Section 9422 Shoreline Segmentation Guidance for Shoreline Cleanup and Assessment Technique (SCAT)

Table of Contents

Section **Page**

9422

Shoreline Segmentation Guidance for Shoreline Cleanup and Assessment Technique (SCAT)

9422.1 Introduction

This section provides guidelines for processes through which shorelines in Washington and Oregon may be segmented for Shoreline Cleanup Assessment Technique (SCAT) programs and other activities supporting a response or other spill-related activities.

These guidelines were developed by the Northwest Area Committee (NWAC) 2014 SCAT Pre-Segmentation Task Force as part of a phased approach to encourage the "pre-segmentation" of the coastal shorelines in the NWAC region (i.e., Oregon and Washington shorelines), prior to a spill. The NWAC anticipates that these guidelines can be used during any shoreline segmentation efforts being conducted by stakeholders throughout the region.

The ultimate objective of the segmentation process is to generate a comprehensive, region-wide Phase 1 baseline to which data can be added on an as-needed basis for planning, drills, exercises, and surveys during a spill response or as part of a Phase 2 program. All segmentation efforts made in this region should be shared with the NWAC and should follow this structure and recommended template to ensure compatibility across the region. Phase 2 segmentation efforts are recommended as an expansion of documentation to include linkages with other spill response attributes (e.g., Geographic Response Plan strategies, cleanup options, etc.) and other information as appropriate.

9422.2 Objectives for Naming and Defining Segments

In determining shoreline segments, NWAC the following guiding objectives are recommended by the NWAC:

- Each segment should have similar geomorphology throughout.
- Segment endpoints should be easily recognizable in the field.
- Size may vary, but 0.2–2.0 kilometers (km) is a typical segment length range.

- The segment naming convention should be standardized based on the state, county, local geographic name, segment number, and sub-segment, to include:
  - Two-digit alphabetical state code
  - Four-digit alphabetical county code
  - Three-digit alphabetical geographic code
  - Four-digit numeric code for segment number
  - Single digit alphabetical code (typically lower case) for sub-segment, if needed to support operations
  - Example: **WA-KITS-EGL-0015d**
    - WA – state
    - KITS – county
    - EGL – geographic segment group = Eagle Harbor (ideally, this will be a unique statewide code, i.e., there will be no other "EGL" geographic codes in Washington; a 3-alpha system allows for [26x26x26] 17,576 alphanumeric options)
    - 0015 – segment number
    - d – operations sub-segment
- Crew access should be considered when defining sub-segments (i.e., breaks based on viable access points).
- Segments should break (end/begin) at county boundaries to facilitate jurisdictional tracking and reporting.
- Sub-segments of fixed lengths should be considered for use along uniform shorelines with consistent access but without visual reference points.

9422.3 Phase 1 of Segmentation of Northwest Area Committee Coastal Shorelines

Suggested actions for the initial phase of segmenting NWAC coastal shorelines include:

- The ShoreZone datasets are used as the basis for shoreline segmentation process. This dataset includes and employs more complete data, cross shore character, and visually identifiable endpoints for units.
- Apply a British Columbia (BC) Geographic Response Plan Class to Environmental Sensitivity Index (ESI) conversion, if needed, using an appropriate table provided in Section 9422.6, below.
- Identify standardized geographic areas (ex. Elliot Bay;
- Identify where sub-segmentation of ShoreZone units is required due to jurisdictional boundaries
  - Counties (if not already utilized)
  - Tribal Lands
  - Federal Lands
  - Military Lands
- Identify where sub-segmentation of ShoreZone units is required due to:
  - River or large stream mouths (or delta)

- Segment length. General guideline is for segment length to be less than 2 km.
- Develop and populate a standardized attribute table for each segmentation effort (see field descriptors below.

Once a section of shoreline has been segmented, and the associated attribute table is populated, the results will be posted on the NWAC website (www.rrt10nwac.com) for review. The NWAC Steering Committee will review the initial results of early segmentation efforts to ensure that the process is and remains viable.

If changes to process or new assumptions are required to make decisions or improve the output, these should be documented and reviewed by the NWAC Steering Committee (send to muller.lori@epa.gov and mailto:elizabeth.j.petras@uscg.mil).

9422.4 Phase 2 of Segmentation of Northwest Area Committee Coastal Shorelines

Once the initial segmentation process has been completed, the opportunity will exist to link additional information to the shoreline segments. The following are options identified to date.

ACTION

- Develop a simplified list of shoreline category types and conversion table to the 39 BC codes (and possibly ESI codes).
- Link/add new simplified shoreline type category information to the attribute table.
- Add coastal character and/or backshore information for each segment
- Link individual Geographic Response Plan booming strategies to relevant shoreline segments.
- Link potential cleanup options to relevant shoreline segments.
- Link shoreline access information to shoreline segments.

9422.5 General Guidelines for Conducting the Shoreline Segmentation Process

The following are examples and the locations of data layers that are needed to conduct the shoreline segmentation process.

From http://www.dnr.wa.gov/GIS

- Washington State Department of Natural Resources (DNR): szlineth.shp – Used as the base layer.
- DNR: county.shp for county boundaries.
- DNR: Major Public Lands (non-DNR) – June, 2013 primarily for identification (ID) of various (non-DNR) public entity ownership.
- DNR "Over Water Structures (Marine) on State Aquatic Lands"
- DNR "Transportation (by County) – April 2014"

From http://www.ecy.wa.gov/services/gis/data/data.htm

- Washington Public Beach Access Points
- State Tribal Lands

Attribute Table Edits

Create copy of szlineth.shp. Rename as "county"+ "_shrlineseg.shp" or similar. Delete all fields from copy of szlineth.shp except:

- FID
- Shape
- length
- unit_ID
- bcname
- shorename
- exp_class
- Sm1_type

Add fields (and aliases as needed) per final attribute table discussion:

ESI_Class
Countycode
County_seg
Subseg_code
Shoreline_type
Segment_length
Geo_code
Seg_ID
Seg_ID_short

Basic Data Entry Process

1. Input state name.
2. Input county name.
3. Edit shorename as necessary to define standardized location descriptions.
4. Develop and input geographic code (from shorename).
5. Input state code.
6. Develop and input county code.

Sub-division Process

1. Sub-divide ShoreZone segments at county boundaries.
2. Sub-divide ShoreZone segments at any tribal reservation boundaries.
3. Sub-divide ShoreZone segments at any federal boundaries.
4. Sub-divide ShoreZone segments at any military boundaries.
5. Query existing sz_lineth.shp length field for values greater than 2 km (note: values in this field are in feet). For segments with length values greater than 2 km, manually sub-divide segments at logical points (road ends, piers, boat ramps, obvious geological features, etc.). Use the transportation, overwater structures, public access, or other appropriate layers for this process as needed.

6. Create new sequential county segment number. (increasing E to W, N to S) where possible.
7. Create new segment ID for each segment (State_code)-(County_code)-(Geo_code)-(County_Seg)-(Subseg).
8. Calculate start latitude and longitude for each segment. Populate Lat_start and Long_start.
9. Calculate stop latitude and longitude for each segment. Populate Lat_stop and Long_stop.
10. Calculate midpoint latitude and longitude for each segment. Populate Lat_mid and Long_mid.
11. Calculate new segment lengths (meters). Populate Segment_length

9422.6 Conversion Guidance Table from Shorezone to Environmental Sensitivity Index Shoreline Types

(adapted from Alaska ShoreZone Coastal Mapping Protocol, 1/2014. pp. 47-48), recommended for use as needed.

Substrate	Shore Type	Environmental Sensitivity Index Designation Guideline
Rock	1 2	• If Exposure >= SE then ESI 2A • If Exposure <= SP then ESI 8A (possible ESI 8B if sediment pockets present or lots of fissures)
	3 4 5	• If Exposure >= SE then ESI 1A • If Exposure <= SP then ESI 8A (possible 8B if sediment pockets present or lots of fissures)
Rock + Sediment	6 7	• If >=50% beach sediment then ESI 6A and 6B • If > 50% rock with beach pockets and Exposure >= SE then 2A • If > 50% rock with cobble/pebble beach pockets and Exposure <= SP then 8B (boulders can be present but less abundant than cobble/pebble) • If > 50% rock with boulder/rubble beach pockets and Exposure <= SP then 8D (cobble/pebble can be present but less abundant than boulder)
	8 9 10	• If >=50% beach in unit then ESI 6A and 6B • If mostly talus and Exposure >= SE then 1C • If mostly cobble/pebble talus and Exposure <= SP then 8B (boulders can be present but less abundant than cobble/pebble) • If mostly boulder/rubble talus and Exposure <= SP then 8D (cobble/pebble can be present but less abundant than boulder)
	11 12 13	[There must be >25% sand in the unit for these BC classes to be assigned.]

Substrate	Shore Type	Environmental Sensitivity Index Designation Guideline
	14 15	• If Exposure >= SE and it meets ESI 7 requirements (see protocol) then ESI 7 • If Exposure <= SP and it meets ESI 9A requirements (see protocol) then ESI 9A • Otherwise assign ESI 5. If sand is <25%, reassess the BC class.
	16 17 18 19 20	[There must be >25% sand in the unit for these BC classes to be assigned.] • If Exposure >= SE and it meets ESI 7 requirements (see protocol) then ESI 7 • If Exposure <= SP and it meets ESI 9A requirements (see protocol) then ESI 9A • Otherwise assign ESI 3A or 4. If sand is <25%, reassess the BC class. Refer to BC 27 for guidelines on sediment size.
Sediment	21 22 23	• If Exposure >= SE and it meets ESI 7 requirements (see protocol) then ESI 7 • If Exposure <= SP and it meets ESI 9A requirements (see protocol) then ESI 9A • If it does not meet the above requirements then ESI 6A or 6B
	24	• If Exposure >= SE and it meets ESI 7 requirements (see protocol) then ESI 7 • If Exposure <= SP and it meets ESI 9A requirements (see protocol) then ESI 9A • If it does not meet the above requirements then ESI 5
	25	• ESI 5
	26	• ESI 5
	27	• If sediment size if less than 2 mm then ESI 3A • If sediment size is greater than 2 mm up to pebbles then ESI 4 • If there are pebbles in the XShr then lean towards ESI 4; if there are no pebbles then lean towards ESI 3A.
	28	• If Exposure >= SE and it meets ESI 7 requirements (see protocol) then ESI 7 • If Exposure <= SP and it meets ESI 9A requirements (see protocol) then ESI 9A • If it does not meet the above requirements then ESI 3A or 4. Refer to BC 27 for guidelines on sediment size.
	29	• If Exposure >= SE and it meets ESI 7 requirements (see protocol) then ESI 7 • If Exposure <= SP and it meets ESI 9A requirements (see protocol) then ESI 9A
	30	• ESI 3A or 4 (refer to BC 27)

Substrate	Shore Type	Environmental Sensitivity Index Designation Guideline
Estuarine	31	• If >50% marsh in the A and B zone combined then ESI 10A • If the biologist comments on the marsh being predominately freshwater, ESI 10B can be used. • If the ESI 9A requirements are met (see protocol), then 9A can be used for large tidal flats or deltas and 9B can be used in lagoon areas. • If none of the above requirements are met, assign ESI class based on the dominant Form.
Anthropogenic	32	• If it is rip rap then ESI 6C • If Exposure <=SP then 8B • If Exposure >=SE then 1B
	33	• If Exposure <=SP then 8B • If Exposure >=SE then 1B
Current - Dominated	34	• Decide what Shore Type you would assign if you did not assign a BC 34, then assign and ESI class based on that.

*** Wave Exposure Categories:** VE – Very Exposed; E – Exposed; SE – Semi-exposed; SP – Semi-protected; P – Protected; VP – Very Protected

** Per Alaska ShoreZone Coastal Mapping Protocol, 1/2014. pp. 47-48.

9422.7 Segment Attributes Table

The NWAC recommends that the following segment attributes be used as appropriate during segmentation efforts in the region to promote consistency.

Data Source	Field	Alias	Description	Notes	Process
DNR ShoreZone	FID	FID	ArcView unique ID		
DNR ShoreZone	Shape	Shape	ArcView shape type		
DNR ShoreZone	Length	Length	Original segment length field	Note: values in feet.	
DNR ShoreZone	unit_id	SZ Segment ID	Unique Identifier for Unit Records	This field can be used link back to SZ tables	
DNR ShoreZone	bc_class	BC Classification	Number code for the British Columbia 'coastal class' or 'shoreline type'.	# codes will be text in attribute table (Interim)	To be used in conversion to NOAA Shoreline Type.
DNR ShoreZone	shorename	Geographic name	Name of a prominent geographic feature near the unit	Used to facilitate searches. May need to be edited or modified.	
DNR ShoreZone	exp_class	Exposure class	Best info on segment exposure to wave energy	Used for ESI calculation. (Interim)	
DNR ShoreZone	szlnend	Segment End Points	Segment end points in Shorezone.	recalculate after sub segmenting	
DNR ShoreZone	Sm1_Type	Shoreline Modification Type	Primary type of shoreline modification occurring within the unit.	Modifying information to shoreline type	
Field calculate	ESI_Class	ESI Shoreline Classification	Describes the predominant shoreline type for the segment.	convert BC class to NOAA classes—all codes as text	

Data Source	Field	Alias	Description	Notes	Process
Field calculate	ESI_code	ESI Shoreline Type code	Code for predominant shoreline type	convert BC class to NOAA classes, entering all codes as text	Use AK process for converting from bc_class to ESI. Will require use of shoreline exposure (exp_class) and creating a lookup table.
Field calculate	Lat_Start	Latitude Start	Latitude of segment start endpoint	Use for defining segment ends.	
Field calculate	Long_Start	Longitude Start	Longitude of segment start endpoint	Use for defining segment ends.	
Field calculate	Lat_Stop	Latitude Start	Latitude of segment stop endpoint	Use for defining segment ends.	
Field calculate	Long_Stop	Longitude Start	Longitude of segment stop endpoint	Use for defining segment ends.	
Field calculate	Lat_Mid	Latitude Midpoint	Latitude of segment midpoint	This is the midpoint of a segment. This can be used for linking attributes to a segment for sit/stat.	
Field calculate	Long_Mid	Longitude Midpoint	Longitude of segment midpoint	This is the midpoint of a segment. This can be used for linking attributes to a segment for sit/stat.	
Field calculate	Seg_length	Segment Length	Calculated new segment length	Length in meters	
DNR county.shp	State_nm	State name	Name of state containing segment	listed to facilitate searches	Used for creation of Segment ID
DNR county.shp	Cnty_nm	County name	Name of county containing segment	Used for creation of Segment ID	
Field calculate	State_code	State code	Unique code of state containing segment	Used for creation of segment ID (Interim)	2 digit alpha code created from first letter of state name

Data Source	Field	Alias	Description	Notes	Process
Field calculate	Cnty_code	County code	Unique code associated with county	Used for creation of segment ID (Interim)	4 digit alpha code created from first four letters of county name
Manual	Geo_code	Geographic code	Unique code associated with geo area	Used for the creation of the segment ID (Interim)	3 digit alpha code created from shorename or other
Field calculate	Cty_id	County Segment Number	Unique segment number within county	Used for creation of Segment ID. (Interim)	4 digit numeric. Sequential numbering within each county. Follow format developed during DWH (increasing E to W, N to S) where possible.
Field calculate	Subseg_code	Sub segment Name	Unique sub-segment (if necessary)	Placeholder: Single digit alpha code to be used if an established segment needed to be subdivided at the time of a response.	1 digit alpha code. Likely only needed for operational considerations.
Field calculate	Seg_id	Segment ID	Unique Alpha Numeric Segment Name	Created from Segment ID + State+Geo+County+subsegment	14 digit alpha/numeric code
Field calculate	Seg_ID_short	Shortened Segment ID	Unique alphanumeric segment name that has been truncated for particular incident response	Placeholder: to be created from Segment ID by removing State/County/Geo/ as desired.	Similar to Seg_ID above but as reduced as needed.

Key:
AK Alaska
BC British Columbia
DNR Washington Department of Natural Resources
ESI Environmental Sensitivity Index
ID identifier
NOAA National Oceanic and Atmospheric Administration
SZ Shore Zone

9422.8 Example of Segmentation Process - Elliott Bay, Washington

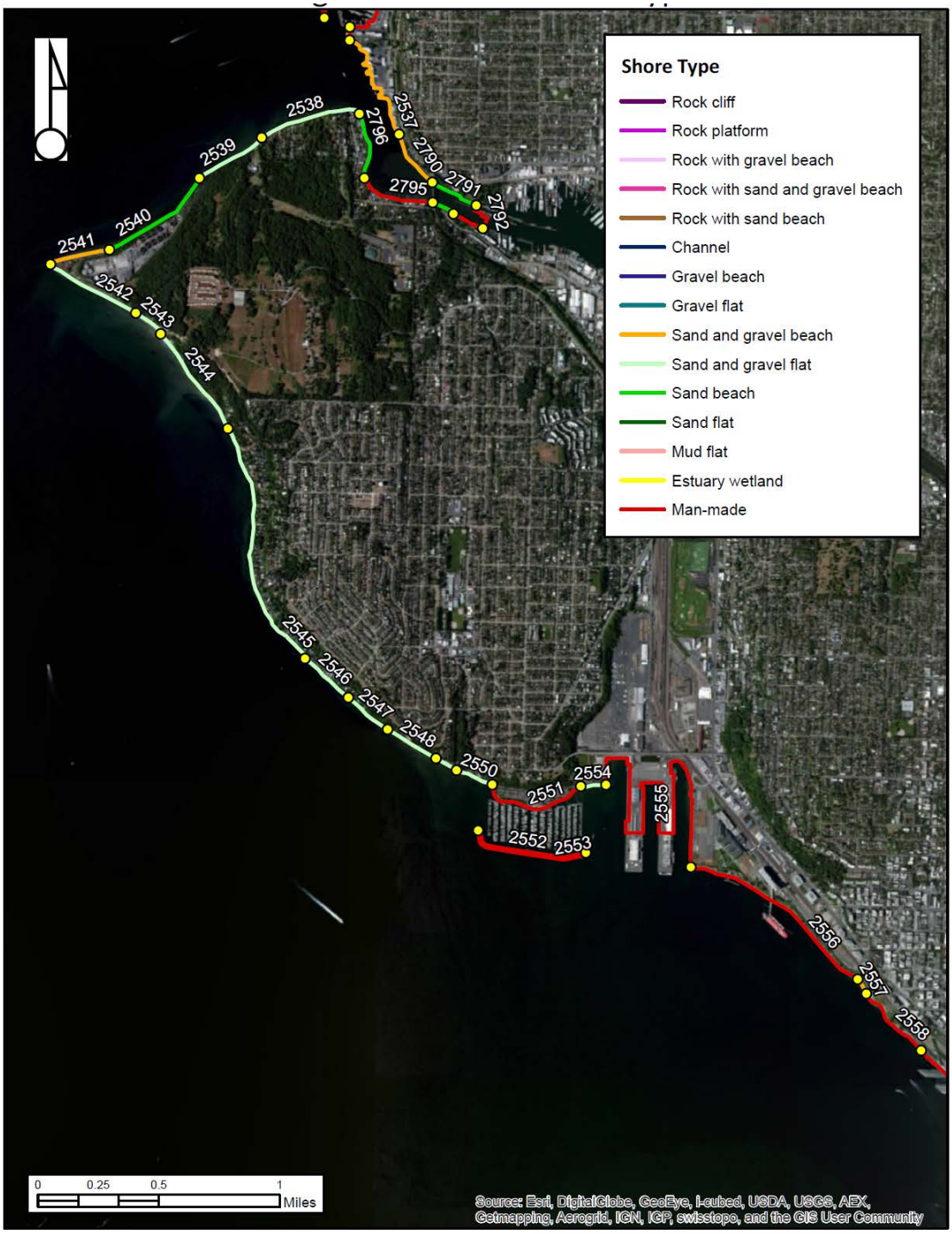

Figure 9422-1 Raw Segmentation Map Derived from Shorezone Based on the 15 Shore Types in the Database

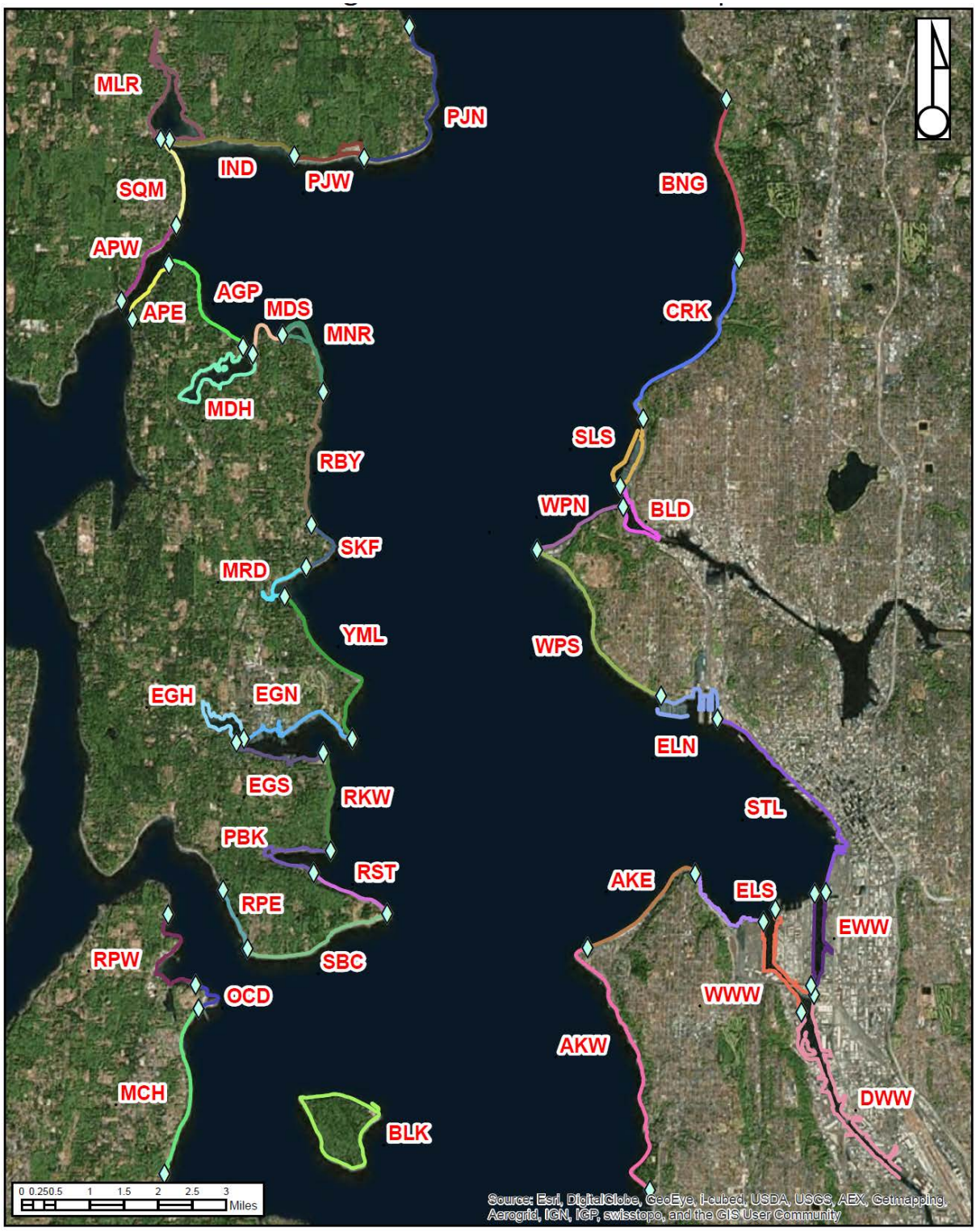

Figure 9422-2 Grouping of Segments by Geographic Area (Segment Group).
Names and abbreviations are summarized in Table 9422-1

STATE CODE	COUNTY CODE	GEOGRAPHIC AREA (SEGMENT GROUP) ID	GEOGRAPHIC AREA (SEGMENT GROUP) NAME	NUMBER OF SEGMENTS IN AREA/GROUP
WA	KNG	BNG	Boeing Creek	3
WA	KNG	CRK	Carkeek Park	10
WA	KNG	SLS	Shilshole	4
WA	KNG	BLD	Ballard	8
WA	KNG	WPN	West Point North	4
WA	KNG	WPS	West Point South	9
WA	KNG	ELN	Elliott Bay North	5
WA	KNG	STL	Seattle Downtown	7
WA	KNG	EWW	East Waterway	8
WA	KNG	WWW	West Waterway	6
WA	KNG	DWW	Duwamish Waterway	20
WA	KNG	ELS	Elliott Bay South	4
WA	KNG	AKE	Alkai Point East	5
WA	KNG	AKW	Alkai Point West	13
WA	KNG	MCH	Manchester	6
WA	KIT	BLK	Blake Island	11
WA	KIT	OCD	Orchard Point	5
WA	KIT	RPW	Rich Passage West	15
WA	KIT	RPE	Rich Passage East	5
WA	KIT	SBC	South Beach	9
WA	KIT	RST	Restoration Point	5
WA	KIT	PBK	Port Blakely	11
WA	KIT	RKW	Rockaway	5
WA	KIT	EGS	Eagle Harbor South	8
WA	KIT	EGH	Eagle Harbor	8
WA	KIT	EGN	Eagle Harbour North	13
WA	KIT	YML	Yeomalt Point	13
WA	KIT	MRD	Murden Cove	7
WA	KIT	SKF	Skiff Point	4
WA	KIT	RBY	Rolling Bay	6
WA	KIT	MNR	Point Monroe	6
WA	KIT	MDS	Port Madison	5
WA	KIT	MDH	Port Madison Harbor	16
WA	KIT	AGP	Agate Pont	9
WA	KIT	APE	Agate Pass East	4
WA	KIT	APW	Agate Pass West	5
WA	KIT	SQM	Suquamish	4
WA	KIT	MLR	Miller Bay	12
WA	KIT	IND	Indianola	3
WA	KIT	PJW	Point Jefferson West	4
WA	KIT	PJN	Point Jefferson North	11
WA	KNG	HRB	Harbor Island	2
			TOTAL	318

Table 9422-1 Geographic Area Abbreviations (Segment Groups)

Figure 9422-3 Map of Shore types and Segment Identification Based on Geographic Areas (Segment Group)

State	County	Group	Segment	Length (ft)	BC_CLASS	BC_NAME	REP_CODE	REP_NAME	Shorezone Unit_ID
WA	KIT	YML	1	122	21	Gravel flat, wide	15	Gravel flat	3155
WA	KIT	YML	2	245	22	Gravel beach, narrow	7	Gravel beach	3156
WA	KIT	YML	3	712	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3157
WA	KIT	YML	4	3609	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3158
WA	KIT	YML	5	347	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3159
WA	KIT	YML	6	328	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3160
WA	KIT	YML	7	2014	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3161
WA	KIT	YML	8	1960	30	Sand beach	9	Sand beach	3162
WA	KIT	YML	9	1718	24	Sand and gravel flat or fan	14	Sand and gravel flat	3163
WA	KIT	YML	10	1121	24	Sand and gravel flat or fan	14	Sand and gravel flat	3164
WA	KIT	YML	11	185	24	Sand and gravel flat or fan	14	Sand and gravel flat	3165
WA	KIT	YML	12	1424	24	Sand and gravel flat or fan	14	Sand and gravel flat	3166
WA	KIT	YML	13	601	28	Sand flat	10	Sand flat	3167
WA	KIT	AGP	1	2000	24	Sand and gravel flat or fan	14	Sand and gravel flat	3212
WA	KIT	AGP	2	1962	28	Sand flat	10	Sand flat	3213
WA	KIT	AGP	3	664	24	Sand and gravel flat or fan	14	Sand and gravel flat	3214
WA	KIT	AGP	4	1427	24	Sand and gravel flat or fan	14	Sand and gravel flat	3215
WA	KIT	AGP	5	916	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3216
WA	KIT	AGP	6	1657	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3217
WA	KIT	AGP	7	322	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3218
WA	KIT	AGP	8	526	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3219
WA	KIT	AGP	9	629	30	Sand beach	9	Sand beach	3220
WA	KIT	APE	1	2115	30	Sand beach	9	Sand beach	3221
WA	KIT	APE	2	1006	30	Sand beach	9	Sand beach	3222
WA	KIT	APE	3	1549	30	Sand beach	9	Sand beach	3223
WA	KIT	APE	4	783	30	Sand beach	9	Sand beach	3487
WA	KIT	APW	1	1012	30	Sand beach	9	Sand beach	3224
WA	KIT	APW	2	2445	30	Sand beach	9	Sand beach	3225
WA	KIT	APW	3	1819	27	Sand beach	9	Sand beach	3226
WA	KIT	APW	4	1181	30	Sand beach	9	Sand beach	3227
WA	KIT	APW	5	1074	27	Sand beach	9	Sand beach	3228
WA	KIT	BLK	1	681	30	Sand beach	9	Sand beach	3303
WA	KIT	BLK	2	3875	30	Sand beach	9	Sand beach	3304
WA	KIT	BLK	3	2380	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3305
WA	KIT	BLK	4	1463	24	Sand and gravel flat or fan	14	Sand and gravel flat	3306
WA	KIT	BLK	5	1505	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3307
WA	KIT	BLK	6	1189	24	Sand and gravel flat or fan	14	Sand and gravel flat	3308
WA	KIT	BLK	7	1922	27	Sand beach	9	Sand beach	3309

State	County	Group	Segment	Length (ft)	BC_CLASS	BC_NAME	REP_CODE	REP_NAME	Shorezone Unit_ID
WA	KIT	BLK	8	1564	32	Man-made, permeable	13	Man-made	3310
WA	KIT	BLK	9	804	32	Man-made, permeable	13	Man-made	3311
WA	KIT	BLK	10	4798	24	Sand and gravel flat or fan	14	Sand and gravel flat	3312
WA	KIT	BLK	11	761	27	Sand beach	9	Sand beach	3313
WA	KIT	EGH	1	1196	28	Sand flat	10	Sand flat	3134
WA	KIT	EGH	2	721	30	Sand beach	9	Sand beach	3135
WA	KIT	EGH	3	1397	29	Mud flat	11	Mud flat	3136
WA	KIT	EGH	4	1776	29	Mud flat	11	Mud flat	3137
WA	KIT	EGH	5	1762	29	Mud flat	11	Mud flat	3138
WA	KIT	EGH	6	1491	29	Mud flat	11	Mud flat	3139
WA	KIT	EGH	7	1145	29	Mud flat	11	Mud flat	3140
WA	KIT	EGH	8	2405	30	Sand beach	9	Sand beach	3141
WA	KIT	EGN	1	377	30	Sand beach	9	Sand beach	3142
WA	KIT	EGN	2	715	30	Sand beach	9	Sand beach	3143
WA	KIT	EGN	3	504	30	Sand beach	9	Sand beach	3144
WA	KIT	EGN	4	791	29	Mud flat	11	Mud flat	3145
WA	KIT	EGN	5	501	30	Sand beach	9	Sand beach	3146
WA	KIT	EGN	6	2368	29	Mud flat	11	Mud flat	3147
WA	KIT	EGN	7	661	32	Man-made, permeable	13	Man-made	3148
WA	KIT	EGN	8	2012	24	Sand and gravel flat or fan	14	Sand and gravel flat	3149
WA	KIT	EGN	9	2090	24	Sand and gravel flat or fan	14	Sand and gravel flat	3150
WA	KIT	EGN	10	922	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3151
WA	KIT	EGN	11	834	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3152
WA	KIT	EGN	12	350	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3153
WA	KIT	EGN	13	731	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3154
WA	KIT	EGS	1	547	24	Sand and gravel flat or fan	14	Sand and gravel flat	3126
WA	KIT	EGS	2	1065	32	Man-made, permeable	13	Man-made	3127
WA	KIT	EGS	3	416	32	Man-made, permeable	13	Man-made	3128
WA	KIT	EGS	4	463	26	Sand and gravel flat or fan	8	Sand and gravel beach	3129
WA	KIT	EGS	5	1496	30	Sand beach	9	Sand beach	3130
WA	KIT	EGS	6	380	26	Sand and gravel flat or fan	8	Sand and gravel beach	3131
WA	KIT	EGS	7	2754	26	Sand and gravel flat or fan	8	Sand and gravel beach	3132
WA	KIT	EGS	8	1126	24	Sand and gravel flat or fan	14	Sand and gravel flat	3133
WA	KIT	IND	1	1304	30	Sand beach	9	Sand beach	3245
WA	KIT	IND	2	3748	28	Sand flat	10	Sand flat	3246
WA	KIT	IND	3	5242	28	Sand flat	10	Sand flat	3247
WA	KIT	MDH	1	700	30	Sand beach	9	Sand beach	3196
WA	KIT	MDH	2	3195	29	Mud flat	11	Mud flat	3197
WA	KIT	MDH	3	1078	29	Mud flat	11	Mud flat	3198

State	County	Group	Segment	Length (ft)	BC_CLASS	BC_NAME	REP_CODE	REP_NAME	Shorezone Unit_ID
WA	KIT	MDH	4	1114	29	Mud flat	11	Mud flat	3199
WA	KIT	MDH	5	1298	29	Mud flat	11	Mud flat	3200
WA	KIT	MDH	6	1173	29	Mud flat	11	Mud flat	3201
WA	KIT	MDH	7	765	29	Mud flat	11	Mud flat	3202
WA	KIT	MDH	8	1598	31	Organics/fines	12	Estuary wetland	3203
WA	KIT	MDH	9	2650	29	Mud flat	11	Mud flat	3204
WA	KIT	MDH	10	739	29	Mud flat	11	Mud flat	3205
WA	KIT	MDH	11	347	29	Mud flat	11	Mud flat	3206
WA	KIT	MDH	12	913	30	Sand beach	9	Sand beach	3207
WA	KIT	MDH	13	1216	29	Mud flat	11	Mud flat	3208
WA	KIT	MDH	14	1500	29	Mud flat	11	Mud flat	3209
WA	KIT	MDH	15	961	30	Sand beach	9	Sand beach	3210
WA	KIT	MDH	16	821	28	Sand flat	10	Sand flat	3211
WA	KIT	MDS	1	1372	28	Sand flat	10	Sand flat	3191
WA	KIT	MDS	2	1208	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3192
WA	KIT	MDS	3	1127	30	Sand beach	9	Sand beach	3193
WA	KIT	MDS	4	1202	28	Sand flat	10	Sand flat	3194
WA	KIT	MDS	5	247	30	Sand beach	9	Sand beach	3195
WA	KIT	MLR	1	781	30	Sand beach	9	Sand beach	3233
WA	KIT	MLR	2	1613	31	Organics/fines	12	Estuary wetland	3234
WA	KIT	MLR	3	1928	29	Mud flat	11	Mud flat	3235
WA	KIT	MLR	4	3411	29	Mud flat	11	Mud flat	3236
WA	KIT	MLR	5	9069	31	Organics/fines	12	Estuary wetland	3237
WA	KIT	MLR	6	2466	29	Mud flat	11	Mud flat	3238
WA	KIT	MLR	7	1502	29	Mud flat	11	Mud flat	3239
WA	KIT	MLR	8	1153	29	Mud flat	11	Mud flat	3240
WA	KIT	MLR	9	825	29	Mud flat	11	Mud flat	3241
WA	KIT	MLR	10	1322	31	Organics/fines	12	Estuary wetland	3242
WA	KIT	MLR	11	2121	30	Sand beach	9	Sand beach	3243
WA	KIT	MLR	12	265	30	Sand beach	9	Sand beach	3244
WA	KIT	MNR	1	930	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3185
WA	KIT	MNR	2	2730	24	Sand and gravel flat or fan	14	Sand and gravel flat	3186
WA	KIT	MNR	3	721	24	Sand and gravel flat or fan	14	Sand and gravel flat	3187
WA	KIT	MNR	4	1534	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3188
WA	KIT	MNR	5	1736	30	Sand beach	9	Sand beach	3189
WA	KIT	MNR	6	5020	31	Organics/fines	12	Estuary wetland	3190
WA	KIT	MRD	1	375	28	Sand flat	10	Sand flat	3168
WA	KIT	MRD	2	379	28	Sand flat	10	Sand flat	3169
WA	KIT	MRD	3	201	28	Sand flat	10	Sand flat	3170

State	County	Group	Segment	Length (ft)	BC_CLASS	BC_NAME	REP_CODE	REP_NAME	Shorezone Unit_ID
WA	KIT	MRD	4	2639	31	Organics/fines	12	Estuary wetland	3171
WA	KIT	MRD	5	1136	28	Sand flat	10	Sand flat	3172
WA	KIT	MRD	6	1005	28	Sand flat	10	Sand flat	3173
WA	KIT	MRD	7	1554	28	Sand flat	10	Sand flat	3174
WA	KIT	PBK	1	1454	24	Sand and gravel flat or fan	14	Sand and gravel flat	3110
WA	KIT	PBK	2	393	30	Sand beach	9	Sand beach	3111
WA	KIT	PBK	3	341	28	Sand flat	10	Sand flat	3112
WA	KIT	PBK	4	334	30	Sand beach	9	Sand beach	3113
WA	KIT	PBK	5	1242	28	Sand flat	10	Sand flat	3114
WA	KIT	PBK	6	2327	29	Mud flat	11	Mud flat	3115
WA	KIT	PBK	7	834	15	Platform with gravel and sand beach	5	Rock with sand and gravel beach	3116
WA	KIT	PBK	8	1470	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3117
WA	KIT	PBK	9	430	24	Sand and gravel flat or fan	14	Sand and gravel flat	3118
WA	KIT	PBK	10	1054	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3119
WA	KIT	PBK	11	935	13	Cliff with gravel and sand beach	5	Rock with sand and gravel beach	3120
WA	KIT	PJN	1	3495	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3252
WA	KIT	PJN	2	376	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3253
WA	KIT	PJN	3	1109	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3254
WA	KIT	PJN	4	1137	24	Sand and gravel flat or fan	14	Sand and gravel flat	3255
WA	KIT	PJN	5	978	24	Sand and gravel flat or fan	14	Sand and gravel flat	3256
WA	KIT	PJN	6	1727	24	Sand and gravel flat or fan	14	Sand and gravel flat	3257
WA	KIT	PJN	7	2060	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3258
WA	KIT	PJN	8	1423	24	Sand and gravel flat or fan	14	Sand and gravel flat	3259
WA	KIT	PJN	9	573	30	Sand beach	9	Sand beach	3260
WA	KIT	PJN	10	1238	28	Sand flat	10	Sand flat	3261
WA	KIT	PJN	11	1428	28	Sand flat	10	Sand flat	3262
WA	KIT	PJW	1	3505	24	Sand and gravel flat or fan	14	Sand and gravel flat	3248
WA	KIT	PJW	2	1620	28	Sand flat	10	Sand flat	3249
WA	KIT	PJW	3	5772	31	Organics/fines	12	Estuary wetland	3250
WA	KIT	PJW	4	617	24	Sand and gravel flat or fan	14	Sand and gravel flat	3251
WA	KIT	QCD	1	666	30	Sand beach	9	Sand beach	3056
WA	KIT	QCD	2	1181	4	Rock ramp, narrow	3	Rock cliff	3057
WA	KIT	QCD	3	927	3	Rock cliff	3	Rock cliff	3058
WA	KIT	QCD	4	401	18	Cliff with sand beach	6	Rock with sand beach	3059
WA	KIT	QCD	5	1041	3	Rock cliff	3	Rock cliff	3060
WA	KIT	RBY	1	5599	24	Sand and gravel flat or fan	14	Sand and gravel flat	3179
WA	KIT	RBY	2	815	28	Sand flat	10	Sand flat	3180
WA	KIT	RBY	3	647	28	Sand flat	10	Sand flat	3181
WA	KIT	RBY	4	741	28	Sand flat	10	Sand flat	3182

State	County	Group	Segment	Length (ft)	BC_CLASS	BC_NAME	REP_CODE	REP_NAME	Shorezone Unit_ID
WA	KIT	RBY	5	574	28	Sand flat	10	Sand flat	3183
WA	KIT	RBY	6	2477	28	Sand flat	10	Sand flat	3184
WA	KIT	RKW	1	541	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3121
WA	KIT	RKW	2	1497	24	Sand and gravel flat or fan	14	Sand and gravel flat	3122
WA	KIT	RKW	3	3974	24	Sand and gravel flat or fan	14	Sand and gravel flat	3123
WA	KIT	RKW	4	813	24	Sand and gravel flat or fan	14	Sand and gravel flat	3124
WA	KIT	RKW	5	1162	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3125
WA	KIT	RPE	1	917	15	Platform with gravel and sand beach	5	Rock with sand and gravel beach	3091
WA	KIT	RPE	2	2322	12	Platform with gravel and sand beach, wide	5	Rock with sand and gravel beach	3092
WA	KIT	RPE	3	684	14	Ramp with gravel and sand beach	5	Rock with sand and gravel beach	3093
WA	KIT	RPE	4	439	19	Ramp with sand beach, narrow	6	Rock with sand beach	3094
WA	KIT	RPE	5	646	11	Ramp with gravel and sand beach, wide	5	Rock with sand and gravel beach	3095
WA	KIT	RPW	1	410	9	Ramp with gravel beach	4	Rock with gravel beach	3061
WA	KIT	RPW	2	271	9	Ramp with gravel beach	4	Rock with gravel beach	3062
WA	KIT	RPW	3	365	11	Ramp with gravel and sand beach, wide	5	Rock with sand and gravel beach	3063
WA	KIT	RPW	4	1673	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3064
WA	KIT	RPW	5	1258	24	Sand and gravel flat or fan	14	Sand and gravel flat	3065
WA	KIT	RPW	6	701	28	Sand flat	10	Sand flat	3066
WA	KIT	RPW	7	1510	24	Sand and gravel flat or fan	14	Sand and gravel flat	3067
WA	KIT	RPW	8	784	24	Sand and gravel flat or fan	14	Sand and gravel flat	3068
WA	KIT	RPW	9	744	9	Ramp with gravel beach	4	Rock with gravel beach	3069
WA	KIT	RPW	10	492	8	Cliff with gravel beach	4	Rock with gravel beach	3070
WA	KIT	RPW	11	263	14	Ramp with gravel and sand beach	5	Rock with sand and gravel beach	3071
WA	KIT	RPW	12	1033	24	Sand and gravel flat or fan	14	Sand and gravel flat	3072
WA	KIT	RPW	13	446	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3073
WA	KIT	RPW	14	348	32	Man-made, permeable	13	Man-made	3074
WA	KIT	RPW	15	276	32	Man-made, permeable	13	Man-made	3075
WA	KIT	RST	1	2393	16	Ramp with sand beach, wide	6	Rock with sand beach	3105
WA	KIT	RST	2	352	30	Sand beach	9	Sand beach	3106
WA	KIT	RST	3	2095	15	Platform with gravel and sand beach	5	Rock with sand and gravel beach	3107
WA	KIT	RST	4	1379	21	Gravel flat, wide	15	Gravel flat	3108
WA	KIT	RST	5	493	24	Sand and gravel flat or fan	14	Sand and gravel flat	3109
WA	KIT	SBC	1	3152	12	Platform with gravel and sand beach, wide	5	Rock with sand and gravel beach	3096
WA	KIT	SBC	2	1801	24	Sand and gravel flat or fan	14	Sand and gravel flat	3097
WA	KIT	SBC	3	1236	12	Platform with gravel and sand beach, wide	5	Rock with sand and gravel beach	3098
WA	KIT	SBC	4	1190	12	Platform with gravel and sand beach, wide	5	Rock with sand and gravel beach	3099
WA	KIT	SBC	5	1454	12	Platform with gravel and sand beach, wide	5	Rock with sand and gravel beach	3100
WA	KIT	SBC	6	1321	12	Platform with gravel and sand beach, wide	5	Rock with sand and gravel beach	3101
WA	KIT	SBC	7	794	17	Platform with sand beach, wide	6	Rock with sand beach	3102

State	County	Group	Segment	Length (ft)	BC_CLASS	BC_NAME	REP_CODE	REP_NAME	Shorezone Unit_ID
WA	KIT	SBC	8	215	17	Platform with sand beach, wide	6	Rock with sand beach	3103
WA	KIT	SBC	9	1043	17	Platform with sand beach, wide	6	Rock with sand beach	3104
WA	KIT	SKF	1	2789	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3175
WA	KIT	SKF	2	409	24	Sand and gravel flat or fan	14	Sand and gravel flat	3176
WA	KIT	SKF	3	1304	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3177
WA	KIT	SKF	4	757	24	Sand and gravel flat or fan	14	Sand and gravel flat	3178
WA	KIT	SQM	1	2532	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3229
WA	KIT	SQM	2	1917	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3230
WA	KIT	SQM	3	2089	28	Sand flat	10	Sand flat	3231
WA	KIT	SQM	4	781	30	Sand beach	9	Sand beach	3232
WA	KNG	AKE	1	2825	28	Sand flat	10	Sand flat	2570
WA	KNG	AKE	2	948	28	Sand flat	10	Sand flat	2571
WA	KNG	AKE	3	2729	28	Sand flat	10	Sand flat	2572
WA	KNG	AKE	4	2259	28	Sand flat	10	Sand flat	2573
WA	KNG	AKE	5	2258	27	Sand beach	9	Sand beach	2574
WA	KNG	AKW	1	1175	25	Sand and gravel beach, narrow	8	Sand and gravel beach	2575
WA	KNG	AKW	2	1334	24	Sand and gravel flat or fan	14	Sand and gravel flat	2576
WA	KNG	AKW	3	2516	24	Sand and gravel flat or fan	14	Sand and gravel flat	2577
WA	KNG	AKW	4	2587	24	Sand and gravel flat or fan	14	Sand and gravel flat	2578
WA	KNG	AKW	5	796	24	Sand and gravel flat or fan	14	Sand and gravel flat	2579
WA	KNG	AKW	6	5010	24	Sand and gravel flat or fan	14	Sand and gravel flat	2580
WA	KNG	AKW	7	1421	25	Sand and gravel beach, narrow	8	Sand and gravel beach	2581
WA	KNG	AKW	8	1507	24	Sand and gravel flat or fan	14	Sand and gravel flat	2582
WA	KNG	AKW	9	368	24	Sand and gravel flat or fan	14	Sand and gravel flat	2583
WA	KNG	AKW	10	895	24	Sand and gravel flat or fan	14	Sand and gravel flat	2584
WA	KNG	AKW	11	521	25	Sand and gravel beach, narrow	8	Sand and gravel beach	2585
WA	KNG	AKW	12	2531	25	Sand and gravel beach, narrow	8	Sand and gravel beach	2586
WA	KNG	AKW	13	2042	25	Sand and gravel beach, narrow	8	Sand and gravel beach	2587
WA	KNG	BLD	1	3045	25	Sand and gravel beach, narrow	8	Sand and gravel beach	2537
WA	KNG	BLD	2	1314	25	Sand and gravel beach, narrow	8	Sand and gravel beach	2790
WA	KNG	BLD	3	1114	30	Sand beach	9	Sand beach	2791
WA	KNG	BLD	4	747	33	Man-made, impermeable	13	Man-made	2792
WA	KNG	BLD	5	723	33	Man-made, impermeable	13	Man-made	2793
WA	KNG	BLD	6	524	30	Sand beach	9	Sand beach	2794
WA	KNG	BLD	7	1684	32	Man-made, permeable	13	Man-made	2795
WA	KNG	BLD	8	1473	30	Sand beach	9	Sand beach	2796
WA	KNG	BNG	1	647	25	Sand and gravel beach, narrow	8	Sand and gravel beach	2520
WA	KNG	BNG	2	3502	28	Sand flat	10	Sand flat	2521
WA	KNG	BNG	3	8891	28	Sand flat	10	Sand flat	2522

State	County	Group	Segment	Length (ft)	BC_CLASS	BC_NAME	REP_CODE	REP_NAME	Shorezone Unit_ID
WA	KNG	CRK	1	1520	25	Sand and gravel beach, narrow	8	Sand and gravel beach	2523
WA	KNG	CRK	1	1235	32	Man-made, permeable	13	Man-made	2532
WA	KNG	CRK	2	2749	30	Sand beach	9	Sand beach	2524
WA	KNG	CRK	3	800	24	Sand and gravel flat or fan	14	Sand and gravel flat	2525
WA	KNG	CRK	4	4103	28	Sand flat	10	Sand flat	2526
WA	KNG	CRK	5	798	28	Sand flat	10	Sand flat	2527
WA	KNG	CRK	5	293	32	Man-made, permeable	13	Man-made	2536
WA	KNG	CRK	6	2460	27	Sand beach	9	Sand beach	2528
WA	KNG	CRK	7	1689	25	Sand and gravel beach, narrow	8	Sand and gravel beach	2529
WA	KNG	CRK	8	716	28	Sand flat	10	Sand flat	2530
WA	KNG	CRK	9	1363	30	Sand beach	9	Sand beach	2531
WA	KNG	WWW	1	7477	32	Man-made, permeable	13	Man-made	2786
WA	KNG	WWW	2	2568	32	Man-made, permeable	13	Man-made	2787
WA	KNG	WWW	3	1735	32	Man-made, permeable	13	Man-made	2788
WA	KNG	WWW	4	5112	32	Man-made, permeable	13	Man-made	2783
WA	KNG	WWW	5	2643	32	Man-made, permeable	13	Man-made	2784
WA	KNG	WWW	6	1361	32	Man-made, permeable	13	Man-made	2785
WA	KNG	ELN	1	2364	32	Man-made, permeable	13	Man-made	2551
WA	KNG	ELN	2	2612	32	Man-made, permeable	13	Man-made	2552
WA	KNG	ELN	3	2721	32	Man-made, permeable	13	Man-made	2553
WA	KNG	ELN	4	559	24	Sand and gravel flat or fan	14	Sand and gravel flat	2554
WA	KNG	ELN	5	10520	32	Man-made, permeable	13	Man-made	2555
WA	KNG	ELS	1	1371	32	Man-made, permeable	13	Man-made	2566
WA	KNG	ELS	2	2130	32	Man-made, permeable	13	Man-made	2567
WA	KNG	ELS	3	1954	32	Man-made, permeable	13	Man-made	2568
WA	KNG	ELS	4	3927	32	Man-made, permeable	13	Man-made	2569
WA	KNG	EWW	1	616	32	Man-made, permeable	13	Man-made	2757
WA	KNG	EWW	2	916	32	Man-made, permeable	13	Man-made	2758
WA	KNG	EWW	3	3607	32	Man-made, permeable	13	Man-made	2759
WA	KNG	EWW	4	1046	32	Man-made, permeable	13	Man-made	2760
WA	KNG	EWW	5	1695	32	Man-made, permeable	13	Man-made	2761
WA	KNG	EWW	6	1910	32	Man-made, permeable	13	Man-made	2762
WA	KNG	EWW	7	1233	32	Man-made, permeable	13	Man-made	2789
WA	KNG	EWW	8	6079	33	Man-made, impermeable	13	Man-made	2563
WA	KNG	HRB	1	1670	32	Man-made, permeable	13	Man-made	2564
WA	KNG	HRB	2	2276	32	Man-made, permeable	13	Man-made	2565
WA	KNG	MCH	1	1298	24	Sand and gravel flat or fan	14	Sand and gravel flat	3050
WA	KNG	MCH	2	452	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3051
WA	KNG	MCH	3	3130	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3052

State	County	Group	Segment	Length (ft)	BC_CLASS	BC_NAME	REP_CODE	REP_NAME	Shorezone Unit_ID
WA	KNG	MCH	4	4779	24	Sand and gravel flat or fan	14	Sand and gravel flat	3053
WA	KNG	MCH	5	1211	24	Sand and gravel flat or fan	14	Sand and gravel flat	3054
WA	KNG	MCH	6	3035	25	Sand and gravel beach, narrow	8	Sand and gravel beach	3055
WA	KNG	SLS	2	4843	32	Man-made, permeable	13	Man-made	2535
WA	KNG	SLS	3	4497	32	Man-made, permeable	13	Man-made	2534
WA	KNG	SLS	4	4523	32	Man-made, permeable	13	Man-made	2533
WA	KNG	STL	1	4539	32	Man-made, permeable	13	Man-made	2556
WA	KNG	STL	2	368	25	Sand and gravel beach, narrow	8	Sand and gravel beach	2557
WA	KNG	STL	3	1781	32	Man-made, permeable	13	Man-made	2558
WA	KNG	STL	4	6466	32	Man-made, permeable	13	Man-made	2559
WA	KNG	STL	5	1518	32	Man-made, permeable	13	Man-made	2560
WA	KNG	STL	6	2660	32	Man-made, permeable	13	Man-made	2561
WA	KNG	STL	7	3816	33	Man-made, impermeable	13	Man-made	2562
WA	KNG	WPN	1	2292	24	Sand and gravel flat or fan	14	Sand and gravel flat	2538
WA	KNG	WPN	2	1636	24	Sand and gravel flat or fan	14	Sand and gravel flat	2539
WA	KNG	WPN	3	2575	30	Sand beach	9	Sand beach	2540
WA	KNG	WPN	4	1346	25	Sand and gravel beach, narrow	8	Sand and gravel beach	2541
WA	KNG	WPS	1	2160	24	Sand and gravel flat or fan	14	Sand and gravel flat	2542
WA	KNG	WPS	2	724	24	Sand and gravel flat or fan	14	Sand and gravel flat	2543
WA	KNG	WPS	3	2551	24	Sand and gravel flat or fan	14	Sand and gravel flat	2544
WA	KNG	WPS	4	5572	24	Sand and gravel flat or fan	14	Sand and gravel flat	2545
WA	KNG	WPS	5	1273	24	Sand and gravel flat or fan	14	Sand and gravel flat	2546
WA	KNG	WPS	6	1111	24	Sand and gravel flat or fan	14	Sand and gravel flat	2547
WA	KNG	WPS	7	1233	24	Sand and gravel flat or fan	14	Sand and gravel flat	2548
WA	KNG	WPS	8	517	24	Sand and gravel flat or fan	14	Sand and gravel flat	2549
WA	KNG	WPS	9	849	24	Sand and gravel flat or fan	14	Sand and gravel flat	2550
WA	KNG	DWW	1	2336	32	Man-made, permeable	13	Man-made	2763
WA	KNG	DWW	2	1199	32	Man-made, permeable	13	Man-made	2764
WA	KNG	DWW	3	961	32	Man-made, permeable	13	Man-made	2765
WA	KNG	DWW	4	1105	32	Man-made, permeable	13	Man-made	2766
WA	KNG	DWW	5	1776	32	Man-made, permeable	13	Man-made	2767
WA	KNG	DWW	6	4780	32	Man-made, permeable	13	Man-made	2768
WA	KNG	DWW	7	1217	32	Man-made, permeable	13	Man-made	2769
WA	KNG	DWW	8	2181	32	Man-made, permeable	13	Man-made	2770
WA	KNG	DWW	9	654	32	Man-made, permeable	13	Man-made	2771
WA	KNG	DWW	10	7307	32	Man-made, permeable	13	Man-made	2772
WA	KNG	DWW	11	3078	32	Man-made, permeable	13	Man-made	2773
WA	KNG	DWW	12	6096	32	Man-made, permeable	13	Man-made	2774
WA	KNG	DWW	13	1484	32	Man-made, permeable	13	Man-made	2775

State	County	Group	Segment	Length (ft)	BC_CLASS	BC_NAME	REP_CODE	REP_NAME	Shorezone Unit_ID
WA	KNG	DWW	14	1296	32	Man-made, permeable	13	Man-made	2776
WA	KNG	DWW	15	4391	32	Man-made, permeable	13	Man-made	2777
WA	KNG	DWW	16	2585	29	Mud flat	11	Mud flat	2780
WA	KNG	DWW	17	2670	30	Sand beach	9	Sand beach	2778
WA	KNG	DWW	18	1724	31	Organics/fines	12	Estuary wetland	2779
WA	KNG	DWW	19	604	32	Man-made, permeable	13	Man-made	2781
WA	KNG	DWW	20	1151	32	Man-made, permeable	13	Man-made	2782

BC_CLASS 35 shore types 15 grouped
REP_CODE shore types used for mapping

Table 9422-2 Summary Table of Shore Type Information for the Segments Mapped in Figure 9422-3