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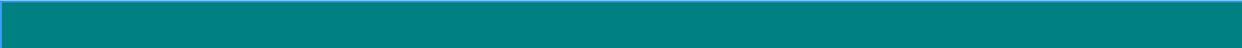# Shoreline Segmentation Guidance for Shoreline Cleanup and Assessment Technique (SCAT)

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# 9422 Shoreline Segmentation Guidance

## 9422.1    Introduction

The following are guidelines for processes through which shorelines in Washington and Oregon State could be segmented for Shoreline Cleanup Assessment Technique programs and other purposes to support a response or other spill-related activities.

These guidelines were developed by the 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.* OR and WA shorelines), prior to a spill  occurring. The NWAC anticipates that these guidelines can be used during any shoreline segmentation efforts being conducted by stakeholders throughout the region.

The segmentation process is intended to ultimately 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 done 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., GRP strategies, cleanup options, etc.) and other information as appropriate.

## 9422.2    Objectives for Naming and Defining Segments

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

- Each segment should have similar geomorphology throughout the segment.
- Segment endpoints should be easily recognizable in the field.
- Size may vary, but 0.2-2.0 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:
    - 2 digit alphabetical state code
    - 4 digit alphabetical county code

- 3 digit alphabetical geographic code
- 4 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 - hopefully a unique statewide code - i.e. there will be no other "EGL" geographic codes in WA - a 3-alpha system allows for (26x26x26) 17,576 alphanumeric options - if becomes problematic at least will be unique in the County
  - 0015 – Segment Number
  - d – operations Sub-segment
- Crew access should be considered when defining sub-segments (e.g. 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 NWAC 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 BC_Class to ESI conversion, if needed, using an appropriate table provided in Section 4, Conversion Guidance table from ShoreZone to ESI shoreline types.
- Identify standardized geographic areas (ex. Elliot Bay)  - see example in section 9422.__
- 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 clark.josie@epa.gov and heather.a.parker@uscg.mil).

## 9422.4     Phase 2 of Segmentation of NWAC 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 attribute table
- Add coastal character and/or backshore information for each segment
- Link individual GRP 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

Data Layers Needed

From http://fortress.wa.gov/dnr/app1/dataweb/dmmatrix.html
- WA DNR: szlineth.shp – Used as the base layer.
- WA DNR: county.shp for county boundaries.
- WA DNR: Major Public Lands (non-DNR) -- June, 2013 primarily for 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 | Segment_length |
| Countycode | Geo_code |
| County_seg | Seg_ID |
| Subseg_code | Seg_ID_short |
| Shoreline_type | |

<u>Basic Data Entry Process</u>

Input State Name
Input County Name
Edit Shorename as necessary to define standardized location descriptions
Develop and Input Geographic Code (from Shorename)
Input State Code
Develop and Input County Code

<u>Sub-division Process</u>

Sub-divide ShoreZone segments at county boundaries.
Sub-divide ShoreZone segments at any Tribal Reservation boundaries.
Sub-divide ShoreZone segments at any Federal boundaries.
Sub-divide ShoreZone segments at any military boundaries.
Query existing sz_lineth.shp length field for values greater than 2 km (note: values in this field are in feet). For those 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.

Create new sequential County Segment Number. Follow format developed during DWH (increasing E to W, N to S) where possible.

Create new segment ID for each segment (State_code)-(County_code)-(Geo_code)-(County_Seg)-(Subseg)

Calculate start latitude and longitude for each segment. Populate Lat_start and Long_start.

Calculate stop latitude and longitude for each segment. Populate Lat_stop and Long_stop.

Calculate midpoint latitude and longitude for each segment. Populate Lat_mid and Long_mid.

Calculate new segment lengths (meters).  Populate Segment_length

## 9422.6    Conversion Guidance table from Shorezone to ESI shoreline types

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

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

| Substrate | Shore Type | ESI Designation Guideline |
|---|---|---|
| | 13 | • If Exposure >= SE and it meets ESI 7 requirements (see protocol) then ESI 7 |
| | 14 | |
| | 15 | • 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 | [There must be >25% sand in the unit for these BC classes to be assigned.] |
| | 17 | |
| | 18 | • If Exposure >= SE and it meets ESI 7 requirements (see protocol) then ESI 7 |
| | 19 | |
| | 20 | • 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 | • If Exposure >= SE and it meets ESI 7 requirements (see protocol) then ESI 7 |
| | 22 | |
| | 23 | • 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 | ESI Designation Guideline |
|---|---|---|
| Estuarine | 31 | • If >50% marsh in the A and B zone combined then ESI 10A<br>• If the biologist comments on the marsh being predominately freshwater, ESI 10B can be used.<br>• 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.<br>• If none of the above requirements are met, assign ESI class based on the dominant Form. |
| Anthropogenic | 32 | • If it is riprap then ESI 6C<br>• If Exposure <=SP then 8B<br>• If Exposure >=SE then 1B |
| | 33 | • If Exposure <=SP then 8B<br>• 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-- 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 alpha Numeric 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. |

## 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 data base**
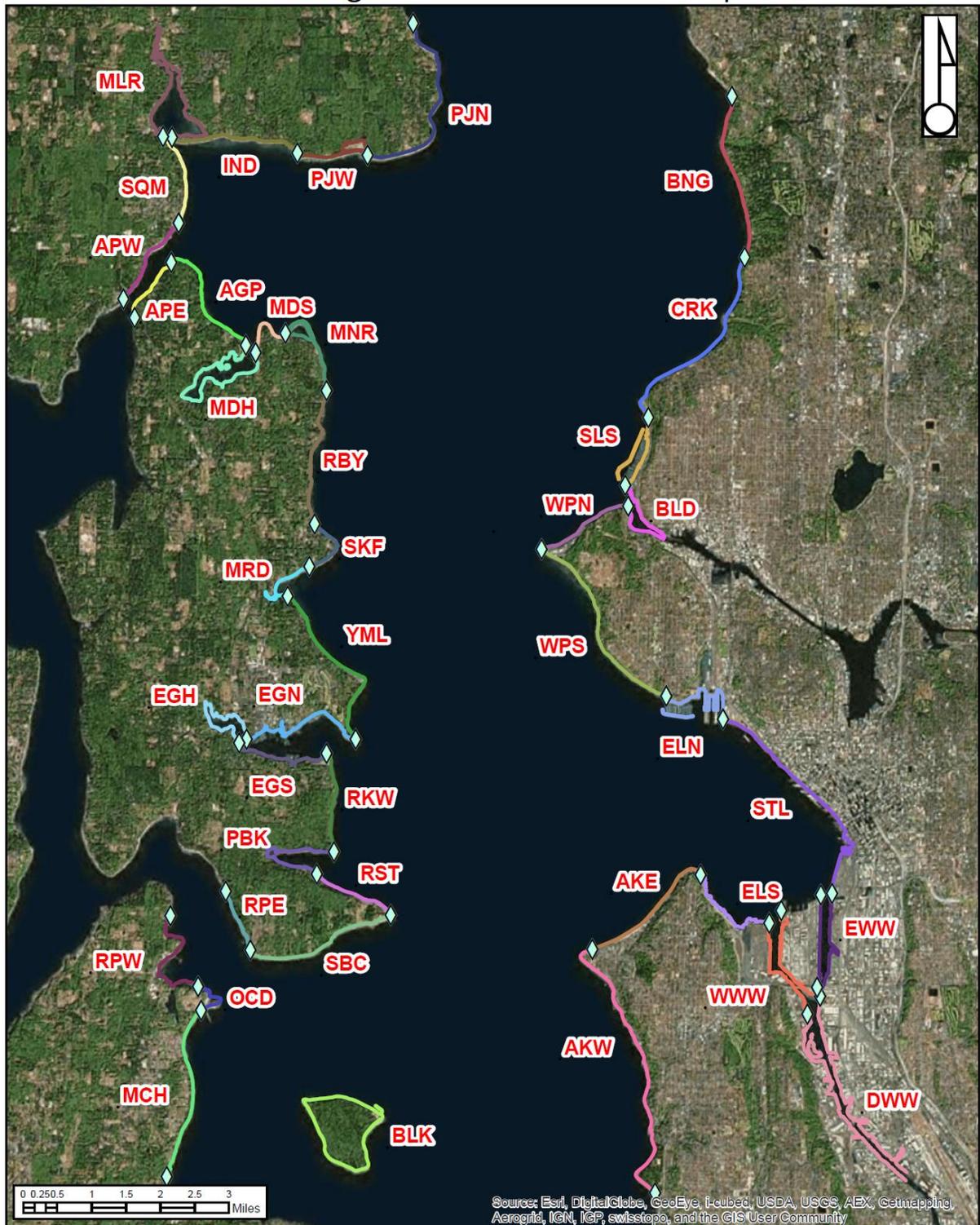
**Figure 9422-2 Grouping of segments by geographic area (segment group). Names and abbreviations are summarized in Table 9422-1**

| 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 |
| 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 |

| State | County | Group | Segment | Length (ft) | BC_CLASS | BC_NAME | REP_CODE | REP_NAME | Shorezone Unit_ID |
|-------|--------|-------|---------|-------------|----------|---------|----------|----------|-------------------|
| 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 |
| 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 |

| State | County | Group | Segment | Length (ft) | BC_CLASS | BC_NAME | REP_CODE | REP_NAME | Shorezone Unit_ID |
|-------|--------|-------|---------|-------------|----------|---------|----------|----------|-------------------|
| 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 |
| 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 |

| State | County | Group | Segment | Length (ft) | BC_CLASS | BC_NAME | REP_CODE | REP_NAME | Shorezone Unit_ID |
|---|---|---|---|---|---|---|---|---|---|
| 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 |
| 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 |

| State | County | Group | Segment | Length (ft) | BC_CLASS | BC_NAME | REP_CODE | REP_NAME | Shorezone Unit_ID |
|---|---|---|---|---|---|---|---|---|---|
| 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 |
| 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 |

| State | County | Group | Segment | Length (ft) | BC_CLASS | BC_NAME | REP_CODE | REP_NAME | Shorezone Unit_ID |
|---|---|---|---|---|---|---|---|---|---|
| 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 |
| 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 |

| State | County | Group | Segment | Length (ft) | BC_CLASS | BC_NAME | REP_CODE | REP_NAME | Shorezone Unit_ID |
|---|---|---|---|---|---|---|---|---|---|
| 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 |
| 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 |

| State | County | Group | Segment | Length (ft) | BC_CLASS | BC_NAME | REP_CODE | REP_NAME | Shorezone Unit_ID |
|---|---|---|---|---|---|---|---|---|---|
| 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 |
| 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**