

3-2021

Pacific Northwest Littoral Data

Curt D. Peterson
Portland State University, curt.d.peterson@gmail.com

Kara E. P. Kingen
Portland State University, kkingen@pdx.edu

Follow this and additional works at: https://pdxscholar.library.pdx.edu/geology_data



Part of the [Geology Commons](#)

Let us know how access to this document benefits you.

Recommended Citation

Peterson, C.D. and Kingen, K.E.P., 2021, Pacific Northwest Littoral Data. Dataset <https://doi.org/10.15760/geology-data.01>

This Dataset is brought to you for free and open access. It has been accepted for inclusion in Geology Faculty Datasets by an authorized administrator of PDXScholar. Please contact us if we can make this document more accessible: pdxscholar@pdx.edu.

Pacific Northwest Littoral Data

Completed March 17, 2021

Curt D. Peterson and Kara E.P. Kingen

Geology Department, Portland State University, Portland, Oregon, USA

METADATA

This document contains five data tables in PDF file formats, that are used to characterize littoral subcell (beach, river mouth, and inner-shelf) conditions in the Pacific Northwest (PNW) region (Washington, Oregon, and Northern California). These data have been compiled from pre-existing data sets (see citations in Table notes and References, below) for the purposes of predicting possible beach erosion from potential future sea level rise (SLR), as introduced in Kingen (2018) and Peterson et al. (2019, 2020a,b). The five data tables include Heavy-mineral tracers (Table 1), Heavy-mineral data (normalized) (Table 2), Subcell beach profile settings (Table 3), Subcell beach profile parameters (Table 4), and Subcell shelf profile parameters (Table 5). Parts of the Heavy-mineral data (Tables 1 and 2) have been used in Peterson et al. (1984a,b; 2009; 2010; 2016; and 2020b). Detailed motivation, methods and applications for the compiled data in Tables 1 and 2 are provided in Peterson et al. (2020b). Parts of the beach profile data (Tables 3 and 4) have been used in Peterson et al. (2020b). Detailed motivation, methods and applications for the compiled data in Tables 3 and 4 are provided in Peterson et al. (2020b). Parts of the inner-shelf profile data (Table 5) have been used in Peterson et al. (2020b). Detailed motivation, methods and applications for the compiled data in Table 5 are provided in Peterson et al. (2020b). Future work on predicted SLR in the PNW region could benefit from data presented in this Document.

REFERENCES

- Davis L.G., Punke M.L., Hall R.L., Fillmore M., Willis S.C. 2004. A late Pleistocene occupation on the southern coast of Oregon. *Journal of Field Archaeology*, 2:7-16.
- Doyle, D.L. 1996. Beach response to subsidence following a Cascadia subduction zone earthquake along the Washington-Oregon coast. M.S. Thesis, Portland State University, Portland, Oregon.
- Google Earth 2020. Google Earth Pro. <https://www.google.com/earth/>. Accessed June 20, 2020.
- Kingen, K.E.P. 2018. Estimating sand loss: Using eolian sand ramps as a proxy for estimating past erosion within the Lincoln City dune sheet, Oregon. Senior Honors Thesis. Geology Department, Portland State University, Oregon.
- Minor, R., Peterson, C.D., 2016. Multiple reoccupations after four paleotsunami inundations (0.3-1.3 ka) at a prehistoric site in the Netarts littoral cell, Northern Oregon, USA. *Geoarchaeology*. 32: 248-266.
- PacWave 2019. Vibracore Logs from Research Cruise MSL1903 (pdf). College of Engineering, Oregon State University, Corvallis, Oregon. 27 p.
- Percy, D.C., Peterson, C.D. and Cruikshank, K.M. .1998. Collection of ephemeral data on 1997-98 beach erosion at the Capes project within the Netarts littoral cell, Oregon. Final Report to Hart Crower. 10 p. and CD Rom Electronic GIS Files
- Peterson, C. D., Darienzo M. E., Hamilton, D., Pettit, D. J., Yeager, R. K., Jackson, P. L., Rosenfeld, C.L., and Terich, T.A. 1994. Cascadia beach-shoreline data base, Pacific Northwest Region, USA. Oregon Department of Geology and Mineral Industries Open-File Report 0-94-2, 29 p. and 3 Electronic Database Files.
- Peterson, C.D., Doyle, D.L., Rosenfeld, C.L. and Kingen, K.E. 2020b. Predicted responses of beaches, bays, and inner-shelf sand supplies to potential sea level rise (0.5–1.0 m) in three small littoral subcells in the high-wave-energy Northern Oregon coast, USA. *Journal of Geography and Geology*, 12:1-27.
- Peterson, C.D., Jol., H.M., Vanderburgh, S., Phipps, J.B., Percy, D., and Gelfenbaum, G., 2010 Dating of late-Holocene shoreline positions by regional correlation of coseismic retreat events in the Columbia River littoral cell, *Marine Geology*, Vol. 273:44-61.

- Peterson, C.D., Kingen, K.E., Erlandson, J.M., Kaijankoski, P., Meyer, J. and Ryan, C. 2019. Widespread Evidence of Terminated Marine Transgressive Sand Supply and Failing Longshore Sand Transport to Eroding Coastal Eolian Sand Ramps during the Latest Holocene Time in Oregon and California (Pacific Coast, USA). *Journal of Coastal Research*, 35, 1145-1163.
- Peterson, C.D., Linde, T.C., and Vanderburgh, S. 2020a. Late-Holocene shoreline responses to competing shelf, bay, and beach accommodation spaces under conditions of relative sea level change, and the potential for future catastrophic beach retreat in the Columbia River Littoral Cell, Washington and Oregon, USA. *Marine Geology*, 427, 106272
- Peterson, C.D., Phipps, J.B., 2016. Accommodation space controls on incised-valley sediment accumulation rates during the Holocene marine transgression (0–11 ka) in Grays Harbor, a large meso-tidal estuary, Washington, USA. *Marine Geology*, 380:1-16.
- Peterson, C.D. and Scheidegger, K.F. 1984a. Holocene depositional evolution in a small active- margin estuary of the northwestern United States. *Marine Geology*, 59:51-83.
- Peterson, C.D., Scheidegger, K.F. Niem W. and Komar, P.D. 1984b. Sediment composition and hydrography in six high-gradient estuaries of the northwestern United States. *Journal of Sedimentary Petrology*, 54:086-097.
- Peterson, C., Stock, E., Cloyd, C., Beckstrand, D., Clough, C., Erlandson, J., Hart, R., Murillo- Jiménez, Percy, D., Price, D., Reckendorf, F., Vanderburgh, S., 2006. Dating and morphostratigraphy of coastal dune sheets from the central west coast of North America. Oregon Sea Grant Publications, Corvallis, Oregon, 81p. PDF on CD.
- Peterson, C.D., Stock, E., Hart, R., Percy, D., Hostetler, S. W., and Knott, J.R. 2009. Holocene coastal dune fields used as indicators of net littoral transport: West Coast, USA. *Geomorphology*, 116:115-134.
- Pettit, D.J. 1990. Distribution of sand within selected littoral cells of the Pacific Northwest. M.S Thesis, Portland State University, Portland, Oregon.
- Rosenfeld, C.L., Peterson, C.D., Pettit, D.J., Jackson, P.L., and Kimerling, A.J. 1991. Integrated photogrammetric and geophysical monitoring of shoreline instability in littoral cells in the Pacific Northwest. *ASCE Coastal Sediments 91 Proceedings*, (1991), 2214-2222.
- Scheidegger, K.F., Kulm, L.D., and Runge, E.J. 1971. Sediment sources and dispersal patterns of Oregon continental shelf sands. *Journal of Sedimentary Petrology*, 41: 1112–1120.
- Weidemann, A.M., 1990. The coastal parabolic dune system at Sand Lake, Tillamook County, Oregon, USA. In: Davidson-Arnott, R. (Ed.), *Proceedings of the Symposium on Coastal Sand Dunes 1990*. National Research Council, Ottawa, pp. 341-358.

DATA FILES

Table 1. Heavy-mineral tracers

Settings/ Name	UTM-N	Sample mean size (mm)	Augite (%)	Hypersthene (%)	Hornblende (%)	B.G. Horn- blende (%)	Actinolite and Tremolite (%)	Glauco- phane (%)
Rivers			38	0	31	15	16	0
Quillayute	5307100		41	1	33	13	12	0
Hoh	5289400		47	2	31	12	8	0
Queets	5266600		54	1	28	9	8	0
Quinalt	5244600		63	4	30	1	2	0
Chelahis	5196500		26	18	44	6	6	0
Columbia	5121500		78	7	14	1	0	0
Nehalem	5056100		81	5	13	1	0	0
Wilson	5046300		85	2	12	0	1	0
Nestucca	5000900		82	1	14	1	2	0

Salmon	4988500		83	0	16	1	0	0
Siletz	4975200		85	2	12	1	0	0
Alsea	4919200		66	4	28	1	1	0
Siuslaw	4874200		32	28	33	5	2	0
Umpqua	4835600		60	5	25	7	3	0
Coos	4800850		23	4	40	6	27	0
Coquille	4775000		19	5	34	9	32	1
Sixes	4745700		14	11	49	8	18	0
Rogue	4697300		23	2	37	12	26	0
Pistol	4680500		25	4	30	11	30	0
Chetco	4655250		15	2	36	9	38	0
Smith	4644400		10	3	32	21	33	1
Klamath	4599100		19	2	30	9	27	13
Eel	4499400		38	0	31	15	16	0
Sea cliff dunes								
The Capes	5033200		31	12	33	9	14	1
Sand Lake	5017000		30	18	33	7	11	1
Lincoln City	4979090		29	14	37	8	12	0
Newport	4929650		33	22	30	7	9	0
Reedsport	4834890		32	25	29	7	8	0
Bullards	4784640		27	25	30	8	10	0
Otter Rock	4702210		16	15	39	12	17	1
Indian Sands	4668000		19	5	38	14	23	1
Pt St George	4626682		10	3	35	21	29	2
Beaches								
Hobuck	5360000	0.320	32	3	31	13	21	0
Sand Point	5330650	0.225	38	4	33	10	15	0
La Push	5307100	0.213	43	7	29	10	11	0
Beach #3	5279350	0.327	33	11	34	9	13	0
South Beach	5268200	0.224	32	25	22	7	14	0
Whale Cove	5240450	0.439	30	26	25	12	7	0
Pt. Grenville	5240609	0.204	29	19	38	8	6	0
Copalis	5219500	0.191	25	22	39	8	6	0
Ocean Shores	5208400	0.213	31	25	35	5	4	0
Cohasset	5192800	0.276	28	23	34	9	6	0
Ocean Park	5150600	0.228	24	18	41	9	8	0
Long Beach	5135050	0.218	26	20	40	7	7	0
Fort Stevens	5120600	0.185	26	19	43	5	7	0
Sunset	5111700	0.204	25	19	45	6	5	0
Cannon	5086150	0.208	50	10	33	3	4	0
Arcadia	5079500	0.216	52	12	31	1	4	0
Manzanita	5066150	0.221	58	15	25	2	2	0
Rockaway	5053950	0.272	57	11	28	3	1	0
Oceanside	5035050	0.197	62	14	21	3	0	0
Netarts	5031700	0.210	64	15	17	2	2	0
Scouts	5020600	0.241	64	14	21	1	0	0

Sand Creek	5015050	0.239	60	15	22	2	1	0
Pacific City	5007300	0.234	64	9	25	0	2	0
Cannery Hill	5002850	0.255	65	8	26	1	0	0
Roads End	4986150	0.183	64	10	24	2	0	0
Lincoln City	4980600	0.276	63	12	20	2	3	0
Salishan	4975050	0.303	62	10	27	0	1	0
Otter Rock	4956200	0.198	42	22	27	6	3	0
Moolack	4951750	0.269	44	25	22	7	2	0
Agate	4948400	0.189	43	19	30	6	2	0
Nye	4943950	0.213	45	23	29	3	0	0
South Beach Park	4939500	0.239	40	20	34	5	1	0
Seal Rock	4930650	0.243	50	16	30	3	1	0
Patterson Beach	4919500	0.222	48	15	32	2	3	0
Stonefield	4892850	0.358	38	28	31	3	0	0
Lilly Lake	4885100	0.192	36	31	27	3	3	0
Heceta Beach	4877300	0.202	42	35	20	2	1	0
Florence	4872850	0.294	33	22	39	3	3	0
Siltcoos	4861750	0.326	34	26	33	5	2	0
Umpqua Jetty	4834000	0.349	37	30	26	6	1	0
Horsefall	4817350	0.379	35	27	28	6	4	0
Sacci	4786250	0.185	34	16	39	3	7	1
Bullards	4779600	0.265	41	13	36	3	5	2
Bradely	4768450	0.234	33	13	43	4	7	0
Langlois	4755150	0.322	36	14	37	4	8	1
Elk R. Beach	4742950	0.217	25	11	43	7	14	0
Port Orford	4732950	0.208	24	18	39	6	13	0
Ophir	4715150	0.232	13	11	47	5	24	0
Nesika	4707400	0.289	14	9	47	7	23	0
Hunter Cove	4692950	0.278	12	10	50	7	21	0
Cape Sebastian	4687400	0.192	14	11	49	8	18	0
Myers Creek	4684100	0.218	16	9	45	7	23	0
Samuel Boardman	4670750	0.355	17	13	35	8	27	0
Chetco Jetty	4656300	0.386	19	5	37	10	29	0
Pelican	4644100	0.485	20	4	31	11	34	0
Kellog	4636350	0.497	16	2	34	4	44	0
Castle Rock	4625250	0.256	12	2	39	3	44	0
Crescent City	4621900	0.221	12	4	40	4	40	0
False Klamath	4599700	0.500	8	3	38	18	33	0
Fern Canyon	4593000	0.181	5	2	37	19	37	0
Gold Bluffs	4580800	0.317	8	3	34	22	33	0
Redwood Creek	4570850	0.498	6	2	37	20	35	0
Moonstone	4545300	0.202	9	2	36	8	33	12
Samoa	4519750	0.337	10	3	32	6	37	12
Table Bluffs	4507550	0.415	11	3	37	8	31	10
Inner-shelf								
Gold Beach								
GB VL #(1.0 m)	4687800	0.16	11	10	51	9	19	0
GB VL #4(3.0 m)	4687800	0.16	13	11	48	7	21	0
GB VL #4(6.0 m)	4687800	0.17	12	8	49	10	21	0
PacWave								
P1-2A22VC(0.5m)	4925478	0.19	47	18	30	3	2	0
P1-2A22VC(1.0m)	4925478	0.16	41	22	31	5	1	0
P1-2A22VC(1.5m)	4925478	0.17	45	21	27	6	1	0
P1-2A22VC(2.0m)	4925478	0.18	42	20	30	5	3	0

Notes. River and estuary positions are shown as river mouth or tidal inlet UTM northing coordinates (m), though river sand samples that were collected for heavy-mineral analyses were collected upstream of any littoral sand

influx. Pleistocene dune sheet samples were collected from exposures in sea cliffs (Peterson et al., 2006). Pleistocene paleo-dune luminescence ages (ka) are as follows: 1) The Capes, Late-Pleistocene (Peterson et al., 2006), 2) S. Cape Lookout, 11.2±1.5 ka (Wiedemann, 1990), 3) Lincoln City, 73.3±4.5 ka (Peterson et al., 2006), 4) Newport, 62.6±4.1 ka (Peterson et al., 2006), 5) Reedsport, 30.6±5.4 ka (Peterson et al., 2006), 6) Bullards, 38.1±3.4 ka (Peterson et al., 2006), 7) Otter Rock, 31.1±6.3 ka (Peterson et al., 2006), 8) Indian Sands, 22.8±3.7 ka (Davis et al., 2004), 9) Pt St George, Late-Pleistocene (Peterson et al., 2006). Inner-shelf core sites include Gold Beach GB VL #4 in 26 m water depth and PacWave MSL1903-P1-2A22VC in 34 m water depth. Mean grain size of beach sand (beach face) is in millimeters (mm). Heavy-minerals include 1) mono-mineralic colored pyroxenes; augite, hypersthene, 2) mono-mineralic hornblende; 3) medium-grade metamorphic amphiboles or MetaAmphs including blue green (B.G) hornblende, actinolite and tremolite, and 4) glaucophane. Only strongly colored or pleochroic orthopyroxene grains are counted as hypersthene in this study, thereby slightly reducing hypersthene counts relative to Scheidegger et al. (1971).

Table 2. Heavy-mineral data (normalized)

Settings/ Name	UTM-N	Hypersthene: Augite ratio	Hypersthene: Metamorphic Amphibole ratio	Metamorphic Amphibole :Augite ratio	Glaucophane total HM ratio
Rivers					
Quillayute	5307100	0.0	0.0	0.8	0
Hoh	5289400	0.0	0.0	0.6	0
Queets	5266600	0.0	0.1	0.4	0
Quinault	5244600	0.0	0.1	0.3	0
Chelahis	5196500	0.1	1.3	0.0	0
Columbia	5121500	0.7	1.5	0.5	0
Nehalem	5056100	0.1	7.0	0.0	0
Wilson	5046300	0.1	5.0	0.0	0
Nestucca	5000900	0.0	2.0	0.0	0
Salmon	4988500	0.0	0.3	0.0	0
Siletz	4975200	0.0	0.0	0.0	0
Alesea	4919200	0.0	2.0	0.0	0
Siuslaw	4874200	0.1	2.0	0.0	0
Umpqua	4835600	0.9	4.0	0.2	0
Coos	4800850	0.1	0.5	0.2	0
Coquille	4775000	0.2	0.1	1.4	0
Sixes	4745700	0.3	0.1	2.2	1
Rogue	4697300	0.8	0.4	1.9	0
Pistol	4680500	0.1	0.1	1.7	0
Chetco	4655250	0.2	0.1	1.6	0
Smith	4644400	0.1	0.0	3.1	0
Klamath	4599100	0.3	0.1	5.4	1
Eel	4499400	0.1	0.0	1.9	13
Sea cliff dunes					
The Capes	5033200	0.4	0.5	0.7	1
Sand Lake	5017000	0.6	0.9	0.6	1
Lincoln City	4979090	0.5	0.7	0.7	0

Newport	4929650	0.7	1.5	0.5	0
Reedspport	4834890	0.8	1.8	0.4	0
Bullards	4784640	0.9	1.4	0.7	0
Otter Rock	4702210	0.9	0.5	1.8	1
Indian Sands	4668000	0.3	0.1	1.9	1
Pt St George	4626682	0.3	0.1	5.0	2
Subcell/ Beach sites					
Hobuck	5360000	0.1	0.1	1.1	0
Sand Point	5330650	0.1	0.2	0.7	0
La Push	5307100	0.2	0.3	0.5	0
Beach #3	5279350	0.3	0.5	0.7	0
South Beach	5268200	0.8	1.2	0.7	0
Whale Cove	5240450	0.9	1.4	0.6	0
Pt. Grenville	5240609	0.7	1.4	0.5	0
Copalis	5219500	0.9	1.6	0.6	0
Ocean Shores	5208400	0.8	2.8	0.3	0
Cohasset	5192800	0.8	1.5	0.5	0
Ocean Park	5150600	0.8	1.1	0.7	0
Long Beach	5135050	0.8	1.4	0.5	0
Fort Stevens	5120600	0.7	1.6	0.5	0
Sunset	5111700	0.8	1.7	0.4	0
Cannon	5086150	0.2	1.4	0.1	0
Arcadia	5079500	0.2	2.4	0.1	0
Manzanita	5066150	0.3	3.8	0.1	0
Rockaway	5053950	0.2	2.8	0.1	0
Oceanside	5035050	0.2	4.7	0.0	0
Netarts	5031700	0.2	3.8	0.1	0
Scouts	5020600	0.2	14.0	0.0	0
Sand Creek	5015050	0.3	5.0	0.1	0
Pacific City	5007300	0.1	4.5	0.0	0
Cannery Hill	5002850	0.1	8.0	0.0	0
Roads End	4986150	0.2	5.0	0.0	0
Lincoln City	4980600	0.2	2.4	0.1	0
Salishan	4975050	0.2	10.0	0.0	0
Otter Rock	4956200	0.5	2.4	0.2	0
Moolack	4951750	0.6	2.8	0.2	0
Agate	4948400	0.4	2.4	0.2	0
Nye	4943950	0.5	7.7	0.1	0
South Beach Park	4939500	0.5	3.3	0.2	0
Seal Rock	4930650	0.3	4.0	0.1	0
Patterson Beach	4919500	0.3	3.0	0.1	0
Stonefield	4892850	0.7	9.3	0.1	0
Lilly Lake	4885100	0.9	5.2	0.2	0
Heceta Beach	4877300	0.8	11.7	0.1	0
Florence	4872850	0.7	3.7	0.2	0
Siltcoos	4861750	0.8	3.7	0.2	0
Umpqua Jetty	4834000	0.8	4.3	0.2	0
Horsefall	4817350	0.8	2.7	0.3	0
Sacci	4786250	0.5	1.5	0.3	1
Bullards	4779600	0.3	1.3	0.2	2
Bradely	4768450	0.4	1.2	0.3	0
Langlois	4755150	0.4	1.1	0.3	1
Elk R. Beach	4742950	0.4	0.5	0.8	0
Port Orford	4732950	0.8	0.9	0.8	0
Ophir	4715150	0.8	0.4	2.2	0

Nesika	4707400	0.6	0.3	2.1	0
Hunter Cove	4692950	0.8	0.4	2.3	0
Cape Sebastian	4687400	0.8	0.4	1.9	0
Myers Creek	4684100	0.6	0.3	1.9	0
Samuel Boardman	4670750	0.8	0.4	2.1	0
Chetco Jetty	4656300	0.3	0.1	2.1	0
Pelican	4644100	0.2	0.1	2.3	0
Kellogg	4636350	0.1	0.0	3.0	0
Castle Rock	4625250	0.2	0.0	3.9	0
Crescent City	4621900	0.3	0.1	3.7	0
False Klamath	4599700	0.4	0.1	6.4	0
Fern Canyon	4593000	0.4	0.0	11.2	0
Gold Bluffs	4580800	0.4	0.1	6.9	0
Redwood Creek	4570850	0.3	0.0	9.2	0
Moonstone	4545300	0.2	0.0	4.6	12
Samoa	4519750	0.3	0.1	4.3	12
Table Bluffs	4507550	0.3	0.1	3.5	10
Inner-shelf					
Gold Beach					
GB VL #4 (1.0 m)	4687800	0.9	0.4	2.5	0
GB VL #4 (3.0 m)	4687800	0.8	0.4	2.2	0
GB VL #4 (6.0 m)	4687800	0.7	0.3	2.6	0
PacWave					
P1-2A22VC (0.5 m)	4925478	0.4	3.6	0.1	0
P1-2A22VC (1.0 m)	4925478	0.5	3.7	0.1	0
P1-2A22VC (1.5 m)	4925478	0.5	3.0	0.2	0
P1-2A22VC (2.0 m)	4925478	0.5	2.5	0.2	0

Notes: Diagnostic ratios of the pyroxene and amphibole minerals are computed from heavy-mineral counts (%) in Part 1 (above).

Table 3. Subcell beach profile settings

Subcell/ profile UTM-N (m)	Back-edge type	Backshore elev. (m MTL)	Mid-beach platform elev. (m MTL)	Beach sand size (mean $\pm 1\sigma$ mm)	Beach width to MTL (m)	Beach slope to MLLW (%)
1: Hobuck						
5355200	FD/BS	4.0		0.12 \pm 0.33	203	1.6
5351550	FD/BP	4.5		0.21 \pm 0.04	182	1.9
2: Shi Shi						
5347240	SC	4.5	-2.5	0.26 \pm 0.5	127	3.3
5346260	SC	4.5	-2.5	0.63	156	2.9
3: La Push						
5310050	SC	3.5	-1.5	0.73 \pm 0.45	82	2.9
5308950	SC	4.0	-1.5	0.75 \pm 0.53	120	5.9
5306800	BP	4.0	-1.5	0.16 \pm 0.03	89	6.3
5306450	SC	3.5	-1.0	0.16 \pm 0.03	106	4.8
4: Kalaloch						
5284850	SC	3.5	-1.0	1.73 \pm 1.29	73	5.1
5278150	SC	3.5	-2.0	0.79 \pm 0.55	55	4.3
5273700	SC	3.5		0.13 \pm 0.00	100	2.4
5268800	SC	5.0	-1.5	0.16 \pm 0.03	76	3.4
5259940	SC	5.0	-2.5	0.15 \pm 0.03	164	3.2
5254300	SC	3.0	0.0	0.14 \pm 0.03	20	7.5
5:North Beaches						
5236000	SC	4.5	-2.0	0.17 \pm 0.03	243	1.8
5225240	SC	5.0	-3.0	-	323	1.6

5223580	SC	4.0	-3.5	0.18±0.03	177	1.6
5217950	FD/BP	5.5		0.20±0.04	412	1.6
5213450	FD/BP	4.0		0.20±0.03	371	1.3
5209140	FD/BS	5.0		0.19±0.04	325	1.1
5201490	FD/BS	5.5		0.23±0.06	315	1.9
6: Grayland Plains						
5189900	FD/BS	5.5		0.28±0.81	225	2.5
5184450	FD/BP	5.0		0.19±0.03	279	1.8
5179950	FD/BP	5.0		0.20±0.03	249	1.3
7: Long Beach						
5161230	FD/BS	5.5		0.23±0.05	230	2.2
5155330	FD/BS	7.0		0.25±0.06	275	2.3
5146300	FD/BS	5.5		0.25±0.05	309	2.2
5140180	FD/BS	4.5		0.25±0.06	235	1.8
5130440	FD/BP	4.5		0.27±0.06	197	2.5
8: Clatsop Plains						
5117000	FD/BS	6.0		0.22±0.06	180	3.8
5105340	FD/BP	6.0		0.23±0.06	297	3.6
5102260	FD/BP	6.5		0.22±0.05	309	3.0
5096500	FD/BP	7.0		0.23±0.06	267	2.0
5094380	FD/BR	6.0		0.20±0.04	250	2.0
5092190	BR	5.5		0.22±0.05	217	1.9
9: Cannon Beach						
5083750	FD/SC	5.5	-1.5	0.17±0.03	250	1.6
5079700	SC	5.5	-1.0	0.17±0.04	164	2.1
5077150	SC	5.5	-2.0	0.19±0.03	164	2.4
5073650	SC	5.5	-1.5	0.19±0.03	180	2.1
5070000	SC	1.5	-2.5	0.15±0.05	34	5.1
10: Tillamook						
5063240	FD/BP	5.0		0.22	140	4.2
5061530	FD/BS	5.5		0.19±0.02	160	2.0
5059830	FD/BS	5.5		0.21±0.04	100	3.8
5051000	FD/BP	5.0		0.27	70	3.6
5041000	FD/BS	5.0		-	60	5.0
5039300	FD/BS	4.0		0.17±0.04	50	7.1
11: Netarts						
5034400	SC	4.5	-1.5	0.20±0.04	60	6.2
5032900	SC	3.5	-2.0	0.197	50	5.0
5030650	FD/BS	4.5		0.210	100	3.8
5028820	FD/BS	4.5		-	80	4.7
5025870	FD/BS	4.0		-	50	5.0
5023790	SC	3.5	0.5	0.18±0.03	30	5.0
12: Sand Lake						
5018900	SC	4.5		0.25	60	7.5
5015300	FD/BS	5.0		0.24	90	5.0
5010650	FD/BR	5.0		-	60	4.5
5008600	SC	4.0	-1.5	0.23	50	5.6
13: Pacific City						
5007200	FD/BP	7.0	-3.5	0.23	130	3.2
5004700	FD/BP	6.0		-	100	4.6
4999350	FD/BR	6.0		0.26	90	5.0
4995300	FD/BR	5.0		0.36	55	6.7
14: Lincoln City						
4985000	SC	4.5	-1.5	0.34±0.07	127	2.4
4981000	SC	4.0	-1.5	0.40±0.11	130	3.5
4977310	SC	5.0	-1.0	0.33±0.07	174	3.6

4974080	FD/BS	5.0		0.44±0.13	167	3.8
4969550	SC	5.0	-2.0	0.53±0.23	66	7.2
4966500	SC	5.0	-2.0	0.43±0.19	147	3.4
4965460	SC	5.0	-1.5	0.54±0.34	128	5.5
15: Otter Rock						
4954800	SC	4.5	-0.5	0.20±0.05	177	2.5
4953150	SC	3.5	-1.0	0.23±0.05	140	2.3
4950400	SC	3.5	-1.0	0.23±0.04	118	2.4
4947900	SC	4.5	-0.5	0.27±0.09	68	5.3
16: Newport						
4946950	SC	-	-1.0	0.12±0.02	110	1.5
4945550	SC	4.0	-1.5	0.15±0.03	190	1.5
4943300	SC	-	-1.5	0.15±0.03	137	2.1
4939200	FD/BS	6.5		0.15±0.02	178	2.4
4936650	SC	4.0	-1.0	0.17±0.03	159	1.4
4930000	SC	3.5	-1.5	0.15±0.03	105	2.3
4928600	SC	3.5	-1.0	0.15±0.03	60	2.3
17: Waldport						
4923880	SC	3.5	-2.0	0.18±0.03	114	2.8
4918050	SC	4.0	-4.5	0.20±0.03	164	1.7
4912680	SC	3.5	-2.5	0.19±0.04	90	2.0
4909300	SC	3.5	-2.0	0.16±0.03	100	2.6
18: Winchester						
4883320	FD/BP	7.5		0.30±0.05	140	3.3
4879490	FD/BP	6.0		0.32±0.07	167	3.7
4876640	FD/BP	5.5		0.28±0.05	192	2.5
4870620	FD/BS	5.5		0.30±0.06	160	2.9
4867410	FD/BP	6.5		0.30±0.07	201	2.7
4863590	FD/BP	5.5		0.28±0.05	192	3.4
4857110	FD/BP	7.0		0.29±0.06	156	4.1
4851400	FD/BP	6.5		0.28±0.05	143	4.2
4847330	FD/BP	5.0		0.28±0.07	201	2.6
4842740	FD/BS	5.5		0.33±0.07	163	3.4
4833000	FD/BP	6.5		0.34±0.08	185	3.3
4830940	FD/BP	5.0		0.36±0.09	185	3.2
4827630	FD/BP	6.0		0.41±0.09	135	5.3
4823400	FD/BP	6.5		0.36±0.10	161	4.7
4816340	FD/BP	7.0		0.43±0.11	137	5.1
4812420	FD/BP	6.0		0.37±0.09	172	4.1
4808700	FD/BS	7.0		0.31±0.08	164	5.3
4805580	FD/BS	6.0		0.44±0.12	124	4.9
19: Bullard						
4789760	SC	6.5	-4.5	0.23±0.04	152	3.2
4786840	SC	6.5	-4.5	0.21±0.03	140	1.8
4784310	SC	6.0		0.22±0.05	158	3.7
4778540	FD/BS	6.5		0.46±0.30	104	4.3
20: Bandon						
4772100	SC	6.0	-1.0	0.24±0.05	149	2.6
4769810	SC	5.0	-2.0	0.25±0.06	210	3.1
4764180	BP	6.5		0.37±0.08	186	3.6
4758120	BP	5.5		0.39±1.00	98	5.8
4752050	BP	5.5		0.69±0.23	70	10.7
4749440	SC	5.5		1.65±0.93	99	7.8
21: Garrison						
4742750	SC	3.0	-1.0	0.23±0.06	124	2.4
4742020	SC	5.0	-1.5	0.24±0.06	152	3.2

4739070	BP	6.0		0.40±0.22	79	7.2
4736390	SC	6.5	-4.5	0.61±0.45	85	7.5
4734700	BR	7.0		0.88±0.47	125	5.8
22: Gold Beach						
4700950	SC	6.0	-2.0	0.18±0.06	232	2.6
4699700	SC	4.0	-4.0	0.18±0.04	130	3.5
4698700	SC	5.5	-2.0	0.20±0.05	185	2.8
4695900	BP	5.5	-3.0	0.33±0.12	108	4.3
4693400	SC	6.5	-4.5	0.38±0.11	187	4.4
4691100	SC	4.5	-2.0	0.43±0.13	119	5.1
23: Brookings						
4651360	SC	4.5	-2.0	0.31±0.12	104	4.6
4650020	SC	6.5		0.45±0.28	90	5.4
4649410	SC	5.5	-2.5	0.61±0.34	107	4.8
4648470	SC	6.0		0.50±0.69	120	3.8
4645780	SC	5.0	-1.5	0.24±0.08	107	6.6
4642930	FD/BS	5.5		0.59±0.34	97	7.1
4639500	FD/BP	6.0		0.61±0.32	146	4.1
4635790	FD/BP	4.5		1.16±1.10	87	6.7
4630910	FD/BP	5.0		1.04±0.52	71	10.2
4626820	SC	4.0	-3.5	0.19±0.04	119	2
24: S. Crescent City						
4621500	FD	4.0		0.12±0.02	133	2.0
4620450	SC	4.0	-2.0	0.12±0.02	131	1.7
4619950	SC	4.5	-2.0	0.11±0.02	107	1.9
4618700	SC	4.0	-0.5	0.13±0.03	103	2.4
25: Orick						
4584000	FD/BP	6.0		0.37	100	4.9
4579200	FD/SC	6.0	-3.0	0.32	80	5.3
4570600	SC	6.0	-2.0	0.40	73	5.6
4567900	BR	5.5		1.47	65	6.8
4564200	BR	5.5		0.37	63	6.4
4557250	BR	5.5		0.56	79	4.7
4555000	SC	6.5	-2.5	0.72	90	5.2
26: Eureka						
4542230	SC	4.0	0.0	0.12±0.03	510	1.0
4538700	FD/BP	4.0	-0.5	0.13±0.02	293	1.6
4531110	FD/BS	5.5		0.16±0.04	123	4.7
4522300	FD/BS	5.5		0.18±0.04	119	4.4
4517210	FD/BS	5.0		0.25±0.05	87	5.6
4514000	FD/BS	5.0		0.24±0.06	105	4.8
4511600	FD/BS	5.5		0.20±0.05	205	2.8
4505630	FD/BS	4.5		0.24±0.05	126	3.3
4501230	FD/BS	4.5		0.31±0.06	123	3.6
4493750	FD/BP	4.5		0.60±0.20	82	6.0
4491650	SC	5.0	-3.0	0.57±0.20	69	6.1

Notes: Back-edge of backshore conditions: sea cliff (SC), foredune (FD), bay spit (BS), beach plain (BP), beach ridge (BR). Overlying foredunes (FD) and underlying unconsolidated sand deposits are separated by back-slashes. Backshore sand elevations (m MTL) are taken from backshore back-edge sand deposits. Platform depth (m MTL) is taken from measured elevations of basal cobbles or indurated stratum 'bedrock' in mid-backshore profile positions. Beach sand samples used for grain size analyses are from summer mid-beach or summer-berm locations. Beach widths are from summer beach back-edge (sea cliff or foredune <50% vegetation cover) to the mid-beach face or MTL. Beach slope or gradient is from the beach back-edge to the beach toe or MLLW. Data sources are as follows: Tillamook, Sand Lake, Pacific City subcells (Doyle, 1996); Humboldt Lagoon beach ridges in the Orick subcell (C. D. Peterson, L. Dengler, and G. Carver, unpublished data, 1996); Netarts subcell (Percy et al., 1998; Minor and Peterson; 2016); all other subcells (Peterson et al., 1994).

Table 4. Subcell beach profile parameters

Subcell/ profile UTM-N (m)	Cross-X area above MHHW (m ²)	Cross-X area above MLLW (m ²)	Beach segment length (m)	Volume above MHHW (m ³)	Volume above MLLW (m ³)
1: Hobuck					
5355200	200	720	2650	615000	2194000
5351550	280	760	2600	580000	1602000
2: Shi Shi					
5347240	70	380	1250	108000	595000
5346260	160	590	1750	418000	1570000
3: La Push					
5310050	40	90	1610	47000	119000
5308950	30	140	1530	38000	162000
5306800	50	80	340	17000	26000
5306450	70	80	720	61000	68000
4: Kalaloch					
5284850	80	220	8480	492000	1416000
5278150	20	120	5070	147000	781000
5273700	30	230	5340	160000	1169000
5268800	20	100	5690	176000	871000
5259940	90	280	7310	490000	14911000
5254300	0	20	7290	0	160000
5:North Beaches					
5236000	80	320	10310	1093000	4196000
5225240	190	930	4560	917000	4546000
5223580	40	430	2540	109000	1194000
5213450	280	1230	10500	3182000	13976000
5209140	250	1060	6400	1389000	5824000
5201490	120	700	7560	1051000	5972000
6: Grayland Plains					
5189900	420	1030	7670	3007000	7417000
5184450	330	1110	5270	1723000	5771000
5179950	140	760	5950	922000	5135000
7: Long Beach					
5161230	200	810	7390	2106000	8491000
5155330	160	760	7710	1288000	6307000
5146300	380	1100	8350	3474000	10070000
5140180	230	870	8740	1696000	6520000
5130440	180	670	5960	1174000	4375000
8:Clatsop Plains					
5117000	220	650	6350	1302000	3861000
5105340	700	1470	9310	6247000	13118000
5102260	1020	1810	3650	3190000	5683000
5096500	590	1170	3740	2349000	4653000
5094380	230	850	1880	421000	1589000
5092190	190	820	1600	366000	1590000
9: Cannon Beach					
5083750	530	730	2070	1100000	1513000
5079700	20	220	3630	54000	774000
5077150	30	290	2830	78000	718000
5073650	50	170	3110	139000	503000
5070000	30	110	2190	50000	186000
10: Tillamook					
5063240	90	430	2310	207900	993300

5061530	920	1730	1430	1315600	2473900
5059830	240	720	5900	1416000	4248000
5051000	210	530	9570	2009700	5072100
5041000	160	500	4620	739200	2310000
5039300	20	190	2130	42600	404700
11: Netarts					
5034400	20	110	1050	21000	115500
5032900	0	100	1570	0	157000
5030650	80	410	1740	139200	713400
5028820	14	490	2380	33320	1166200
5025870	20	190	2750	55000	522500
5023790	0	60	1850	0	111000
12: Sand Lake					
5018900	35	150	3400	119000	510000
5015300	80	250	5200	416000	1300000
5010650	70	230	3100	217000	713000
5008600	50	180	1600	80000	288000
13: Pacific City					
5007200	150	660	1700	255000	1122000
5004700	110	420	3600	396000	1512000
4999350	110	360	5500	605000	1980000
4995300	40	190	2800	112000	532000
14: Lincoln City					
4985000	130	190	3040	392000	572000
4981000	80	160	3660	278000	549000
4977310	70	150	4040	319000	667000
4974080	310	660	3730	951000	2003000
4969550	140	170	4220	595000	747000
4966500	120	180	1770	218000	338000
4965460	270	360	390	114000	155000
15: Otter Rock					
4954800	30	120	1280	35000	150000
4953150	20	140	2135	40000	324000
4950400	10	50	2990	25000	131000
4947900	0	30	1350	9000	73000
16: Newport					
4946950	40	240	1100	48000	325000
4945550	100	220	1680	115000	261000
4943300	10	130	3050	36000	484000
4939200	360	840	2680	1020000	2387000
4936650	40	210	2865	95000	557000
4930000	20	140	2270	43000	268000
4928600	20	140	1700	36000	296000
17: Waldport					
4923880	130	590	5720	732000	3312000
4918050	580	1680	1930	938000	2725000
4912680	120	470	3720	551000	2199000
4909300	120	600	1860	216000	1101000
18: Winchester					
4883320	370	650	3020	1148000	2011000
4879490	300	660	3340	985000	2138000
4876640	50	350	3370	118000	917000
4870620	380	620	5150	2225000	3579000
4867410	340	670	3900	1244000	2492000
4863590	460	840	4620	2168000	4019000
4857110	230	570	6270	1329000	3386000

4851400	210	500	4660	1170000	2824000
4847330	250	580	4310	1168000	2758000
4842740	220	570	9220	2351000	6085000
4833000	330	750	3000	1011000	2295000
4830940	320	670	2560	876000	1825000
4827630	210	490	3950	1019000	2374000
4823400	230	530	5440	1050000	2404000
4816340	260	550	5950	1077000	2273000
4812420	330	720	3390	1200000	2637000
4808700	510	840	3610	1585000	2643000
4805580	110	380	3450	424000	1466000
19: Bullard					
4789760	160	390	2990	428000	1058000
4786840	80	410	2730	197000	1024000
4784310	190	470	3550	639000	1562000
4778540	210	410	6820	1739000	3451000
20: Bandon					
4772100	50	200	2290	82000	364000
4769810	100	310	3800	308000	980000
4764180	70	310	6000	360000	1734000
4758120	120	320	5500	737000	1881000
4752050	160	300	4640	821000	1536000
4749440	290	530	1960	504000	917000
21: Garrison					
4742750	30	200	1140	50000	309000
4742020	100	200	2140	178000	370000
4739070	140	330	2190	287000	683000
4736390	130	330	2690	291000	724000
4734700	400	660	2080	951000	1558000
22: Gold Beach					
4700950	210	360	1525	346000	588000
4699700	180	300	1220	278000	462000
4698700	210	370	1890	295000	512000
4695900	240	370	2315	595000	927000
4693400	250	410	2500	717000	1162000
4691100	190	220	3780	643000	723000
23: Brookings					
4651360	110	300	1460	172000	461000
4650020	150	370	650	73000	189000
4649410	120	300	650	99000	241000
4648470	150	410	1850	361000	990000
4645780	60	190	2880	121000	366000
4642930	180	410	3070	494000	1133000
4639500	240	660	3500	648000	1796000
4635790	160	350	4250	786000	1751000
4630910	160	310	4500	675000	1278000
4626820	30	290	2600	83000	741000
24: S. Crescent City					
4621500	60	170	830	55000	148000
4620450	70	290	890	61000	251000
4619950	30	130	980	37000	149000
4618700	30	70	1320	30000	77000
25: Orick					
4584000	130	369	5910	768300	2180800
4579200	90	280	7300	657000	2044000
4570600	70	220	6000	420000	1320000

4567900	50	210	4300	215000	903000
4564200	60	230	5500	330000	1265000
4557250	70	320	4500	315000	1440000
4555000	110	360	1500	165000	540000
26: Eureka					
4542230	180	720	3260	799000	3198000
4538700	240	490	5510	1108000	2226000
4531110	80	270	7500	675000	2460000
4522300	130	310	7250	950000	2313000
4517210	70	230	3910	414000	1400000
4514000	160	360	2620	396000	883000
4511600	400	450	6040	2235000	2549000
4505630	130	180	1440	156000	216000
4501230	340	760	5200	1518000	3385000
4493750	160	350	7360	1354000	2900000

Notes: Beach sand cross-section areas (m²) for MHHW and MLLW are based on calibrated digitization of areas bounded by 1) profile top surfaces to the sea cliff or mid-slope of the foredune (<50 % vegetation cover) and to the beach face interception with MLLW, 2) underlying wave-cut platform surfaces, and/or 3) the basal elevation cut-offs at the MHHW or MLLW tidal elevations. Beach segment lengths are measured alongshore using mid-points between profiles or terminal beach deposits near the bounding headlands but exclude estuary tidal-inlets. Estimated beach sand volumes are based on the products of cross-section areas above MHHW and above MLLW multiplied by corresponding segment lengths. The cross-sectional areas are adjusted for all profiles (Peterson et al., 1994), except those in Tillamook, Sand Lake, Pacific City subcells (Doyle, 1966); Orisk subcell (C. Peterson and G. Carver, unpublished data, 1996); Netarts subcell (Percy et al., 1998). The adjustments are made by using the ratios of the measured profile beach widths compared to the averaged beach widths from the corresponding segments, as measured at ~0.5 km alongshore spacings from low-elevation aerial photo/videography (Pettit, 1990; Rosenfeld et al. 1991; Peterson et al., 1994). See Peterson et al. (1994) for statistics on averaged beach widths (means and standard deviations) and computed adjustment factors used to adjust beach cross-sectional areas in beach sand volume estimates.

Table 5. Subcell shelf profile parameters

Subcell/ UTM	0-30 m Shelf Distance (m)	0-30 m Shelf Gradient (%)	0.33xTransition Distance (m)	Accommodation Width (m)
1				
5355400	4210	0.71	1389	2821
5351800	2840	1.06	937	1903
Average	3525	0.88	1163	2362
2				
5348300	2990	1.00	987	2003
5346200	2650	1.13	875	1776
Average	2820	1.07	931	1889
3				
5309600	4190	0.72	1383	2807
5306500	4270	0.70	1409	2861
5304600	1960	1.53	647	1313
Average	3473	0.98	1146	2327
4				
5302400	4110	0.73	1356	2754
5300100	4400	0.68	1452	2948
5293690	7300	0.41	2409	4891
5284800	11200	0.27	3696	7504
5273700	10110	0.30	3336	6774
5254300	10720	0.28	3538	7182
Average	7973	0.44	1852	3760
5				
5236000	8620	0.35	2845	5775

5217950	7500	0.40	2475	5025
5209140	6800	0.44	2244	4556
5201500	7480	0.40	2468	5012
Average	7600	0.40	2508	5092
6				
5190000	7470	0.40	2465	5005
5184450	6845	0.44	2259	4586
5178600	5180	0.58	1709	3471
Average	6498	0.47	2144	4354
7				
5161230	7030	0.43	2320	4710
5155300	7630	0.39	2518	5112
5146300	7500	0.40	2475	5025
5140180	7550	0.40	2492	5059
5126240	6940	0.43	2290	4650
Average	7330	0.41	2419	4911
8				
5117000	9490	0.32	3132	6358
5110220	7320	0.41	2416	4904
5102260	5060	0.59	1670	3390
5094500	5090	0.59	1680	3410
Average	6740	0.48	2224	4516
9				
5083000	2483	1.21	819	1664
5077100	2410	1.24	795	1615
5071200	2787	1.08	920	1867
Average	2560	1.18	845	1715
10				
5063200	2230	1.35	736	1494
5058000	2480	1.21	818	1662
5054400	2470	1.21	815	1655
5048900	2240	1.34	739	1501
5042450	3400	0.88	1122	2278
Average	2564	1.198	846	1718
11				
5032600	2450	1.22	809	1642
5028440	2360	1.27	779	1581
5025100	3020	0.99	997	2023
Average	2610	1.16	862	1749
12				
5018910	2120	1.42	700	1420
5015300	2190	1.37	723	1467
5010600	2570	1.17	848	1722
5008600	2360	1.27	779	1581
Average	2310	1.31	762	1548
13				
5004700	1711	1.75	565	1146
5002800	1650	1.82	545	1106
4999300	1730	1.73	571	1159
4995300	2540	1.18	838	1702
Average	1908	1.62	630	1278
14				
4985000	2130	1.41	703	1427
4981000	2300	1.30	759	1541
4977300	2040	1.47	673	1367
4974100	1840	1.63	607	1233

4969500	2300	1.30	759	1541
4966500	1870	1.60	617	1253
Average	2080	1.45	686	1394
15				
4954800	2810	1.07	927	1883
4953100	3180	0.94	1049	2131
4950400	3010	1.00	993	2017
4947900	2140	1.40	706	1434
Average	2785	1.10	919	1866
16				
4947000	2910	1.03	960	1950
4943300	2900	1.03	957	1943
4936700	3450	0.87	1139	2312
4928600	2203	1.36	727	1476
Average	2866	1.07	946	1920
17				
4923900	2340	1.28	772	1568
4918100	2230	1.35	736	1494
4912700	2260	1.33	746	1514
4909300	2080	1.44	686	1394
Average	2228	1.35	735	1492
18				
4883300	2310	1.30	762	1548
4879500	2580	1.16	851	1729
4876600	2090	1.44	690	1400
4870600	2600	1.15	858	1742
4867400	2454	1.22	810	1644
4857100	2550	1.18	842	1709
4851400	2650	1.13	875	1776
4847300	2460	1.22	812	1648
4842700	2690	1.12	888	1802
4830940	1960	1.53	647	1313
4823400	2340	1.28	772	1568
4816300	2430	1.23	802	1628
4812400	2650	1.13	875	1776
4808700	3050	0.98	1007	2044
4805600	3450	0.87	1139	2312
Average	2551	1.20	842	1709
19				
4789700	2780	1.08	917	1863
4786800	2410	1.24	795	1615
4784300	2720	1.10	898	1822
4778500	3190	0.94	1053	2137
Average	2775	1.09	916	1859
20				
4772100	1900	1.58	627	1273
4769800	1780	1.69	587	1193
4784200	1720	1.74	568	1152
4758120	1890	1.59	624	1266
4752000	2500	1.20	825	1675
Average	1958	1.56	646	1312
21				
4742700	4300	0.70	1419	2881
4742000	4900	0.61	1617	3283
4739100	4310	0.70	1422	2888
4736400	2690	1.12	888	1802

4734700	2120	1.42	700	1420
Average	3664	0.91	1209	2455
22				
4700900	5280	0.57	1742	3538
4698700	4810	0.62	1587	3223
4693400	3240	0.93	1069	2171
4691100	3000	1.00	990	2010
Average	4083	0.78	1347	2735
23				
4650000	6000	0.50	1980	4020
4648500	6500	0.46	2145	4355
4645800	6200	0.48	2046	4154
4639500	7500	0.40	2475	5025
4635800	9740	0.31	3214	6526
4630900	12300	0.24	4059	8241
4626800	9500	0.32	3135	6365
Average	8249	0.39	2722	5527
24				
4621500	4050	0.74	1337	2714
4620500	4050	0.74	1337	2714
4620000	4320	0.69	1426	2894
4618700	4000	0.75	1320	2680
Average	4105	0.73	1355	2750
25				
4594100	5930	0.51	1957	3973
4586200	5980	0.50	1973	4007
4579300	5390	0.56	1779	3611
4570900	4200	0.71	1386	2814
4568200	4200	0.71	1386	2814
4563800	4500	0.67	1485	3015
4557500	4410	0.68	1455	2955
4554700	3860	0.78	1274	2586
Average	4809	0.64	1587	3222
26				
4542200	6440	0.47	2125	4315
4538700	5530	0.54	1825	3705
4531100	3120	0.96	1030	2090
4522300	2860	1.05	944	1916
4517200	2980	1.01	983	1997
4514000	3100	0.97	1023	2077
4511600	3420	0.88	1129	2291
4505600	3790	0.79	1251	2539
4501200	5810	0.52	1917	3893
4493700	5190	0.58	1713	3477
4491700	4000	0.75	1320	2680

Notes: Inner-shelf profiles are identified by subcell number and UTM-N coordinates (m). Across innermost-shelf distances (m) are from the shoreline (0 m NAVD88 datum) to the 30 m water depth, as are the transition distances (m) from the shoreline to 33 % of the across-innermost shelf distance. The across-shelf profile gradients (%) are taken from the shorelines to the 30 m depth positions. The accommodation space widths are taken from the innermost-shelf widths minus the corresponding transition widths in shelf profiles. Bathymetric data are interpreted from Google Earth (2020).

