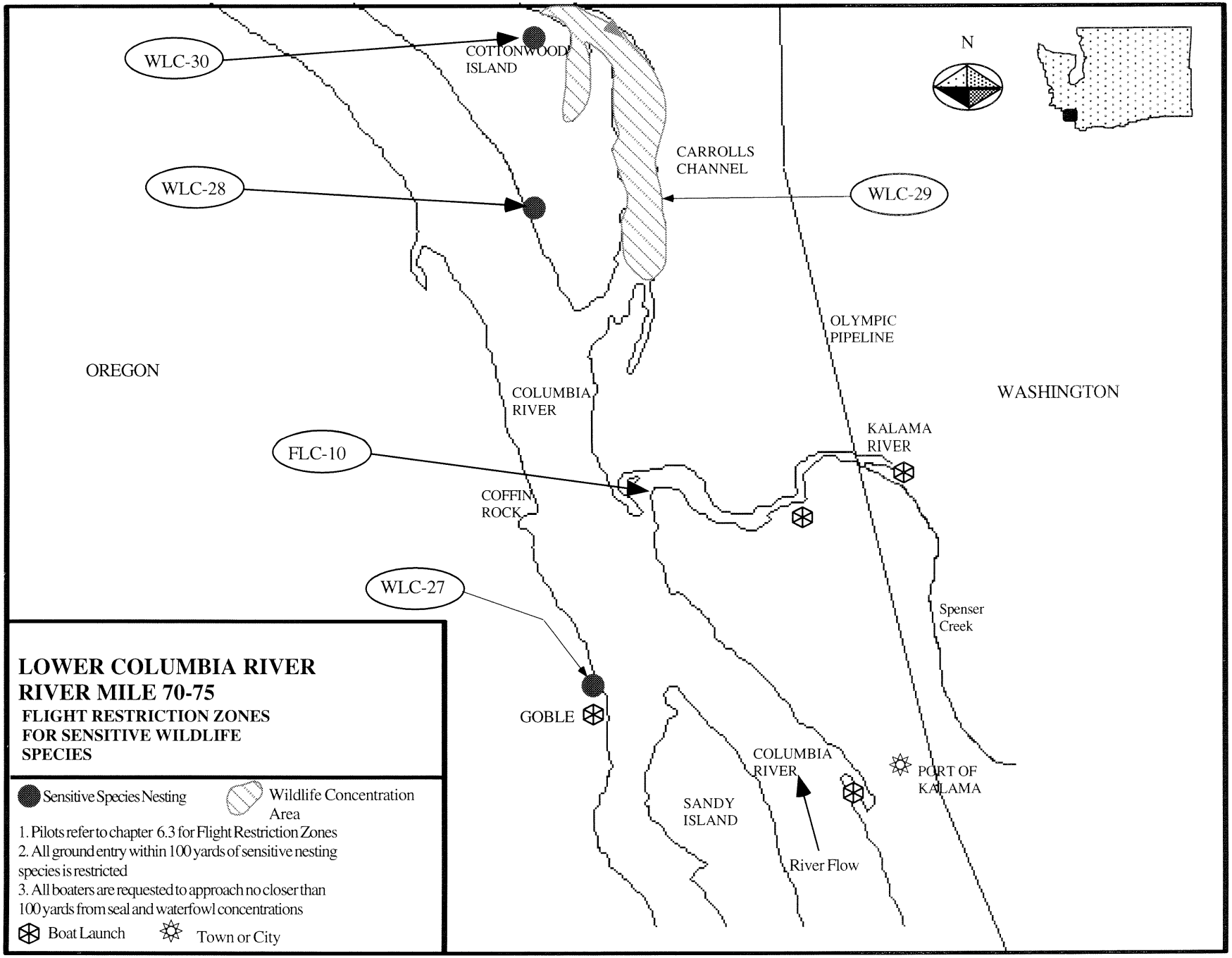
* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance

Sensitive season - Minimize seasonal disturbance

FISH STOCK STATUS

C - CRITICAL
D - DEPRESSED
H - HEALTHY
U - UNKNOWN


WLC-30
COTTONWOOD ISLAND
N
CARROLLS CHANNEL
WLC-28
WLC-29
OLYMPIC PIPELINE
OREGON
COLUMBIA RIVER
WASHINGTON
KALAMA RIVER
FLC-10
COFFIN ROCK
WLC-27
Spenser Creek
GOBLE
COLUMBIA RIVER
PORT OF KALAMA
SANDY ISLAND
River Flow
LOWER COLUMBIA RIVER
RIVER MILE 70-75
FLIGHT RESTRICTION ZONES
FOR SENSITIVE WILDLIFE
SPECIES
Sensitive Species Nesting
Wildlife Concentration Area
1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations
Boat Launch
Town or City

LOWER COLUMBIA RIVER WILDLIFE RESOURCES

River Mile 63-70												PERIOD OF SENSITIVITY								
Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WLC-31	Carrolls Channel					Yes		Yes												
WLC-32	Carrolls Channel				Yes															
WLC-33	Cowlitz River		Yes																	
WLC-34	Lord Island			Yes				Yes												

LOWER COLUMBIA RIVER FISHERY RESOURCES

River Mile 63-70												PERIOD OF SENSITIVITY								
Code	Location	Winter Steelhead	Summer Steelhead	Spring Chinook	Summer Chinook	Fall Chinook	Coho Salmon	Chum Salmon	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
FLC-11	Cowlitz River	D		H		H	D													
FLC-12	Coweeman River	D				H	D													
FLC-13	Mainstem/ North Fork Toutle River	D					D													
FLC-14	South Fork Toutle River	H				D	D													
FLC-15	Green River	D				D	D													

* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance

Sensitive season - Minimize seasonal disturbance

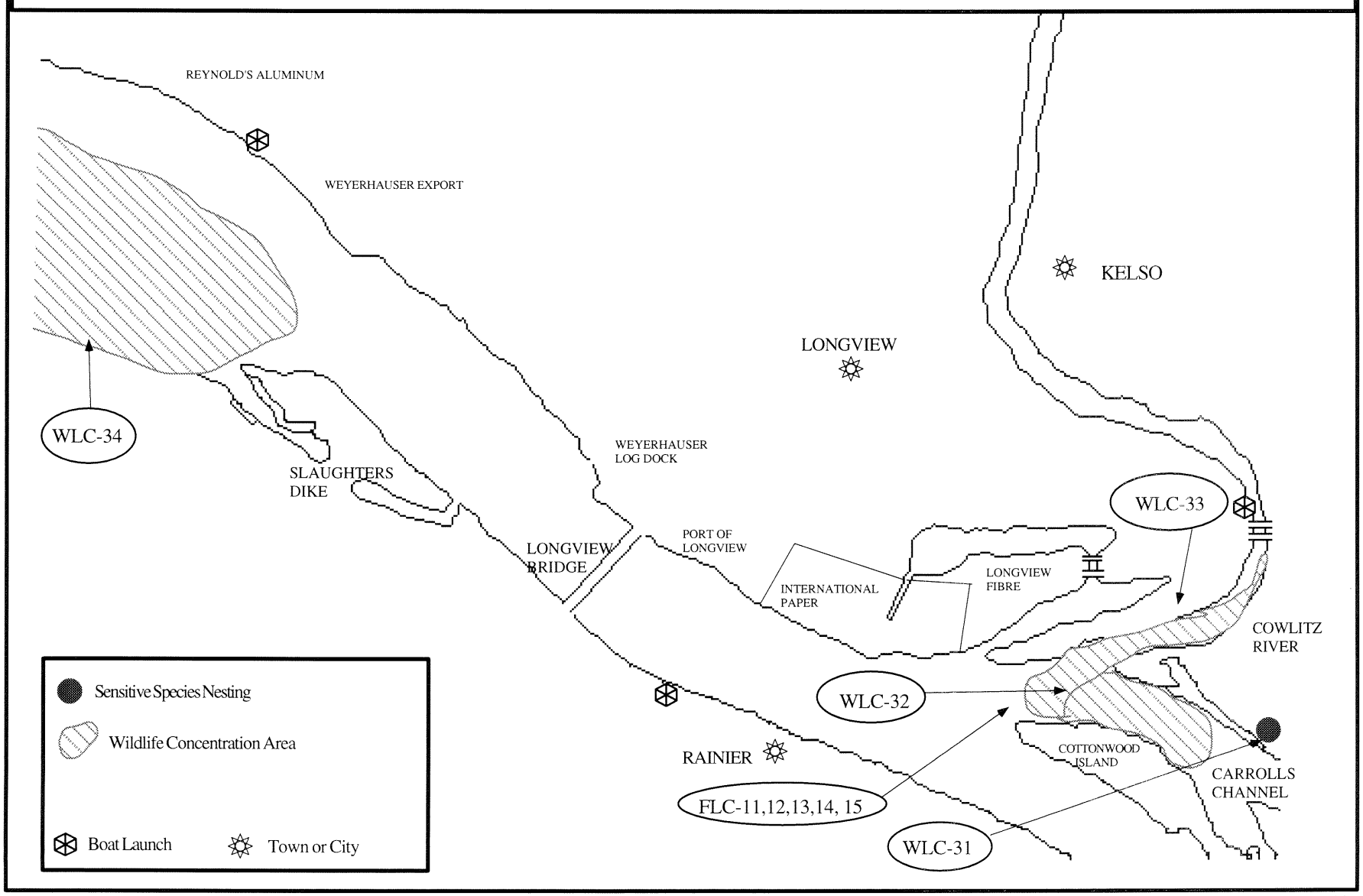
FISH STOCK STATUS

C - CRITICAL
D - DEPRESSED
H - HEALTHY
U - UNKNOWN

LOWER COLUMBIA RIVER - RIVER MILE 63-70

FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES

1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations



LOWER COLUMBIA RIVER WILDLIFE RESOURCES

River Mile 54-63

Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
												PERIOD OF SENSITIVITY								
WLC-34	Lord Island			Yes				Yes												
WLC-35	Oregon shore near Walker Island					Yes		Yes												
WLC-36	Fisher Island					Yes		Yes												
WLC-37	Crims Island			Yes		Yes		Yes												
WLC-38	Bradbury Slough					Yes		Yes												
WLC-39	Gull Island					Yes		Yes												
WLC-40	Abernathy Creek					Yes		Yes												

LOWER COLUMBIA RIVER FISHERY RESOURCES

River Mile 54-63

Code	Location	Winter Steelhead	Summer Steelhead	Spring Chinook	Summer Chinook	Fall Chinook	Coho Salmon	Chum Salmon	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
												PERIOD OF SENSITIVITY								
FLC-16	Germany Creek	D				H	D													
FLC-17	Abernathy Creek	D				H	D													

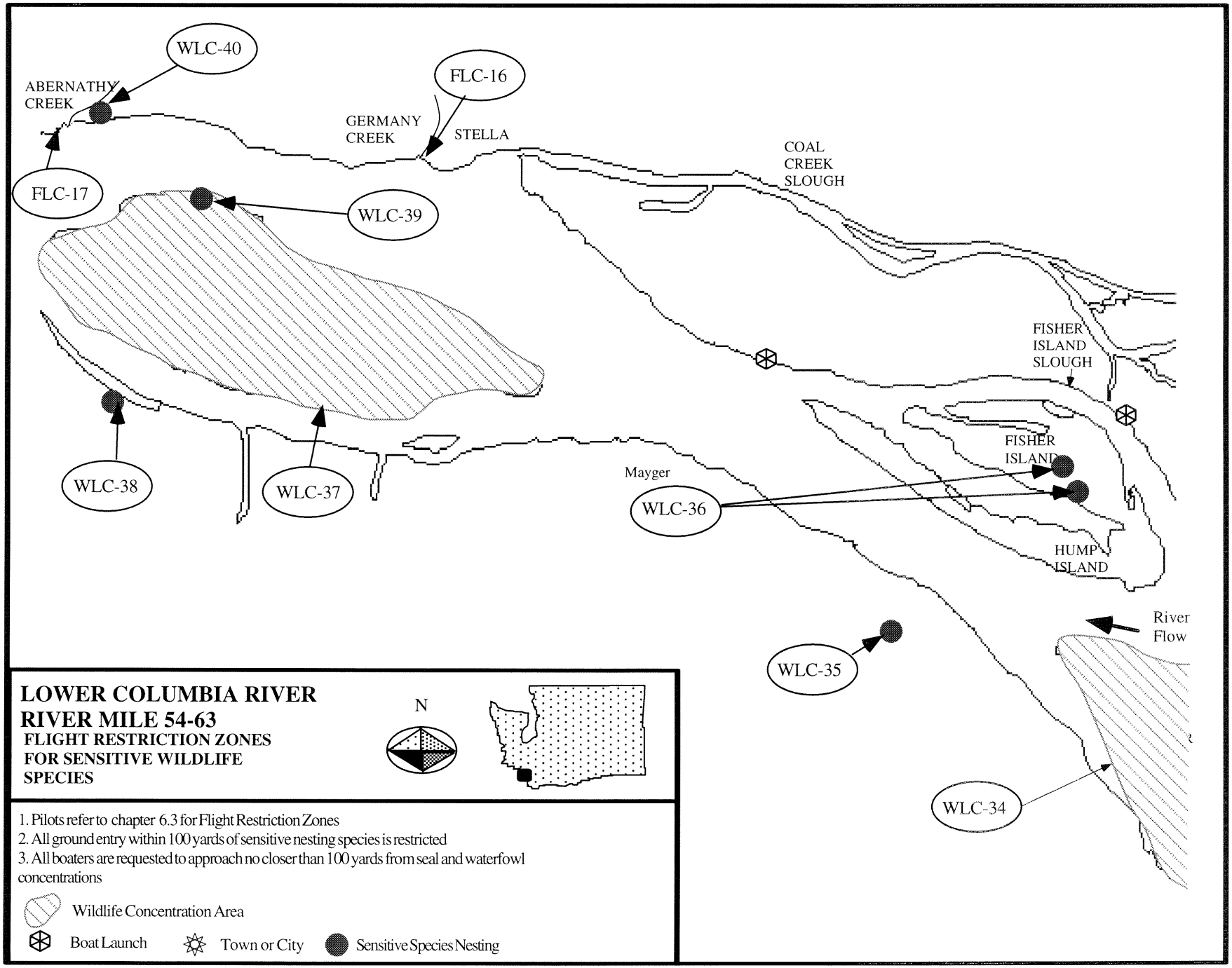
* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance

Sensitive season - Minimize seasonal disturbance

FISH STOCK STATUS

C - CRITICAL
D - DEPRESSED
H - HEALTHY
U - UNKNOWN



LOWER COLUMBIA RIVER
RIVER MILE 54-63
FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES

1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations

Wildlife Concentration Area
Boat Launch
Town or City
Sensitive Species Nesting

LOWER COLUMBIA RIVER WILDLIFE RESOURCES

River Mile 47-54												PERIOD OF SENSITIVITY								
Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WLC-41	Wallace Island					Yes		Yes												
WLC-42	Wallace Island Complex					Yes		Yes												

LOWER COLUMBIA RIVER FISHERY RESOURCES

River Mile 47-54												PERIOD OF SENSITIVITY								
Code	Location	Winter Steelhead	Summer Steelhead	Spring Chinook	Summer Chinook	Fall Chinook	Coho Salmon	Chum Salmon	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
FLC-18	Mill Creek	D				H	D													

* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance

Sensitive season - Minimize seasonal disturbance

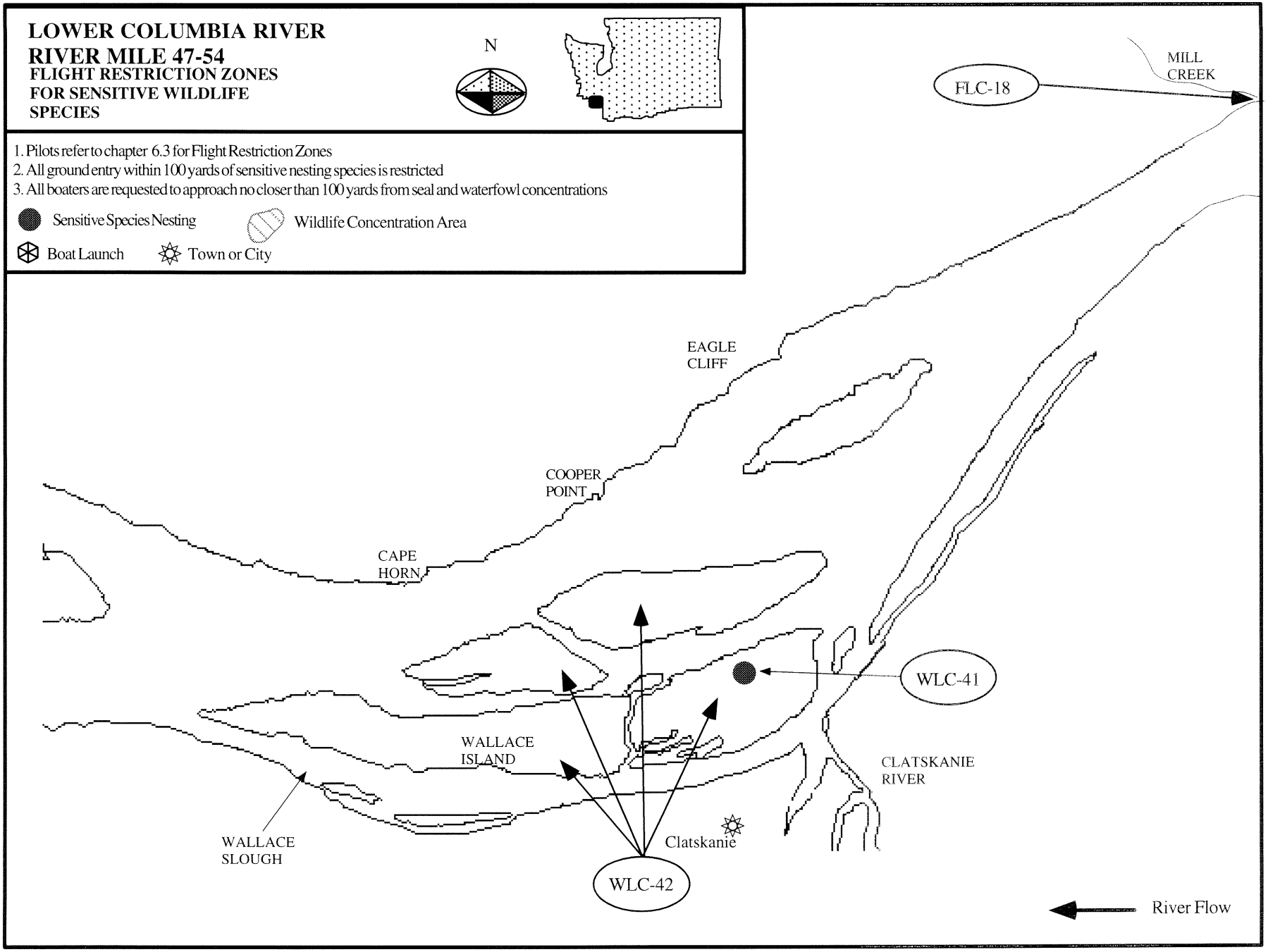
FISH STOCK STATUS

C - CRITICAL
D - DEPRESSED
H - HEALTHY
U - UNKNOWN

LOWER COLUMBIA RIVER
RIVER MILE 47-54
FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES

1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations

Sensitive Species Nesting
Wildlife Concentration Area
Boat Launch
Town or City



LOWER COLUMBIA RIVER WILDLIFE RESOURCES

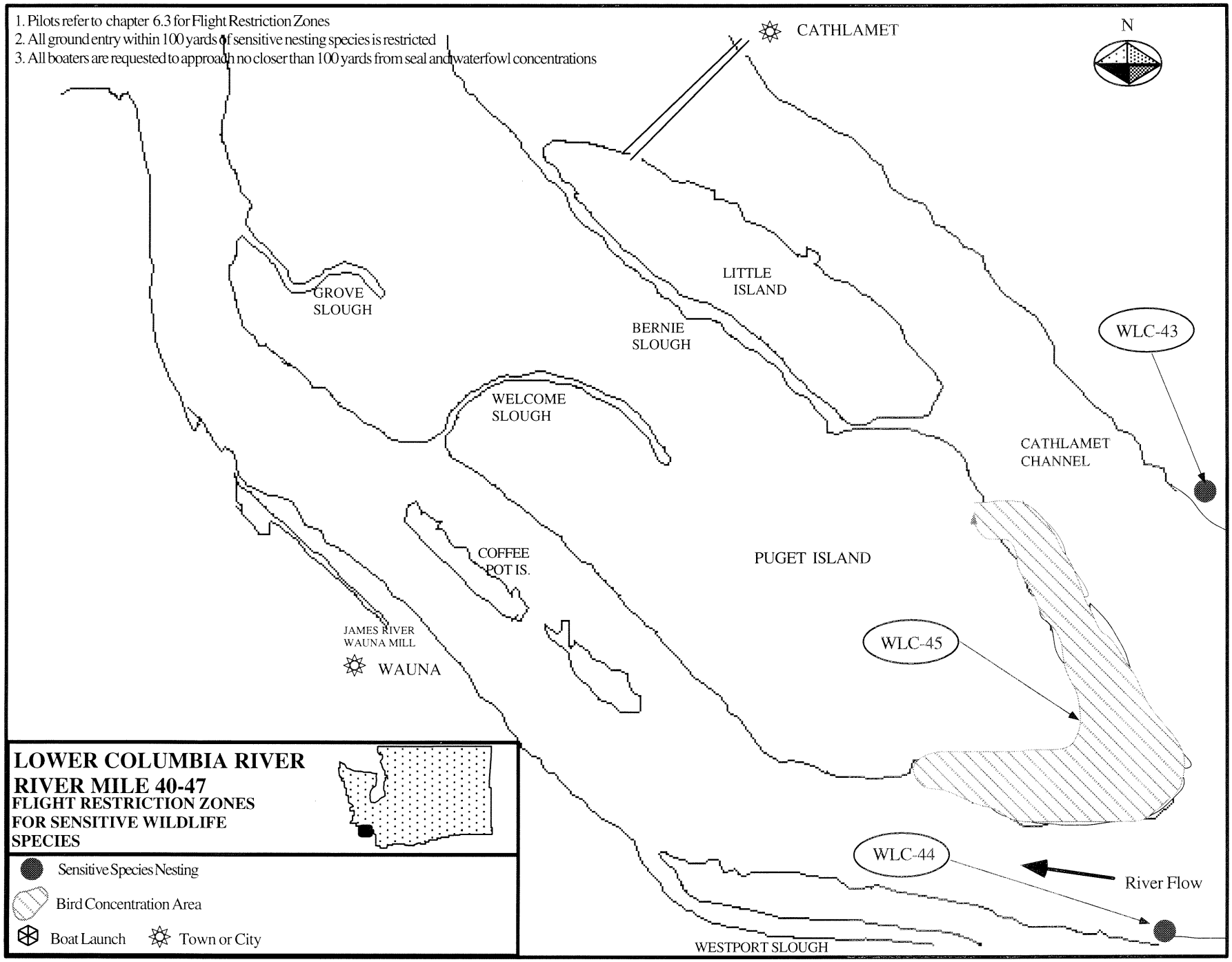
River Mile 40-47												PERIOD OF SENSITIVITY								
Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WLC-43	Nassa Point					Yes		Yes												
WLC-44	Oregon shore south of Puget Island					Yes		Yes												
WLC-45	Puget Island					Yes		Yes												

* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance

Sensitive season - Minimize overflight disturbance

1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations



LOWER COLUMBIA RIVER WILDLIFE RESOURCES

River Mile 30-40

Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
												PERIOD OF SENSITIVITY								
WLC-46	Ryan Island					Yes		Yes												
WLC-47	Elochoman River					Yes		Yes												
WLC-48	Hunting Island					Yes		Yes												
WLC-49	Julia Butler Hanson NWR			Yes				Yes												
WLC-50	Columbia Whitetail Deer NWR			Yes				Yes												
WLC-51	Lewis and Clark NWR			Yes				Yes												
WLC-52	Price Island					Yes		Yes												

LOWER COLUMBIA RIVER FISHERY RESOURCES

River Mile 30-40

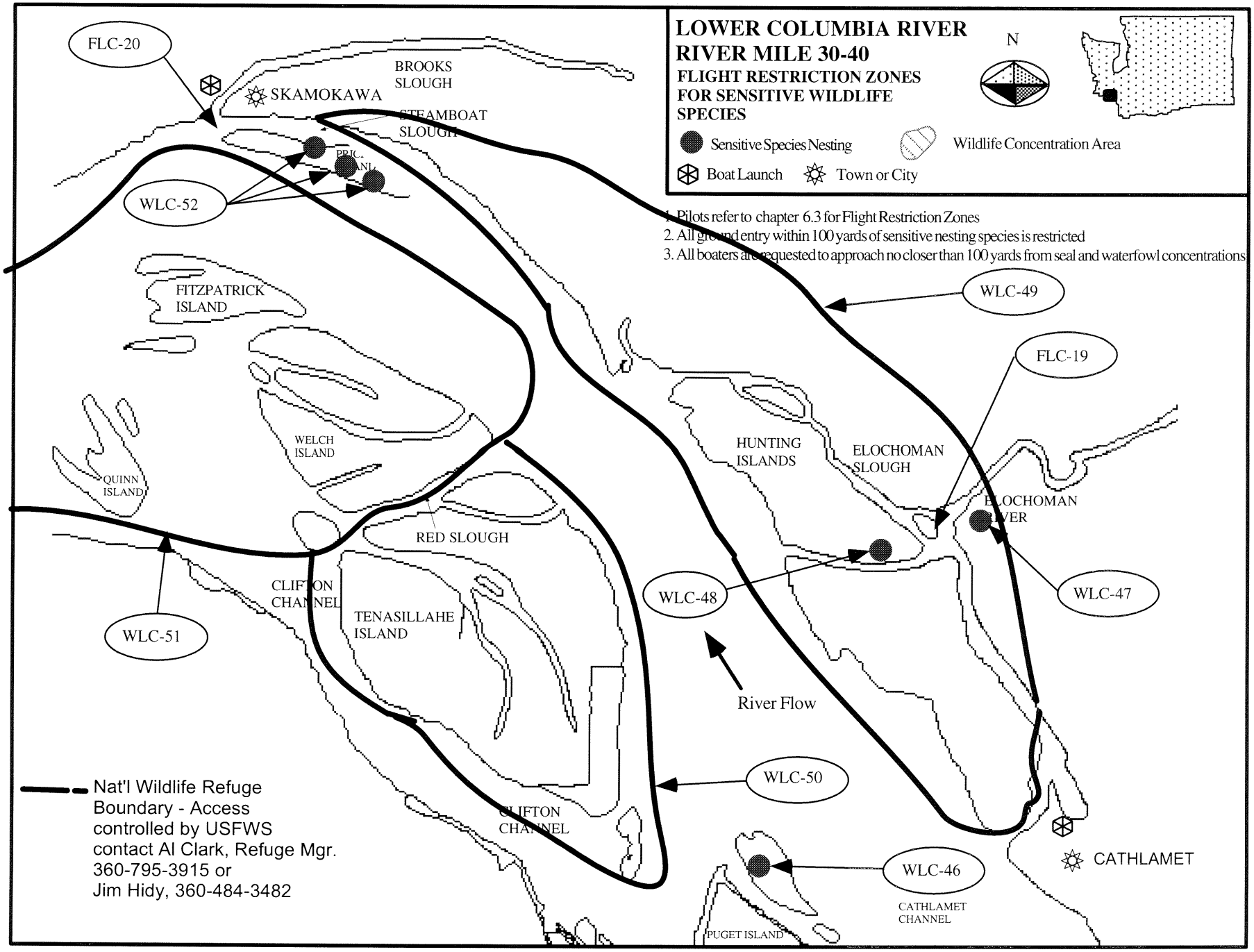
Code	Location	Winter Steelhead	Summer Steelhead	Spring Chinook	Summer Chinook	Fall Chinook	Coho Salmon	Chum Salmon	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
												PERIOD OF SENSITIVITY								
FLC-19	Elochoman River	D				H	D													
FLC-20	Skamokawa Creek	U				H	D													

* FLIGHT AND GROUND ENTRY RESTRICTIONS

- Flights below 1000 feet require clearance
- Nat'l Wildlife Refuge - Access restricted - contact Al Clark - 360-795-3915
- Sensitive season - Minimize seasonal disturbance

FISH STOCK STATUS

- C - CRITICAL
- D - DEPRESSED
- H - HEALTHY
- U - UNKNOWN


LOWER COLUMBIA RIVER
RIVER MILE 30-40
FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES
N
Sensitive Species Nesting
Wildlife Concentration Area
Boat Launch
Town or City
1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations
FLC-20
BROOKS SLOUGH
SKAMOKAWA
STEAMBOAT SLOUGH
WLC-52
FITZPATRICK ISLAND
WELCH ISLAND
QUINN ISLAND
RED SLOUGH
CLIFTON CHANNEL
TENASILLAHE ISLAND
WLC-51
WLC-49
FLC-19
HUNTING ISLANDS
ELOCHOMAN SLOUGH
ELOCHOMAN RIVER
WLC-48
WLC-47
River Flow
WLC-50
CLIFTON CHANNEL
WLC-46
CATHLAMET CHANNEL
PUGET ISLAND
CATHLAMET
Nat'l Wildlife Refuge Boundary - Access controlled by USFWS contact Al Clark, Refuge Mgr. 360-795-3915 or Jim Hidy, 360-484-3482

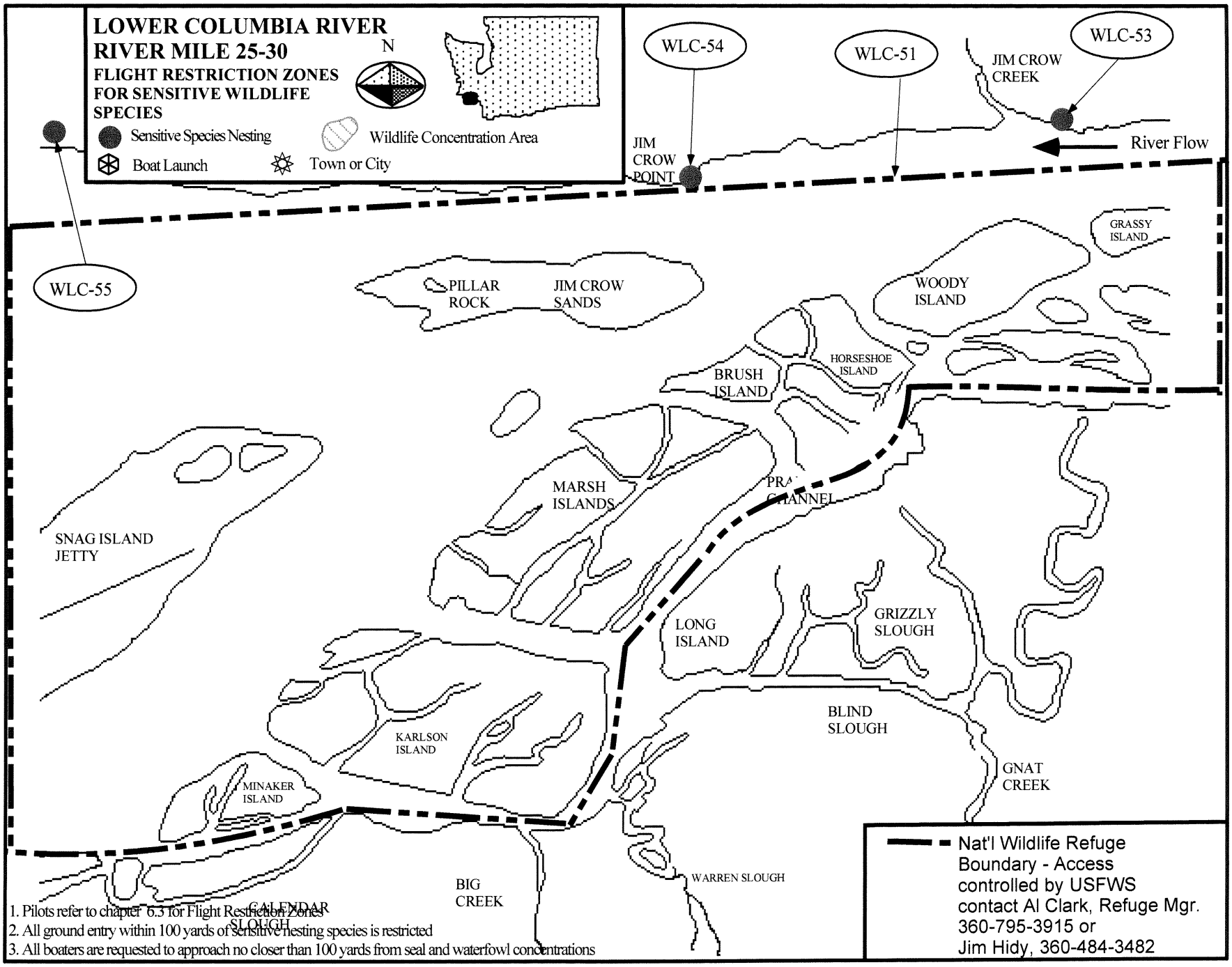
LOWER COLUMBIA RIVER WILDLIFE RESOURCES

River Mile 25-30

Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
									PERIOD OF SENSITIVITY											
WLC-51	Lewis and Clark NWR			Yes	Yes		Yes	Yes												
WLC-53	Jim Crow Creek					Yes		Yes												
WLC-54	Jim Crow Point					Yes		Yes												
WLC-55	Dahlia					Yes		Yes												

* FLIGHT AND GROUND ENTRY RESTRICTIONS

- Flights below 1000 feet require clearance
- Nat'l Wildlife Refuge - Access restricted - contact Al Clark - 360-795-3915
- Sensitive season - Minimize overflight disturbance

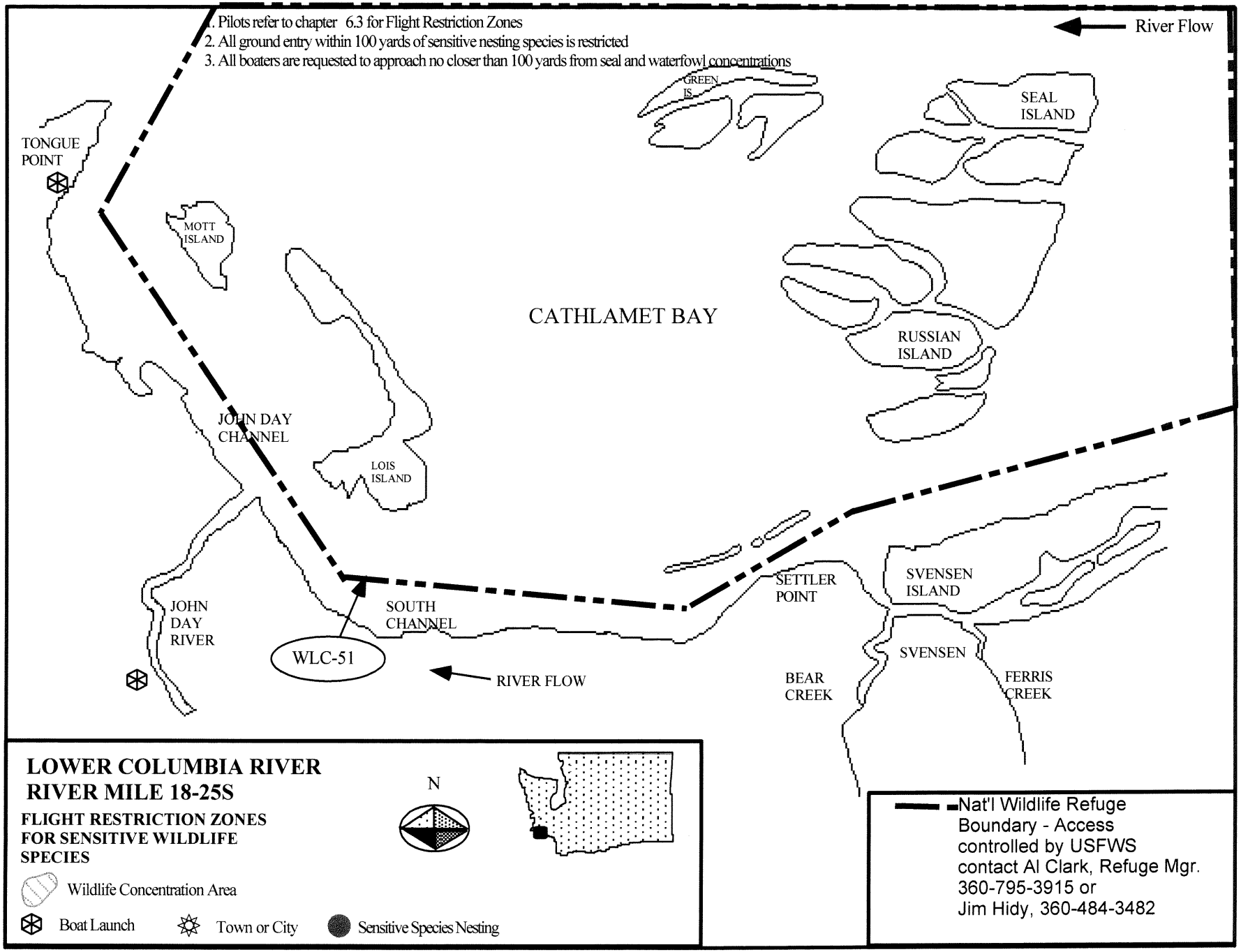

LOWER COLUMBIA RIVER
RIVER MILE 25-30
FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES
N
Sensitive Species Nesting
Wildlife Concentration Area
Boat Launch
Town or City
WLC-54
WLC-51
WLC-53
JIM CROW CREEK
River Flow
JIM CROW POINT
WLC-55
PILLAR ROCK
JIM CROW SANDS
GRASSY ISLAND
WOODY ISLAND
HORSESHOE ISLAND
BRUSH ISLAND
MARSH ISLANDS
SNAG ISLAND JETTY
LONG ISLAND
GRIZZLY SLOUGH
BLIND SLOUGH
KARLSON ISLAND
MINAKER ISLAND
GNAT CREEK
WARREN SLOUGH
BIG CREEK
CALENDAR SLOUGH
Nat'l Wildlife Refuge Boundary - Access controlled by USFWS contact Al Clark, Refuge Mgr. 360-795-3915 or Jim Hidy, 360-484-3482
1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations

LOWER COLUMBIA RIVER WILDLIFE RESOURCES

River Mile 18-25S												PERIOD OF SENSITIVITY								
Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WLC-51	Lewis and Clark NWR			Yes	Yes		Yes	Yes												

* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance
Nat'l Wildlife Refuge - Access restricted - contact Al Clark - 360-795-3915
Sensitive season - Minimize overflight disturbance


1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations
River Flow
GREEN IS.
SEAL ISLAND
TONGUE POINT
MOTT ISLAND
CATHLAMET BAY
RUSSIAN ISLAND
JOHN DAY CHANNEL
LOIS ISLAND
SETTLER POINT
SVENSEN ISLAND
JOHN DAY RIVER
SOUTH CHANNEL
WLC-51
RIVER FLOW
SVENSEN
BEAR CREEK
FERRIS CREEK
LOWER COLUMBIA RIVER
RIVER MILE 18-25S
FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES
N
Wildlife Concentration Area
Boat Launch
Town or City
Sensitive Species Nesting
Nat'l Wildlife Refuge Boundary - Access controlled by USFWS contact Al Clark, Refuge Mgr. 360-795-3915 or Jim Hidy, 360-484-3482

LOWER COLUMBIA RIVER WILDLIFE RESOURCES

River Mile 18-25N												PERIOD OF SENSITIVITY							
Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WLC-56	Gray's River					Yes		Yes												
WLC-57	Harrington Point					Yes		Yes												
WLC-58	Altoona					Yes		Yes												
WLC-59	Miller Sands	Yes		Yes		Yes	Yes	Yes												
WLC-60	Rice Island	Yes		Yes				Yes												
WLC-61	Grays Bay			Yes			Yes	Yes												
WLC-62	Miller Point					Yes		Yes												
WLC-63	Brix Bay					Yes		Yes												
WLC-64	Portugese Point					Yes		Yes												
WLC-65	Grays Point					Yes		Yes												

LOWER COLUMBIA RIVER FISHERY RESOURCES

River Mile 18-25N												PERIOD OF SENSITIVITY							
Code	Location	Winter Steelhead	Summer Steelhead	Spring Chinook	Summer Chinook	Fall Chinook	Coho Salmon	Chum Salmon	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
FLC-21	Gray's River	D				H	D	D												

* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance

Sensitive season - Minimize seasonal disturbance

FISH STOCK STATUS

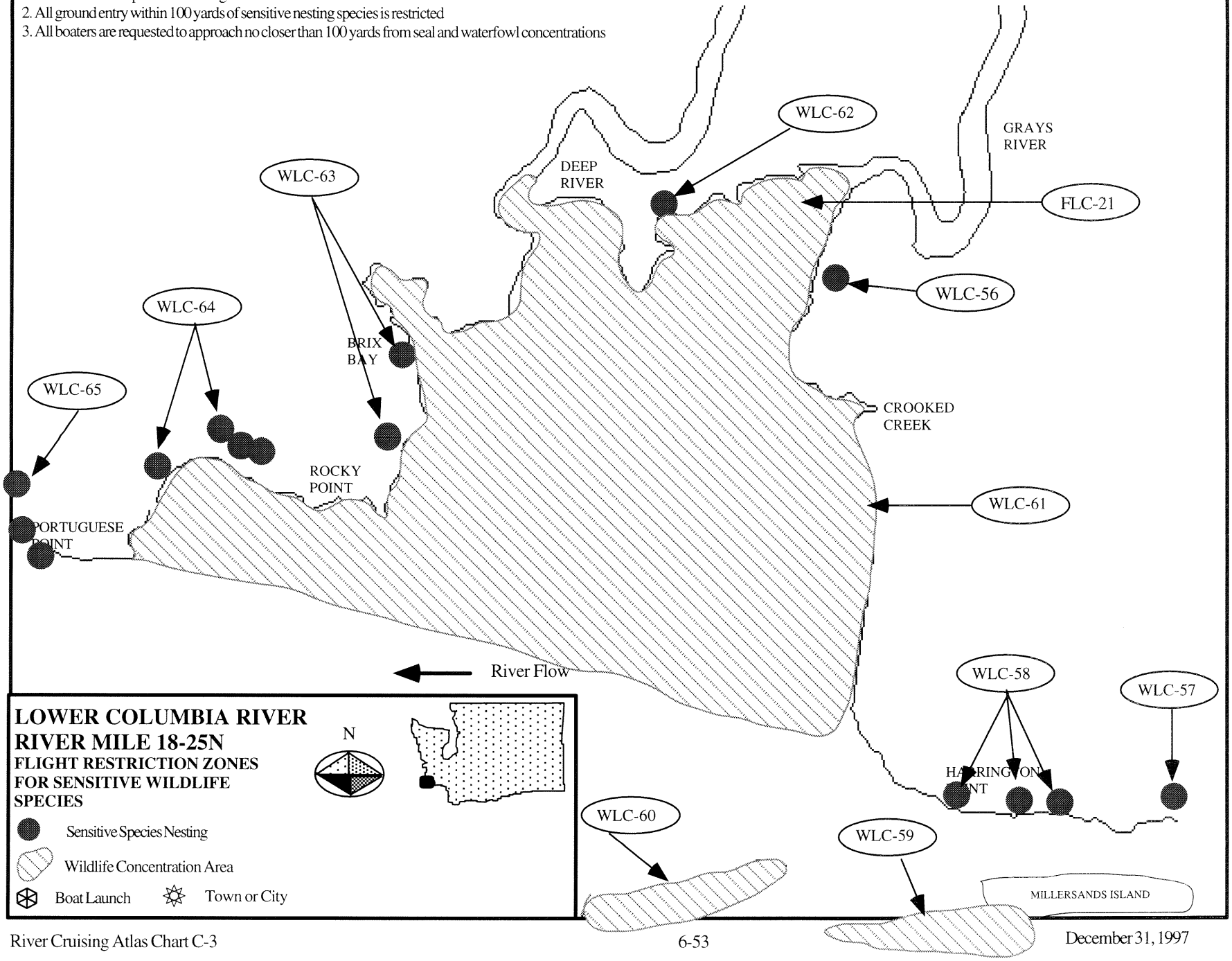
C - CRITICAL

D - DEPRESSED

H - HEALTHY

U - UNKNOWN

1. Pilots refer to chapter 6.3 For Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations



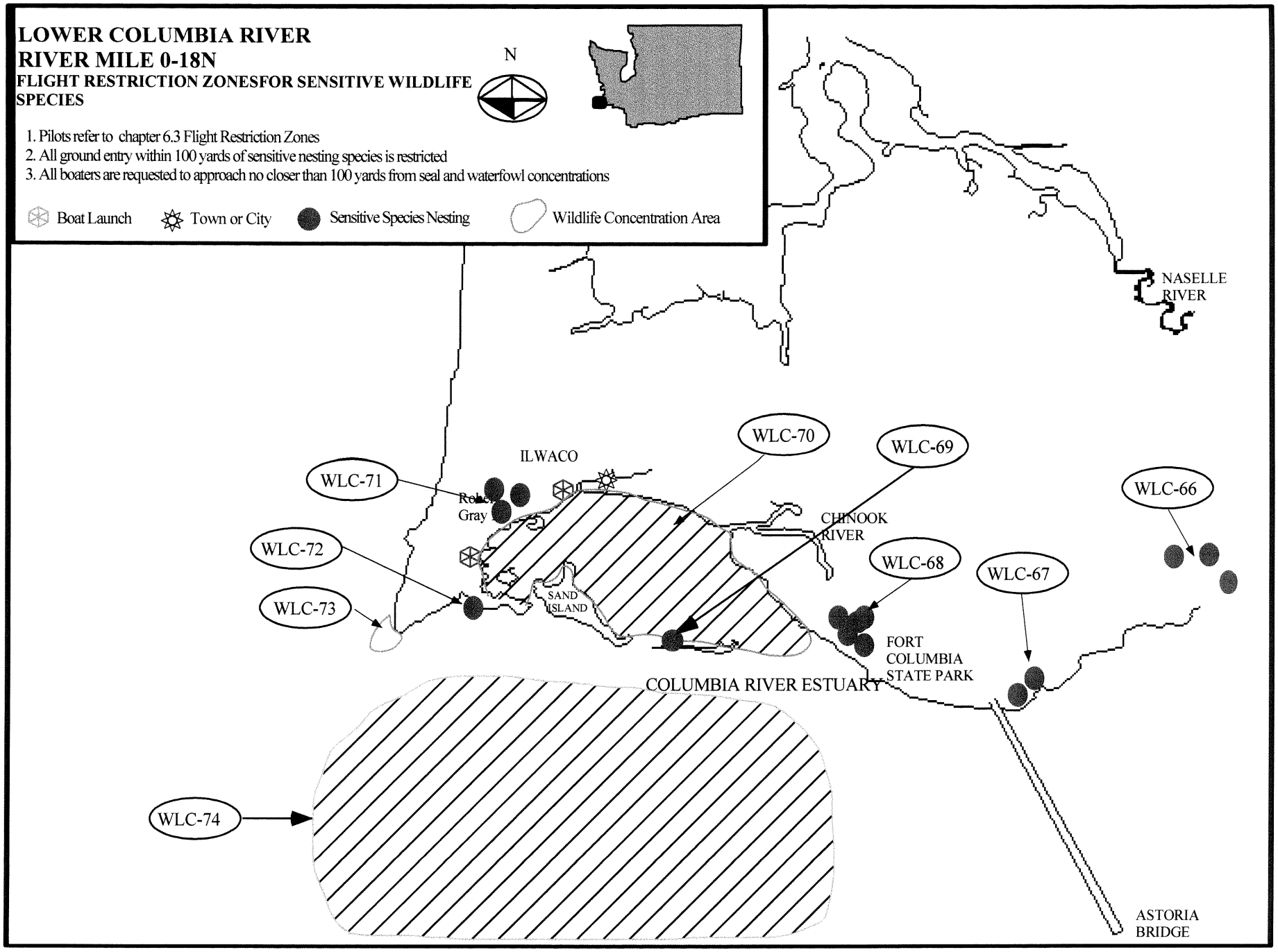
LOWER COLUMBIA RIVER WILDLIFE RESOURCES

River Mile 0-18N												PERIOD OF SENSITIVITY								
Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WLC-66	Cliff Point					Yes		Yes												
WLC-67	Megler					Yes		Yes												
WLC-68	Scarboro Point					Yes		Yes												
WLC-69	Sand Island	Yes						Yes												
WLC-70	Baker Bay			Yes			Yes	Yes												
WLC-71	Fort Canby State Park					Yes		Yes												
WLC-72	Cape Disappointment	Yes				Yes		Yes												
WLC-73	North Jetty		Yes	Yes				Yes												
WLC-74	Columbia River mouth		Yes					Yes												

* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance

Sensitive season - Minimize overflight disturbance


LOWER COLUMBIA RIVER
RIVER MILE 0-18N
FLIGHT RESTRICTION ZONESFOR SENSITIVE WILDLIFE SPECIES
1. Pilots refer to chapter 6.3 Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations
Boat Launch
Town or City
Sensitive Species Nesting
Wildlife Concentration Area
N
NASELLE RIVER
ILWACO
Gray
CHINOOK RIVER
SAND ISLAND
FORT COLUMBIA STATE PARK
COLUMBIA RIVER ESTUARY
ASTORIA BRIDGE
WLC-66
WLC-67
WLC-68
WLC-69
WLC-70
WLC-71
WLC-72
WLC-73
WLC-74

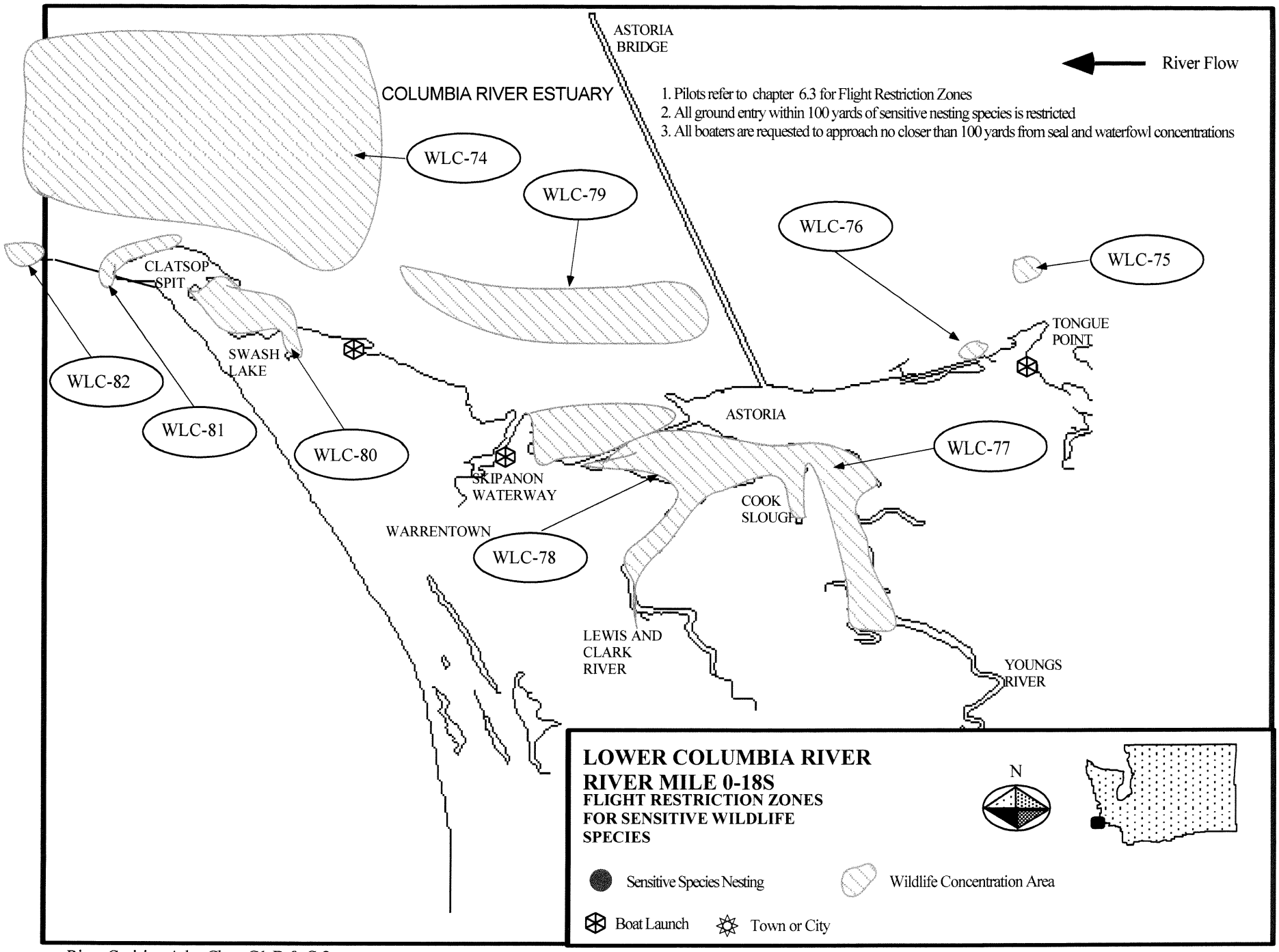
LOWER COLUMBIA RIVER WILDLIFE RESOURCES

River Mile 0-18S												PERIOD OF SENSITIVITY								
Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WLC-74	Columbia River mouth		Yes					Yes												
WLC-75	Tongue Point				Yes															
WLC-76	City Harbor				Yes															
WLC-77	Young's River			Yes				Yes												
WLC-78	Young's Bay			Yes				Yes												
WLC-79	Desdemona Sands				Yes															
WLC-80	Siwash Lake and Jetty Lagoon			Yes				Yes												
WLC-81	Clatsop Spit			Yes				Yes												
WLC-82	South Jetty			Yes				Yes												

* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance

Sensitive season - Minimize overflight disturbance


ASTORIA BRIDGE
River Flow
COLUMBIA RIVER ESTUARY
1. Pilots refer to chapter 6.3 for Flight Restriction Zones
2. All ground entry within 100 yards of sensitive nesting species is restricted
3. All boaters are requested to approach no closer than 100 yards from seal and waterfowl concentrations
WLC-74
WLC-79
WLC-76
WLC-75
CLATSOP SPIT
SWASH LAKE
TONGUE POINT
WLC-82
WLC-81
WLC-80
ASTORIA
WLC-77
SKIPANON WATERWAY
COOK SLOUGH
WARRENTOWN
WLC-78
LEWIS AND CLARK RIVER
YOUNGS RIVER
LOWER COLUMBIA RIVER
RIVER MILE 0-18S
FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES
N
Sensitive Species Nesting
Wildlife Concentration Area
Boat Launch
Town or City

6.7 Downstream Water Users

Because GRPs focus only on protection of public resources, the numerous private water intakes along the lower Willamette and lower Columbia Rivers are not listed in this plan. Key public water intakes within the planning area include:

- Port of Vancouver
- Ridgefield National Wildlife Refuge
- Port of Longview
- Port of Wahkiakum
- Hunting Island – U.S. Fish & Wildlife Service

Most of these sites are also identified under the "Resources Protected" sections of applicable strategy matrices in Section 4.3.