

Chapter 2

Comparisons with other biological surveys and shore mapping systems

2.1 Historical Biological Surveys

We performed a qualitative comparison of our Carr Inlet survey with others from various locations around the greater Puget Trough, mostly from the 1970's and 1980's. Sixteen old surveys were examined in detail (Table 14); these were those that had species-level identifications for at least some of the taxa and had sufficient detail about location, tidal elevations, and substrate types for comparison with our data. These 16 sources described 238 transects, and we recorded data from them for 190 species (generally excluding infrequent and uncommon ones). For some surveys we were able to extract quantitative information, whereas others had only presence/absence information, or the data were in such a different format (e.g., counts rather than percent cover for barnacles) that they could not be compared and were reduced to presence/absence. Patterns described below are based on presence/absence information, i.e. by noting in how many of the transects/sites a given taxon was found. The old surveys varied widely in sampling methodologies (Table 14), including level of replication and mesh size of sieves (if any), and some focused on only a few taxa (e.g., the clams or the algae). Thus gaps in the database cannot be assumed to reflect true absence of a taxon from any given site. Data are included in a file.

Surveys examining soft-sediment habitats (the range that we studied in Carr Inlet) covered a considerable geographic range, although the majority were concentrated in central Puget Sound and in the San Juans and Straits because of numerous applied studies there (Figure 11, Table 15). Information about wave fetch or other measures of energy level were seldom included, so that we have based our qualitative comparisons below only on substrate types (mixes of different sediment sizes). An additional difficulty is that substrate sizes (especially for "gravel") were rarely defined quantitatively; thus we have had to assume that their definitions are similar to ours.

Table 14. Additional information on 'old surveys' for Puget Sound, including methods and call number if document exists in UW Library system.

Thom et al. 1979. Methods: Sessile surface biota: photos of 20 random 0.1 m² areas at leach level; 50 RPQ per photo later. Algal biomass sampled from 10 0.06m² areas.
Small Infauna: 2 small cores: 24cm² x 10 cm deep, 1mm sieve
Large infauna: 3 large cores: 625 cm² x 30 cm deep, 12.5mm sieve. QL138 W35 1979.

Thom et al. 1984. Methods as in Thom et al. 1979. Much clustering in report, taxa gen. not listed by site, only common taxa listed. Not in UW Library [Dethier has copy].

Webber 1980. Methods: Large cores: 0.25m² x 30 cm deep, 13mm sieve
Small cores: 0.05m² x 15 cm deep, 1mm sieve
Scrapes from cobble: 5 random .01m² subsections scraped of algae and inverts >1 mm size.
3-5 replicates of each per tidal level, some seasonal data over 2 years. Extensive quantitative data maybe available somewhere? UW QH 91.8 B4 W42

Smith and Webber 1978. Methods: Surface biota: scrapes from 0.25m² quadrats, inverts down only to 3 mm size. Large infauna: 0.25 m² x 30 cm, 0.5 inch sieve. Small infauna: 0.05m² x 15 cm, 1 and 2 mm sieves. N = 5 per level for cobble and pebble, N = 7 per level for sand and mud. Two rock sites sampled but not entered in database. Quant. data presumably exists somewhere. UW QL212 S64 1978

Chew 1970. Methods: 4-10? 0.25m² digs to 6-12 inches, sieved to 0.25inches. Only bivalves and large crustacea quantified and identified to species. Size info. available for bivalves. UW QL212 C54 1970a.

Nyblade 1979. Methods: 3-5 replicates per level of 0.05m² x 15 cm deep, sieved to 1mm. Surface scrapes of cobbles of 0.05m² areas. Extensive seasonal and year to year data. Only common species entered into our database. All taxa (almost) identified to species. Some deeper (to 30cm) sampling at Wescott Bay for clams. Some rock and some subtidal sites also done. Five-year summary: QL 138 N92, and appendix with all data QH 105 W2 B2 App. F.

Armstrong 1977. Methods: At each level, 2 0.25 m² areas sampled at each date, with areas rotating among sample dates. Epifauna scraped from 400cm² areas. Cores: 31.2cm² x 15 cm deep, sieved to 1 mm (other sizes experimented with). Large infauna 0.25m² to 30cm, sieved to 6mm. Only 'most abundant' polychaete species listed with quant. data – other spp just listed, but not by tidal height (therefore not put into our database). SH 19 Th25546.

Nyblade 1979 (Straits). Methods: Surface scrapes (.05m²) on cobbles, small infauna core .05m² x 15cm sieved to 1mm, large infauna 0.25m² x 30cm deep, sieved to 12.5 mm (N = 4-5 each). Some rock and some subtidal sites also done. Only common species entered. QH105 W2 N92

Thom et al. 1979 (Skiff Point). Methods: Vertical transects, 3 tidal levels on each. 5 0.25m² quads per level. Qual. visual estimate of surface biota. Small infauna in 31cm² x 15 cm cores, sieved to 1 mm. Large infauna in .25m² x 30cm core, to 0.25in (= .64cm). Common species entered – quant. data for others exists. QL138 W35 1979.

Thom 1978 thesis. Same methods as Armstrong, but surface flora and fauna only. SH 19 Th26541.

Houghton 1973. 3 0.25m² quads per level. Cores of same size, to 30 cm depth. Sieved to 7 mm. Small infauna in 44 cm² x 10cm deep core, sieved to 1mm. Appendix with quant. data, but not sorted by tidal height. Thus only qual. data entered, common species. SH19 Th21986

Smith 1980. Monthly or so samples at each level. Cores = 5.1cm² x 8cm, sieved to 0.3mm. N = 7 usually. Clams not effectively sampled with small and shallow cores, or other large and mobile inverts. SH19 Th27883.

Shimek 1977. Quant. data available. Focussed on snail food: polychaetes. Clams and other large infauna and epibiota only mentioned in passing. Methods: 18cm² x 10 cm cores, sieved to 0.5mm. N's?? (??). QL3 Th25262.

Pamatmat 1966. Cores of 0.1m² x 10cm, sieved to 0.5 or 0.8 mm. N's? Seasonal sampling. Only common species listed. FHL 551.46 Th15298.

Dames and Moore 1981. Intertidal and subtidal organisms sampled both with an epibenthic pump (data not used here), and cores at 8 different transects in and on the sides of Commencement Bay. Samples in Nov. and April. 2 cores per level per date, 12.5cm² by 36 cm depth. Sieved to 0.5mm. Data presented in clustered fashion, "coincidence values" only. Subtidal data not included. Most intertidal species entered in database. DNR has copy of report, Dethier has xerox.

Dethier 1993. Sand and mud cored with 10cm diam clam gun to 15 cm, sieved to 1mm. 4 replicates per level. Surface quadrats also taken in eelgrass and cobbly mud. Clams in mud habitats dug in 0.1m² box core. Quantitative data available.

Other possible surveys:

'Hood Canal Project Report', Evergreen State College (UW QH105 W2 H66): scattered surveys throughout canal, variable levels of detail, tidal heights and substrate types often not recorded.

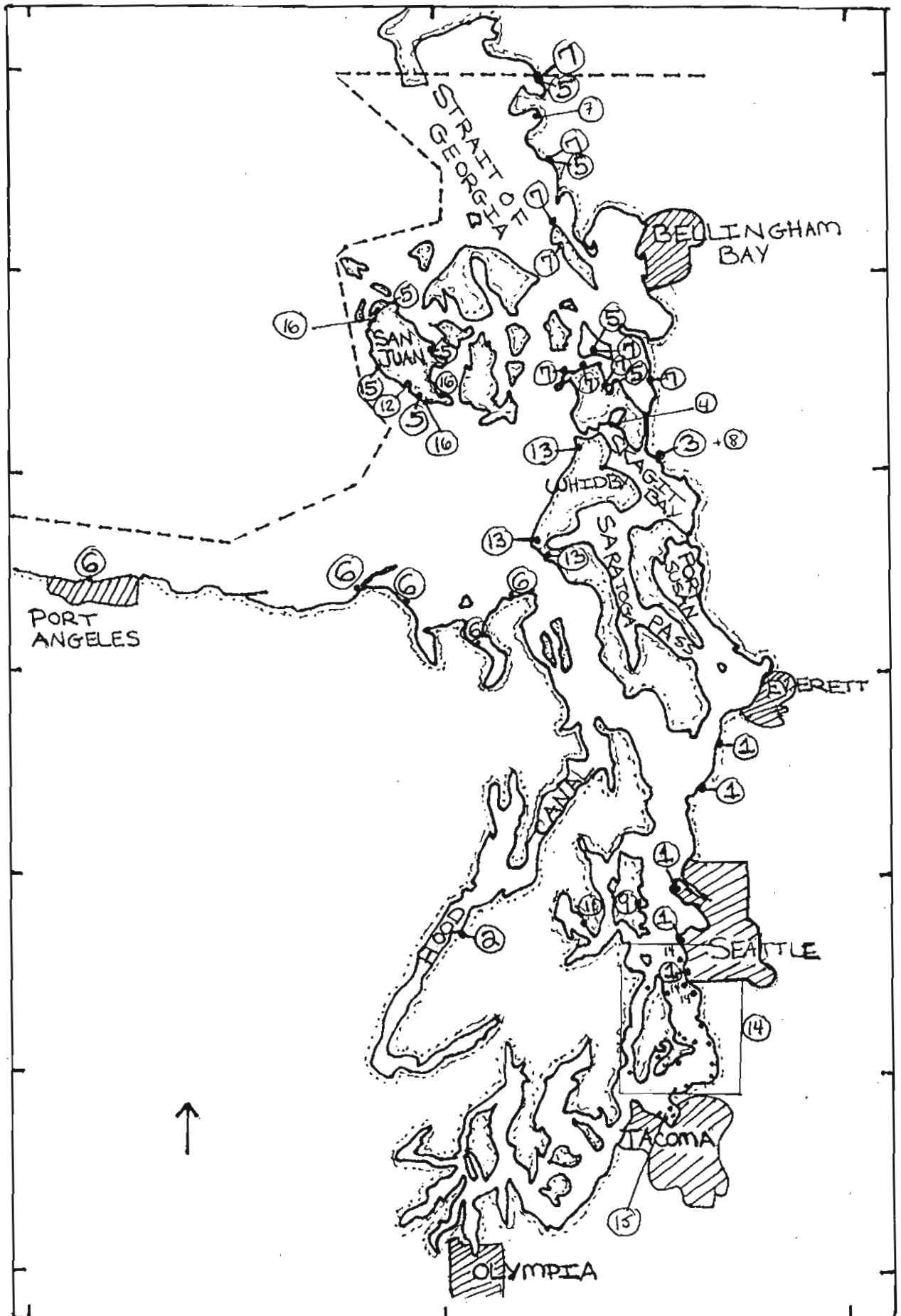


Figure 11. Locations of 'old surveys' in the greater Puget Trough. Numbers correspond to references listed in Table . Most references contain data from more than one site.

Table 15. Studies cited as 'old surveys', as numbered in Figure 11.

1. Armstrong, J.M. 1977. The Impact of Subtidal Sewage Outfalls on the Intertidal Macrofauna of Several Central Puget Sound Beaches. Dissertation, College of Fisheries, University of Washington, Seattle, Washington. 1977
2. Chew, K.K. 1970. Preliminary survey of macrofauna in Anderson Cove. Prepared for Boise Cascade Properties, Inc. 43 pp.
3. Eckman, J.M. 1979. Small scale patterns and processes in a soft-substratum, intertidal community. *J. Mar. Res.* 37:437-457.
4. Houghton, J.P. 1973. The intertidal ecology of Kiket Island, Washington, with emphasis on age and growth of *Protothaca staminea* and *Saxidomus giganteus* (Lamellibranchia: Veneridae). PhD Dissertation, Univ. of Washington.
5. Nyblade, Carl F. 1979. Five Year Intertidal Community Change, San Juan Islands 1974-1978 (and: The Intertidal Benthos of North Puget Sound, Summer 1978). Baseline Study Program North Puget Sound, Washington State Department of Ecology, Olympia, Washington. Appendix F, August 1979.
6. Nyblade, Carl F. 1979. The Strait of Juan De Fuca Intertidal and Subtidal Benthos. Interagency Energy/Environment R&D Program Report, University of Washington, Friday Harbor Laboratories, Friday Harbor, Washington. March 1979.
7. Smith, F. and Webber, H. H. 1978. A Biological Sampling Program of Intertidal Habitats of Northern Puget Sound. Baseline Study Program North Puget Sound (Wash. state oil baseline program), Huxley College of Environmental Studies, Western Washington University, Bellingham, Washington. September 1978.
8. Smith, J.E. 1980. Seasonality, spatial dispersion patterns and migration of benthic invertebrates in an intertidal marsh-sandflat system of Puget Sound, Washington, and their relation to waterfowl foraging and the feeding ecology of staghorn sculpin, *Leptocottus armatus*. PhD Dissertation, Univ. of Washington.
9. Thom, R.M., K. Chew, D. Crisostomo, B. Dumbault, A. Escofet, C. Falmange, J. Hampel, C. Lau, J. Orensanz, and D. Waumann de Pinet. 1979. Habitats, Abundance, and Diversity of the Intertidal Benthic Biota of Skiff Point, Bainbridge Island, Washington. Report to METRO. College of Fisheries, University of Washington, Seattle, Washington; Sept. 1979.
10. Thom, R.M. 1978. The composition, growth, seasonal periodicity and habitats of benthic algae on the eastern shore of Central Puget Sound, with special reference to sewage pollution. PhD Dissertation, Univ. of Washington.
11. Shimek, R.L. 1977. Resource utilization and natural history of some northeastern Pacific Turridae. PhD Dissertation, Univ. of Washington.
12. Pamatmat, M.M. 1966. The ecology and metabolism of a benthic community on an intertidal sandflat (False Bay, San Juan Island, Washington). PhD Dissertation, Univ. of Washington.
13. Webber, H. H. 1980. Whidbey Island Intertidal and Shallow Subtidal Benthos. Interagency Energy/Environment R&D Program Report, Huxley College of Environmental Studies, Western Washington University, Bellingham, Washington. November 1980.
14. Thom, R., R. Albright, C. Simenstad, J. Hampel, J. Cordell and K. Chew. 1984. Renton sewage treatment plant project: Seahurst Baseline Study. IV, Section 5. Intertidal and shallow subtidal benthic ecology. Final Report for METRO, UW Fisheries Research Institute.
15. Dames and Moore, Inc. 1981. Preliminary draft: invertebrate studies technical report for Commencement Bay Studies. Aug. 19, 1981. 00682-021-05.
16. Dethier, M.N. 1993. A baseline survey and inventory of intertidal communities in San Juan Island National Historical Park. Report to the National Park Service, Dec. 1993.

For the Low zone (tidal range of old surveys encompassing about -0.3 to +0.6m relative to MLLW, compared to our sampling at 0.0m), we were able to separate out data from 5 substrate types in the old surveys: 1) cobble, gravel, and sand; 2) gravel with some sand; 3) sand, and 4) mud and 5) sand with some gravel. The flora (few algae) and fauna (many clams, worms, and some epifauna) of the first type were fairly consistent across the various regions where such sediments were sampled. The surface cobbles were dominated by barnacles, Lacuna snails, Mytilus, and ulvoids, whereas the infauna was characterized by numerous clams (especially Macoma inquinata, Protothaca, Saxidomus, and Tresus) and worms (especially Armandia, Malacoceros, Mediomastus, Notomastus, Owenia, Platynereis, and Hemipodus). In contrast, while our Low 'gravel' sites (with this same kind of mixed substrate) had many of the same, very common, epifauna and flora, the infauna was very different except for the 2 worms Notomastus and Hemipodus. Our coring was not deep enough to reach Saxidomus or Tresus, but Protothaca were sampled effectively by our method in higher zones, yet we did not find them in the Low zone as did most of these old surveys.

We did not sample any relatively high-energy, Low-zone, gravel-dominated (i.e., dynamic) beaches like the gravel-sand ones in some of the old surveys; these were recorded as relatively depauperate biologically and showed little consistency from site to site; nemerteans, oligochaetes, and gammarid amphipods were the only common taxa. The sand-gravel beaches had distinctly different infauna than the gravel-sand (i.e., different primary substrate type). The sandier beaches were dominated by the polychaetes Armandia, Glycinde, Notomastus, and Owenia, with various other worms and occasional clams. The fauna recorded in the different districts of Puget Sound were similar. Again, we sampled no beaches of this type in Carr Inlet.

The sand or mixed sand-mud areas in the old surveys were highly variable; most had a mix of clam species (especially the small species Transenella, and some Macoma spp.), and the tanaid crustacean Leptochelia. The burrowing cucumber Leptosynapta and various worms and amphipods were also present in some areas. The muddier sites clearly had a richer infauna, especially of clams. No obvious regional differences were seen. Only one site in this category (False Bay, San Juan Island) had any Dendraster. In contrast, our low sand sites were dominated in most cases by Dendraster, and also

contained nemerteans, Spiochaetopterus, some amphipods, and relatively few worms. One sand block had the burrowing anemone Edwardsia. Very few of these taxa were even noted in the old surveys; the only species held in common seemed to be the clam Tellina modesta. We cannot determine at this time if all these differences result from the presence or absence of Dendraster or from larger biogeographic differences between South Sound and the other regions.

Low zone muddy habitats in the old surveys were dominated by Zostera, Macoma nasuta, the polychaetes Malacoceros and Notomastus, and the crustaceans Corophium, Cumella, and Leptocheilia. Out of the 11 Central-district and 10 Straits-district transects of this type, some taxa were confined largely or totally to only one district or the other. For example, the red alga Gracilaria and the cumacean crustacean Cumella were recorded only in the Central surveys, while Protothaca and a number of polychaetes were recorded only in the Straits. A number of taxa (Zostera, Macoma, Corophium) were common in both. The only taxa clearly seen in common between the old surveys and those in Carr were the red alga Gracilaria and the clam Macoma nasuta. Taxa seen commonly in Carr but not in the old surveys included Callianassa and associates, the clam Tellina, and the polychaete Goniada.

Biota in the Mid zone (+1 to +2m) showed greater consistency between the old surveys and ours (at +1.5m) in Carr Inlet. The cobble-gravel-sand (mixed-coarse) substrate was particularly similar, with epifauna dominated by barnacles, Hemigrapsus, Littorina, limpets, Mytilus, and ephemeral algae, and infauna dominated by Protothaca, Notomastus, isopods, Hemipodus, the amphipod Hyale, and spionid worms. Differences lay in the common presence of other worms and the isopod Gnorimosphaeroma in the old surveys. Some of these differences may lie in the smaller sieve size used by some of the old studies, although most of the worms listed are larger taxa. As with the Low mud, some taxa in the old surveys tended to be concentrated either in the Central or Straits districts, but not both.

The old surveys also contained 23 transects described as gravel and sand, not clearly paralleling any of the transects in the Carr study. These were mostly in the Straits, with a few in Central Puget Sound, and may have been higher-energy sites than any of ours. Surveys showed little consistency among these sites, with a wide range of bivalves,

polychaetes, and crustaceans scattered through them. The data suggest that the Straits habitats described as gravel and sand were more wave-exposed than those in the Central district and the fauna in these overlapped very little, thus emphasizing the importance of quantifying wave exposure in some way (in addition to describing sediment types).

Sand substrates (sometimes with secondary gravel or shell) in the Mid zones of both Carr and the old studies were quite variable in biota at different locations. We found few species that were consistent enough in the Carr Mid sand to be listed as 'indicators' (Table 14), and the old studies similarly had few species in common with each other. This variability may result from lumping data from different energy regimes. Both sets of surveys had the polychaetes Hemipodus and nereids, and some Callianassa, but no taxa could be described as characteristic.

Mud substrates (often with secondary gravel) in the Mid zone showed some species in common between the old surveys and ours. While the Mid zone mud in Carr Inlet was clearly dominated by Callianassa and associated species, this taxon was found at few of the old sites (although the commensal clam Cryptomya was in many of the old sites). Both sets of studies found Macoma nasuta, Tapes, and the amphipod Corophium. The old surveys commonly also found Mya, Macoma balthica, Mytilus, and a variety of polychaetes that were not seen in ours. Again there appeared to be some separation in the old surveys between species found in the Central vs. the Straits districts.

In the High zone (+2 to +3m), 3-4 substrate types could be distinguished in the old surveys: 1) cobble mixed with gravel and sand; 2) gravel, sometimes with sand (probably higher energy), and 3) a continuum from mud/gravel/sand to sand/gravel/mud. The mixed-coarse areas in the old surveys had some species in common with our 'gravel' sites, although the Carr sites seemed relatively depauperate, probably because they were at the upper limit of this zone. Species in common were the common epibiota Balanus and Littorina spp., and the amphipod Hyale plumosa. Hardshell clams were characteristic of both datasets, although the common species in Carr was Tapes, versus Protothaca and Saxidomus in the old surveys. Cryptomya and Mytilus were also common in the old surveys but were not in Carr, probably because of the elevation difference.

The High gravel/sand areas in the old surveys had no parallel in our Carr samples. As in the Mid zone, these tended to be biotically depauperate, commonly containing only

nemerteans, oligochaetes, and gammarids. The mud/sand/gravel sites appear to be geophysically similar to our high 'mud' sites, which also tended to contain sand and pebbles. Very few species were similar, however. Indicator taxa for the Carr High mud areas were barnacles, Enteromorpha, the ghost shrimp Callianassa, and the amphipod Corophium. None of these were recorded commonly in the old surveys, although the muddier sites did often contain the mud shrimp Upogebia. Other common taxa recorded in the old surveys, but seldom if ever recorded in Carr, included Macoma balthica and M. nasuta, Mya, Notomastus, and the snail Battilaria attramentaria. Differences may again result in part from the very high zone at which our samples were taken.

Overall, we cannot determine at this time if the extensive differences between biota in Carr Inlet versus the old surveys are a result of different sampling methods (especially deeper digging for clams in the old surveys), different biogeographic regimes (South Sound vs. Central and North), or real temporal differences. It would clearly be of interest to resample some of the old survey sites (especially those that were thoroughly sampled before) using our methodology (including the same quantification of physical parameters); this would provide substantial information to help us distinguish such spatial vs. temporal differences. Use of the old data versus newly collected data even in presence/absence form should enable us to detect overall change in community structure if there was one (e.g., if local populations have gone extinct, or new species invaded), although priority should probably be given to resampling areas with thorough, quantitative data in the old database.

2.2 Comparison of Mapping Methods

Harper Shore Mapping System

In 1979 the British Columbia Ministry of the Environment set out to inventory and map the physical character of the provincial coastal zone. Harper et al. (1991) developed a classification of the materials, forms and processes that occur or operate along the sheltered mainland and exposed outer-island coasts of British Columbia. The classification was specifically developed to provide an inventory of the physical character of the shore zone and to show the distribution, extent and locations of shore types. The system is hierarchical and the data are independent of map scale. The database has a

wide range of natural resource applications including planning, management, impact assessment, and oil spill response.

The classification allows systematic recording of shore morphology, shore-zone substrate and wave exposure characteristics. The classification hierarchy subdivides the shoreline into alongshore units. These are subsequently partitioned into across-shore components based on elevations relative to tidal parameters. Each component is systematically described in terms of physical characteristics such as morphology, texture and dominant geomorphic processes. Wave exposure is based on fetch distance, resulting in a categorization summarizing wave exposure over multiple units. As such, the mapping approach is descriptive (the mapper describes what can be seen of the component). There are no functional relationships with ecological processes incorporated into the classification scheme. Thirty-four shoreline categories are pre-defined in terms of substrate type, sediment size, width, and slope. Shoreline units are represented by line segments on a map and with a unique identifier. Alternatively, shore units may be represented as polygons or points depending upon the scale of the map representation. Additional information on each unit and the components are recorded in an associated database.

The advantage of this aerial shoreline mapping system is that it can provide a broad-area characterization of the principal habitat types to serve as a basis for more detailed ground-based quantitative surveys of selected priority areas. The ground surveys for shoreline partitioning using the SCALE model can be very time consuming when no previous data are available, or when large spatial scales are under investigation. Even qualitative data on the principal habitat types would expedite the ground work by providing preliminary alongshore unit delineations, an aerial video record of the shore zones, and a basis for prioritizing the areas under consideration for quantitative work. Another advantage is that the Harper shoreline categories representing homogeneous alongshore units, which can be useful for testing the terminal aggregation scale in the SCALE model of nested hierarchically aggregated biological groups. The level of biological extrapolation to the spatial scales of the Harper shoreline type category may be appropriate in some regions. Further testing is required with the Carr Inlet data to validate this conclusion.

Dethier Marine and Estuarine Habitat Classification System

We compared the results of shore mapping from the Marine and Estuarine Habitat Classification System as applied by DNR and from the SCALE model described in Chapter 1. The two systems are difficult to compare quantitatively because the Dethier classification relies on visual identification and mapping of predefined substrate classes. The SCALE method also visually identifies homogeneous partitions, but the habitat classes are statistically combined from the physical attribute data. The resulting habitat units are also represented differently on the maps produced. The data collected by DNR are shown by polygons representing the substrate classes, but these polygons cross gradients of aspect, wave energy, and elevation or intertidal zones. The SCALE segments partition the shoreline into horizontal blocks generally orthogonal to the shoreline, but the blocks partition gradients so that individual segments are relatively homogeneous. The SCALE across-shore zones subdivide the segments vertically to differentiate the intertidal zones. Therefore, quantitative spatial comparisons of the mapping units generated by the two systems would not be meaningful, and a determination of mapping accuracy for either system would require an independent field evaluation. The DNR method of mapping substrate polygons, using low altitude color infrared aerial photography for field base maps, is potentially more accurate than the SCALE method for representing the actual spatial extent of different substrate patches (polygons) but this advantage is offset by the low level of information used to characterize the mapped polygons.

The predefined substrate classes used for the DNR maps are not directly comparable to the SCALE habitat groups since the groups are derived from more attributes than just substrate size. The only corresponding attributes in the SCALE model are the primary, secondary and interstitial substrate size measurements. To compare the methods we reduced the SCALE data for each segment by forcing the three substrate size measurements into one of seven substrate classes used by the Dethier classification. Table 16 lists the results from a frequency analysis of SCALE segments. Table 17, 18, and 19 list the SCALE habitat group lengths and areas for each zone. The number of segments within each SCALE group are also shown. Tables 20 and 21 list the total areas

Table 16. Frequency summary by Block, Zone, and SCALE group code for SCALE segments reclassified to DNR substrate classes.

Block	DNR	ZONE	HABITAT	FREQUENCY
1	gravel	upper-middle	1	62
	mixed coarse	upper-middle	4	17
	mixed fine	upper-middle	2	48
	mud	upper-middle	8	9
	sand	upper-middle	3	5
	gravel	lower-middle	2	42
	mixed coarse	lower-middle	1	72
	mixed fine	lower-middle	4	15
	mud	lower-middle	9	7
	sand	lower-middle	8	9
	mixed coarse	lower	7	12
	mixed fine	lower	1	38
	mud	lower	8	37
	sand	lower	2	57
2	gravel	upper-middle	1	19
	mixed coarse	upper-middle	4	3
	mixed fine	upper-middle	10	3
	gravel	lower-middle	2	4
	mixed coarse	lower-middle	1	20
	mixed fine	lower-middle	10	2
	mixed coarse	lower	11	5
	sand	lower	2	18
	mixed fine	lower	1	2
	3	mixed coarse	upper-middle	5
sand		upper-middle	3	1
mixed fine		upper-middle	6	12
gravel		upper-middle	1	10
mixed coarse		lower-middle	6	15
sand		lower-middle	8	2
mixed fine		lower-middle	7	5
gravel		lower-middle	2	9
mixed coarse		lower	9	8
sand		lower	3	17
mixed fine		lower	6	7
4	gravel	upper-middle	1	12
	mixed coarse	upper-middle	4	10
	mixed fine	upper-middle	2	57
	sand	upper-middle	3	6
	mud	upper-middle	12	22
	gravel	lower-middle	2	2
	mixed coarse	lower-middle	1	60
	mixed fine	lower-middle	4	25
	sand	lower-middle	12	12
	mud	lower-middle	9	12
	mixed coarse	lower	9	14
	mixed fine	lower	6	17
	sand	lower	3	41
	mud	lower	8	28
Total				918

Table 17. Upper-middle zone habitat group summary

Group	DESCRIPTION	COUNT	SUM AREA (m2)	SUM LENGTH (m)
1	pebbles/pebbles	103	2906454	21305
2	pebbles/sand	66	1948053	11312
3	sand/sand	12	574373	2847
4	pebbles/cobbles	26	508533	4527
5	cobbles/pebbles	11	253088	2112
6	sand/pebbles	18	15147889	3470
7	sand/pebbles	16	290926	2183
8	silt/mud	25	2851161	3755
9	sand/sand	14	167072	1755
10	sand/pebbles	7	376256	912
11	sand/pebbles	1	3891	129
12	sand/mud	7	107464	493
Zone Totals		306	25135289	54580
All Totals		900	88254847	

Table 18. Lower-middle habitat group summary

Group	DESCRIPTION	COUNT	SUM AREA (m2)	SUM LENGTH (m)
1	pebbles/cobbles	46	5213734	14798
2	pebbles/cobbles	57	2893579	11200
3	pebbles/pebbles	72	4020225	13419
4	sand/pebbles	12	743635	2801
5	cobbles/pebbles	27	1386738	4831
6	cobbles/pebbles	11	1117231	2276
7	pebbles/sand	24	1795639	3686
8	sand/mud	16	1147224	2504
9	silt/mud	19	1328529	2147
10	sand/sand	12	1088794	2002
11	pebbles/sand	2	53197	388
12	sand/silt/mud	8	83741	851
		306	20832285	80883

Table 19. Lower habitat group summary

Group	DESCRIPTION	COUNT	SUM AREA (m2)	SUM LENGTH (m)
1	pebbles/sand	18	4454643	4792
2	sand/sand	23	1550931	4100
3	sand/sand	55	18115189	16184
4	sand/silt	37	8005401	8085
5	sand/pebbles	28	1278954	3942
6	sand/pebbles	20	2748511	3411
7	pebbles/sand	7	1084887	1858
8	silt/sand	49	3384923	6082
9	pebbles/cobbles	16	2276731	4330
10	silt/mud	18	617253	2437
11	cobbles/pebbles	16	1380738	4087
12	silt/silt/mud	3	380352	363
		288	43287312	59481

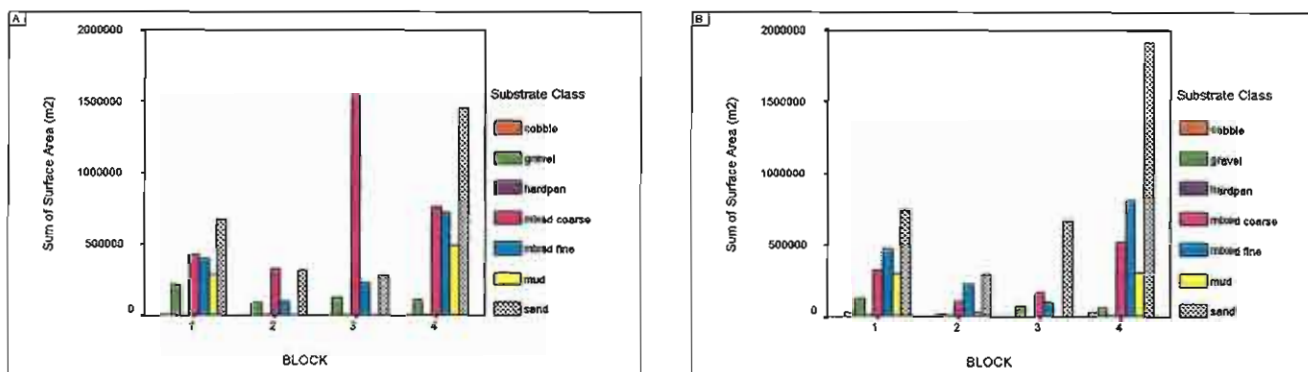
Table 20. Frequency and area summary of SCALE segments classified by DNR substrate classes.

DNR CLASS	SUBSTRATE	COUNT	SUM AREA (m ²)
1	cobble	0	0
2	gravel	180	528563
3	hardpan	0	0
4	mixed coarse	242	3034373
5	mixed fine	231	1430954
6	mud	115	771042
7	sand	187	2716360
	Total		8482292

Table 21. Frequency and area summary of DNR polygon substrate classes.

DNR CLASS	SUBSTRATE	COUNT	SUM AREA (m ²)
1	cobble	12	62199
2	gravel	28	261085
3	hardpan	1	782
4	mixed coarse	53	1103186
5	mixed fine	46	1581723
6	mud	11	612744
7	sand	19	3615144
	Total		7238853

Figure 12. Comparison of SCALE Habitats to DNR Habitat Classes by Total Surface Area of Substrate Categories



of SCALE segments reclassified by the DNR substrate code, and the areas of the DNR polygons by substrate code. Also shown are the number of segments corresponding to the DNR substrate categories. Figures 12A and B show spatial distribution graphs of the substrate classes grouped by the Carr Inlet blocks for the SCALE segments and the DNR polygons respectively.

These graphs and tables show that the SCALE mapping system can be forced to nest within the Dethier classification but the resulting loss of information makes this procedure of questionable value. The total mapped substrate areas, shown on Tables 20 and 21, are quite close, indicating that the intertidal zone is delineated similarly with both methods. The graphs show essentially the same trends for substrate class areas. Particularly good comparisons were found for gravel, sand and mud which are relatively easy to identify in the field. The gravel and mixed coarse categories represents the poorest comparisons between the two systems. These beach classes span a very large range of substrate size combinations, potentially introducing a source of unintentional ambiguity in the classification.

Based on the work presented in Chapter 1, where we found that subtle differences in the physical environment can yield significant differences in biotic communities, we conclude that the DNR substrate class polygon maps are likely to not have the necessary physical resolution required for extrapolating biotic information collected from reference transects to larger spatial scales. The differences found between the two methods in total surface area of the mapped substrate polygons may justify a reexamination of how contiguous patches of uniform substrates, and the entire intertidal zone, are delineated.

Chapter 3

Implications for Monitoring the Health of Puget Sound

The 'health' of a body of water and its biota can be defined in many different ways, making quantification and monitoring of this parameter very difficult. As suggested in Figure 13, health can be broken down into at least 3 components, including physical, biological, and chemical characteristics. Known (and probably some unknown) processes can affect each one of these components of health. For instance, clearcutting in watersheds can increase runoff into a body of water like Puget Sound, affecting water clarity and sedimentation, which in turn can affect the biota. Oil spills can affect the physical environment (e.g. by cementing pebble-sand beaches into 'pavement'), the biota (through lethal or sublethal effects), and the chemistry. Biological 'health' can also be affected directly by unnatural biotic processes, especially the introduction of new species and pathogens. Chemical health is a broad topic, discussed and monitored directly by a variety of organizations, and it too clearly can impact the biological health of a region.

The advantage of quantifying 'health' by looking at biotic features is that these features may respond rapidly and sensitively to changes in the other two types of parameters. In addition, quantifying biotic abundance and diversity will often be less costly than the very expensive tests needed to quantify chemical changes in water properties. Thus while a clear definition of health is likely to remain elusive (since each agency and interest group has its own target species or system), monitoring the biota is likely to provide information of interest to all.

The question then resolves into "which biota, where, and how" should we monitor? Intertidal communities provide an opportunity to study a set of plants and animals that are diverse, productive, and consumed by a variety of species (including humans) that are considered 'important' by the public. In addition, they are relatively easy to quantify compared to subtidal communities that require either scuba diving or

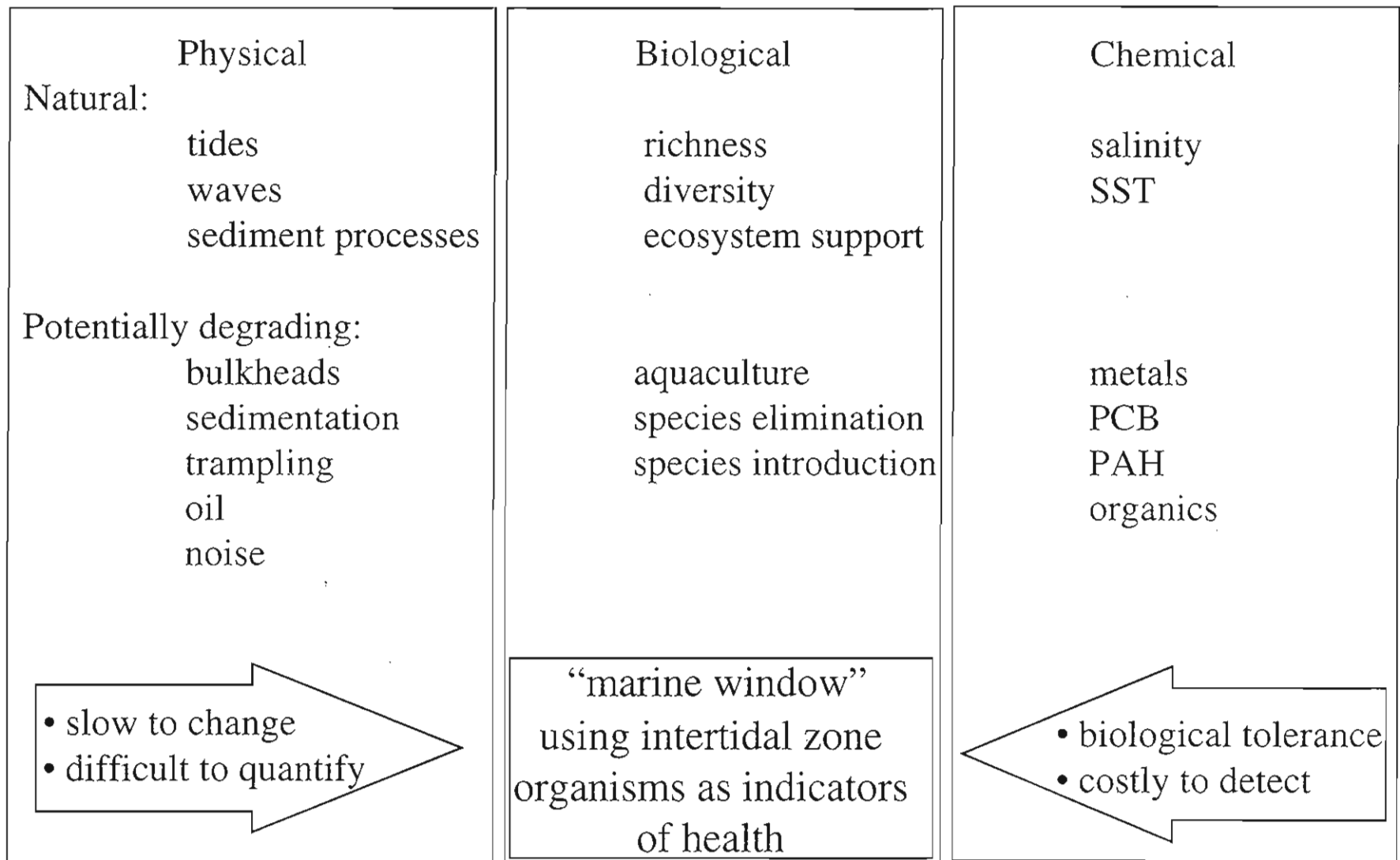


Figure 13. Intertidal zone organisms potentially provide a sensitive, low cost and readily accessible ‘signal’ for monitoring the health of marine environments.

remote sampling methods, both of which are expensive and difficult to replicate. These communities are also subject to the range of physical, biological, and chemical degrading processes shown in Figure 13. However, Puget Sound has very extensive and geochemically as well as biologically diverse shorelines, such that a monitoring system that can quantify everything in all regions is currently impossible.

Our work in Carr Inlet constitutes the first significant test of a model and methodology that we believe can provide a relatively low-cost, low-tech, *high-resolution* way to quantify the state of Puget Sound shoreline habitats as they are today. The data provided by this methodology are quite fine-scale and thus comparatively labor intensive to gather, but overall cost per unit of information (e.g., data at the scale of resolution that may tell us about "health") is not great. In addition, with some further testing, this methodology should be useful for comparing communities in clearly degraded areas versus relatively pristine ones, and for detecting change into the future. Chapter 1 has described this methodology; below we consider implications to the design of a broader scale monitoring program.

To date, our research provides detailed information about both geophysical habitats in Carr Inlet and the biota in them, and the model shows to what extent, and for what species, we can extrapolate from the sampled beaches to others in the Inlet. Overall, we found that most of the shoreline of Carr Inlet can be broadly categorized into three habitat types defined by a suite of geophysical features, and that there is a strong correspondence between these features and the biota. For each habitat type, we can predict with reasonable accuracy what organisms (and in what abundances) should be found in beaches that we did not sample. We found that the biota (both infauna and epibiota) are sensitive in terms of numbers and species composition to subtle habitat differences; this emphasizes that current methods of remote imaging, which cannot detect such fine geophysical differences, will be unable to provide any predictability about the biota.

However, it is clear that the model cannot yet be used to extrapolate what the biota will look like in areas outside of Carr Inlet; anecdotal information suggests, for example, that sand dollars are not found in all of Puget Sound in the same densities that they are found in Carr Inlet, and we know that critical factors such as wave energy and

salinity are substantially different in other areas, presumably affecting the biota. Thus extrapolation to areas with slightly different physical parameters (e.g., in salinity) will introduce more variation in the biotic data. Further testing of the model, both in other areas of the South Sound District and in the other Districts, are therefore needed.

However, the basic methodology we have described should be able to be applied at these larger scales, and eventually provide the high-resolution information about habitats and biota that DNR needs for assessing current health and gradual change. High-resolution data about physical features (versus lower-resolution, e.g. from Harper-maps) are needed, for example, for: mapping or predicting where resources of interest (e.g. clams, ghost shrimp, eelgrass) are or can live; assessing biotic damage following an unnatural event; or judging success in restoration of biota (or 'function') in a damaged area.

Since our methodology is labor-intensive (both the on-the-ground partitioning of shorelines, and the biotic sampling and identification), broad characterization of the shorelines of the Sound may need to be more circumscribed in terms of level of detail, choice of substrate types, and choice of regions to sample with varying degrees of effort. Future decisions about monitoring programs thus need to be question-driven, with the questions specifying the scale of resolution needed. We recommend:

1. At a minimum, it would be very useful to have (for the whole Sound) the type of shoreline maps generated by the Harper methodology, i.e. ones that show basic beach types, linear extents, and degree of bulkheading and other major anthropogenic influences. These could be used for some large-scale land-use planning decisions, for monitoring change in the degree of shoreline armoring (e.g., by re-mapping the high shore at periodic intervals), and for providing the basic information needed for more detailed shoreline partitioning by the SCALE method (see Chapter 2).
2. Questions requiring a higher degree of spatial resolution in terms of geophysical features, and questions about the biota of given areas (whether reference sites or degraded areas) need a different methodology, and some form of the SCALE method should be used. For example, there *must* be geophysical matching (in terms of substrate type, wave energy, salinity, etc.) between 'control' sites and degraded or

impacted sites (e.g., from known areas of point source pollution, or from an area with new clearcutting in a watershed), or biotic comparisons will be meaningless. This matching could use either the SCALE or some other grouping method. It will never be possible to effectively monitor across multiple spatial scales and multiple environmental gradients at the same time; these must be distinguished. If the patterns of variation that we found in Carr Inlet are paralleled elsewhere in the Sound, then change detection (of biota through time) of the whole community will be statistically possible only at the level of the individual beach segment; over larger areas (like our blocks of the inlet) for only a portion of the community; and for an inlet-scale change, only for a few organisms whose distributions showed comparatively low variance.

3. Choosing reference sites for monitoring should probably follow a different procedure than that for studying particular impacts. Reference site selection would be most straightforward if monitoring was designed to answer a particular question (e.g., how stable are sand communities or eelgrass beds through time?). Without such a question-driver, however, agencies must decide on what regions (e.g., South vs. Central Sound), what habitats (e.g., only mud, only low intertidal), and what organisms are of most concern. Since we know little, overall, about what 'functions' different shoreline habitats provide (besides obvious ones of shores used by humans for harvesting or recreation, or some of the known functions of eelgrass beds), it is impossible at this time to choose the most 'important' habitats. Harper-style maps would enable agencies to determine what substrate/habitat type is the most *abundant* in Puget Sound, or in different Districts of Puget Sound. Monitoring these (in replicated, randomly-chosen sites) would provide information that applied to the largest *areal extent* of shore. However, such habitats (which might well be sand or sand-pebble beaches) might not be the most *sensitive* to some of the degrading influences of concern. Unfortunately, we do not know enough either about the sensitivity of local species or about what stressor is of greatest concern to be able to recommend one habitat type indicative of sensitivity. Our results show habitat (in Carr Inlet) *diversity*, but even this judgment is based on scale; the sand habitats were most diverse overall in Carr Inlet partly because this habitat was sampled more

frequently, but the per-sample diversity was higher in gravel and mud. Each of the habitat types is also highly *productive* in its own way; sand flats in terms of enormous biomasses of sand dollars or tube worms, with some ephemeral algae and diatoms; mud areas with ghost shrimp, clams, and surface diatoms and ulvoids; gravel areas with some permanent algal populations, clams, and very abundant epifauna and infauna.

4. If particular habitats of concern cannot be identified, then reference sites (designed to monitor gradual change due to cumulative impacts) could be chosen either by: 1) randomizing the sample of physical habitats such that the sites are representative of the Sound (or a District) as a whole, thus encompassing very large variation; or 2) stratifying by habitat type (defined by either the coarser Harper methodology or the finer SCALE methodology), thus encompassing moderate or low variation. The former would allow the scale of extrapolation to be the Sound or the District but (if there was no stratification by habitat) would lead to such high variability that detection of change would be impossible. The latter would require at least some level of shoreline mapping prior to choosing reference sites and would allow extrapolation to the level of the chosen habitat type(s) within the Sound or District, but would greatly reduce the intrinsic variability and thus increase the ability to detect change.
5. We recommend that monitoring be concentrated in the lower intertidal zone (e.g., near MLLW). At this level the organisms (in all the habitat types) are the most diverse, the most productive, and probably the most sensitive in that their relatively low-stress natural habitat means that they do not have the broad tolerances of physical extremes seen in upper-shore species. In addition, since the low shore is covered by the ocean much of the time but still uncovered for a part of each day, it is subject to anthropogenic stressors from both land and sea. Of a possible list of common stressors, only oil spills are less likely to damage low- than high-shore biota, since oil typically settles and sticks to the high shore and thus may impact biota more in upper zones. Clearly when species of concern (e.g., smelt) use a different intertidal level,

there should be a monitoring program with different protocols than this recommended low-zone emphasis.

6. Although our data suggest that the biotic community of beaches is highly sensitive to subtle physical differences, this does not mean that community analysis will not be useful as a baseline. The function of reference sites is presumably to detect *change through time*. If beaches remain geophysically stable through time, we do not yet know if whole-community analyses will be similarly stable biotically, or will show significant year-to-year variation that parallels the beach-to-beach variation. High spatial variation does not necessarily imply high temporal variation in these communities. This could be readily tested in Carr Inlet by resampling some of the beaches sampled in Spring 1997 and looking both at multivariate (whole biota) and univariate (individual population) changes.

7. We were generally satisfied with our sampling regime, with the possible exception of needing greater sample sizes for quantifying some of the very patchy species. The concurrent use of quadrats to monitor surface-dwelling species and cores to monitor the infauna worked well for capturing the whole community in a beach segment. Surface quadrats in the low zone can be done very rapidly in most habitat types, especially using the cover-class categories described in Chapter 1. Choice of sieve size for core samples is controversial; clearly some organisms (and therefore information) are lost with the larger-than-standard 2 mm mesh that we used, but we argue that for our study the tradeoffs were worth while. Smaller mesh would capture tiny, difficult to count and identify taxa, such as oligochaetes, nematodes, and juveniles of the species caught on the 2 mm mesh. Therefore using a smaller mesh size would add substantive time both in the field (for sieving, for both sticky and coarse sediments) and in the lab (for identifying), for the addition of taxa of unknown value for characterizing communities. Since diversity and abundance of larger taxa are both high, we argue that the information gained from smaller mesh would not justify the extra cost. On the other hand, use of 1 mm mesh would make future data more comparable both with many of the old surveys (Chapter 2) and with current

subtidal sampling efforts (e.g., the Puget Sound Estuarine Protocol), and might capture more species indicative of polluted conditions (see Chapter 1). There is a substantial literature arguing the pros and cons of various mesh sizes; Ferraro and Cole (1992) found that 1.0 vs. 0.5 mm fractions were generally "sufficient" to detect differences between reference and moderately impacted stations. James et al. (1995) found that 0.5 mm mesh samples took 2-4 times as long to sort (because of both more animals and more sediment retained) than 1.0 mm samples, but that the two fractions showed statistically similar spatial patterns (using multivariate analyses) with depth. Individual populations showed some different spatial patterns with depth because of different numbers of juveniles retained on the two meshes. We roughly estimate that a change from 2 mm to 1 mm mesh in intertidal sampling in Puget Sound might result in a 50-100% increase in both field (sorting) and laboratory (identification) time.

8. Further analyses remain to be done on the information lost in aggregating taxa to the family (or other higher taxonomic) level. Preliminary work suggests that family-level ordinations still distinguish well among communities (e.g., in different substrate types or spatial blocks), probably because most families in Carr Inlet have only 1-2 species. Very substantial savings in lab time will result if it is determined that family-level identifications are sufficient for detecting differences among regions; however, it remains to be seen if these taxonomic aggregations are sufficient to detect *change through time* within a region.
9. A relatively straightforward way to gain information on regional vs. temporal differences in biota in Puget Sound would be to revisit some of the sites whose biota was sampled in detail in the older surveys described in Chapter 2. By resampling these sites, both geophysically and biotically, using our methodology, valuable information could be gained about how much of the variation between the old surveys elsewhere in Puget Sound and ours in Carr Inlet might be due to temporal changes, regional differences, or methodological differences. Most of the sites summarized in Chapter 2 were described in sufficient detail that relocating them should be possible.

To summarize, the model described in Chapter 1 provides a methodology that should prove invaluable both in mapping critical shoreline features of Puget Sound, and in choosing monitoring sites in a biologically and statistically meaningful fashion. We have demonstrated the importance of numerous geophysical features in determining the biota found in an area; thus any monitoring or reference sites should be geophysically matched. To make extrapolating to other areas statistically valid, sites should be randomly chosen from groups of similar sites. Extrapolation will be valid only to similar beaches within a given region; extrapolating to larger spatial scales will always entail adding more variation in the data. More field work is needed to determine how much variation is added at increasingly large spatial scales – that is, we know how variable are similar beaches within Carr Inlet, but we do not yet know how different are beaches in other inlets in South Sound, or in other districts of Puget Sound. However, it is clear that if the shoreline habitats and biota of Puget Sound are to be mapped and monitored in a way that allows the detection of change in the flora and fauna, that data must be gathered at a fine spatial scale of resolution such as that described in this report.

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Appendix A

Physical Shoreline Attributes for Carr Inlet

Table 1. Nearshore Geophysical Classification

← DECREASING HORIZONTAL SPATIAL SCALES →

				Exposure Region	Shoreline Segment			Alongshore Unit <small>(see below for across-shore zone attributes)</small>		
				1-10 km	100 -1,000 m			10-100 m		
				Wave Power	Iribarren #			Aspect	Drift Exposure	
				1 = (H _s = 0.25, T = 2) 2 = (H _s = 0.5, T = 4) 3 = (H _s = 1, T = 8) 4 = (H _s = 2, T = 16) 5 = (H _s = 4, T = 16)	calculated value			1 = N 2 = NE 3 = E 4 = SE 5 = S 6 = SW 7 = W 8 = NW	1 = same direction 2 = 135 degrees 3 = 90 degrees 4 = 45 degrees 5 = opposite direction	

← Across-shore Zones →

Intertidal Zone Elevation	Zone Attributes								
	Form	Slope	Dynamism	Roughness	Size			Permeability	Seepage
1 = Upper Intertidal (MHW)	1=anthropogenic	1 = 0 - 5°	1 = none	1 = very smooth (sand)	1 = clay			1 = none	1 = none
2 = Upper-Middle Intertidal (at 10 feet)	2=beach	2 = 5 - 15°	2 = slow	2 = smooth (small pebbles)	2 = mud			2 = slow	2 = 25%
3 = Lower-Middle Intertidal (at 5 feet)	3=cliff	3 = 15 - 35°	3 = moderate	3 = gnarled (cobble)	3 = silt			3 = moderate	3 = 50%
4 = Lower Intertidal (MLLW)	4=delta	4 = 35 - 80°	4 = high	4 = rough (boulders)	4 = fine sand			4 = fast	4 = 75%
	5=dune	5 = > 80°	5 = extreme	5 = crevices (blocks)	5 = coarse sand			5 = extreme	5 = 100%
	6=reef				6 = pebbles				
	7=lagoon								
	8=marsh								
	9=offshore island				7 = cobbles				
	10=platform				8 = boulders				
	11=river channel				9 = blocks				
	12=tidal flat				10 = basement				

See end of table for field definitions

segment#	block	zone	zone_code	salinity	energy	H	T	L	slope	beta	Inbarren	aspect	drift	form	primary	secondary	interslitual	dyna_calc	dynamism	permeability	roughness	seepage
1	1	1 u	1	26.9	3	1	4	24	2	0.18	0.86	4	3	2	5	5	5	1.7013	2	3	1	1
1	1	1 um	2	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	6	6	2.8356	3	4	2	1
1	1	1 lm	3	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	7	4	2.6613	3	2	3	3
1	1	1 l	4	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	5	4	1.5154	2	2	2	1
2	1	1 u	1	26.9	3	1	4	24	5	100.00	489.90	5	2	1	9	9	9	0.0397	1	1	1	1
2	1	1 um	2	26.9	3	1	4	24	2	0.18	0.86	5	2	2	6	7	6	2.6548	3	4	3	1
2	1	1 lm	3	26.9	3	1	4	24	2	0.18	0.86	5	2	2	6	7	4	2.6613	3	2	3	3
2	1	1 l	4	26.9	3	1	4	24	2	0.18	0.86	5	2	2	4	3	3	2.3414	2	1	1	1
3	1	1 u	1	26.9	3	1	4	24	5	100.00	489.90	5	5	3	10	10	10	0.0357	1	1	1	1
3	1	1 um	2	26.9	3	1	4	24	2	0.18	0.86	5	5	2	6	7	6	2.6548	3	4	3	1
3	1	1 lm	3	26.9	3	1	4	24	2	0.18	0.86	5	5	2	7	6	4	2.5766	3	2	3	3
3	1	1 l	4	26.9	3	1	4	24	1	0.04	0.21	5	5	2	4	5	4	3.8683	4	2	1	1
4	1	1 u	1	26.9	3	1	4	24	5	100.00	489.90	6	4	1	10	10	10	0.0357	1	1	1	1
4	1	1 um	2	26.9	3	1	4	24	2	0.18	0.86	6	4	2	6	5	4	3.0309	3	2	2	1
4	1	1 lm	3	26.9	3	1	4	24	2	0.18	0.86	6	4	2	6	6	6	2.8356	3	4	2	2
4	1	1 l	4	26.9	3	1	4	24	1	0.04	0.21	6	4	2	4	3	3	4.7028	5	1	1	1
5	1	1 u	1	26.9	3	1	4	24	5	100.00	489.90	7	3	1	10	10	10	0.0357	1	1	1	1
5	1	1 um	2	26.9	3	1	4	24	2	0.18	0.86	7	3	2	6	6	4	2.8435	3	2	2	1
5	1	1 lm	3	26.9	3	1	4	24	2	0.18	0.86	7	3	2	6	7	6	2.6548	3	4	3	2
5	1	1 l	4	26.9	3	1	4	24	1	0.04	0.21	7	3	2	4	3	3	4.7028	5	1	1	1
6	1	1 u	1	26.9	3	1	4	24	5	100.00	489.90	8	3	1	10	10	10	0.0357	1	1	1	1
6	1	1 um	2	26.9	3	1	4	24	2	0.18	0.86	8	3	2	6	6	4	2.8435	3	2	2	1
6	1	1 lm	3	26.9	3	1	4	24	2	0.18	0.86	8	3	2	6	7	6	2.6548	3	4	3	3
6	1	1 l	4	26.9	3	1	4	24	1	0.04	0.21	8	3	2	4	3	3	4.7028	5	1	1	1
7	1	1 u	1	26.9	2	0.5	2	6	5	100.00	346.41	8	3	1	10	10	10	0.0425	1	1	1	1
7	1	1 um	2	26.9	2	0.5	2	6	2	0.18	0.61	8	3	2	6	6	4	3.3815	3	2	2	1
7	1	1 lm	3	26.9	2	0.5	2	6	2	0.18	0.61	8	3	2	6	7	6	3.1571	3	4	3	1
7	1	1 l	4	26.9	2	0.5	2	6	1	0.04	0.15	8	3	2	4	3	3	5.5926	5	1	1	1
8	1	1 u	1	26.9	2	0.5	2	6	5	100.00	346.41	8	2	1	10	10	10	0.0425	1	1	1	1
8	1	1 um	2	26.9	2	0.5	2	6	2	0.18	0.61	8	2	2	6	7	6	3.1571	3	4	3	1
8	1	1 lm	3	26.9	2	0.5	2	6	2	0.18	0.61	8	2	2	6	7	4	3.1648	3	2	3	2
8	1	1 l	4	26.9	2	0.5	2	6	2	0.18	0.61	8	2	2	6	4	4	1.9118	2	2	2	1
9	1	1 u	1	26.9	2	0.5	2	6	5	100.00	346.41	7	3	1	10	10	10	0.0425	1	1	1	1
9	1	1 um	2	26.9	2	0.5	2	6	2	0.18	0.61	7	3	3	6	7	6	3.1571	3	4	3	1
9	1	1 lm	3	26.9	2	0.5	2	6	2	0.18	0.61	7	3	3	6	7	4	3.1648	3	2	3	2
9	1	1 l	4	26.9	2	0.5	2	6	1	0.04	0.15	7	3	3	6	5	4	3.6198	4	2	2	1
10	1	1 u	1	26.9	2	0.5	2	6	2	0.18	0.61	8	3	2	6	5	4	1.8022	2	2	2	1
10	1	1 um	2	26.9	2	0.5	2	6	2	0.18	0.61	8	3	2	6	5	4	3.6043	4	2	2	1
10	1	1 lm	3	26.9	2	0.5	2	6	2	0.18	0.61	8	3	2	6	6	6	3.3721	3	4	2	2
10	1	1 l	4	26.9	2	0.5	2	6	1	0.04	0.15	8	3	2	4	5	4	4.6002	5	2	1	1
11	1	1 u	1	26.9	1	0.25	1	1	2	0.18	0.35	4	3	2	6	4	3	2.5192	3	1	2	1
11	1	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	4	3	2	6	4	3	5.0384	5	1	2	1
11	1	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	4	3	2	6	4	3	5.0384	5	1	2	2
11	1	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	4	3	2	4	6	3	2.7331	3	1	2	1
12	1	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	2	3	1	10	10	10	0.0559	1	1	1	1
12	1	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	2	3	2	4	5	4	6.0284	5	2	1	1
12	1	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	2	3	2	4	5	4	6.0284	5	2	1	3
12	1	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	2	3	2	4	3	2	3.6714	4	1	1	1
13	1	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	2	4	1	10	10	10	0.0559	1	1	1	1
13	1	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	2	4	2	6	6	4	4.4503	4	2	2	1
13	1	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	2	4	2	4	6	4	5.4581	5	2	2	1
13	1	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	2	4	2	4	6	3	2.7331	3	1	2	1
14	1	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	4	2	1	10	10	10	0.0559	1	1	1	1
14	1	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	4	2	2	6	4	4	5.0321	5	2	2	1
14	1	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	4	2	2	4	6	4	5.4581	5	2	2	4
14	1	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	4	2	2	4	6	3	2.7331	3	1	2	1
15	1	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	3	3	1	10	10	10	0.0559	1	1	1	1
15	1	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	4	5	4	6.0284	5	2	1	1
15	1	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	4	5	3	6.0392	5	1	1	3
15	1	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	4	3	3	3.6645	4	1	1	1
16	1	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	2	4	1	10	10	10	0.0559	1	1	1	1
16	1	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	2	4	2	6	4	3	5.0384	5	1	2	1

16	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	2	4	2	4	6	3	5.4661	5	1	2	3
16	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	2	4	2	4	6	3	2.7331	3	1	2	1
17	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	3	3	1	10	10	10	0.0559	1	1	1	1
17	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	6	6	4	4.4503	4	2	2	1
17	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	4	6	4	5.4581	5	2	2	3
17	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	4	3	3	3.6645	4	1	1	1
18	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	3	3	1	10	10	10	0.0559	1	1	1	1
18	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	6	6	4	4.4503	4	2	2	1
18	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	4	6	4	5.4581	5	2	2	3
18	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	4	3	3	3.6645	4	1	1	1
19	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	3	3	1	10	10	10	0.0559	1	1	1	1
19	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	4	5	4	6.0284	5	2	1	1
19	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	6	4	4	5.0321	5	2	2	2
19	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	4	6	3	2.7331	3	1	2	1
20	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	3	3	1	10	10	10	0.0559	1	1	1	1
20	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	6	5	4	4.7436	5	2	2	1
20	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	5	6	4	4.9276	5	2	2	4
20	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	4	6	3	2.7331	3	1	2	1
21	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	3	3	1	10	10	10	0.0559	1	1	1	1
21	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	6	4	4	5.0321	5	2	2	1
21	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	6	5	4	4.7436	5	2	2	1
21	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	4	6	4	2.7290	3	2	2	1
22	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	1	5	1	9	9	9	0.0621	1	1	1	1
22	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	1	5	2	9	9	9	2.9586	3	5	5	1
22	1 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	1	5	2	4	3	2	14.7486	5	1	1	2
22	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	1	5	2	4	3	2	7.3743	5	1	1	1
23	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	4	1	10	10	10	0.0559	1	1	1	1
23	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	5	4	4.7436	5	2	2	1
23	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	4	3	5.0384	5	1	2	2
23	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	4	6	3	2.7331	3	1	2	1
24	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	4	1	10	10	10	0.0559	1	1	1	1
24	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	6	4	4.4503	4	2	2	1
24	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	4	3	5.0384	5	1	2	3
24	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	4	6	3	2.7331	3	1	2	1
25	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	4	1	10	10	10	0.0559	1	1	1	1
25	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	6	4	4.4503	4	2	2	1
25	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	4	3	5.0384	5	1	2	2
25	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	4	6	3	2.7331	3	1	2	1
26	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	7	3	1	10	10	10	0.0559	1	1	1	1
26	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	7	3	2	6	6	4	4.4503	4	2	2	1
26	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	7	3	2	6	4	3	5.0384	5	1	2	1
26	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	7	3	2	4	6	3	2.7331	3	1	2	1
27	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	7	3	1	10	10	10	0.0559	1	1	1	1
27	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	7	3	2	6	6	4	4.4503	4	2	2	1
27	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	7	3	2	6	4	3	5.0384	5	1	2	2
27	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	7	3	2	4	6	3	2.7331	3	1	2	1
28	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	4	1	10	10	10	0.0559	1	1	1	1
28	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	6	4	4.4503	4	2	2	1
28	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	4	4	5.0321	5	2	2	2
28	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	4	6	4	2.7290	3	2	2	1
29	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	4	1	10	10	10	0.0559	1	1	1	1
29	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	5	4	4.7436	5	2	2	1
29	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	4	6	3	5.4661	5	1	2	2
29	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	4	6	3	2.7331	3	1	2	1
30	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	4	1	10	10	10	0.0559	1	1	1	1
30	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	5	4	4.7436	5	2	2	1
30	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	4	4	5.0321	5	2	2	2
30	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	8	4	2	4	6	3	5.4895	5	1	2	1
31	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	4	1	10	10	10	0.0559	1	1	1	1
31	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	6	4	4.4503	4	2	2	1
31	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	4	5	5.0240	5	3	2	2
31	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	4	6	5	2.7239	3	3	2	1
32	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	4	1	10	10	10	0.0559	1	1	1	1
32	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	6	4	4.4503	4	2	2	1

32	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	4	4	5.0321	5	2	2	3
32	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	8	4	2	4	6	3	5.4895	5	1	2	1
33	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	4	1	10	10	10	0.0559	1	1	1	1
33	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	6	4	4.4503	4	2	2	1
33	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	4	4	5.0321	5	2	2	3
33	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	4	6	3	2.7331	3	1	2	1
34	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	4	1	10	10	10	0.0559	1	1	1	1
34	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	6	4	4.4503	4	2	2	1
34	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	4	4	5.0321	5	2	2	3
34	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	8	4	2	4	6	3	5.4895	5	1	2	1
35	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	8	4	1	10	10	10	0.0665	1	1	1	1
35	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	8	4	2	6	6	4	5.2923	5	2	2	1
35	1 lm	3	26.9	2	0.5	2	1	2	0.18	0.25	8	4	2	6	4	4	5.9842	5	2	2	3
35	1 l	4	26.9	2	0.5	2	1	2	0.18	0.25	8	4	2	4	6	3	3.2502	3	1	2	1
36	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	8	4	1	10	10	10	0.0665	1	1	1	1
36	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	8	5	2	6	6	4	5.2923	5	2	2	1
36	1 lm	3	26.9	2	0.5	2	1	2	0.18	0.25	8	5	2	6	4	4	5.9842	5	2	2	2
36	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	8	5	2	4	6	3	6.5282	5	1	2	1
37	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	6	3	1	9	9	9	0.0739	1	1	1	1
37	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	6	3	2	6	6	4	5.2923	5	2	2	1
37	1 lm	3	26.9	2	0.5	2	1	2	0.18	0.25	6	3	2	6	4	4	5.9842	5	2	2	2
37	1 l	4	26.9	2	0.5	2	1	2	0.18	0.25	6	3	2	4	6	3	3.2502	3	1	2	1
38	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	6	5	1	10	10	10	0.0665	1	1	1	1
38	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	6	5	2	6	6	4	5.2923	5	2	2	1
38	1 lm	3	26.9	2	0.5	2	1	2	0.18	0.25	6	5	2	6	4	4	5.9842	5	2	2	2
38	1 l	4	26.9	2	0.5	2	1	2	0.18	0.25	6	5	2	4	6	3	3.2502	3	1	2	1
39	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	6	3	1	10	10	10	0.0665	1	1	1	1
39	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	6	3	2	6	6	4	5.2923	5	2	2	1
39	1 lm	3	26.9	2	0.5	2	1	1	0.04	0.06	6	3	2	4	4	4	15.9005	5	2	1	3
39	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	6	3	2	4	4	3	7.9677	5	1	1	1
40	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	6	5	3	10	10	10	0.0665	1	1	3	1
40	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	6	5	2	7	6	6	4.7846	5	4	3	1
40	1 lm	3	26.9	2	0.5	2	1	2	0.18	0.25	6	5	2	7	6	4	4.7956	5	2	3	3
40	1 l	4	26.9	2	0.5	2	1	2	0.18	0.25	6	5	2	7	4	3	2.6487	3	1	3	1
41	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	6	4	1	9	9	9	0.0739	1	1	1	1
41	1 um	2	26.9	2	0.5	2	1	1	0.04	0.06	6	4	2	7	6	5	9.6223	5	3	3	1
41	1 lm	3	26.9	2	0.5	2	1	1	0.04	0.06	6	4	2	7	6	4	9.6323	5	2	3	3
41	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	6	4	2	4	4	4	7.9503	5	2	1	1
42	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	7	3	3	10	10	10	0.0665	1	1	3	1
42	1 um	2	26.9	2	0.5	2	1	1	0.04	0.06	7	3	2	6	7	6	9.9245	5	4	3	1
42	1 lm	3	26.9	2	0.5	2	1	1	0.04	0.06	7	3	2	7	6	4	9.6323	5	2	3	3
42	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	7	3	2	4	4	4	7.9503	5	2	1	1
43	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	7	3	1	10	10	10	0.0665	1	1	1	1
43	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	7	3	2	6	6	6	5.2776	5	4	2	1
43	1 lm	3	26.9	2	0.5	2	1	1	0.04	0.06	7	3	2	4	6	4	13.0372	5	2	2	2
43	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	7	3	2	4	4	4	7.9503	5	2	1	1
44	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	8	2	1	10	10	10	0.0665	1	1	1	1
44	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	8	2	2	6	6	6	5.2776	5	4	2	1
44	1 lm	3	26.9	2	0.5	2	1	1	0.04	0.06	8	2	2	4	6	4	13.0372	5	2	2	1
44	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	8	2	2	4	4	4	7.9503	5	2	1	1
45	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	8	2	1	9	9	9	0.0739	1	1	1	1
45	1 um	2	26.9	2	0.5	2	1	1	0.04	0.06	8	2	2	6	4	4	12.0197	5	2	2	1
45	1 lm	3	26.9	2	0.5	2	1	1	0.04	0.06	8	2	2	4	4	4	15.9005	5	2	1	2
45	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	8	2	2	4	4	3	7.9677	5	1	1	1
46	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	8	3	3	10	10	10	0.0665	1	1	3	1
46	1 um	2	26.9	2	0.5	2	1	1	0.04	0.06	8	3	2	6	4	4	12.0197	5	2	2	1
46	1 lm	3	26.9	2	0.5	2	1	1	0.04	0.06	8	3	2	4	4	4	15.9005	5	2	1	2
46	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	8	3	2	4	4	3	7.9677	5	1	1	1
47	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	8	3	1	10	10	10	0.0665	1	1	1	4
47	1 um	2	26.9	2	0.5	2	1	1	0.04	0.06	8	3	2	6	6	4	10.6299	5	2	2	4
47	1 lm	3	26.9	2	0.5	2	1	1	0.04	0.06	8	3	2	6	4	4	12.0197	5	2	2	2
47	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	8	3	2	8	4	3	6.0174	5	1	2	4
48	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	8	3	1	10	10	10	0.0665	1	1	1	1
48	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	8	3	2	6	6	6	5.2776	5	4	2	1

48	1 lm	3	26.9	2	0.5	2	1	1	0.04	0.06	8	3	2	6	7	4	9.9488	5	2	3	3
48	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	8	3	2	4	6	4	6.5186	5	2	2	1
49	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	8	3	1	10	10	10	0.0665	1	1	1	1
49	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	8	3	2	6	6	6	5.2776	5	4	2	1
49	1 lm	3	26.9	2	0.5	2	1	1	0.04	0.06	8	3	2	4	6	4	13.0372	5	2	2	3
49	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	8	3	2	4	4	3	7.9677	5	1	1	1
50	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	8	3	1	9	9	9	0.0739	1	1	1	1
50	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	8	3	2	6	4	4	5.9842	5	2	2	1
50	1 lm	3	26.9	2	0.5	2	1	1	0.04	0.06	8	3	2	4	6	4	13.0372	5	2	2	3
50	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	8	3	2	4	4	3	7.9677	5	1	1	1
51	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	8	3	1	9	9	9	0.0739	1	1	1	1
51	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	8	3	2	6	4	4	5.9842	5	2	2	1
51	1 lm	3	26.9	2	0.5	2	1	1	0.04	0.06	8	3	2	4	6	4	13.0372	5	2	2	3
51	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	8	3	2	4	4	3	7.9677	5	1	1	1
52	1 u	1	26.9	2	0.5	2	1	2	0.18	0.25	8	2	2	5	5	5	3.1665	3	3	2	1
52	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	8	2	2	6	4	4	5.9842	5	2	2	1
52	1 lm	3	26.9	2	0.5	2	1	1	0.04	0.06	8	2	2	4	5	4	14.3994	5	2	1	3
52	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	8	2	2	4	4	3	7.9677	5	1	1	1
53	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	8	3	1	10	10	10	0.0665	1	1	1	1
53	1 um	2	26.9	2	0.5	2	1	1	0.04	0.06	8	3	2	6	4	4	12.0197	5	2	2	1
53	1 lm	3	26.9	2	0.5	2	1	1	0.04	0.06	8	3	2	3	3	2	21.2599	5	1	1	3
53	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	8	3	2	3	3	2	10.6299	5	1	1	1
54	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	1	2	1	10	10	10	0.0665	1	1	1	1
54	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	1	2	2	6	4	4	5.9842	5	2	2	1
54	1 lm	3	26.9	2	0.5	2	1	2	0.18	0.25	1	2	2	6	4	4	5.9842	5	2	2	2
54	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	1	2	2	3	3	2	10.6299	5	1	1	1
55	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	1	2	1	10	10	10	0.0559	1	1	1	1
55	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	1	2	2	6	7	4	4.1651	4	2	3	1
55	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	1	2	2	4	4	2	6.6820	5	1	1	2
55	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	1	2	2	4	3	2	3.6714	4	1	1	1
56	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	1	2	1	10	10	10	0.0559	1	1	1	1
56	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	1	2	2	6	4	4	5.0321	5	2	2	1
56	1 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	1	2	2	7	6	2	8.1109	5	1	3	3
56	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	1	2	2	7	6	2	4.0555	4	1	3	1
57	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	1	2	1	10	10	10	0.0559	1	1	1	1
57	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	1	2	2	6	7	4	4.1651	4	2	3	1
57	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	1	2	2	6	2	2	5.5282	5	1	2	1
57	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	1	2	2	3	3	2	4.4503	4	1	1	1
58	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	1	2	1	9	9	9	0.0621	1	1	1	1
58	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	1	2	2	6	7	3	4.1687	4	1	3	1
58	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	1	2	2	3	7	2	5.3741	5	1	3	2
58	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	1	2	2	3	7	2	2.6870	3	1	3	1
59	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	2	1	3	10	10	10	0.0559	1	1	3	1
59	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	2	1	2	4	6	4	5.4581	5	2	2	1
59	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	2	1	2	3	6	2	6.0330	5	1	2	2
59	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	2	1	2	3	6	2	3.0165	3	1	2	1
60	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	1	1	9	9	9	0.0621	1	1	1	1
60	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	1	2	3	6	2	6.0330	5	1	2	1
60	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	8	1	2	3	6	2	6.0330	5	1	2	2
60	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	8	1	2	3	3	2	4.4503	4	1	1	1
61	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	4	1	3	10	10	10	0.0559	1	1	3	1
61	1 um	2	26.9	1	0.25	1	1	1	0.04	0.09	4	1	2	3	3	2	17.8773	5	1	1	1
61	1 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	4	1	2	3	3	2	17.8773	5	1	1	2
61	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	4	1	2	3	3	2	8.9387	5	1	1	1
62	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	1	2	3	10	10	10	0.0559	1	1	3	1
62	1 um	2	26.9	1	0.25	1	1	1	0.04	0.09	1	2	2	3	3	2	17.8773	5	1	1	1
62	1 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	1	2	2	3	3	2	17.8773	5	1	1	3
62	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	1	2	2	3	3	2	8.9387	5	1	1	1
63	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	7	1	1	10	10	10	0.0559	1	1	1	1
63	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	7	1	2	6	6	2	4.4578	4	1	2	1
63	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	7	1	2	6	3	2	5.3096	5	1	2	1
63	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	7	1	2	3	3	2	4.4503	4	1	1	1
64	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	4	1	10	10	10	0.0559	1	1	1	1
64	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	7	3	4.1687	4	1	3	1

64	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	7	3	4.1687	4	1	3	4	
64	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	3	3	2	4.4503	4	1	1	1	
65	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	4	1	10	10	10	0.0559	1	1	1	1	
65	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	5	3	4.7488	5	1	2	1	
65	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	7	3	4.1687	4	1	3	3	
65	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	8	4	2	6	7	3	2.0843	2	1	3	1	
66	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	2	2	1	10	10	10	0.0559	1	1	1	1	
66	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	2	2	2	2	6	5	3	4.7488	5	1	2	1
66	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	2	2	2	2	6	3	2	5.3096	5	1	2	3
66	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	2	2	2	2	6	3	2	2.6548	3	1	2	1
67	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	3	1	1	10	10	10	0.0559	1	1	1	1	
67	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	3	1	2	6	4	3	5.0384	5	1	2	1	
67	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	3	1	2	4	3	2	7.3429	5	1	1	3	
67	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	3	1	2	4	3	2	3.6714	4	1	1	1	
68	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	4	1	1	10	10	10	0.0559	1	1	1	1	
68	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	4	1	2	6	4	3	5.0384	5	1	2	1	
68	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	4	1	2	4	3	2	7.3429	5	1	1	3	
68	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	4	1	2	3	3	2	8.9387	5	1	1	1	
69	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	4	1	1	10	10	10	0.0559	1	1	1	1	
69	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	4	1	2	6	4	3	5.0384	5	1	2	1	
69	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	4	1	2	4	3	2	7.3429	5	1	1	2	
69	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	4	1	2	3	3	2	8.9387	5	1	1	1	
70	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	3	1	1	10	10	10	0.0559	1	1	1	1	
70	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	3	1	2	6	4	3	5.0384	5	1	2	1	
70	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	3	1	2	4	3	2	7.3429	5	1	1	4	
70	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	3	1	2	3	3	2	8.9387	5	1	1	1	
71	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	3	1	1	10	10	10	0.0559	1	1	1	1	
71	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	3	1	2	6	4	3	5.0384	5	1	2	1	
71	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	3	1	2	4	3	2	7.3429	5	1	1	1	
71	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	3	1	2	3	3	2	8.9387	5	1	1	1	
72	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	1	1	10	10	10	0.0559	1	1	1	1	
72	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	1	2	6	4	3	5.0384	5	1	2	1	
72	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	8	1	2	4	3	2	7.3429	5	1	1	2	
72	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	8	1	2	3	3	2	8.9387	5	1	1	1	
73	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	1	1	10	10	10	0.0559	1	1	1	1	
73	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	1	2	6	4	3	5.0384	5	1	2	1	
73	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	8	1	2	4	3	2	7.3429	5	1	1	2	
73	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	8	1	2	3	3	2	8.9387	5	1	1	1	
74	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	1	1	10	10	10	0.0559	1	1	1	1	
74	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	1	2	6	4	3	5.0384	5	1	2	1	
74	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	8	1	2	4	6	2	5.4719	5	1	2	3	
74	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	8	1	2	3	3	2	8.9387	5	1	1	1	
75	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	1	1	10	10	10	0.0559	1	1	1	1	
75	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	1	2	6	4	4	5.0321	5	2	2	1	
75	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	8	1	2	4	3	2	7.3429	5	1	1	2	
75	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	8	1	2	3	3	2	4.4503	4	1	1	1	
76	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	1	1	10	10	10	0.0559	1	1	1	1	
76	1 um	2	26.9	1	0.25	1	1	1	0.04	0.09	8	1	2	6	4	4	10.1073	5	2	2	1	
76	1 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	8	1	2	4	3	2	14.7486	5	1	1	1	
76	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	8	1	2	3	3	2	8.9387	5	1	1	1	
77	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	1	1	10	10	10	0.0559	1	1	1	1	
77	1 um	2	26.9	1	0.25	1	1	1	0.04	0.09	8	1	2	6	4	4	10.1073	5	2	2	1	
77	1 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	8	1	2	4	3	2	14.7486	5	1	1	2	
77	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	8	1	2	3	3	2	8.9387	5	1	1	1	
78	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	6	1	1	10	10	10	0.0559	1	1	1	1	
78	1 um	2	26.9	1	0.25	1	1	1	0.04	0.09	6	1	2	4	4	3	13.4000	5	1	1	1	
78	1 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	6	1	2	4	3	2	14.7486	5	1	1	2	
78	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	6	1	2	3	3	2	8.9387	5	1	1	1	
79	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	4	1	1	10	10	10	0.0559	1	1	1	1	
79	1 um	2	26.9	1	0.25	1	1	1	0.04	0.09	4	1	2	4	4	3	13.4000	5	1	1	1	
79	1 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	4	1	2	4	3	2	14.7486	5	1	1	2	
79	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	4	1	2	3	3	2	8.9387	5	1	1	1	
80	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	4	1	1	10	10	10	0.0559	1	1	1	1	
80	1 um	2	26.9	1	0.25	1	1	1	0.04	0.09	4	1	2	4	6	4	10.9629	5	2	2	1	

80	1 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	4	1	2	4	3	2	14.7486	5	1	1	2
80	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	4	1	2	3	3	2	8.9387	5	1	1	1
81	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	3	1	1	10	10	10	0.0559	1	1	1	1
81	1 um	2	26.9	1	0.25	1	1	1	0.04	0.09	3	1	2	6	4	3	10.1200	5	1	2	1
81	1 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	3	1	2	4	3	2	14.7486	5	1	1	2
81	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	3	1	2	3	3	2	8.9387	5	1	1	1
82	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	3	1	1	10	10	10	0.0559	1	1	1	1
82	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	3	1	2	6	4	3	5.0384	5	1	2	1
82	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	3	1	2	4	6	2	5.4719	5	1	2	3
82	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	3	1	2	3	3	2	8.9387	5	1	1	1
83	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	5	3	1	10	10	10	0.0559	1	1	1	1
83	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	5	3	2	6	8	4	4.4503	4	2	2	1
83	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	5	3	2	4	3	3	7.3290	5	1	1	3
83	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	5	3	2	3	2	2	5.0321	5	1	1	1
84	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	7	3	1	10	10	10	0.0665	1	1	1	1
84	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	7	3	2	6	4	3	5.9917	5	1	2	1
84	1 lm	3	26.9	2	0.5	2	1	2	0.18	0.25	7	3	2	6	7	4	4.9532	5	2	3	3
84	1 l	4	26.9	2	0.5	2	1	2	0.18	0.25	7	3	2	4	3	2	4.3661	4	1	1	1
85	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	7	3	1	10	10	10	0.0665	1	1	1	1
85	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	7	3	2	6	4	3	5.9917	5	1	2	1
85	1 lm	3	26.9	2	0.5	2	1	1	0.04	0.06	7	3	2	4	3	2	17.5392	5	1	1	3
85	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	7	3	2	3	4	3	9.2852	5	1	1	1
86	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	7	3	1	10	10	10	0.0665	1	1	1	1
86	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	7	3	2	6	4	4	5.9842	5	2	2	1
86	1 lm	3	26.9	2	0.5	2	1	2	0.18	0.25	7	3	2	6	7	4	4.9532	5	2	3	2
86	1 l	4	26.9	2	0.5	2	1	2	0.18	0.25	7	3	2	3	4	3	4.6228	5	1	1	1
87	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	7	3	1	10	10	10	0.0665	1	1	1	1
87	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	7	3	2	6	6	4	5.2923	5	2	2	1
87	1 lm	3	26.9	2	0.5	2	1	2	0.18	0.25	7	3	2	6	7	4	4.9532	5	2	3	2
87	1 l	4	26.9	2	0.5	2	1	2	0.18	0.25	7	3	2	4	3	2	4.3661	4	1	1	1
88	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	7	3	1	10	10	10	0.0665	1	1	1	1
88	1 um	2	26.9	2	0.5	2	1	1	0.04	0.06	7	3	2	6	4	4	12.0197	5	2	2	1
88	1 lm	3	26.9	2	0.5	2	1	1	0.04	0.06	7	3	2	6	4	4	12.0197	5	2	2	2
88	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	7	3	2	4	3	3	8.7530	5	1	1	1
89	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	7	3	1	10	10	10	0.0665	1	1	1	1
89	1 um	2	26.9	2	0.5	2	1	1	0.04	0.06	7	3	2	6	4	3	12.0347	5	1	2	1
89	1 lm	3	26.9	2	0.5	2	1	1	0.04	0.06	7	3	2	3	4	2	18.6102	5	1	1	3
89	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	7	3	2	3	4	2	9.3051	5	1	1	1
90	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	7	1	1	10	10	10	0.0559	1	1	1	1
90	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	7	1	2	6	6	4	4.4503	4	2	2	1
90	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	7	1	2	4	3	3	7.3290	5	1	1	3
90	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	7	1	2	3	3	2	8.9387	5	1	1	1
91	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	7	3	3	10	10	10	0.0559	1	1	3	1
91	1 um	2	26.9	1	0.25	1	1	1	0.04	0.09	7	3	2	4	3	2	14.7486	5	1	1	1
91	1 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	7	3	2	3	3	2	17.8773	5	1	1	3
91	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	7	3	2	3	3	2	8.9387	5	1	1	1
92	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	3	3	3	10	10	10	0.0559	1	1	3	1
92	1 um	2	26.9	1	0.25	1	1	1	0.04	0.09	3	3	2	4	3	2	14.7486	5	1	1	1
92	1 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	3	3	2	3	3	2	17.8773	5	1	1	3
92	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	3	3	2	3	3	2	8.9387	5	1	1	1
93	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	3	3	3	10	10	10	0.0559	1	1	3	1
93	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	6	5	4	4.7436	5	2	2	1
93	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	4	2	3	7.9388	5	1	1	2
93	1 l	4	26.9	1	0.25	1	1	1	0.04	0.09	3	3	2	3	3	2	8.9387	5	1	1	1
94	1 u	1	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	5	5	5	2.6627	3	3	2	1
94	1 um	2	26.9	1	0.25	1	1	3	0.47	0.93	3	3	2	4	6	4	3.3561	3	2	2	1
94	1 lm	3	26.9	1	0.25	1	1	3	0.47	0.93	3	3	2	6	4	4	3.0942	3	2	2	1
94	1 l	4	26.9	1	0.25	1	1	3	0.47	0.93	3	3	2	4	3	2	2.2575	2	1	1	1
95	1 u	1	26.9	2	0.5	2	1	2	0.18	0.25	6	3	2	5	5	5	3.1665	3	3	2	1
95	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	6	3	2	6	4	4	5.9842	5	2	2	1
95	1 lm	3	26.9	2	0.5	2	1	1	0.04	0.06	6	3	2	4	6	3	13.0584	5	1	2	2
95	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	6	3	2	4	6	3	6.5282	5	1	2	1
96	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	8	3	1	10	10	10	0.0665	1	1	1	1
96	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	6	3	2	6	6	6	5.2776	5	4	2	1

96	1 lm	3	26.9	2	0.5	2	1	2	0.18	0.25	6	3	2	6	7	4	4.9532	5	2	3	2
96	1 f	4	26.9	2	0.5	2	1	2	0.18	0.25	6	3	2	4	6	3	3.2502	3	1	2	1
97	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	6	3	1	10	10	10	0.0665	1	1	1	4
97	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	6	3	2	6	6	6	5.2776	5	4	2	4
97	1 lm	3	26.9	2	0.5	2	1	2	0.18	0.25	6	3	2	6	7	4	4.9532	5	2	3	2
97	1 l	4	26.9	2	0.5	2	1	2	0.18	0.25	6	3	2	4	6	4	3.2454	3	2	2	4
98	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	6	3	1	10	10	10	0.0665	1	1	1	1
98	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	6	3	2	4	6	4	6.4908	5	2	2	1
98	1 lm	3	26.9	2	0.5	2	1	1	0.04	0.06	6	3	2	4	6	4	13.0372	5	2	2	3
98	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	6	3	2	4	3	3	8.7530	5	1	1	1
99	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	5	2	3	10	10	10	0.0665	1	1	3	1
99	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	5	2	2	5	6	4	5.8600	5	2	2	1
99	1 lm	3	26.9	2	0.5	2	1	1	0.04	0.06	5	2	2	5	6	4	11.7701	5	2	2	3
99	1 l	4	26.9	2	0.5	2	1	1	0.04	0.06	5	2	2	4	3	2	8.7696	5	1	1	1
100	1 u	1	26.9	2	0.5	2	1	5	100.00	141.42	5	2	3	10	10	10	0.0665	1	1	3	1
100	1 um	2	26.9	2	0.5	2	1	2	0.18	0.25	5	2	2	6	6	6	5.2776	5	4	2	1
100	1 lm	3	26.9	2	0.5	2	1	2	0.18	0.25	5	2	2	6	7	4	4.9532	5	2	3	3
100	1 l	4	26.9	2	0.5	2	1	2	0.18	0.25	5	2	2	6	7	4	2.4766	2	2	3	1
101	1 u	1	26.9	2	0.5	2	6	5	100.00	346.41	6	3	1	10	10	10	0.0425	1	1	1	1
101	1 um	2	26.9	2	0.5	2	6	2	0.18	0.61	6	3	2	6	7	6	3.1571	3	4	3	1
101	1 lm	3	26.9	2	0.5	2	6	2	0.18	0.61	6	3	2	7	8	4	3.0641	3	2	3	3
101	1 l	4	26.9	2	0.5	2	6	2	0.18	0.61	6	3	2	7	8	4	1.5321	2	2	3	1
102	1 u	1	26.9	2	0.5	2	6	2	0.18	0.62	6	3	2	6	6	6	1.6686	2	4	2	1
102	1 um	2	26.9	2	0.5	2	6	2	0.18	0.61	6	3	2	6	4	4	3.8236	4	2	2	1
102	1 lm	3	26.9	2	0.5	2	6	2	0.18	0.61	6	3	2	6	4	4	3.8236	4	2	2	3
102	1 l	4	26.9	2	0.5	2	6	1	0.04	0.15	6	3	2	4	4	3	5.0909	5	1	1	1
103	1 u	1	26.9	2	0.5	2	6	5	100.00	346.41	6	3	3	10	10	10	0.0425	1	1	3	1
103	1 um	2	26.9	2	0.5	2	6	2	0.18	0.61	6	3	2	7	8	6	3.0571	3	4	3	1
103	1 lm	3	26.9	2	0.5	2	6	2	0.18	0.61	6	3	2	7	8	4	3.0641	3	2	3	3
103	1 l	4	26.9	2	0.5	2	6	1	0.04	0.15	6	3	2	7	6	4	3.0772	3	2	3	1
104	2 u	1	25.6	1	0.25	1	1	5	100.00	200.00	6	3	1	10	10	10	0.0559	1	1	1	1
104	2 um	2	25.6	1	0.25	1	1	2	0.18	0.35	8	3	2	6	7	6	4.1550	4	4	3	1
104	2 lm	3	25.6	1	0.25	1	1	2	0.18	0.35	8	3	2	7	6	4	4.0326	4	2	3	2
104	2 l	4	25.6	1	0.25	1	1	2	0.18	0.35	8	3	2	4	3	3	3.6645	4	1	1	1
105	2 u	1	25.6	1	0.25	1	1	2	0.18	0.36	8	3	2	4	6	4	2.7008	3	2	1	1
105	2 um	2	25.6	1	0.25	1	1	2	0.18	0.35	8	3	2	6	6	4	4.4503	4	2	2	1
105	2 lm	3	25.6	1	0.25	1	1	1	0.04	0.09	8	3	2	4	3	3	14.7207	5	1	1	2
105	2 l	4	25.6	1	0.25	1	1	1	0.04	0.09	8	3	2	4	3	2	7.3743	5	1	1	1
106	2 u	1	25.6	1	0.25	1	1	5	100.00	200.00	8	3	3	10	10	10	0.0559	1	1	3	1
106	2 um	2	25.6	1	0.25	1	1	2	0.18	0.35	8	3	2	6	7	6	4.1550	4	4	3	1
106	2 lm	3	25.6	1	0.25	1	1	2	0.18	0.35	8	3	2	7	6	4	4.0326	4	2	3	3
106	2 l	4	25.6	1	0.25	1	1	2	0.18	0.35	8	3	2	4	3	3	3.6645	4	1	1	1
107	2 u	1	25.6	1	0.25	1	1	5	100.00	200.00	3	3	1	10	10	10	0.0559	1	1	1	1
107	2 um	2	25.6	1	0.25	1	1	2	0.18	0.35	3	3	2	7	6	6	4.0234	4	4	3	1
107	2 lm	3	25.6	1	0.25	1	1	2	0.18	0.35	3	3	2	7	6	4	4.0326	4	2	3	1
107	2 l	4	25.6	1	0.25	1	1	1	0.04	0.09	3	3	2	4	3	2	7.3743	5	1	1	1
108	2 u	1	25.6	1	0.25	1	1	5	100.00	200.00	8	3	1	10	10	10	0.0559	1	1	1	1
108	2 um	2	25.6	1	0.25	1	1	2	0.18	0.35	8	3	2	6	6	6	4.4379	4	4	2	1
108	2 lm	3	25.6	1	0.25	1	1	1	0.04	0.09	8	3	2	4	4	3	13.4000	5	1	1	2
108	2 l	4	25.6	1	0.25	1	1	1	0.04	0.09	8	3	2	4	3	2	7.3743	5	1	1	1
109	2 u	1	25.6	1	0.25	1	1	5	100.00	200.00	1	2	1	10	10	10	0.0559	1	1	1	1
109	2 um	2	25.6	1	0.25	1	1	2	0.18	0.35	1	2	2	6	6	6	4.4379	4	4	2	1
109	2 lm	3	25.6	1	0.25	1	1	1	0.04	0.09	1	2	2	4	4	3	13.4000	5	1	1	2
109	2 l	4	25.6	1	0.25	1	1	1	0.04	0.09	1	2	2	4	3	3	7.3603	5	1	1	1
110	2 u	1	25.6	1	0.25	1	1	2	0.18	0.36	2	3	2	5	5	5	2.6352	3	3	1	1
110	2 um	2	25.6	1	0.25	1	1	2	0.18	0.35	2	3	2	6	6	4	4.4503	4	2	2	1
110	2 lm	3	25.6	1	0.25	1	1	1	0.04	0.09	2	3	2	4	4	3	13.4000	5	1	1	2
110	2 l	4	25.6	1	0.25	1	1	1	0.04	0.09	2	3	2	4	3	2	7.3743	5	1	1	1
111	2 u	1	25.6	1	0.25	1	1	1	0.04	0.08	1	1	7	3	3	2	9.3429	5	1	1	1
111	2 um	2	25.6	1	0.25	1	1	1	0.04	0.09	1	1	7	4	6	4	10.9629	5	2	2	1
111	2 lm	3	25.6	1	0.25	1	1	1	0.04	0.09	1	1	7	4	3	2	14.7486	5	1	1	2
111	2 l	4	25.6	1	0.25	1	1	1	0.04	0.09	1	1	7	3	3	2	8.9387	5	1	1	1
112	2 u	1	25.6	1	0.25	1	1	5	100.00	200.00	7	5	1	10	10	10	0.0559	1	1	1	1
112	2 um	2	25.6	1	0.25	1	1	2	0.18	0.35	7	5	2	6	6	4	4.4503	4	2	2	1

112	2 lm	3	25.6	1	0.25	1	1	1	0.04	0.09	7	5	2	4	3	3	14.7207	5	1	1	3
112	2 l	4	25.6	1	0.25	1	1	1	0.04	0.09	7	5	2	4	3	2	7.3743	5	1	1	1
113	2 u	1	25.6	1	0.25	1	1	5	100.00	200.00	7	3	3	10	10	10	0.0559	1	1	3	1
113	2 um	2	25.6	1	0.25	1	1	2	0.18	0.35	7	3	2	6	6	6	4.4379	4	4	2	1
113	2 lm	3	25.6	1	0.25	1	1	2	0.18	0.35	7	3	2	6	7	4	4.1651	4	2	3	1
113	2 l	4	25.6	1	0.25	1	1	1	0.04	0.09	7	3	2	6	4	4	5.0537	5	2	2	1
114	2 u	1	25.6	1	0.25	1	1	5	100.00	200.00	8	3	3	10	10	10	0.0559	1	1	3	1
114	2 um	2	25.6	1	0.25	1	1	2	0.18	0.35	8	3	2	6	6	6	4.4379	4	4	2	1
114	2 lm	3	25.6	1	0.25	1	1	2	0.18	0.35	8	3	2	7	6	4	4.0326	4	2	3	4
114	2 l	4	25.6	1	0.25	1	1	2	0.18	0.35	8	3	2	6	7	4	2.0826	2	2	3	1
115	2 u	1	25.6	1	0.25	1	1	5	100.00	200.00	8	3	1	10	10	10	0.0559	1	1	1	1
115	2 um	2	25.6	1	0.25	1	1	2	0.18	0.35	8	3	2	6	6	6	4.4379	4	4	2	1
115	2 lm	3	25.6	1	0.25	1	1	2	0.18	0.35	8	3	2	7	6	4	4.0326	4	2	3	3
115	2 l	4	25.6	1	0.25	1	1	1	0.04	0.09	8	3	2	4	3	3	7.3603	5	1	1	1
116	2 u	1	25.6	1	0.25	1	1	5	100.00	200.00	1	2	1	10	10	10	0.0559	1	1	1	1
116	2 um	2	25.6	1	0.25	1	1	2	0.18	0.35	1	2	2	6	6	6	4.4379	4	4	2	1
116	2 lm	3	25.6	1	0.25	1	1	1	0.04	0.09	1	2	2	4	3	3	14.7207	5	1	1	3
116	2 l	4	25.6	1	0.25	1	1	1	0.04	0.09	1	2	2	4	3	2	7.3743	5	1	1	1
117	2 u	1	25.6	1	0.25	1	1	5	100.00	200.00	8	3	1	10	10	10	0.0559	1	1	1	1
117	2 um	2	25.6	1	0.25	1	1	2	0.18	0.35	8	3	2	6	6	6	4.4379	4	4	2	1
117	2 lm	3	25.6	1	0.25	1	1	1	0.04	0.09	8	3	2	4	3	3	14.7207	5	1	1	3
117	2 l	4	25.6	1	0.25	1	1	1	0.04	0.09	8	3	2	4	3	2	7.3743	5	1	1	1
118	2 u	1	25.6	1	0.25	1	1	5	100.00	200.00	7	4	1	10	10	10	0.0559	1	1	1	1
118	2 um	2	25.6	1	0.25	1	1	2	0.18	0.35	7	4	2	6	6	6	4.4379	4	4	2	1
118	2 lm	3	25.6	1	0.25	1	1	1	0.04	0.09	7	4	2	4	6	3	10.9791	5	1	2	3
118	2 l	4	25.6	1	0.25	1	1	1	0.04	0.09	7	4	2	4	3	2	7.3743	5	1	1	1
119	2 u	1	25.6	1	0.25	1	1	5	100.00	200.00	7	4	3	10	10	10	0.0559	1	1	3	1
119	2 um	2	25.6	1	0.25	1	1	2	0.18	0.35	7	4	2	7	6	6	4.0234	4	4	3	1
119	2 lm	3	25.6	1	0.25	1	1	2	0.18	0.35	7	4	2	7	6	4	4.0326	4	1	3	2
119	2 l	4	25.6	1	0.25	1	1	2	0.18	0.35	7	4	2	7	6	4	2.0163	2	1	3	1
120	2 u	1	25.6	1	0.25	1	1	5	100.00	200.00	8	3	1	10	10	10	0.0559	1	1	1	1
120	2 um	2	25.6	1	0.25	1	1	2	0.18	0.35	8	3	2	7	6	6	4.0234	4	4	3	1
120	2 lm	3	25.6	1	0.25	1	1	2	0.18	0.35	8	3	2	7	6	4	4.0326	4	2	3	4
120	2 l	4	25.6	1	0.25	1	1	1	0.04	0.09	8	3	2	7	6	4	4.0499	4	2	3	1
121	2 u	1	25.6	1	0.25	1	1	5	100.00	200.00	8	3	1	10	10	10	0.0559	1	1	1	1
121	2 um	2	25.6	1	0.25	1	1	2	0.18	0.35	8	3	2	6	6	6	4.4379	4	4	2	1
121	2 lm	3	25.6	1	0.25	1	1	2	0.18	0.35	8	3	2	6	6	4	4.4503	4	2	2	1
121	2 l	4	25.6	1	0.25	1	1	1	0.04	0.09	8	3	2	4	6	2	5.4953	5	1	2	1
122	2 u	1	25.6	1	0.25	1	1	2	0.18	0.36	8	3	2	5	5	5	2.6352	3	3	1	1
122	2 um	2	25.6	1	0.25	1	1	2	0.18	0.35	8	3	2	6	4	4	5.0321	5	2	2	1
122	2 lm	3	25.6	1	0.25	1	1	1	0.04	0.09	8	3	2	4	3	3	14.7207	5	1	1	2
122	2 l	4	25.6	1	0.25	1	1	1	0.04	0.09	8	3	2	4	3	2	7.3743	5	1	1	1
123	2 u	1	25.6	1	0.25	1	1	5	100.00	200.00	8	1	1	10	10	10	0.0559	1	1	1	1
123	2 um	2	25.6	1	0.25	1	1	2	0.18	0.35	8	1	7	6	7	4	4.1651	4	2	3	1
123	2 lm	3	25.6	1	0.25	1	1	1	0.04	0.09	8	1	7	4	3	2	7.3743	5	1	1	2
124	2 u	1	25.6	1	0.25	1	1	5	100.00	200.00	8	3	1	10	10	10	0.0559	1	1	1	1
124	2 um	2	25.6	1	0.25	1	1	1	0.04	0.09	8	3	2	7	6	4	4.0499	4	2	3	1
124	2 lm	3	25.6	1	0.25	1	1	1	0.04	0.09	8	3	2	4	3	2	14.7466	5	1	1	1
124	2 l	4	25.6	1	0.25	1	1	1	0.04	0.09	8	3	2	3	3	2	17.8773	5	1	1	3
125	2 u	1	25.6	1	0.25	1	1	5	100.00	200.00	8	3	1	10	10	10	0.0559	1	1	1	1
125	2 um	2	25.6	1	0.25	1	1	1	0.04	0.09	8	3	2	7	6	6	4.0406	4	4	3	1
125	2 lm	3	25.6	1	0.25	1	1	1	0.04	0.09	8	3	2	3	3	2	17.8773	5	1	1	1
125	2 l	4	25.6	1	0.25	1	1	1	0.04	0.09	8	3	2	3	3	2	17.8773	5	1	1	2
126	2 u	1	25.6	1	0.25	1	1	5	100.00	200.00	8	3	1	10	10	10	0.0559	1	1	1	1
126	2 um	2	25.6	1	0.25	1	1	1	0.04	0.09	8	3	2	6	4	3	10.1200	5	1	2	1
126	2 lm	3	25.6	1	0.25	1	1	1	0.04	0.09	8	3	2	6	3	2	10.6646	5	1	2	1
126	2 l	4	25.6	1	0.25	1	1	1	0.04	0.09	8	3	2	6	3	2	5.3323	5	1	2	1
127	2 u	1	25.6	1	0.25	1	1	5	100.00	200.00	7	4	1	10	10	10	0.0559	1	1	1	1
127	2 um	2	25.6	1	0.25	1	1	1	0.04	0.09	7	4	2	7	6	6	8.0812	5	4	3	1
127	2 lm	3	25.6	1	0.25	1	1	1	0.04	0.09	7	4	2	7	6	4	8.0997	5	2	3	1
127	2 l	4	25.6	1	0.25	1	1	1	0.04	0.09	7	4	2	6	4	4	5.0537	5	2	2	2
128	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	7	4	1	10	10	10	0.0425	1	1	1	1
128	3 um	2	25.5	2	0.5	2	6	1	0.04	0.15	7	4	2	7	6	6	6.1404	5	4	3	1
128	3 lm	3	25.5	2	0.5	2	6	1	0.04	0.15	7	4	2	7	6	4	6.1545	5	2	3	2

128	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	7	4	2	4	4	3	5.0909	5	1	1	1
129	3 u	1	25.5	2	0.5	2	6	1	0.04	0.14	7	4	2	6	5	5	3.7781	4	3	2	1
129	3 um	2	25.5	2	0.5	2	6	1	0.04	0.15	7	4	2	6	4	4	7.6799	5	2	2	1
129	3 lm	3	25.5	2	0.5	2	6	1	0.04	0.15	7	4	2	7	6	4	6.1545	5	2	3	2
129	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	7	4	2	7	6	3	3.0797	3	1	3	1
130	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	7	4	2	6	4	4	0.0803	1	2	2	1
130	3 um	2	25.5	2	0.5	2	6	1	0.04	0.15	7	4	2	7	6	6	6.1404	5	4	3	1
130	3 lm	3	25.5	2	0.5	2	6	1	0.04	0.15	7	4	2	7	6	5	6.1481	5	3	3	2
130	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	7	4	2	7	6	4	3.0772	3	2	3	1
131	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	6	5	1	10	10	10	0.0425	1	1	1	1
131	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	6	5	2	7	6	4	3.0641	3	2	3	1
131	3 lm	3	25.5	2	0.5	2	6	2	0.18	0.61	6	5	2	7	6	4	3.0641	3	2	3	2
131	3 l	4	25.5	2	0.5	2	6	2	0.18	0.61	6	5	2	7	6	4	1.5321	2	2	3	1
132	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	4	3	1	9	9	9	0.0472	1	5	5	1
132	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	4	4	3.8236	4	2	2	1
132	3 lm	3	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	4	4	3.8236	4	2	2	3
132	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	4	3	2	4	4	4	5.0798	5	2	1	1
133	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	4	3	1	9	9	9	0.0472	1	5	5	1
133	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	5	4	3.6043	4	2	2	1
133	3 lm	3	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	5	4	3.6043	4	2	2	3
133	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	4	3	2	4	4	4	5.0798	5	2	1	1
134	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	4	3	1	9	9	9	0.0472	1	5	5	1
134	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	5	4	3.6043	4	2	2	1
134	3 lm	3	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	5	4	3.6043	4	2	2	3
134	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	4	3	2	4	6	4	4.1650	4	2	2	1
135	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	4	3	1	10	10	10	0.0425	1	1	1	1
135	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	5	4	3.6043	4	2	2	1
135	3 lm	3	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	7	6	4	3.0641	3	2	3	3
135	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	4	3	2	4	4	4	5.0798	5	2	1	1
136	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	4	3	1	9	9	9	0.0472	1	5	5	1
136	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	4	4	4	5.0581	5	2	1	1
136	3 lm	3	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	7	4	3.1648	3	2	3	2
136	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	4	3	2	4	4	4	5.0798	5	2	1	1
137	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	4	3	1	9	9	9	0.0472	1	5	5	1
137	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	6	4	3.3815	3	2	2	1
137	3 lm	3	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	7	4	3.1648	3	2	3	2
137	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	4	3	2	4	4	3	5.0909	5	1	1	1
138	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	5	4	1	10	10	10	0.0425	1	1	1	1
138	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	5	4	2	6	6	4	3.3815	3	2	2	1
138	3 lm	3	25.5	2	0.5	2	6	2	0.18	0.61	5	4	2	6	7	4	3.1648	3	2	3	2
138	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	5	4	2	6	6	4	3.3960	3	2	2	1
139	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	5	4	1	10	10	10	0.0425	1	1	1	1
139	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	5	4	2	8	6	4	3.3815	3	2	2	1
139	3 lm	3	25.5	2	0.5	2	6	1	0.04	0.15	5	4	2	6	5	4	7.2395	5	2	2	3
139	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	5	4	2	4	4	4	5.0798	5	2	1	1
140	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	4	3	1	10	10	10	0.0425	1	1	1	1
140	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	4	4	3.8236	4	2	2	1
140	3 lm	3	25.5	2	0.5	2	6	1	0.04	0.15	4	3	2	7	4	4	6.7919	5	2	3	3
140	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	4	3	2	4	4	4	5.0798	5	2	1	1
141	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	4	3	1	10	10	10	0.0425	1	1	1	1
141	3 um	2	25.5	2	0.5	2	6	1	0.04	0.15	4	3	2	6	4	4	7.6799	5	2	2	1
141	3 lm	3	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	7	5	4	3.2270	3	2	3	3
141	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	4	3	2	4	6	4	4.1650	4	2	2	1
142	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	5	4	3	10	10	10	0.0425	1	1	3	1
142	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	5	4	2	6	6	4	3.3815	3	2	2	1
142	3 lm	3	25.5	2	0.5	2	6	2	0.18	0.61	5	4	2	7	6	4	3.0641	3	2	3	3
142	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	5	4	2	4	6	4	4.1650	4	2	2	1
143	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	4	3	3	10	10	10	0.0425	1	1	3	1
143	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	4	4	3.8236	4	2	2	1
143	3 lm	3	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	6	4	3.3815	3	2	2	2
143	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	4	3	2	4	4	4	5.0798	5	2	1	1
144	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	5	4	1	10	10	10	0.0425	1	1	1	1
144	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	5	4	2	6	4	4	3.8236	4	2	2	1
144	3 lm	3	25.5	2	0.5	2	6	2	0.18	0.61	5	4	2	6	6	4	3.3815	3	2	2	1

144	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	5	4	2	4	4	4	5.0798	5	2	1	1
145	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	4	3	3	10	10	10	0.0425	1	1	3	1
145	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	4	6	4	4.1472	4	2	2	1
145	3 lm	3	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	7	4	3.1648	3	2	3	2
145	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	4	3	2	4	4	4	5.0798	5	2	1	1
146	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	4	3	1	10	10	10	0.0425	1	1	1	1
146	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	4	4	3.8236	4	2	2	1
146	3 lm	3	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	7	4	3.1648	3	2	3	2
146	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	4	3	2	4	4	4	5.0798	5	2	1	1
147	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	4	3	1	10	10	10	0.0425	1	1	1	4
147	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	5	6	4	3.7442	4	2	2	4
147	3 lm	3	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	7	4	3.1648	3	2	3	2
147	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	4	3	2	4	4	4	5.0798	5	2	1	4
148	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	5	4	1	9	9	9	0.0472	1	5	5	1
148	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	5	4	2	6	6	4	3.3815	3	2	2	1
148	3 lm	3	25.5	2	0.5	2	6	2	0.18	0.61	5	4	2	6	6	4	3.3815	3	2	2	3
148	3 l	4	25.5	2	0.5	2	6	2	0.18	0.61	5	4	2	6	6	4	1.6907	2	2	2	1
149	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	4	3	3	10	10	10	0.0425	1	1	3	1
149	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	5	4	3.6043	4	2	2	1
149	3 lm	3	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	7	6	5	3.0610	3	3	3	3
149	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	4	3	2	4	4	4	5.0798	5	2	1	1
150	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	4	3	3	10	10	10	0.0425	1	1	3	1
150	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	4	4	3.8236	4	2	2	1
150	3 lm	3	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	7	6	5	3.0610	3	3	3	3
150	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	4	3	2	4	6	4	4.1650	4	2	2	1
151	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	4	3	3	10	10	10	0.0425	1	1	3	1
151	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	4	6	4	4.1472	4	2	2	1
151	3 lm	3	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	6	4	3.3815	3	2	2	3
151	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	4	3	2	4	4	4	5.0798	5	2	1	1
152	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	4	3	1	9	9	9	0.0472	1	5	5	1
152	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	7	4	3.1648	3	2	3	1
152	3 lm	3	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	7	6	4	3.0641	3	2	3	3
152	3 l	4	25.5	2	0.5	2	6	1	0.04	0.15	4	3	2	7	6	4	3.0772	3	2	3	1
153	3 u	1	25.5	2	0.5	2	6	5	100.00	346.41	4	3	1	10	10	10	0.0425	1	1	1	1
153	3 um	2	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	6	7	4	3.1648	3	2	3	1
153	3 lm	3	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	7	6	5	3.0610	3	3	3	3
153	3 l	4	25.5	2	0.5	2	6	2	0.18	0.61	4	3	2	7	4	4	1.6907	2	2	3	1
154	3 u	1	25.5	3	1	4	24	5	100.00	489.90	5	4	1	10	10	10	0.0357	1	1	1	1
154	3 um	2	25.5	3	1	4	24	2	0.18	0.86	5	4	2	7	6	6	2.5707	3	4	3	1
154	3 lm	3	25.5	3	1	4	24	2	0.18	0.86	5	4	2	7	6	4	2.5766	3	2	3	2
154	3 l	4	25.5	3	1	4	24	1	0.04	0.21	5	4	2	4	6	4	3.5023	4	2	2	1
155	4 u	1	26.9	1	0.25	1	1	5	100.00	200.00	5	4	1	10	10	10	0.0559	1	1	1	1
155	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	5	4	2	7	6	6	4.0234	4	4	3	1
155	4 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	5	4	2	7	6	6	4.0234	4	4	3	2
155	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	5	4	2	4	6	4	5.4815	5	2	2	1
156	4 u	1	26.9	1	0.25	1	1	1	0.04	0.08	6	2	2	5	5	5	5.5902	5	3	1	1
156	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	6	2	2	6	4	4	5.0321	5	2	2	1
156	4 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	6	2	2	6	6	4	4.4503	4	2	2	3
156	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	6	2	2	4	3	2	7.3743	5	1	1	1
157	4 u	1	26.9	1	0.25	1	1	1	0.04	0.08	8	3	2	5	4	4	6.0421	5	2	1	1
157	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	3	2	4	6	4	5.4581	5	2	1	1
157	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	8	3	2	4	3	2	7.3743	5	1	1	1
158	4 u	1	26.9	1	0.25	1	1	5	100.00	200.00	3	4	3	10	10	10	0.0559	1	1	3	1
158	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	3	4	2	4	2	2	7.9565	5	1	1	1
158	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	3	4	2	4	3	2	7.3743	5	1	1	2
159	4 u	1	26.9	1	0.25	1	1	1	0.04	0.08	4	1	2	4	2	2	8.3519	5	1	1	1
159	4 um	2	26.9	1	0.25	1	1	1	0.04	0.09	4	1	2	4	2	2	15.9810	5	1	1	1
159	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	4	1	2	4	3	2	7.3743	5	1	1	2
160	4 u	1	26.9	1	0.25	1	1	1	0.04	0.08	8	5	2	5	4	4	6.0421	5	2	1	1
160	4 um	2	26.9	1	0.25	1	1	1	0.04	0.09	8	5	2	4	4	2	13.4211	5	1	1	1
160	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	8	5	2	4	4	2	6.7106	5	1	1	2
161	4 u	1	26.9	1	0.25	1	1	1	0.04	0.08	7	3	2	5	4	4	6.0421	5	2	1	1
161	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	7	3	2	5	4	4	5.7560	5	2	1	1
161	4 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	7	3	2	4	4	4	3.3284	3	2	1	2

162	4 u	1	26.9	2	0.5	2	6	1	0.04	0.14	3	2	2	5	4	4	4.5910	5	2	1	1
162	4 um	2	26.9	2	0.5	2	6	2	0.18	0.61	3	2	2	4	4	4	5.0581	5	2	1	1
162	4 lm	3	26.9	2	0.5	2	6	2	0.18	0.61	3	2	2	4	4	4	2.5291	3	2	1	3
162	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	3	2	2	4	4	2	5.0989	5	1	1	1
163	4 u	1	26.9	3	1	4	24	1	0.04	0.20	4	3	2	5	4	4	3.8606	4	2	1	1
163	4 um	2	26.9	3	1	4	24	2	0.18	0.86	4	3	2	4	6	4	3.4874	3	2	2	1
163	4 lm	3	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	4	4	3.2152	3	2	2	1
163	4 l	4	26.9	3	1	4	24	1	0.04	0.21	4	3	2	4	4	4	4.2716	4	2	1	1
164	4 u	1	26.9	3	1	4	24	1	0.04	0.20	4	3	2	4	6	4	3.6607	4	2	2	1
164	4 um	2	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	4	4	3.2152	3	2	2	1
164	4 lm	3	26.9	3	1	4	24	2	0.18	0.86	4	3	2	7	6	4	2.5766	3	2	3	4
164	4 l	4	26.9	3	1	4	24	1	0.04	0.21	4	3	2	4	4	4	4.2716	4	2	1	1
165	4 u	1	26.9	3	1	4	24	5	100.00	489.90	4	3	1	9	9	9	0.0397	1	5	5	1
165	4 um	2	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	4	4	3.2152	3	2	2	1
165	4 lm	3	26.9	3	1	4	24	2	0.18	0.86	4	3	2	7	6	4	2.5766	3	2	3	3
165	4 l	4	26.9	3	1	4	24	1	0.04	0.21	4	3	2	4	4	4	4.2716	4	2	1	1
166	4 u	1	26.9	3	1	4	24	5	100.00	489.90	4	3	1	9	9	9	0.0397	1	5	5	1
166	4 um	2	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	4	4	3.2152	3	2	2	1
166	4 lm	3	26.9	3	1	4	24	2	0.18	0.86	4	3	2	7	6	4	2.5766	3	2	3	3
166	4 l	4	26.9	3	1	4	24	1	0.04	0.21	4	3	2	4	4	4	4.2716	4	2	1	1
167	4 u	1	26.9	3	1	4	24	1	100.00	489.90	4	3	2	4	6	4	0.0732	1	2	2	1
167	4 um	2	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	4	4	3.2152	3	2	2	1
167	4 lm	3	26.9	3	1	4	24	2	0.18	0.86	4	3	2	7	6	4	2.5766	3	2	3	3
167	4 l	4	26.9	3	1	4	24	1	0.04	0.21	4	3	2	4	4	4	4.2716	4	2	1	1
168	4 u	1	26.9	3	1	4	24	5	100.00	489.90	4	3	3	10	10	10	0.0357	1	1	3	1
168	4 um	2	26.9	3	1	4	24	2	0.18	0.86	4	3	2	8	4	4	3.2152	3	2	2	1
168	4 lm	3	26.9	3	1	4	24	2	0.18	0.86	4	3	2	7	6	4	2.5766	3	2	3	3
168	4 l	4	26.9	3	1	4	24	1	0.04	0.21	4	3	2	4	4	4	4.2716	4	2	1	1
169	4 u	1	26.9	3	1	4	24	5	100.00	489.90	4	3	1	10	10	10	0.0357	1	1	1	1
169	4 um	2	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	4	4	3.2152	3	2	2	1
169	4 lm	3	26.9	3	1	4	24	2	0.18	0.86	4	3	2	7	6	4	2.5766	3	2	3	2
169	4 l	4	26.9	3	1	4	24	1	0.04	0.21	4	3	2	6	4	4	3.2290	3	2	2	1
170	4 u	1	26.9	3	1	4	24	5	100.00	489.90	4	3	1	10	10	10	0.0357	1	1	1	1
170	4 um	2	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	4	4	3.2152	3	2	2	1
170	4 lm	3	26.9	3	1	4	24	2	0.18	0.86	4	3	2	7	6	4	2.5766	3	2	3	4
170	4 l	4	26.9	3	1	4	24	1	0.04	0.21	4	3	2	4	6	4	3.5023	4	2	2	1
171	4 u	1	26.9	3	1	4	24	5	100.00	489.90	5	4	3	10	10	10	0.0357	1	1	3	1
171	4 um	2	26.9	3	1	4	24	2	0.18	0.86	5	4	2	6	4	4	3.2152	3	2	2	1
171	4 lm	3	26.9	3	1	4	24	2	0.18	0.86	5	4	2	6	7	4	2.6613	3	2	3	1
171	4 l	4	26.9	3	1	4	24	1	0.04	0.21	5	4	2	4	4	4	4.2716	4	2	1	1
172	4 u	1	26.9	3	1	4	24	5	100.00	489.90	5	4	1	10	10	10	0.0357	1	1	1	1
172	4 um	2	26.9	3	1	4	24	2	0.18	0.86	5	4	2	6	4	4	3.2152	3	2	2	1
172	4 lm	3	26.9	3	1	4	24	2	0.18	0.86	5	4	2	6	6	6	2.8356	3	4	2	2
172	4 l	4	26.9	3	1	4	24	1	0.04	0.21	5	4	2	4	4	4	4.2716	4	2	1	1
173	4 u	1	26.9	3	1	4	24	5	100.00	489.90	4	3	1	10	10	10	0.0357	1	1	1	1
173	4 um	2	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	4	4	3.2152	3	2	2	1
173	4 lm	3	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	7	4	2.6613	3	2	3	2
173	4 l	4	26.9	3	1	4	24	1	0.04	0.21	4	3	2	4	4	3	4.2809	4	1	1	1
174	4 u	1	26.9	3	1	4	24	5	100.00	489.90	4	3	3	10	10	10	0.0357	1	1	3	1
174	4 um	2	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	6	6	2.8356	3	4	2	1
174	4 lm	3	26.9	3	1	4	24	1	0.04	0.21	4	3	2	7	6	4	5.1753	5	2	3	3
174	4 l	4	26.9	3	1	4	24	1	0.04	0.21	4	3	2	6	7	4	2.6727	3	2	3	1
175	4 u	2	26.9	3	1	4	24	5	100.00	489.90	5	4	3	10	10	10	0.0357	1	1	3	1
175	4 um	2	26.9	3	1	4	24	2	0.18	0.86	5	4	2	6	6	6	2.8356	3	4	2	1
175	4 lm	3	26.9	3	1	4	24	1	0.04	0.21	5	4	2	7	6	4	5.1753	5	2	3	2
175	4 l	4	26.9	3	1	4	24	1	0.04	0.21	5	4	2	7	6	4	2.5876	3	2	3	1
176	4 u	1	26.9	2	0.5	2	6	5	100.00	346.41	5	5	1	10	10	10	0.0425	1	1	1	1
176	4 um	2	26.9	2	0.5	2	6	2	0.18	0.61	5	5	2	6	7	4	3.1648	3	2	3	1
176	4 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	5	5	2	7	6	4	6.1545	5	2	3	1
176	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	5	5	2	7	6	4	3.0772	3	2	3	1
177	4 u	1	26.9	2	0.5	2	6	1	0.04	0.14	8	3	2	5	4	4	4.5910	5	2	1	1
177	4 um	2	26.9	2	0.5	2	6	2	0.18	0.61	8	3	2	6	4	4	3.8236	4	2	2	1
177	4 lm	3	26.9	2	0.5	2	6	2	0.18	0.61	8	3	2	6	6	4	3.3815	3	2	2	2
177	4 l	4	26.9	2	0.5	2	6	2	0.18	0.61	8	3	2	4	6	2	2.0789	2	1	2	1

178	4 u	1	26.9	1	0.25	1	1	1	0.04	0.08	1	1	2	5	4	4	6.0421	5	2	1	1
178	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	1	1	2	6	4	4	5.0321	5	2	2	1
178	4 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	1	1	2	6	6	4	4.4503	4	2	2	2
178	4 l	4	26.9	1	0.25	1	1	2	0.18	0.35	1	1	2	4	6	2	2.7359	3	1	2	1
179	4 u	1	26.9	1	0.25	1	1	1	0.04	0.08	3	3	2	5	4	4	6.0421	5	2	1	1
179	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	4	6	2	5.4719	5	1	2	1
179	4 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	3	3	2	4	3	2	7.3429	5	1	1	2
179	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	3	3	2	3	3	2	8.9387	5	1	1	1
180	4 u	1	26.9	1	0.25	1	1	1	0.04	0.08	8	3	2	5	4	4	6.0421	5	2	1	1
180	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	3	2	4	6	2	5.4719	5	1	2	1
180	4 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	8	3	2	4	3	2	7.3429	5	1	1	2
180	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	8	3	2	3	3	2	8.9387	5	1	1	1
181	4 u	1	26.9	1	0.25	1	1	5	100.00	200.00	7	3	1	10	10	10	0.0559	1	1	1	1
181	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	7	3	2	6	4	2	5.0429	5	1	2	1
181	4 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	7	3	2	6	3	2	5.3096	5	1	2	2
181	4 l	4	26.9	1	0.25	1	1	2	0.18	0.35	7	3	2	3	3	2	4.4503	4	1	1	1
182	4 u	1	26.9	1	0.25	1	1	2	0.18	0.36	7	3	2	6	4	2	2.4954	2	1	2	1
182	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	7	3	2	6	4	2	5.0429	5	1	2	1
182	4 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	7	3	2	6	4	2	5.0429	5	1	2	3
182	4 l	4	26.9	1	0.25	1	1	2	0.18	0.35	7	3	2	3	3	2	4.4503	4	1	1	1
183	4 u	1	26.9	1	0.25	1	1	2	0.18	0.36	8	2	2	4	4	4	3.2940	3	2	1	1
183	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	2	2	4	4	2	6.6820	5	1	1	1
183	4 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	8	2	2	3	3	2	8.9006	5	1	1	3
183	4 l	4	26.9	1	0.25	1	1	2	0.18	0.35	8	2	2	3	3	2	4.4503	4	1	1	1
184	4 u	1	26.9	1	0.25	1	1	2	0.18	0.36	5	5	2	6	4	2	2.4954	2	1	2	1
184	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	5	5	2	6	4	2	5.0429	5	1	2	1
184	4 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	5	5	2	6	4	2	5.0429	5	1	2	3
184	4 l	4	26.9	1	0.25	1	1	2	0.18	0.35	5	5	2	3	3	2	4.4503	4	1	1	1
185	4 u	1	26.9	1	0.25	1	1	2	0.18	0.36	6	4	2	6	4	2	2.4954	2	1	2	1
185	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	6	4	2	6	4	2	5.0429	5	1	2	1
185	4 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	6	4	2	4	6	2	5.4719	5	1	2	3
185	4 l	4	26.9	1	0.25	1	1	2	0.18	0.35	6	4	2	3	3	2	4.4503	4	1	1	1
186	4 u	1	26.9	1	0.25	1	1	2	0.18	0.36	7	3	2	6	4	2	2.4954	2	1	2	1
186	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	7	3	2	6	4	2	5.0429	5	1	2	1
186	4 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	7	3	2	4	3	2	7.3429	5	1	1	2
186	4 l	4	26.9	1	0.25	1	1	2	0.18	0.35	7	3	2	3	3	2	4.4503	4	1	1	1
187	4 u	1	26.9	1	0.25	1	1	1	0.04	0.08	3	3	2	4	6	4	5.7294	5	2	2	1
187	4 um	2	26.9	1	0.25	1	1	1	0.04	0.09	3	3	2	3	4	2	15.6492	5	1	1	1
187	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	3	3	2	3	6	2	12.1177	5	1	2	2
187	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	3	3	2	3	3	2	8.9387	5	1	1	1
188	4 u	1	26.9	1	0.25	1	1	1	0.04	0.08	8	3	2	3	4	2	8.1785	5	1	1	1
188	4 um	2	26.9	1	0.25	1	1	1	0.04	0.09	8	3	2	3	4	2	15.6492	5	1	1	1
188	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	8	3	2	3	6	2	12.1177	5	1	2	2
188	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	8	3	2	3	3	2	8.9387	5	1	1	1
189	4 u	1	26.9	1	0.25	1	1	1	0.04	0.08	4	3	2	3	4	2	8.1785	5	1	1	1
189	4 um	2	26.9	1	0.25	1	1	1	0.04	0.09	4	3	2	3	4	2	15.6492	5	1	1	1
189	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	4	3	2	3	6	2	12.1177	5	1	2	3
189	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	4	3	2	3	3	2	8.9387	5	1	1	1
190	4 u	1	26.9	1	0.25	1	1	1	0.04	0.08	6	3	2	3	4	2	8.1785	5	1	1	1
190	4 um	2	26.9	1	0.25	1	1	1	0.04	0.09	6	3	2	3	4	2	15.6492	5	1	1	1
190	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	6	3	2	3	6	2	12.1177	5	1	2	3
190	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	6	3	2	3	3	2	8.9387	5	1	1	1
191	4 u	1	26.9	1	0.25	1	1	1	0.04	0.08	5	4	2	3	3	2	9.3429	5	1	1	1
191	4 um	2	26.9	1	0.25	1	1	1	0.04	0.09	5	4	2	3	3	2	17.8773	5	1	1	1
191	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	5	4	2	3	4	2	15.6492	5	1	1	3
191	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	5	4	2	3	3	2	8.9387	5	1	1	1
192	4 u	1	26.9	1	0.25	1	1	1	0.04	0.08	5	4	2	3	4	2	8.1785	5	1	1	1
192	4 um	2	26.9	1	0.25	1	1	1	0.04	0.09	5	4	2	3	3	2	17.8773	5	1	1	1
192	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	5	4	2	3	4	2	15.6492	5	1	1	3
192	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	5	4	2	3	3	2	8.9387	5	1	1	1
193	4 u	1	26.9	1	0.25	1	1	1	0.04	0.08	2	3	2	3	3	2	9.3429	5	1	1	1
193	4 um	2	26.9	1	0.25	1	1	1	0.04	0.09	2	3	2	3	3	2	17.8773	5	1	1	1
193	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	2	3	2	3	4	2	15.6492	5	1	1	2
193	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	2	3	2	3	3	2	8.9387	5	1	1	1

194	4 u	1	26.9	1	0.25	1	1	1	0.04	0.08	2	3	2	3	4	2	8.1785	5	1	1	1
194	4 um	2	26.9	1	0.25	1	1	1	0.04	0.09	2	3	2	3	4	2	15.6492	5	1	1	1
194	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	2	3	2	3	6	2	12.1177	5	1	2	1
194	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	2	3	2	3	3	2	8.9387	5	1	1	1
195	4 u	1	26.9	1	0.25	1	1	1	0.04	0.08	2	3	2	4	6	2	5.7439	5	1	2	1
195	4 um	2	26.9	1	0.25	1	1	1	0.04	0.09	2	3	2	4	6	2	10.9907	5	1	2	1
195	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	2	3	2	4	6	2	10.9907	5	1	2	2
195	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	2	3	2	3	3	2	8.9387	5	1	1	1
196	4 u	1	26.9	1	0.25	1	1	2	0.18	0.36	2	3	2	4	2	2	3.9371	4	1	1	1
196	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	2	3	2	4	2	2	7.9565	5	1	1	1
196	4 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	2	3	2	3	4	2	7.7913	5	1	1	2
196	4 l	4	26.9	1	0.25	1	1	2	0.18	0.35	2	3	2	3	3	2	4.4503	4	1	1	1
197	4 u	1	26.9	1	0.25	1	1	2	0.18	0.36	1	1	2	4	2	2	3.9371	4	1	1	1
197	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	1	1	2	4	2	2	7.9565	5	1	1	1
197	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	1	1	2	3	3	2	17.8773	5	1	1	2
197	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	1	1	2	3	3	2	8.9387	5	1	1	1
198	4 u	1	26.9	1	0.25	1	1	2	0.18	0.36	1	1	2	4	4	4	3.2940	3	2	1	1
198	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	1	1	2	4	4	2	6.6820	5	1	1	1
198	4 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	1	1	2	4	4	2	6.6820	5	1	1	3
198	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	1	1	2	3	3	2	8.9387	5	1	1	1
199	4 u	1	26.9	2	0.5	2	6	2	0.18	0.62	4	3	2	4	4	4	2.5029	3	2	1	1
199	4 um	2	26.9	2	0.5	2	6	2	0.18	0.61	4	3	2	4	4	4	5.0581	5	2	1	1
199	4 lm	3	26.9	2	0.5	2	6	2	0.18	0.61	4	3	2	4	6	4	4.1472	4	2	2	3
199	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	4	3	2	4	6	4	4.1650	4	2	2	1
200	4 u	1	26.9	2	0.5	2	6	2	0.18	0.62	3	3	2	4	6	4	2.0522	2	2	2	1
200	4 um	2	26.9	2	0.5	2	6	2	0.18	0.61	3	3	2	4	6	4	4.1472	4	2	2	1
200	4 lm	3	26.9	2	0.5	2	6	2	0.18	0.61	3	3	2	6	7	4	3.1648	3	2	3	3
200	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	3	3	2	6	4	4	3.8399	4	2	2	1
201	4 u	1	26.9	2	0.5	2	6	1	0.04	0.14	3	3	2	4	4	4	5.3095	5	2	1	1
201	4 um	2	26.9	2	0.5	2	6	1	0.04	0.15	3	3	2	6	4	4	7.6799	5	2	2	1
201	4 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	3	3	2	6	7	4	6.3567	5	2	3	3
201	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	3	3	2	6	4	4	3.8399	4	2	2	1
202	4 u	1	26.9	2	0.5	2	6	5	100.00	346.41	3	3	1	10	10	10	0.0425	1	1	1	1
202	4 um	2	26.9	2	0.5	2	6	2	0.18	0.61	3	3	2	6	4	4	3.8236	4	2	2	1
202	4 lm	3	26.9	2	0.5	2	6	2	0.18	0.61	3	3	2	6	7	4	3.1648	3	2	3	3
202	4 l	4	26.9	2	0.5	2	6	2	0.18	0.61	3	3	2	6	4	4	1.9118	2	2	2	1
203	4 u	1	26.9	1	0.25	1	1	1	0.04	0.08	1	1	7	4	4	2	7.0141	5	1	1	1
203	4 um	2	26.9	1	0.25	1	1	1	0.04	0.09	1	1	7	4	4	2	13.4211	5	1	1	1
203	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	1	1	7	4	4	2	13.4211	5	1	1	3
203	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	1	1	7	3	4	2	7.8246	5	1	1	1
204	4 u	1	26.9	1	0.25	1	1	2	0.18	0.36	1	1	2	5	4	4	2.8483	3	2	1	1
204	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	1	1	2	4	6	4	5.4581	5	2	2	1
204	4 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	1	1	2	6	4	4	5.0321	5	2	2	2
204	4 l	4	26.9	1	0.25	1	1	2	0.18	0.35	1	1	2	4	4	4	3.3284	3	2	1	1
205	4 u	1	26.9	3	1	4	24	2	0.18	0.86	3	3	2	5	5	4	1.6868	2	2	1	1
205	4 um	2	26.9	3	1	4	24	2	0.18	0.86	3	3	2	6	4	4	3.2152	3	2	2	1
205	4 lm	3	26.9	3	1	4	24	2	0.18	0.86	3	3	2	6	7	4	2.6613	3	2	3	2
205	4 l	4	26.9	3	1	4	24	2	0.18	0.86	3	3	2	4	4	4	2.1267	2	2	1	1
206	4 u	1	26.9	3	1	4	24	5	100.00	489.90	3	3	1	10	10	10	0.0357	1	1	1	1
206	4 um	2	26.9	3	1	4	24	2	0.18	0.86	3	3	2	6	4	4	3.2152	3	2	2	1
206	4 lm	3	26.9	3	1	4	24	1	0.04	0.21	3	3	2	6	6	4	5.7113	5	2	2	3
206	4 l	4	26.9	3	1	4	24	1	0.04	0.21	3	3	2	4	4	4	4.2716	4	2	1	1
207	4 u	1	26.9	3	1	4	24	5	100.00	489.90	3	3	1	10	10	10	0.0357	1	1	1	1
207	4 um	2	26.9	3	1	4	24	2	0.18	0.86	3	3	2	4	4	4	4.2533	4	2	1	1
207	4 lm	3	26.9	3	1	4	24	1	0.04	0.21	3	3	2	6	7	4	5.3453	5	2	3	1
207	4 l	4	26.9	3	1	4	24	1	0.04	0.21	3	3	2	4	4	4	4.2716	4	2	1	1
208	4 u	1	26.9	3	1	4	24	5	100.00	489.90	4	3	1	10	10	10	0.0357	1	1	1	1
208	4 um	2	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	7	4	2.6613	3	2	3	1
208	4 lm	3	26.9	3	1	4	24	1	0.04	0.21	4	3	2	4	4	4	8.5431	5	2	1	2
208	4 l	4	26.9	3	1	4	24	1	0.04	0.21	4	3	2	4	4	4	4.2716	4	2	1	1
209	4 u	1	26.9	3	1	4	24	5	100.00	489.90	3	3	1	10	10	10	0.0357	1	1	1	1
209	4 um	2	26.9	3	1	4	24	2	0.18	0.86	3	3	2	6	7	4	2.6613	3	2	3	1
209	4 lm	3	26.9	3	1	4	24	1	0.04	0.21	3	3	2	4	4	4	8.5431	5	2	1	2
209	4 l	4	26.9	3	1	4	24	1	0.04	0.21	3	3	2	4	4	4	4.2716	4	2	1	1

210	4 u	1	26.9	1	0.25	1	1	1	0.04	0.08	3	1	7	5	4	4	6.0421	5	2	1	1
210	4 um	2	26.9	1	0.25	1	1	1	0.04	0.09	3	1	7	4	4	2	13.4211	5	1	1	1
210	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	3	1	7	4	4	2	13.4211	5	1	1	2
211	4 u	1	26.9	1	0.25	1	1	1	0.04	0.08	7	1	7	5	4	2	6.0591	5	1	1	1
211	4 um	2	26.9	1	0.25	1	1	1	0.04	0.09	7	1	7	4	4	2	6.7106	5	1	1	1
211	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	7	1	7	4	6	4	10.9629	5	2	2	2
212	4 u	1	26.9	3	1	4	24	2	0.18	0.88	4	3	2	5	4	4	1.8199	2	2	1	1
212	4 um	2	26.9	3	1	4	24	2	0.18	0.86	4	3	2	4	6	4	3.4874	3	2	2	1
212	4 lm	3	26.9	3	1	4	24	1	0.04	0.21	4	3	2	4	4	4	8.5431	5	2	1	3
212	4 l	4	26.9	3	1	4	24	1	0.04	0.21	4	3	2	4	4	4	4.2716	4	2	1	1
214	4 u	1	26.9	3	1	4	24	5	100.00	489.90	4	3	1	9	9	9	0.0397	1	5	5	1
214	4 um	2	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	6	4	2.8435	3	2	2	1
214	4 lm	3	26.9	3	1	4	24	1	0.04	0.21	4	3	2	4	4	4	8.5431	5	2	1	1
214	4 l	4	26.9	3	1	4	24	1	0.04	0.21	4	3	2	4	4	4	4.2716	4	2	1	1
215	4 u	1	26.9	3	1	4	24	5	100.00	489.90	4	3	1	10	10	10	0.0357	1	1	1	1
215	4 um	2	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	7	8	2.6548	3	4	3	1
215	4 lm	3	26.9	3	1	4	24	1	0.04	0.21	4	3	2	4	4	4	8.5431	5	2	1	4
215	4 l	4	26.9	3	1	4	24	1	0.04	0.21	4	3	2	4	4	4	4.2716	4	2	1	1
216	4 u	1	26.9	3	1	4	24	5	100.00	489.90	4	3	1	10	10	10	0.0357	1	1	1	1
216	4 um	2	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	6	6	2.8356	3	4	2	1
216	4 lm	3	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	7	4	2.6613	3	2	3	3
216	4 l	4	26.9	3	1	4	24	1	0.04	0.21	4	3	2	4	4	4	4.2716	4	2	1	1
217	4 u	1	26.9	3	1	4	24	5	100.00	489.90	4	3	1	9	9	9	0.0397	1	5	5	1
217	4 um	2	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	6	6	2.8356	3	4	2	1
217	4 lm	3	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	7	4	2.6613	3	2	3	3
217	4 l	4	26.9	3	1	4	24	1	0.04	0.21	4	3	2	4	4	4	4.2716	4	2	1	1
218	4 u	1	26.9	3	1	4	24	5	100.00	489.90	4	3	1	9	9	9	0.0397	1	5	5	1
218	4 um	2	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	6	6	2.8356	3	4	2	1
218	4 lm	3	26.9	3	1	4	24	2	0.18	0.86	4	3	2	7	6	6	2.5707	3	4	3	3
218	4 l	4	26.9	3	1	4	24	2	0.18	0.86	4	3	2	7	6	4	1.2883	1	2	3	1
219	4 u	1	26.9	3	1	4	24	5	100.00	489.90	4	3	1	9	9	9	0.0397	1	5	5	1
219	4 um	2	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	6	6	2.8356	3	4	2	1
219	4 lm	3	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	7	4	2.6613	3	2	3	3
219	4 l	4	26.9	3	1	4	24	1	0.04	0.21	4	3	2	7	6	4	2.5876	3	2	3	1
220	4 u	1	26.9	3	1	4	24	5	100.00	489.90	4	3	1	9	9	9	0.0397	1	5	5	1
220	4 um	2	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	6	6	2.8356	3	4	2	1
220	4 lm	3	26.9	3	1	4	24	1	0.04	0.21	4	3	2	6	7	8	5.3323	5	4	3	2
220	4 l	4	26.9	3	1	4	24	1	0.04	0.21	4	3	2	4	4	4	4.2716	4	2	1	1
221	4 u	1	26.9	3	1	4	24	5	100.00	489.90	3	3	1	9	9	9	0.0397	1	5	5	1
221	4 um	2	26.9	3	1	4	24	1	0.04	0.21	3	3	2	4	6	4	7.0047	5	2	2	1
221	4 lm	3	26.9	3	1	4	24	1	0.04	0.21	3	3	2	6	4	4	6.4580	5	2	2	4
221	4 l	4	26.9	3	1	4	24	1	0.04	0.21	3	3	2	4	6	4	3.5023	4	2	2	1
222	4 u	1	26.9	3	1	4	24	5	100.00	489.90	3	3	1	9	9	9	0.0397	1	5	5	1
222	4 um	2	26.9	3	1	4	24	2	0.18	0.86	3	3	2	6	6	6	2.8356	3	4	2	1
222	4 lm	3	26.9	3	1	4	24	2	0.18	0.86	3	3	2	7	6	4	2.5766	3	2	3	1
222	4 l	4	26.9	3	1	4	24	1	0.04	0.21	3	3	2	4	4	4	4.2716	4	2	1	1
223	4 u	1	26.9	3	1	4	24	5	100.00	489.90	4	5	1	10	10	10	0.0357	1	1	1	1
223	4 um	2	26.9	3	1	4	24	1	0.04	0.21	4	5	2	4	6	4	7.0047	5	2	2	1
223	4 lm	3	26.9	3	1	4	24	1	0.04	0.21	4	5	2	6	7	4	5.3453	5	2	3	2
223	4 l	4	26.9	3	1	4	24	1	0.04	0.21	4	5	2	6	4	4	3.2290	3	2	2	1
224	4 u	1	26.9	2	0.5	2	6	5	100.00	346.41	5	2	1	10	10	10	0.0425	1	1	1	1
224	4 um	2	26.9	2	0.5	2	6	1	0.04	0.15	5	2	2	4	6	4	8.3300	5	2	2	1
224	4 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	5	2	2	4	4	4	10.1595	5	2	1	2
224	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	5	2	2	6	4	4	3.8399	4	2	2	1
225	4 u	1	26.9	2	0.5	2	6	5	100.00	346.41	5	4	1	10	10	10	0.0425	1	1	1	1
225	4 um	2	26.9	2	0.5	2	6	1	0.04	0.15	5	4	2	4	6	4	8.3300	5	2	2	1
225	4 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	5	4	2	4	4	4	10.1595	5	2	1	3
225	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	5	4	2	6	4	4	3.8399	4	2	2	1
226	4 u	1	26.9	2	0.5	2	6	5	100.00	346.41	4	4	1	10	10	10	0.0425	1	1	1	1
226	4 um	2	26.9	2	0.5	2	6	2	0.18	0.61	4	4	2	6	4	4	3.8236	4	2	2	1
226	4 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	4	4	2	4	6	4	8.3300	5	2	2	2
226	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	4	4	2	4	4	4	5.0989	5	1	1	1
227	4 u	1	26.9	2	0.5	2	6	5	100.00	346.41	4	3	1	10	10	10	0.0425	1	1	1	1
227	4 um	2	26.9	2	0.5	2	6	2	0.18	0.61	4	3	2	6	4	4	3.8236	4	2	2	1

227	4 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	4	3	2	4	6	4	8.3300	5	2	2	1
227	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	4	3	2	4	4	3	5.0909	5	1	1	1
228	4 u	1	26.9	1	0.25	1	1	5	100.00	200.00	4	3	1	10	10	10	0.0559	1	1	1	1
228	4 um	2	26.9	1	0.25	1	1	1	0.04	0.09	4	3	2	6	4	4	10.1073	5	2	2	1
228	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	4	3	2	4	6	4	10.9629	5	2	2	2
228	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	4	3	2	4	4	2	6.7106	5	1	1	1
229	4 u	1	26.9	1	0.25	1	1	5	100.00	200.00	4	3	1	10	10	10	0.0559	1	1	1	1
229	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	4	3	2	6	4	4	5.0321	5	2	2	1
229	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	4	3	2	4	6	4	10.9629	5	2	2	2
229	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	4	3	2	4	4	2	6.7106	5	1	1	1
230	4 u	1	26.9	1	0.25	1	1	5	100.00	200.00	4	3	1	10	10	10	0.0559	1	1	1	1
230	4 um	2	26.9	1	0.25	1	1	1	0.04	0.09	4	3	2	6	4	4	10.1073	5	2	2	1
230	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	4	3	2	4	6	4	10.9629	5	2	2	2
230	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	4	3	2	4	3	2	7.3743	5	1	1	1
231	4 u	1	26.9	1	0.25	1	1	5	100.00	200.00	1	3	1	10	10	10	0.0559	1	1	1	1
231	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	1	3	2	6	4	4	5.0321	5	2	2	1
231	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	1	3	2	4	6	4	10.9629	5	2	2	2
231	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	1	3	2	4	4	2	6.7108	5	1	1	1
232	4 u	1	26.9	1	0.25	1	1	5	100.00	200.00	2	5	1	10	10	10	0.0559	1	1	1	1
232	4 um	2	26.9	1	0.25	1	1	1	0.04	0.09	2	5	2	6	4	4	10.1073	5	2	2	1
232	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	2	5	2	6	4	4	10.1073	5	2	2	2
232	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	2	5	2	6	4	4	5.0537	5	2	2	1
233	4 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	3	1	10	10	10	0.0559	1	1	1	1
233	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	3	2	4	4	4	6.8569	5	2	1	1
233	4 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	8	3	2	4	6	4	5.4581	5	2	2	3
233	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	8	3	2	4	4	2	6.7106	5	1	1	1
234	4 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	3	1	10	10	10	0.0559	1	1	1	1
234	4 um	2	26.9	1	0.25	1	1	1	0.04	0.09	8	3	2	4	4	4	13.3707	5	2	1	1
234	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	8	3	2	4	6	4	10.9629	5	2	2	3
234	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	8	3	2	4	4	2	6.7106	5	1	1	1
235	4 u	1	26.9	1	0.25	1	1	1	0.04	0.08	8	3	2	5	4	4	6.0421	5	2	1	1
235	4 um	2	26.9	1	0.25	1	1	1	0.04	0.09	8	3	2	4	4	4	13.3707	5	2	1	1
235	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	8	3	2	4	4	4	13.3707	5	2	1	3
235	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	8	3	2	4	4	2	6.7106	5	1	1	1
236	4 u	1	26.9	2	0.5	2	6	5	100.00	346.41	2	5	1	9	9	9	0.0472	1	5	5	1
236	4 um	2	26.9	2	0.5	2	6	1	0.04	0.15	2	5	2	4	4	4	10.1595	5	2	1	1
236	4 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	2	5	2	4	4	4	10.1595	5	2	1	3
236	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	2	5	2	4	4	2	5.0989	5	1	1	1
237	4 u	1	26.9	2	0.5	2	6	5	100.00	346.41	8	3	1	10	10	10	0.0425	1	1	1	1
237	4 um	2	26.9	2	0.5	2	6	2	0.18	0.61	8	3	2	6	6	4	3.3815	3	2	2	1
237	4 lm	3	26.9	2	0.5	2	6	2	0.18	0.61	8	3	2	6	6	6	3.3721	3	4	2	2
237	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	8	3	2	4	6	4	4.1650	4	2	2	1
238	4 u	1	26.9	2	0.5	2	6	5	100.00	346.41	8	3	3	10	10	10	0.0425	1	1	3	1
238	4 um	2	26.9	2	0.5	2	6	2	0.18	0.61	8	3	2	6	7	4	3.1648	3	2	3	1
238	4 lm	3	26.9	2	0.5	2	6	2	0.18	0.61	8	3	2	7	6	4	3.0641	3	2	3	2
238	4 l	4	26.9	2	0.5	2	6	2	0.18	0.61	8	3	2	7	6	4	1.5321	2	2	3	1
239	4 u	1	26.9	3	1	4	24	5	100.00	489.90	2	3	1	10	10	10	0.0357	1	1	1	1
239	4 um	2	26.9	3	1	4	24	2	0.18	0.86	2	3	2	7	6	4	2.5766	3	2	3	1
239	4 lm	3	26.9	3	1	4	24	2	0.18	0.86	2	3	2	7	7	6	2.4337	2	4	3	2
239	4 l	4	26.9	3	1	4	24	2	0.18	0.86	2	3	2	7	7	6	1.2169	1	4	3	1
240	4 u	1	26.9	3	1	4	24	5	100.00	489.90	4	5	1	10	10	10	0.0357	1	1	1	1
240	4 um	2	26.9	3	1	4	24	2	0.18	0.86	4	5	2	6	4	4	3.2152	3	2	2	1
240	4 lm	3	26.9	3	1	4	24	2	0.18	0.86	4	5	2	6	6	6	2.8356	3	4	2	3
240	4 l	4	26.9	3	1	4	24	2	0.18	0.86	4	5	2	6	4	4	1.6076	2	2	2	1
241	4 u	1	26.9	2	0.5	2	6	5	100.00	346.41	3	5	1	10	10	10	0.0425	1	1	1	1
241	4 um	2	26.9	2	0.5	2	6	2	0.18	0.61	3	5	2	6	4	4	3.8236	4	2	2	1
241	4 lm	3	26.9	2	0.5	2	6	2	0.18	0.61	3	5	2	6	6	6	3.3721	3	4	2	3
241	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	3	5	2	4	4	4	5.0798	5	2	1	1
242	4 u	1	26.9	2	0.5	2	6	5	100.00	346.41	3	5	1	10	10	10	0.0425	1	1	1	1
242	4 um	2	26.9	2	0.5	2	6	2	0.18	0.61	3	5	2	6	4	4	3.8236	4	2	2	1
242	4 lm	3	26.9	2	0.5	2	6	2	0.18	0.61	3	5	2	6	6	4	3.3815	3	2	2	3
242	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	3	5	2	6	7	6	3.1706	3	4	3	1
243	4 u	1	26.9	2	0.5	2	6	1	0.04	0.14	5	2	2	6	5	4	3.7835	4	2	2	1
243	4 um	2	26.9	2	0.5	2	6	1	0.04	0.15	5	2	2	6	4	4	7.6799	5	2	2	1

243	4 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	5	2	2	6	4	4	7.6799	5	2	2	3
243	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	5	2	2	4	6	4	4.1650	4	2	2	1
244	4 u	1	26.9	1	0.25	1	1	2	0.18	0.36	8	2	2	6	5	4	2.3473	2	2	2	1
244	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	2	2	6	4	4	5.0321	5	2	2	1
244	4 im	3	26.9	1	0.25	1	1	2	0.18	0.35	8	2	2	6	4	4	5.0321	5	2	2	2
244	4 l	4	26.9	1	0.25	1	1	2	0.18	0.35	8	2	2	4	6	4	2.7290	3	2	2	1
245	4 u	1	26.9	1	0.25	1	1	2	0.18	0.36	7	1	2	6	4	4	2.4901	2	2	2	1
245	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	7	1	2	4	6	4	5.4581	5	2	2	1
245	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	7	1	2	4	3	2	14.7486	5	1	1	1
245	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	7	1	2	3	3	2	8.9387	5	1	1	1
246	4 u	1	26.9	1	0.25	1	1	5	100.00	200.00	5	4	1	10	10	10	0.0559	1	1	1	1
246	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	5	4	2	6	4	4	5.0321	5	2	2	1
246	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	5	4	2	4	3	2	14.7486	5	1	1	2
246	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	5	4	2	3	3	2	8.9387	5	1	1	1
247	4 u	1	26.9	1	0.25	1	1	5	100.00	200.00	4	5	3	10	10	10	0.0559	1	1	3	1
247	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	4	5	2	6	4	4	5.0321	5	2	2	1
247	4 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	4	5	2	6	7	4	4.1651	4	2	3	2
247	4 l	4	26.9	1	0.25	1	1	2	0.18	0.35	4	5	2	6	7	4	2.0826	2	2	3	1
248	4 u	1	26.9	1	0.25	1	1	5	100.00	200.00	4	4	1	10	10	10	0.0559	1	1	1	1
248	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	4	4	2	6	7	4	4.1651	4	2	3	1
248	4 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	4	4	2	6	7	4	4.1651	4	2	3	2
248	4 l	4	26.9	1	0.25	1	1	2	0.18	0.35	4	4	2	6	7	4	2.0826	2	2	3	1
249	4 u	1	26.9	1	0.25	1	1	5	100.00	200.00	4	3	1	10	10	10	0.0559	1	1	1	1
249	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	4	3	2	6	4	4	5.0321	5	2	2	1
249	4 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	4	3	2	6	7	4	4.1651	4	2	3	3
249	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	4	3	2	3	3	2	8.9387	5	1	1	1
250	4 u	1	26.9	1	0.25	1	1	5	100.00	200.00	3	4	1	10	10	10	0.0559	1	1	1	1
250	4 um	2	26.9	1	0.25	1	1	1	0.04	0.09	3	4	2	3	3	2	17.8773	5	1	1	1
250	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	3	4	2	3	3	2	17.8773	5	1	1	3
250	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	3	4	2	3	3	2	8.9387	5	1	1	1
251	4 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	5	1	10	10	10	0.0559	1	1	1	1
251	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	5	2	6	6	2	4.4578	4	1	2	1
251	4 lm	3	26.9	1	0.25	1	1	1	0.04	0.09	8	5	2	3	3	2	17.8773	5	1	1	3
251	4 l	4	26.9	1	0.25	1	1	1	0.04	0.09	8	5	2	3	3	2	8.9387	5	1	1	1
252	4 u	1	26.9	1	0.25	1	1	2	0.18	0.36	6	3	2	6	5	5	2.3439	2	3	2	1
252	4 um	2	26.9	1	0.25	1	1	2	0.18	0.35	6	3	2	6	6	5	4.4447	4	3	2	1
252	4 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	6	3	2	6	4	3	5.0384	5	1	2	3
252	4 l	4	26.9	1	0.25	1	1	2	0.18	0.35	6	3	2	6	3	2	2.6548	3	1	2	1
253	4 u	1	26.9	2	0.5	2	6	1	0.04	0.14	2	3	2	6	5	5	3.7781	4	3	2	1
253	4 um	2	26.9	2	0.5	2	6	1	0.04	0.15	2	3	2	6	4	4	7.6799	5	2	2	1
253	4 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	2	3	2	6	4	4	7.6799	5	2	2	3
253	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	2	3	2	4	3	3	5.5926	5	1	1	1
254	4 u	1	26.9	2	0.5	2	6	5	100.00	346.41	1	4	3	10	10	10	0.0425	1	1	3	1
254	4 um	2	26.9	2	0.5	2	6	2	0.18	0.61	1	4	2	6	4	4	3.8236	4	2	2	1
254	4 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	1	4	2	4	3	3	11.1853	5	1	1	3
254	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	1	4	2	4	3	3	5.5926	5	1	1	1
255	4 u	1	26.9	2	0.5	2	6	5	100.00	346.41	8	3	3	10	10	10	0.0425	1	1	3	1
255	4 um	2	26.9	2	0.5	2	6	1	0.04	0.15	8	3	2	6	7	6	6.3412	5	4	3	1
255	4 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	8	3	2	7	6	3	6.1594	5	1	3	2
255	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	8	3	2	7	6	3	3.0797	3	1	3	1
256	4 u	1	26.9	2	0.5	2	6	2	0.18	0.62	1	4	2	7	6	5	1.5147	2	3	3	1
256	4 um	2	26.9	2	0.5	2	6	1	0.04	0.15	1	4	2	6	7	6	6.3412	5	4	3	1
256	4 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	1	4	2	7	6	3	6.1594	5	1	3	2
256	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	1	4	2	7	6	3	3.0797	3	1	3	1
257	4 u	1	26.9	2	0.5	2	6	5	100.00	346.41	2	5	3	10	10	10	0.0425	1	1	3	1
257	4 um	2	26.9	2	0.5	2	6	1	0.04	0.15	2	5	2	6	4	4	7.6799	5	2	2	1
257	4 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	2	5	2	4	6	3	8.3423	5	1	2	3
257	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	2	5	2	3	3	2	6.7919	5	1	1	1
258	4 u	1	26.9	2	0.5	2	6	5	100.00	346.41	2	5	2	5	4	4	0.0918	1	2	1	1
258	4 um	2	26.9	2	0.5	2	6	1	0.04	0.15	2	5	2	4	4	4	10.1595	5	2	1	1
258	4 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	2	5	2	4	6	3	8.3423	5	1	2	1
258	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	2	5	2	3	3	2	6.7919	5	1	1	1
259	4 u	1	26.9	2	0.5	2	6	5	100.00	346.41	1	4	3	10	10	10	0.0425	1	1	3	1
259	4 um	2	26.9	2	0.5	2	6	1	0.04	0.15	1	4	2	6	4	4	7.6799	5	2	2	1

259	4 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	1	4	2	4	6	3	8.3423	5	1	2	2
259	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	1	4	2	3	3	2	8.7919	5	1	1	1
260	4 u	1	26.9	2	0.5	2	6	1	0.04	0.14	7	2	2	5	6	4	3.9303	4	2	2	1
260	4 um	2	26.9	2	0.5	2	6	1	0.04	0.15	7	2	2	4	6	4	8.3300	5	2	2	1
260	4 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	7	2	2	6	4	4	7.6799	5	2	2	2
260	4 l	4	26.9	2	0.5	2	6	1	0.04	0.15	7	2	2	3	3	2	8.7919	5	1	1	1
261	4 u	1	26.9	2	0.5	2	6	5	100.00	346.41	8	3	3	10	10	10	0.0425	1	1	3	1
261	4 um	2	26.9	2	0.5	2	6	2	0.18	0.61	8	3	2	6	4	4	3.8236	4	2	2	1
261	4 im	3	26.9	2	0.5	2	6	2	0.18	0.61	8	3	2	7	6	6	3.0571	3	4	3	2
261	4 l	4	26.9	2	0.5	2	6	2	0.18	0.61	8	3	2	4	3	3	2.7844	3	1	1	1
262	4 u	1	26.9	2	0.5	2	6	5	100.00	346.41	8	3	3	10	10	10	0.0425	1	1	3	1
262	4 um	2	26.9	2	0.5	2	6	2	0.18	0.61	8	3	2	6	4	4	3.8236	4	2	2	1
262	4 lm	3	26.9	2	0.5	2	6	2	0.18	0.61	8	3	2	7	6	4	3.0641	3	2	3	2
262	4 l	4	26.9	2	0.5	2	6	2	0.18	0.61	8	3	2	7	6	4	1.5321	2	2	3	1
263	4 u	1	26.9	3	1	4	24	5	100.00	489.90	1	5	3	10	10	10	0.0357	1	1	3	1
263	4 um	2	26.9	3	1	4	24	2	0.18	0.86	1	5	2	7	6	4	2.5766	3	2	3	1
263	4 lm	3	26.9	3	1	4	24	2	0.18	0.86	1	5	2	7	6	6	2.5707	3	4	3	3
263	4 l	4	26.9	3	1	4	24	2	0.18	0.86	1	5	2	7	6	4	1.2883	1	2	3	1
301	1 u	1	26.9	3	1	4	24	2	0.18	0.88	8	2	2	4	5	4	1.9060	2	2	1	1
301	1 um	2	26.9	3	1	4	24	2	0.18	0.88	8	2	2	4	4	4	4.2533	4	2	1	1
301	1 lm	3	26.9	3	1	4	24	2	0.18	0.88	8	2	2	6	6	4	2.8435	3	2	2	1
301	1 l	4	26.9	3	1	4	24	2	0.18	0.88	8	2	2	4	4	3	2.1313	2	1	1	1
302	1 u	1	26.9	3	1	4	24	5	100.00	489.90	8	3	3	10	10	10	0.0357	1	1	3	1
302	1 um	2	26.9	3	1	4	24	2	0.18	0.88	8	3	2	6	6	4	2.8435	3	2	2	1
302	1 lm	3	26.9	3	1	4	24	2	0.18	0.88	8	3	2	7	6	4	2.5766	3	2	3	4
302	1 l	4	26.9	3	1	4	24	2	0.18	0.88	8	3	2	7	4	3	1.4231	1	1	3	1
303	1 u	1	26.9	3	1	4	24	5	100.00	489.90	6	5	3	10	10	10	0.0357	1	1	3	1
303	1 um	2	26.9	3	1	4	24	1	0.04	0.21	6	5	2	7	6	4	5.1753	5	2	3	1
303	1 lm	3	26.9	3	1	4	24	1	0.04	0.21	8	5	2	7	6	4	5.1753	5	2	3	3
303	1 l	4	26.9	3	1	4	24	1	0.04	0.21	6	5	2	7	6	4	2.5876	3	2	3	1
304	1 u	1	26.9	3	1	4	24	5	100.00	489.90	6	3	3	10	10	10	0.0357	1	1	3	1
304	1 um	2	26.9	3	1	4	24	2	0.18	0.86	6	3	2	7	6	6	2.5707	3	4	3	1
304	1 lm	3	26.9	3	1	4	24	2	0.18	0.86	6	3	2	7	6	4	2.5766	3	2	3	3
304	1 l	4	26.9	3	1	4	24	2	0.18	0.86	6	3	2	7	6	4	1.2883	1	2	3	1
401	1 u	1	26.9	3	1	4	24	5	100.00	489.90	6	5	1	9	9	9	0.0397	1	5	5	1
401	1 um	2	26.9	3	1	4	24	1	0.04	0.21	6	5	2	7	6	6	5.1634	5	4	3	1
401	1 lm	3	26.9	3	1	4	24	1	0.04	0.21	6	5	2	7	6	4	5.1753	5	2	3	3
401	1 l	4	26.9	3	1	4	24	1	0.04	0.21	6	5	2	6	7	4	2.6727	3	2	3	1
402	1 u	1	26.9	3	1	4	24	5	100.00	489.90	7	4	1	10	10	10	0.0357	1	1	1	1
402	1 um	2	26.9	3	1	4	24	2	0.18	0.86	7	4	2	6	7	6	2.6548	3	4	3	1
402	1 lm	3	26.9	3	1	4	24	1	0.04	0.21	7	4	2	4	4	4	8.5431	5	2	1	3
402	1 l	4	26.9	3	1	4	24	1	0.04	0.21	7	4	2	4	4	3	4.2809	4	1	1	1
403	1 u	1	26.9	3	1	4	24	5	100.00	489.90	7	2	1	10	10	10	0.0357	1	1	1	1
403	1 um	2	26.9	3	1	4	24	2	0.18	0.86	7	2	2	6	7	6	2.6548	3	4	3	1
403	1 lm	3	26.9	3	1	4	24	1	0.04	0.21	7	2	2	7	6	4	5.1753	5	2	3	2
403	1 l	4	26.9	3	1	4	24	1	0.04	0.21	7	2	2	6	6	4	2.8556	3	2	2	1
404	1 u	1	26.9	2	0.5	2	6	5	100.00	346.41	8	3	1	10	10	10	0.0425	1	1	1	1
404	1 um	2	26.9	2	0.5	2	6	2	0.18	0.61	8	3	2	6	5	4	3.6043	4	2	2	1
404	1 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	8	3	2	3	4	2	11.8908	5	1	1	4
404	1 l	4	26.9	2	0.5	2	6	1	0.04	0.15	8	3	2	3	4	2	5.9454	5	1	1	1
405	1 u	1	26.9	2	0.5	2	6	5	100.00	346.41	1	2	1	10	10	10	0.0425	1	1	1	1
405	1 um	2	26.9	2	0.5	2	6	2	0.18	0.61	1	2	2	6	5	4	3.6043	4	2	2	1
405	1 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	1	2	2	4	6	4	8.3300	5	2	2	1
405	1 l	4	26.9	2	0.5	2	6	1	0.04	0.15	1	2	2	3	4	2	5.9454	5	1	1	1
406	1 u	1	26.9	2	0.5	2	6	5	100.00	346.41	8	2	1	10	10	10	0.0425	1	1	1	1
406	1 um	2	26.9	2	0.5	2	6	2	0.18	0.61	8	2	2	6	5	4	3.6043	4	2	2	1
406	1 lm	3	26.9	2	0.5	2	6	2	0.18	0.61	8	2	2	6	4	4	3.8236	4	2	2	2
406	1 l	4	26.9	2	0.5	2	6	2	0.18	0.61	8	2	2	4	4	3	2.5346	3	1	1	1
407	1 u	1	26.9	2	0.5	2	6	5	100.00	346.41	1	2	1	10	10	10	0.0425	1	1	1	1
407	1 um	2	26.9	2	0.5	2	6	2	0.18	0.61	1	2	2	4	6	4	4.1472	4	2	2	1
407	1 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	1	2	2	6	4	4	7.6799	5	2	2	2
407	1 l	4	26.9	2	0.5	2	6	1	0.04	0.15	1	2	2	4	4	3	5.0909	5	1	1	1
408	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	2	2	1	10	10	10	0.0559	1	1	1	1
408	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	2	2	2	7	6	3	4.0358	4	1	3	1

408	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	2	2	2	4	3	3	7.3290	5	1	1	3
408	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	2	2	2	4	3	3	3.6645	4	1	1	1
409	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	2	2	3	10	10	10	0.0559	1	1	3	1
409	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	2	2	2	4	3	2	7.3429	5	1	1	1
409	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	2	2	2	4	3	2	7.3429	5	1	1	2
409	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	2	2	2	4	3	2	3.6714	4	1	1	1
410	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	8	1	3	10	10	10	0.0559	1	1	3	1
410	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	8	1	2	4	6	3	5.4661	5	1	2	1
410	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	8	1	2	3	3	2	8.9006	5	1	1	1
410	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	8	1	2	3	3	2	4.4503	4	1	1	1
411	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	3	1	3	10	10	10	0.0559	1	1	3	1
411	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	3	1	2	4	3	2	7.3429	5	1	1	1
411	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	3	1	2	3	3	2	8.9006	5	1	1	2
411	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	3	1	2	3	3	2	4.4503	4	1	1	1
412	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	4	1	1	9	9	9	0.0621	1	5	5	1
412	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	4	1	2	6	7	4	4.1651	4	2	3	1
412	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	4	1	2	4	3	2	7.3429	5	1	1	2
412	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	4	1	2	3	3	2	4.4503	4	1	1	1
413	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	4	3	1	9	9	9	0.0621	1	5	5	1
413	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	4	3	2	3	6	2	6.0330	5	1	2	1
413	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	4	3	2	3	6	2	6.0330	5	1	2	2
413	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	4	3	2	3	6	2	3.0165	3	1	2	1
414	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	6	5	1	9	9	9	0.0621	1	5	5	1
414	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	6	5	2	7	6	2	4.0382	4	1	3	1
414	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	6	5	2	3	4	2	7.7913	5	1	1	2
414	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	6	5	2	3	4	2	3.8956	4	1	1	1
415	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	4	3	1	10	10	10	0.0559	1	1	1	1
415	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	4	3	2	6	7	2	4.1712	4	1	3	1
415	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	4	3	2	3	4	2	7.7913	5	1	1	2
415	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	4	3	2	3	4	2	3.8956	4	1	1	1
416	1 u	1	26.9	1	0.25	1	1	5	100.00	200.00	4	3	3	10	10	10	0.0559	1	1	3	1
416	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	4	3	2	6	4	3	5.0384	5	1	2	1
416	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	4	3	2	4	3	3	7.3290	5	1	1	3
416	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	4	3	2	4	3	2	3.6714	4	1	1	1
417	1 u	1	26.9	1	0.25	1	1	2	0.18	0.35	3	2	2	4	6	4	2.7290	3	2	2	1
417	1 um	2	26.9	1	0.25	1	1	2	0.18	0.35	3	2	2	4	6	4	5.4581	5	2	2	1
417	1 lm	3	26.9	1	0.25	1	1	2	0.18	0.35	3	2	2	4	6	4	5.4581	5	2	2	3
417	1 l	4	26.9	1	0.25	1	1	2	0.18	0.35	3	2	2	4	6	3	2.7331	3	1	2	1
418	1 u	1	26.9	2	0.5	2	6	5	100.00	346.41	5	4	1	10	10	10	0.0425	1	1	1	1
418	1 um	2	26.9	2	0.5	2	6	2	0.18	0.61	5	4	2	6	4	4	3.8236	4	2	2	1
418	1 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	5	4	2	4	3	2	11.2065	5	1	1	3
418	1 l	4	26.9	2	0.5	2	6	1	0.04	0.15	5	4	2	4	3	2	5.6033	5	1	1	1
419	1 u	1	26.9	2	0.5	2	6	5	100.00	346.41	6	5	1	10	10	10	0.0425	1	1	1	1
419	1 um	2	26.9	2	0.5	2	6	2	0.18	0.61	6	5	2	6	4	4	3.8236	4	2	2	1
419	1 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	6	5	2	4	3	2	11.2065	5	1	1	3
419	1 l	4	26.9	2	0.5	2	6	1	0.04	0.15	6	5	2	4	3	2	5.6033	5	1	1	1
420	1 u	1	26.9	2	0.5	2	6	5	100.00	346.41	5	4	1	10	10	10	0.0425	1	1	1	1
420	1 um	2	26.9	2	0.5	2	6	2	0.18	0.61	5	4	2	6	4	4	3.8236	4	2	2	1
420	1 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	5	4	2	4	3	2	11.2065	5	1	1	2
420	1 l	4	26.9	2	0.5	2	6	1	0.04	0.15	5	4	2	4	3	2	5.6033	5	1	1	1
421	1 u	1	26.9	2	0.5	2	6	5	100.00	346.41	6	5	1	10	10	10	0.0425	1	1	1	1
421	1 um	2	26.9	2	0.5	2	6	2	0.18	0.61	6	5	2	6	4	4	3.8236	4	2	2	1
421	1 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	6	5	2	4	3	2	11.2065	5	1	1	2
421	1 l	4	26.9	2	0.5	2	6	1	0.04	0.15	6	5	2	4	3	2	5.6033	5	1	1	1
422	1 u	1	26.9	2	0.5	2	6	5	100.00	346.41	5	4	1	10	10	10	0.0425	1	1	1	1
422	1 um	2	26.9	2	0.5	2	6	2	0.18	0.61	5	4	2	6	4	4	3.8236	4	2	2	1
422	1 lm	3	26.9	2	0.5	2	6	1	0.04	0.15	5	4	2	4	3	2	11.2065	5	1	1	1
422	1 l	4	26.9	2	0.5	2	6	1	0.04	0.15	5	4	2	4	3	2	5.6033	5	1	1	1
423	1 u	1	26.9	3	1	4	24	5	100.00	489.90	4	3	1	10	10	10	0.0357	1	1	1	1
423	1 um	2	26.9	3	1	4	24	2	0.18	0.86	4	3	2	6	4	4	3.2152	3	2	2	1
423	1 lm	3	26.9	3	1	4	24	1	0.04	0.21	4	3	2	4	3	2	9.4235	5	1	1	1
423	1 l	4	26.9	3	1	4	24	1	0.04	0.21	4	3	2	4	3	2	4.7118	5	1	1	1

Database field definitions

segment#	cross referenced to orthophoto maps
block	4 blocks, SE, NE, NW, SW respectively
zone	intertidal zone where $u > 12$ feet, $u_m = 10$ feet, $l_m = 5$ feet, $t < 0$ feet
zone_code	numerical reference to intertidal zone
salinity	block salinity in ppt
energy	wave power categories based on open water distance in the maximum fetch direction
H	significant wave height based on equal wave power curves
T	wave period based on significant wave power curves
L	wave length calculated from H and T
slope	slope (α) of intertidal zone measured in the field
beta	$\tan \alpha$
irbarren	surf similarity parameter = $\beta / \sqrt{H/L}$
aspect	direction the beach faces
dnrt	current direction
form	primary geomorphic feature characterizing the beach
primary	primary particle size (>50%)
secondary	secondary particle size (<40%)
interstitial	interstitial particle size
dyna_calc	calculation for the dynamism parameter based on irbarren number, particle sizes and percentage, and elevation
dynamism	measure of substrate stability in the maximum wave climate
permeability	based on the interstitial particle size
roughness	based on the largest of the primary and secondary particle sizes
seepage	estimated in the field

Appendix B

Sampled Biota from Carr Inlet

CODE	HIGHER TAXA	SPECIES
A_elegan	Anthozoa	Anthopleura elegantissima
A_rubro	Maldanidae	Axiothella rubrocincta
Acro	Chlorophyta	Acrosiphonia coalita
Amphiod	Ophiuroidea	Amphiodia urtica
Amphi	Gammarids	Amphipods
A_elegan	Anthozoa	Anthopleura elegantissima
A_rubro	Maldanidae	Axiothella rubrocincta
Acro	Chlorophyta	Acrosiphonia coalita
Amphiod	Ophiuroidea	Amphiodia urtica
Amphi	Gammarids	Amphipods
Artac	Terebellidae	Artacama conifera?
Callian	Decapoda	Callianassa californiensis
Cancer	Decapoda	Cancer sp.
Cap_cap	Capitellidae	Capitella capitata
Capit	Capitellidae	unidentified spp.
Chaeto	Cirratulidae	Chaetozone sp. (probably)
Cariosus	Cirripedia	Semi-balanus cariosus
Clino	Bivalvia	Clinocardium ?ciliatum (juv)
Crass	Bivalvia	Crassostrea gigas
Crepid	Pododesmia	Crepidula sp.
Crypto	Bivalvia	Cryptomya californica (assoc. with ghost shrimp)
Decam	Capitellidae	Decamastus gracilis
Dendr	Echinoidea	Dendraster excentricus
Edward	Anthozoa	Edwardsia sipunculoides
Eggs	Miscellaneous	Miscellaneous eggs
Endo	Rhodophyta	Endocladia muricata
Entero	Chlorophyta	Enteromorpha sp.
Upogeb	Decapoda	Upogebia pugettensis
Eupol	Terebellidae	Eupolymnia heterobranchia
Fila_red	Rhodophyta	Unidentified filamentous red
Freem	Platyhelminthes	Freemania litoricola (probably)
Fucus	Phaeophyta	Fucus gardneri
G_annul	Goniadidae	Goniada annulata?
Gelid	Rhodophyta	Gelidium sp.
Gland	Cirripedia	Balanus glandula
Gnorim	Isopods	Gnorimosphaeroma oregonense
Gpolyg	Glyceridae	Glycinde polygnatha
Grace	Rhodophyta	Gracelaria sjoestedtii
Gsiph	Glyceridae	Glycera siphonostoma
Gten	Glyceridae	Glycera tenuis
Haminea	Gastropods	Haminea vesicula
Hem_oreg	Decapoda	Hemigrapsus oregonensis
Hem_nud	Decapoda	Hemigrapsus nudus
Hemip	Glyceridae	Hemipodus borealis
Hippol	Hippolytidae	Hippolyte clarki
Holes	Miscellaneous	Miscellaneous unidentified holes
Lig_occ	Isopods	Ligia occidentalis
L_sac	Phaeophyta	Laminaria saccharina
L_squam	Polynoidae	Lepidonotus squamatus
L_strig	Gastropods	Lottia strigatella
Lepto	Holothuroidea	Leptosynapta clarki
Litt_scut	Gastropods	Littorina scutulata
M_dubia	Hesionidae	Micropodarke dubia

CODE	HIGHER TAXA	SPECIES
A_elegan	Anthozoa	Anthopleura elegantissima
A_rubro	Maldanidae	Axiothella rubrocincta
Acro	Chlorophyta	Acrosiphonia coalita
Amphiod	Ophiuroidea	Amphiodia urtica
Amphi	Gammarids	Amphipods
M_edulis	Bivalvia	Mytilus edulis
M_nasuta	Bivalvia	Macoma nasuta
M_sarsi	Maldanidae	Maldane sarsi
M_secta	Bivalvia	Macoma secta
Macom	Bivalvia	Macoma (juveniles)
Magel	Megelonidae	Gnorimosphaeroma oregonense
Mald	Maldanidae	unident. spp.
Masto	Rhodophyta	Mastocarpus papillata
MYST	?	?
Neomolg	Arachnida	Neomolgus littoralis
N_brand	Nereidae	Nereis brandti
N_caeca	Nephtyidae	Nephtys caeca
N_ferr	Nephtyidae	Nephtys ferruginea
N_limn	Nereidae	Nereis limnicola
N_long	Nephtyidae	Nephtys longosetosa
N_othr	Onuphidae	Nothria conchylega
N_proc	Nereidae	Nereis procera
N_tenuis	Capitellidae	Notomastus tenuis
N_vex	Nereidae	Nereis vexillosa
Nassa	Gastropods	Nassarius mendicus
Nemer	Nemertea	unidentified nemertean: including Paranemertes, Cerebratulus
Ner_sp	Nereidae	Unidentified nereid
Nothr	Onuphidae	Nothria conchylega
Notom	Capitellidae	Notomastus lineatus
Nuc_Lam	Gastropods	Nucella lamellosa
O_pug	Hesionidae	Ophiodromus pugettensis
P_brach	Spionidae	Polydora brachycephala
P_colum	Spionidae	Polydora columbiana
P_kemp	Spionidae	Polydora kempii japonica
P_soc	Spionidae	Polydora socialis
Pagurus	Decapoda	Pagurus sp.
Paranem	Nemertean	Paranemertean peregrina
Pectin	Pectinariidae	Pectinaria granulata
Petro	Rhodophyta	Petrocelis sp.
Pinnoth	Decapoda	Pinnotherid sp. (pea crab)
Pin_tub	Pinnotheridae	Pinnixia tubicola
Platy	Nereidae	Platynereis bicanaliculata
Polinec	Gastropods	Polinices lewisii
Polyn	Polynoidae	Unid. polynoids (impossible without scales, which do not preserve)
Porphy	Rhodophyta	Porphyra sp.
Prototh	Bivalvia	Protothaca staminea
Pseud	Bivalvia	Pseudopythina rugifera (small clams assoc. with ghost shrimp)
Red_crus	Rhodophyta	Unidentified encrusting red alga
S_acme	Orbiniidae	Scoloplos acmeiceps
Sacco	Hemichordata	??
Scler	Decapoda	Scleroplax granulata (pea crabs assoc. with ghost shrimp)
Scolo	Orbiniidae	Scoloplos armiger
Scyto	Phaeophyta	Scytosiphon lomentaria

CODE	HIGHER TAXA	SPECIES
A_elegan	Anthozoa	Anthopleura elegantissima
A_rubro	Maldanidae	Axiothella rubrocincta
Acro	Chlorophyta	Acrosiphonia coalita
Amphiod	Ophiuroidea	Amphiodia urtica
Amphi	Gammarids	Amphipods
Siphonia	Rhodophyta	Polysiphonia(?) sp.
Siphons	Bivalvia	Unidentified clam siphons
Spio	Spionidae	Spio. sp. (unident)
Spioc	Chaetoperidae	Spiochaetopterus costarum
Talitrids	Gammarids	Beach hoppers
Tapes	Bivalvia	Tapes philippinarum (juv)
Telli	Bivalvia	Tellina sp. (juv. bodegensis?)
Thary	Cirratulidae	Tharyx parvus (probably)
Ulvoids	Chlorophyta	Ulva sp.
Worms	Nemertean	Unidentified nemertean (hopeless)

UITZ - upper-middle zone (3 meters)

110 samples

21 species

		Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
	Species Code	Callia(C)	Capit(C)	Entero(Q)	Fucus(Q)	Gland(Q)	Grac(Q)	Hem_o(Q)	Hemip(C)	Hipp(C)	Holes(Q)	Lig_o(Q)	Litt_s(Q)	L_strig(Q)	Masto(Q)	Neomo(Q)
	Family	Callianassidae	Capitellidae			Lepadidae		Grapsidae	Glycerida	Hippolytidae		Ligiidae	Littorinidae	Lottidae		Bdellidae
194UA	4	mud	0	0	0	0	0	1	0	0	0	0	0	0	0	0
194UB	4	mud	0	0	0	0	0	2	0	0	0	0	0	0	0	0
194UC	4	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
194UD	4	mud	0	0	0	0	0	2	0	0	0	0	0	0	0	0
194UE	4	mud	0	0	0	0	0	5	0	0	20	0	6	0	0	0
194UF	4	mud	0	0	25	0	0	2	0	0	25	0	0	0	0	0
194UG	4	mud	0	0	5	0	0	0	0	0	50	0	0	0	0	0
194UH	4	mud	0	0	1	0	0	0	1	0	10	0	1	0	0	0
194UI	4	mud	0	0	1	0	0	2	0	0	15	0	0	0	0	0
194UJ	4	mud	0	0	0	0	0	0	0	0	10	0	0	0	0	0
233UA	4	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
233UB	4	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
233UC	4	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
233UD	4	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
233UE	4	mud	0	0	1	0	0	0	0	0	0	0	0	0	0	0
233UF	4	mud	0	0	1	1	1	0	0	0	0	0	0	0	0	0
233UG	4	mud	0	0	0	0	1	0	0	0	0	0	8	0	0	0
233UH	4	mud	0	0	25	1	1	0	0	0	0	0	4	0	0	0
233UI	4	mud	0	0	5	0	0	0	0	0	0	0	6	0	0	0
233UJ	4	mud	0	0	25	0	5	0	0	0	0	0	0	0	0	0
251UA	4	mud	0	0	1	0	5	0	0	0	0	0	0	0	0	0
251UB	4	mud	0	0	5	5	5	0	0	0	0	0	0	0	0	0
251UC	4	mud	0	0	5	0	0	0	0	0	0	0	50	0	0	0
251UD	4	mud	0	0	1	25	5	0	0	0	0	0	0	0	0	0
251UE	4	mud	0	0	1	0	1	0	0	0	0	0	0	0	0	0
251UF	4	mud	0	0	25	0	1	0	0	0	0	0	0	0	0	0
251UG	4	mud	0	0	5	0	1	0	0	0	0	0	0	0	0	0
251UH	4	mud	0	0	25	0	1	1	1	0	2	0	0	0	0	0
251UI	4	mud	0	0	5	0	1	0	0	0	0	0	0	0	0	0
251UJ	4	mud	0	0	5	0	1	0	0	0	0	0	0	0	0	0
239UA	4	gravel	0	0	0	0	1	0	0	0	0	0	20	0	0	1

UITZ - upper-middle zone (3 mete s)

110 samples

21 species

			Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
	Species Code	Callia(C)	Capit(C)	Entero(Q)	Fucus(Q)	Gland(Q)	Grac(Q)	Hem_o(Q)	Hemip(C)	Hipp(C)	Holes(Q)	Lig_o(Q)	Litt_s(Q)	L_strig(Q)	Masto(Q)	Neomo(Q)	
	Family	Callianassidae	Capitellidae	Lepadidae			Grapsidae	Glycerida	Hippolytidae		Ligiidae	Littorinidae	Lottiidae	Bdellidae			
239UB	4	gravel	0	0	0	0	1	0	1	0	0	0	0	10	0	0	1
239UC	4	gravel	0	0	0	0	1	0	5	0	0	0	0	15	0	0	2
239UD	4	gravel	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
239UE	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
239UF	4	gravel	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0
239UG	4	gravel	0	0	0	0	5	0	0	0	0	0	0	5	0	0	0
239UH	4	gravel	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
239UI	4	gravel	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0
239UJ	4	gravel	0	0	0	0	1	0	0	0	0	0	0	5	0	0	0
263UA	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
263UB	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
263UC	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
263UD	4	gravel	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
263UE	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
263UF	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
263UG	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
263UH	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
263UI	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
263UJ	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
299UA	4	gravel	0	0	0	0	5	0	2	0	0	0	0	20	0	1	0
299UB	4	gravel	0	1	0	0	5	0	3	1	0	0	0	15	0	1	0
299UC	4	gravel	0	0	0	0	1	0	0	0	0	0	0	10	0	0	0
299UD	4	gravel	0	0	0	0	5	0	0	0	0	0	0	15	0	1	0
299UE	4	gravel	0	0	0	0	5	0	0	0	0	0	0	20	0	5	0
299UF	4	gravel	0	0	0	0	5	0	2	0	0	0	0	30	0	0	0
299UG	4	gravel	0	0	0	0	1	0	1	0	0	0	0	20	0	0	0
299UH	4	gravel	0	0	0	0	1	0	0	0	0	0	0	10	0	1	0
299UI	4	gravel	0	0	0	0	5	0	2	0	0	0	0	15	0	0	0
299UJ	4	gravel	0	0	0	0	1	0	0	0	0	0	0	10	0	0	0
103UA	1	gravel	0	0	0	0	5	0	0	0	0	0	0	10	0	0	0
103UB	1	gravel	0	0	0	0	5	0	0	0	0	0	0	20	0	0	0

UITZ - upper-middle zone (3 mete s)

110 samples

21 species

			Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
	Species Code	Callia(C)	Capit(C)	Entero(Q)	Fucus(Q)	Gland(Q)	Grac(Q)	Hem_o(Q)	Hemip(C)	Hipp(C)	Holes(Q)	Lig_o(Q)	Litt_s(Q)	L_strig(Q)	Masto(Q)	Neomo(Q)	
	Family	Callianassidae	Capitellidae			Lepadidae		Grapsidae	Glycerida	Hippolytidae		Ligiidae	Littorinidae	Lottiidae		Bdellidae	
103UC	1	gravel	0	0	0	0	1	0	0	0	0	0	0	10	0	0	0
103UD	1	gravel	0	0	0	0	1	0	0	0	0	0	0	20	0	0	0
103UE	1	gravel	0	0	0	0	5	0	0	0	0	0	0	30	0	0	0
103UF	1	gravel	0	0	0	0	5	0	0	0	0	0	0	20	0	0	0
103UG	1	gravel	0	0	0	0	5	0	0	0	0	0	0	20	0	0	0
103UH	1	gravel	0	0	0	0	5	0	0	0	0	0	0	80	0	0	0
103UI	1	gravel	0	0	0	0	5	0	0	0	0	0	0	40	0	0	0
103UJ	1	gravel	0	0	0	0	5	0	0	0	0	0	0	10	0	1	0
303UA	1	gravel	0	0	0	0	1	0	1	0	1	0	0	31	0	0	0
303UB	1	gravel	0	0	0	0	1	0	1	0	0	0	0	50	0	0	0
303UC	1	gravel	0	0	0	0	1	0	0	0	0	0	0	62	0	0	0
303UD	1	gravel	0	0	0	0	5	0	2	0	0	0	0	46	0	0	0
303UE	1	gravel	0	0	0	0	1	0	0	0	0	0	0	45	0	0	0
303UF	1	gravel	0	0	0	0	1	0	1	0	0	0	0	20	0	0	0
303UG	1	gravel	0	0	0	0	5	0	0	0	0	0	0	30	0	0	0
303UH	1	gravel	0	0	0	0	1	0	0	0	0	0	0	10	0	0	0
303UI	1	gravel	0	0	0	0	5	0	0	0	0	0	0	25	0	0	0
303UJ	1	gravel	0	0	0	0	5	0	0	0	0	0	0	10	0	0	0

UITZ - upper-middle zone (3 mete

110 samples

21 species

Segment	Block	Substrate	Q	Q	Q	Q	Q	Q	
			Species Code	N_limn(C)	N_tenu(C)	Pods(Q)	Tape(C)	Telli(C)	Ulvo(Q)
			Family	Nereidae	Capitellidae	Amphipods	Veneridae	Tellinidae	
164UA	4	sand	0	0	0	0	0	0	
164UB	4	sand	0	0	0	0	0	0	
164UC	4	sand	0	0	0	0	0	0	
164UD	4	sand	0	0	0	0	1	0	
164UE	4	sand	0	0	0	0	0	0	
164UF	4	sand	0	0	0	0	0	0	
164UG	4	sand	0	0	0	0	0	0	
164UH	4	sand	0	0	0	0	0	0	
164UI	4	sand	0	0	0	0	0	0	
164UJ	4	sand	0	0	0	0	0	0	
173UA	4	sand	0	0	0	0	1	0	
173UB	4	sand	0	0	0	0	0	0	
173UC	4	sand	0	0	0	0	0	0	
173UD	4	sand	0	0	0	0	0	0	
173UE	4	sand	0	0	0	0	0	0	
173UF	4	sand	0	0	0	0	0	0	
173UG	4	sand	0	0	0	0	0	0	
173UH	4	sand	0	0	0	0	0	0	
173UI	4	sand	0	0	0	0	0	0	
173UJ	4	sand	0	0	0	0	0	0	
216UA	4	sand	0	0	0	0	0	0	
216UB	4	sand	0	0	0	0	0	0	
216UC	4	sand	0	0	0	0	0	0	
216UD	4	sand	0	0	0	0	0	0	
216UE	4	sand	0	0	0	0	0	0	
216UF	4	sand	0	0	0	0	0	0	
216UG	4	sand	0	0	0	0	0	0	
216UH	4	sand	0	0	0	0	0	0	
216UI	4	sand	0	0	0	0	0	0	
216UJ	4	sand	0	0	0	0	0	0	

UITZ - upper-middle zone (3 mete

110 samples

21 species

			Q	Q	Q	Q	Q	Q
	Species Code	N_limn(C)	N_tenu(C)	Pods(Q)	Tape(C)	Telli(C)	Ulvo(Q)	
	Family	Nereidae	Capitellidae	Amphipods	Veneridae	Tellinidae		
194UA	4	mud	0	0	0	0	0	0
194UB	4	mud	0	0	0	0	0	0
194UC	4	mud	0	0	0	0	0	0
194UD	4	mud	0	0	0	0	0	0
194UE	4	mud	0	0	0	0	0	0
194UF	4	mud	0	0	0	0	0	1
194UG	4	mud	0	0	0	0	0	0
194UH	4	mud	0	0	0	0	0	0
194UI	4	mud	0	0	0	0	0	0
194UJ	4	mud	0	0	0	0	0	0
233UA	4	mud	0	0	0	0	0	0
233UB	4	mud	0	0	0	0	0	0
233UC	4	mud	0	0	0	0	0	0
233UD	4	mud	0	0	0	0	0	0
233UE	4	mud	0	0	0	0	0	0
233UF	4	mud	0	0	0	0	0	0
233UG	4	mud	0	0	0	0	0	0
233UH	4	mud	0	0	0	0	0	0
233UI	4	mud	0	0	0	0	0	0
233UJ	4	mud	0	0	0	0	0	0
251UA	4	mud	0	0	0	0	0	0
251UB	4	mud	0	0	0	0	0	0
251UC	4	mud	0	0	0	0	0	0
251UD	4	mud	0	0	0	0	0	0
251UE	4	mud	0	0	2	0	0	0
251UF	4	mud	0	0	0	0	0	0
251UG	4	mud	0	0	0	0	0	0
251UH	4	mud	0	0	4	0	0	0
251UI	4	mud	0	0	0	0	0	0
251UJ	4	mud	0	0	1	0	0	0
239UA	4	gravel	0	0	3	0	0	0

UITZ - upper-middle zone (3 mete

110 samples

21 species

		Q	Q	Q	Q	Q	Q	
Species Code		N_limn(C)	N_tenu(C)	Pods(Q)	Tape(C)	Telli(C)	Ulvo(Q)	
Family		Nereidae	Capitellidae	Amphipods	Veneridae	Tellinidae		
239UB	4	gravel	0	0	3	0	0	0
239UC	4	gravel	0	0	20	0	0	0
239UD	4	gravel	0	0	2	0	0	0
239UE	4	gravel	0	0	1	0	0	0
239UF	4	gravel	0	0	1	0	0	0
239UG	4	gravel	0	0	0	0	0	0
239UH	4	gravel	0	0	0	0	0	0
239UI	4	gravel	0	0	0	0	0	0
239UJ	4	gravel	0	0	0	0	0	0
263UA	4	gravel	0	0	0	0	0	0
263UB	4	gravel	0	0	0	0	0	0
263UC	4	gravel	0	0	0	0	0	0
263UD	4	gravel	0	0	7	0	0	0
263UE	4	gravel	0	0	0	0	0	0
263UF	4	gravel	0	0	0	0	0	0
263UG	4	gravel	0	0	10	0	0	0
263UH	4	gravel	0	0	0	1	0	0
263UI	4	gravel	0	0	0	0	0	0
263UJ	4	gravel	0	0	0	0	0	0
299UA	4	gravel	0	0	0	0	0	0
299UB	4	gravel	0	0	0	0	0	0
299UC	4	gravel	0	0	3	0	0	0
299UD	4	gravel	0	0	0	0	0	0
299UE	4	gravel	1	0	0	0	0	0
299UF	4	gravel	0	0	0	0	0	0
299UG	4	gravel	0	0	0	0	0	0
299UH	4	gravel	0	0	0	0	0	0
299UI	4	gravel	0	0	0	0	0	0
299UJ	4	gravel	0	0	0	0	0	0
103UA	1	gravel	0	0	0	0	0	0
103UB	1	gravel	0	0	1	0	0	0

UITZ - upper-middle zone (3 mete

110 samples

21 species

			Q	Q	Q	Q	Q	Q
	Species Code	N_limn(C)	N_tenu(C)	Pods(Q)	Tape(C)	Telli(C)	Ulvo(Q)	
	Family	Nereidae	Capitellidae	Amphipods	Veneridae	Tellinidae		
103UC	1	gravel	0	0	0	0	0	0
103UD	1	gravel	0	0	0	0	0	0
103UE	1	gravel	0	0	0	0	0	0
103UF	1	gravel	0	0	0	0	0	0
103UG	1	gravel	0	0	0	0	0	0
103UH	1	gravel	0	0	0	0	0	0
103UI	1	gravel	0	0	0	0	0	0
103UJ	1	gravel	0	0	0	2	0	0
303UA	1	gravel	0	0	1	2	0	0
303UB	1	gravel	0	0	1	0	0	0
303UC	1	gravel	0	0	0	0	0	0
303UD	1	gravel	0	0	0	0	0	0
303UE	1	gravel	0	0	0	2	0	0
303UF	1	gravel	0	0	0	2	0	0
303UG	1	gravel	0	0	0	0	0	0
303UH	1	gravel	0	1	0	0	0	0
303UI	1	gravel	0	0	0	3	0	0
303UJ	1	gravel	0	0	0	0	0	0

MITZ - lower middle zone (1.5 mete s)

110 samples

51 species

Segment	Block	Substrate	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q		
			Species Code	A_eleg(Q)	Artac(C)	Callia(C)	Capit(C)	Crass(Q)	Crypt(C)	Dendr(Q)	Eggs(Q)	Endo(Q)	Entero(Q)	Free(C)	Fucus(Q)	G_ann(C)	Gelid(Q)	Gland(Q)
			Family	Actiniidae	Terebellidae	Callianassidae	Capitellidae	Ostreoida	Myidae	Dendroasteridae	Childiidae			Goniadidae		Lepadidae		
164MA	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	5		
164MB	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	5		
164MC	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
164MD	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
164ME	4	sand	0	0	0	0	0	0	0	1	0	0	0	0	0	25		
164MF	4	sand	0	0	0	0	0	0	0	1	0	0	0	0	0	5		
164MG	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	5		
164MH	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	5		
164MI	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	5		
164MJ	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	25		
173MA	4	sand	0	0	0	0	0	0	0	0	1	0	0	0	0	5		
173MB	4	sand	0	0	2	0	0	0	0	0	0	0	0	0	0	5		
173MC	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
173MD	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	5		
173ME	4	sand	0	0	0	0	0	0	0	0	1	0	0	0	0	25		
173MF	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	5		
173MG	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	5		
173MH	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	5		
173MI	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	5		
173MJ	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	5		
216MA	4	sand	0	0	0	0	0	0	0	0	1	0	0	0	0	25		
216MB	4	sand	0	0	1	0	0	0	0	0	0	1	0	0	0	5		
216MC	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	25		
216MD	4	sand	0	0	1	0	0	0	0	0	1	0	1	0	0	25		
216ME	4	sand	0	0	1	0	0	0	0	5	0	0	0	0	0	5		
216MF	4	sand	0	0	0	0	0	0	0	5	0	5	0	0	0	25		
216MG	4	sand	0	0	0	0	0	0	0	1	0	0	0	0	0	5		
216MH	4	sand	0	0	0	0	0	0	0	5	0	0	0	0	0	25		
216MI	4	sand	0	0	0	0	0	0	0	5	0	0	0	0	0	5		
216MJ	4	sand	0	0	0	0	0	0	0	0	1	0	0	0	0	25		

MITZ - lower middle zone (1.5 mete s)

110 samples

51 species

		Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
	Species Code	A_eleg(Q)	Artac(C)	Callia(C)	Capit(C)	Crass(Q)	Crypt(C)	Dendr(Q)	Eggs(Q)	Endo(Q)	Entero(Q)	Free(C)	Fucus(Q)	G_ann(C)	Gelid(Q)	Gland(Q)	
	Family	Actiniidae	Terebellidae	Callianassidae	Capitellidae	Ostreoida	Myidae	Dendroasteridae				Chilidiidae		Goniadidae		Lepadidae	
239MB	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
239MC	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
239MD	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
239ME	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
239MF	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
239MG	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
239MH	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
239MI	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
239MJ	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
263MA	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
263MB	4	gravel	0	0	0	0	0	0	0	0	1	0	0	0	0	0	25
263MC	4	gravel	0	1	0	0	0	0	0	0	0	0	0	0	0	0	25
263MD	4	gravel	0	3	0	0	0	0	0	0	0	0	0	0	0	0	25
263ME	4	gravel	0	0	0	0	0	0	0	0	1	0	2	0	0	0	75
263MF	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
263MG	4	gravel	0	0	0	0	0	0	0	0	0	0	2	0	0	0	25
263MH	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75
263MI	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75
263MJ	4	gravel	0	1	0	0	0	0	0	0	0	0	0	0	0	0	25
299MA	4	gravel	0	0	0	0	1	0	0	0	0	0	0	0	0	0	25
299MB	4	gravel	0	0	0	0	0	2	0	0	0	0	1	0	0	0	25
299MC	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
299MD	4	gravel	0	0	0	0	0	0	0	0	0	0	1	0	0	0	25
299ME	4	gravel	0	0	0	0	1	0	0	0	0	0	0	0	0	0	25
299MF	4	gravel	0	0	0	0	0	1	0	0	0	0	0	0	0	0	50
299MG	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
299MH	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
299MI	4	gravel	0	0	0	0	0	1	0	0	0	0	0	0	0	0	25
299MJ	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
103MA	1	gravel	1	0	0	3	0	0	0	0	0	0	0	0	0	0	50
103MB	1	gravel	5	0	0	0	0	0	0	0	1	0	0	0	0	0	25

MITZ - lower middle zone (1.5 mete

110 samples

51 species

Segment	Block	Substrate	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q		
			Species Code	Gnori(C)	Grac(Q)	Hem_n(Q)	Hem_o(Q)	Hemip(C)	Holes(Q)	L_strig(Q)	Lepto(C)	Litt_s(Q)	M_edu(Q)	M_nas(C)	M_sect(C)	Macom(C)	Masto(Q)	N_tenu(C)
			Family	Sphaeromatidae	Grapsidae	Grapsidae	Glyceridae		Lottiidae	Synaptidae	Littorinidae	Mytilidae	Tellinidae	Tellinidae	Tellinidae		Capitellida	
164MA	4	sand	0	0	0	0	0	0	0	0	20	1	0	0	0	0		
164MB	4	sand	0	0	0	0	0	0	0	0	10	1	0	0	0	0		
164MC	4	sand	0	0	0	0	0	0	0	0	5	0	0	0	0	0		
164MD	4	sand	0	0	0	0	0	0	0	0	10	0	0	0	0	0		
164ME	4	sand	0	0	0	0	0	0	0	0	20	25	0	0	0	0		
164MF	4	sand	0	0	0	0	0	0	0	0	20	0	0	0	0	1		
164MG	4	sand	0	0	0	0	0	0	0	0	20	1	0	0	0	1		
164MH	4	sand	0	0	0	0	0	2	0	0	10	0	0	0	0	0		
164MI	4	sand	0	0	0	0	0	3	0	0	12	0	0	0	0	0		
164MJ	4	sand	0	0	0	0	0	1	0	0	50	1	0	0	0	0		
173MA	4	sand	0	0	0	4	0	5	7	0	45	1	0	0	0	0		
173MB	4	sand	0	0	0	1	1	0	5	0	10	1	0	0	0	0		
173MC	4	sand	0	0	0	0	0	0	0	0	5	0	0	0	0	0		
173MD	4	sand	0	0	0	5	1	2	2	0	50	1	0	0	0	0		
173ME	4	sand	0	0	0	0	0	8	5	0	25	5	0	0	0	1		
173MF	4	sand	0	0	0	2	0	0	2	0	15	5	0	0	0	0		
173MG	4	sand	0	0	0	0	0	3	7	0	25	5	0	0	0	1		
173MH	4	sand	0	0	0	0	0	3	2	0	3	1	0	0	0	0		
173MI	4	sand	0	0	0	0	0	0	2	0	40	1	0	0	0	0		
173MJ	4	sand	0	0	0	0	1	0	0	0	0	5	0	0	0	0		
216MA	4	sand	0	0	0	1	0	4	1	0	20	1	0	0	0	0		
216MB	4	sand	0	0	0	2	0	4	5	0	5	1	0	0	0	0		
216MC	4	sand	0	0	0	0	1	10	5	0	15	1	0	0	0	0		
216MD	4	sand	0	0	0	5	1	0	3	0	5	1	0	0	0	0		
216ME	4	sand	0	0	0	2	0	1	0	0	5	1	0	0	0	0		
216MF	4	sand	0	0	0	0	0	5	5	0	20	5	0	0	0	0		
216MG	4	sand	1	0	0	3	1	10	0	0	10	1	0	0	1	0		
216MH	4	sand	2	0	0	3	0	5	18	0	20	5	0	0	0	0		
216MI	4	sand	0	0	0	2	1	5	10	0	25	1	0	0	2	1		
216MJ	4	sand	0	0	0	3	1	5	10	0	10	5	0	0	0	0		

MITZ - lower middle zone (1.5 mete

110 samples

51 species

			Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
	Species Code	Gnori(C)	Grac(Q)	Hem_n(Q)	Hem_o(Q)	Hemip(C)	Holes(Q)	L_strig(Q)	Lepto(C)	Litt_s(Q)	M_edu(Q)	M_nas(C)	M_sect(C)	Macom(C)	Masto(Q)	N_tenu(C)	
	Family	Sphaeromatidae	Grapsidae	Grapsidae	Glyceridae		Lottiidae	Synaptidae	Littorinidae	Mytilidae	Tellinidae	Tellinidae	Tellinidae		Capitellida		
194MA	4	mud	0	0	0	1	0	10	0	0	0	0	0	0	1	0	0
194MB	4	mud	0	0	0	0	0	14	0	0	10	0	0	0	0	0	0
194MC	4	mud	0	0	0	2	0	40	0	1	2	0	0	0	1	0	0
194MD	4	mud	0	0	0	3	0	25	0	0	0	0	0	0	1	0	5
194ME	4	mud	0	0	0	3	2	25	0	0	0	0	0	0	1	0	1
194MF	4	mud	0	0	0	2	0	30	0	0	2	0	0	0	0	0	3
194MG	4	mud	0	0	0	0	1	20	0	0	0	0	0	0	0	0	8
194MH	4	mud	0	0	0	0	1	15	0	0	0	0	0	0	0	0	28
194MI	4	mud	0	1	0	0	1	2	0	0	0	0	0	0	0	0	5
194MJ	4	mud	0	0	0	1	1	25	0	0	0	0	0	0	1	0	1
233MA	4	mud	0	5	0	0	0	16	0	0	0	0	0	0	2	0	0
233MB	4	mud	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
233MC	4	mud	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
233MD	4	mud	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
233ME	4	mud	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
233MF	4	mud	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
233MG	4	mud	0	0	0	0	1	10	0	0	0	0	0	0	0	0	0
233MH	4	mud	0	1	0	2	1	35	0	0	0	0	0	0	0	0	0
233MI	4	mud	0	0	0	0	1	12	0	0	0	0	0	0	2	0	8
233MJ	4	mud	0	0	0	0	0	45	0	0	0	0	0	0	3	0	3
251MA	4	mud	0	0	0	0	1	20	0	0	0	0	0	0	3	0	9
251MB	4	mud	0	1	0	0	0	10	0	0	0	0	0	0	0	0	1
251MC	4	mud	1	25	0	0	0	5	0	0	0	0	0	0	0	0	0
251MD	4	mud	1	1	0	2	4	5	0	0	0	5	0	0	0	0	27
251ME	4	mud	0	5	0	2	7	5	0	0	0	1	1	0	2	0	0
251MF	4	mud	0	95	0	0	0	0	0	0	0	0	0	0	0	0	0
251MG	4	mud	0	25	0	1	0	5	0	0	0	0	0	0	0	0	2
251MH	4	mud	0	0	0	0	0	20	0	0	0	1	1	0	1	0	0
251MI	4	mud	0	0	0	2	5	15	0	0	0	0	0	1	5	0	5
251MJ	4	mud	0	5	0	1	1	3	0	0	0	0	0	0	0	0	22
239MA	4	gravel	0	0	0	6	0	4	5	0	20	0	0	0	0	1	0

MITZ - lower middle zone (1.5 mete

110 samples

51 species

		Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	
	Species Code	Gnori(C)	Grac(Q)	Hem_n(Q)	Hem_o(Q)	Hemip(C)	Holes(Q)	L_strig(Q)	Lepto(C)	Litt_s(Q)	M_edu(Q)	M_nas(C)	M_sect(C)	Macom(C)	Masto(Q)	N_tenu(C)	
	Family	Sphaeromatidae	Grapsidae	Grapsidae	Glyceridae			Lottiidae	Synaptidae	Littorinidae	Mytilidae	Tellinidae	Tellinidae	Tellinidae		Capitellida	
239MB	4	gravel	0	0	0	0	0	2	0	0	20	0	0	0	0	0	0
239MC	4	gravel	0	0	0	0	0	8	30	0	10	1	0	0	0	1	0
239MD	4	gravel	0	0	0	0	0	6	15	0	5	0	0	0	0	0	0
239ME	4	gravel	0	0	0	1	0	4	5	0	20	1	0	0	0	5	0
239MF	4	gravel	0	0	0	16	0	0	0	0	10	1	0	0	0	1	0
239MG	4	gravel	0	0	0	2	0	11	5	0	10	1	0	0	0	1	0
239MH	4	gravel	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0
239MI	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
239MJ	4	gravel	0	0	0	1	0	4	5	0	20	0	0	0	0	0	0
263MA	4	gravel	0	0	2	5	0	0	0	0	5	0	0	0	0	0	0
263MB	4	gravel	0	0	0	13	0	0	10	0	10	5	0	0	0	1	0
263MC	4	gravel	0	0	0	3	3	2	10	0	20	1	0	0	0	0	40
263MD	4	gravel	0	0	0	0	0	0	10	0	20	1	0	0	0	1	0
263ME	4	gravel	0	0	0	9	0	0	18	0	30	5	0	0	0	0	0
263MF	4	gravel	0	0	0	5	1	0	0	0	6	1	0	0	0	0	0
263MG	4	gravel	0	0	0	15	0	0	20	0	30	5	0	0	0	0	0
263MH	4	gravel	0	0	0	13	1	2	12	0	12	1	0	0	0	0	55
263MI	4	gravel	0	0	0	14	1	0	10	0	5	5	0	0	0	0	3
263MJ	4	gravel	0	0	0	0	1	5	10	0	0	5	0	0	1	0	13
299MA	4	gravel	0	0	0	9	0	6	10	0	80	0	0	0	0	1	0
299MB	4	gravel	0	0	0	12	1	2	15	0	30	1	0	0	0	5	0
299MC	4	gravel	0	0	0	0	3	2	5	0	30	5	0	0	0	1	0
299MD	4	gravel	0	0	0	4	0	2	5	0	20	1	0	0	0	0	0
299ME	4	gravel	0	0	0	4	0	2	15	0	80	5	0	0	0	0	0
299MF	4	gravel	0	0	1	3	0	6	20	0	100	5	0	0	0	5	0
299MG	4	gravel	0	0	0	4	0	2	10	0	120	1	0	0	0	1	0
299MH	4	gravel	0	0	1	10	0	5	30	0	80	1	0	0	0	1	0
299MI	4	gravel	0	0	0	13	2	0	20	0	40	1	0	0	0	0	2
299MJ	4	gravel	0	0	1	8	0	3	5	0	140	1	0	0	0	1	0
103MA	1	gravel	0	0	0	5	0	0	6	0	240	1	0	0	0	5	0
103MB	1	gravel	0	0	0	5	0	0	4	0	100	1	0	0	0	5	0

MITZ - lower middle zone (1.5 mete

110 samples

51 species

			Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
	Species Code	Gnori(C)	Grac(Q)	Hem_n(Q)	Hem_o(Q)	Hemip(C)	Holes(Q)	L_strig(Q)	Lepto(C)	Litt_s(Q)	M_edu(Q)	M_nas(C)	M_sect(C)	Macom(C)	Masto(Q)	N_tenu(C)	
	Family	Sphaeromatidae	Grapsidae	Grapsidae	Glyceridae		Lottiidae	Synaptidae	Littorinidae	Mytilidae	Tellinidae	Tellinidae	Tellinidae		Capitellida		
103MC	1	gravel	0	0	0	7	0	0	10	0	240	1	0	0	0	5	0
103MD	1	gravel	0	0	0	4	0	0	5	0	140	0	0	0	0	5	0
103ME	1	gravel	0	0	0	4	0	0	10	0	80	1	0	0	0	1	0
103MF	1	gravel	0	0	0	6	1	0	5	0	100	1	0	0	0	5	0
103MG	1	gravel	0	0	0	4	0	0	10	0	140	1	0	0	0	5	0
103MH	1	gravel	0	0	0	3	1	0	20	0	220	1	0	0	0	5	0
103MI	1	gravel	0	0	0	0	0	0	10	0	120	1	0	0	0	0	0
103MJ	1	gravel	0	0	0	5	0	0	20	0	140	0	0	0	0	5	0
303MA	1	gravel	0	0	0	5	0	0	2	0	60	5	0	0	0	5	0
303MB	1	gravel	0	0	0	16	1	0	5	0	120	5	0	0	0	0	0
303MC	1	gravel	0	0	0	12	0	0	0	0	90	1	0	0	0	0	0
303MD	1	gravel	0	0	0	7	1	0	2	0	30	1	0	0	0	0	0
303ME	1	gravel	0	0	0	5	0	0	5	0	60	1	0	0	0	5	0
303MF	1	gravel	0	0	0	4	0	0	10	0	90	5	0	0	0	0	7
303MG	1	gravel	0	0	0	1	0	0	10	0	60	1	0	0	0	0	0
303MH	1	gravel	0	0	10	0	0	0	0	0	90	1	0	0	0	1	0
303MI	1	gravel	0	0	0	5	0	0	5	0	60	1	0	0	1	5	0
303MJ	1	gravel	0	0	0	1	2	0	10	0	60	1	0	0	0	1	8

MITZ - lower middle zone (1.5 mete

110 samples

51 species

Segment	Block	Substrate	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	
			Species Code	N_vex(C)	Nemer(C)	Ner_sp(C)	Notom(C)	P_brac(C)	P_colu(C)	P_kem(C)	P_soc(C)	Pagur(Q)	Paran(C)	Pods(Q)	Polyn(C)	Porph(Q)	Proto(C)
			Family	Nereidae		Nereidae	Capitellidae	Spionidae	Spionidae	Spionidae	Spionidae	Paguridae	Emplectonematidae	Amphipods	Polynoidae		Veneridae
164MA	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
164MB	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
164MC	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
164MD	4	sand	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
164ME	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
164MF	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
164MG	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
164MH	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
164MI	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
164MJ	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
173MA	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
173MB	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
173MC	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
173MD	4	sand	0	0	0	0	0	0	0	0	0	0	3	0	0	0	
173ME	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
173MF	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
173MG	4	sand	1	0	1	0	0	0	1	0	0	0	0	0	0	0	
173MH	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
173MI	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
173MJ	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
216MA	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
216MB	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
216MC	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
216MD	4	sand	0	0	0	0	0	0	0	0	0	1	1	1	0	0	
216ME	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
216MF	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
216MG	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
216MH	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
216MI	4	sand	0	0	0	0	1	0	0	0	0	0	2	0	0	0	
216MJ	4	sand	0	0	0	0	5	0	0	0	3	0	0	0	0	0	

MITZ - lower middle zone (1.5 mete

110 samples

51 species

			Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
	Species Code	N_vex(C)	Nemer(C)	Ner_sp(C)	Notom(C)	P_brac(C)	P_colu(C)	P_kem(C)	P_soc(C)	Pagur(Q)	Paran(C)	Pods(Q)	Polyn(C)	Porph(Q)	Proto(C)		
	Family	Nereidae		Nereidae	Capitellidae	Spionidae	Spionidae	Spionidae	Spionidae	Paguridae	Emplectonematidae	Amphipods	Polynoidae		Veneridae		
239MB	4	gravel	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
239MC	4	gravel	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
239MD	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
239ME	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
239MF	4	gravel	0	0	0	1	0	1	0	0	0	0	4	0	0	0	1
239MG	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
239MH	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
239MI	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
239MJ	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
263MA	4	gravel	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0
263MB	4	gravel	0	0	0	0	0	0	0	10	0	12	0	0	0	0	1
263MC	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
263MD	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
263ME	4	gravel	0	0	0	0	0	0	0	0	0	26	0	0	0	0	2
263MF	4	gravel	0	0	0	0	0	0	0	0	0	10	0	0	0	0	2
263MG	4	gravel	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0
263MH	4	gravel	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
263MI	4	gravel	1	0	0	0	0	0	0	0	0	20	0	0	0	0	1
263MJ	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
299MA	4	gravel	0	0	0	0	0	0	0	0	0	23	0	0	0	0	0
299MB	4	gravel	1	0	0	0	0	0	0	50	0	22	0	0	0	0	0
299MC	4	gravel	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
299MD	4	gravel	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
299ME	4	gravel	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0
299MF	4	gravel	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0
299MG	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
299MH	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
299MI	4	gravel	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0
299MJ	4	gravel	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0
103MA	1	gravel	0	0	0	0	0	0	0	0	0	3	0	0	0	0	2
103MB	1	gravel	0	0	0	0	0	0	0	1	0	4	0	0	0	0	0

MITZ - lower middle zone (1.5 mete

110 samples

51 species

			Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
	Species Code		N_vex(C)	Nemer(C)	Ner_sp(C)	Notom(C)	P_brac(C)	P_colu(C)	P_kem(C)	P_soc(C)	Pagur(Q)	Paran(C)	Pods(Q)	Polyn(C)	Porph(Q)	Proto(C)
	Family		Nereidae		Nereidae	Capitellidae	Spionidae	Spionidae	Spionidae	Spionidae	Paguridae	Emplectonematidae	Amphipods	Polynoidae		Veneridae
103MC	1	gravel	0	0	0	0	0	0	0	0	2	0	5	0	0	1
103MD	1	gravel	0	0	0	0	0	0	0	0	2	0	0	0	0	0
103ME	1	gravel	0	0	0	0	0	0	0	0	2	0	1	0	0	0
103MF	1	gravel	0	0	0	0	0	0	0	0	0	0	2	0	0	1
103MG	1	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
103MH	1	gravel	0	0	0	0	0	0	0	0	0	0	1	0	0	0
103MI	1	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
103MJ	1	gravel	0	0	0	0	0	0	0	0	0	0	1	0	0	2
303MA	1	gravel	0	0	0	0	0	0	0	0	0	0	2	0	0	0
303MB	1	gravel	0	0	0	0	0	0	0	0	0	0	3	0	0	0
303MC	1	gravel	0	0	0	0	0	0	0	0	0	0	4	0	0	0
303MD	1	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
303ME	1	gravel	0	0	0	0	0	0	0	0	0	0	3	0	0	0
303MF	1	gravel	0	0	0	0	14	0	0	0	0	0	0	0	0	0
303MG	1	gravel	0	0	0	0	0	0	0	0	0	0	2	0	0	0
303MH	1	gravel	0	0	0	0	0	0	0	0	0	0	7	0	0	0
303MI	1	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
303MJ	1	gravel	0	0	0	0	1	0	0	0	0	0	1	0	0	0

MITZ - lower middle zone (1.5 mete

110 samples

51 species

Segment	Block	Substrate	Q	Q	Q	Q	Q	Q	
			Pseud(C)	Red_cr(Q)	Siph(C)	Tape(C)	Ulvo(Q)	Upog(C)	
Family			Montacutidae	Unidentified encrusting	Unidentified cla	Veneridae			
164MA	4	sand	0		0	0	0	0	0
164MB	4	sand	0		0	0	0	0	0
164MC	4	sand	0		0	0	0	0	0
164MD	4	sand	0		0	0	0	0	0
164ME	4	sand	0		0	0	0	0	0
164MF	4	sand	0		0	0	0	0	0
164MG	4	sand	0		0	0	0	0	0
164MH	4	sand	0		0	0	0	0	0
164MI	4	sand	0		0	0	0	0	0
164MJ	4	sand	0		0	0	0	0	0
173MA	4	sand	0		0	0	0	0	0
173MB	4	sand	0		0	0	0	0	0
173MC	4	sand	0		0	0	0	0	0
173MD	4	sand	0		0	0	0	0	0
173ME	4	sand	0		0	0	0	0	0
173MF	4	sand	0		0	0	1	0	0
173MG	4	sand	0		0	0	0	0	0
173MH	4	sand	0		0	0	0	0	0
173MI	4	sand	0		0	0	0	0	0
173MJ	4	sand	0		0	0	0	0	0
216MA	4	sand	0		0	0	0	0	0
216MB	4	sand	0		0	0	0	0	0
216MC	4	sand	0		0	0	0	0	0
216MD	4	sand	0		0	0	1	0	0
216ME	4	sand	0		0	0	1	0	0
216MF	4	sand	0		0	0	0	0	1
216MG	4	sand	0		0	0	0	0	0
216MH	4	sand	0		0	0	1	0	0
216MI	4	sand	0		0	0	0	0	0
216MJ	4	sand	0		0	0	0	0	0

MITZ - lower middle zone (1.5 mete

110 samples

51 species

			Q	Q	Q	Q	Q	Q
	Species Code	Pseud(C)	Red_cr(Q)	Siph(C)	Tape(C)	Ulvo(Q)	Upog(C)	
	Family	Montacutidae	Unidentified encrusting	Unidentified cla	Veneridae			
194MA	4	mud	0	0	0	2	0	0
194MB	4	mud	0	0	0	0	0	0
194MC	4	mud	0	0	0	0	0	0
194MD	4	mud	0	0	0	0	0	0
194ME	4	mud	0	0	0	0	0	0
194MF	4	mud	0	0	0	0	0	1
194MG	4	mud	0	0	0	0	0	0
194MH	4	mud	0	0	0	0	0	0
194MI	4	mud	1	0	0	1	0	0
194MJ	4	mud	0	0	0	0	0	0
233MA	4	mud	0	0	0	0	0	0
233MB	4	mud	0	0	0	0	0	1
233MC	4	mud	0	0	0	0	0	0
233MD	4	mud	0	0	0	0	0	0
233ME	4	mud	0	0	0	0	0	0
233MF	4	mud	0	0	0	0	0	0
233MG	4	mud	0	0	0	0	0	0
233MH	4	mud	0	0	0	0	1	0
233MI	4	mud	0	0	0	0	1	0
233MJ	4	mud	0	0	0	1	0	0
251MA	4	mud	0	0	0	1	5	0
251MB	4	mud	0	0	0	0	75	0
251MC	4	mud	0	0	0	0	25	0
251MD	4	mud	0	0	0	0	25	0
251ME	4	mud	0	0	0	0	95	0
251MF	4	mud	0	0	0	0	1	0
251MG	4	mud	0	0	0	0	25	0
251MH	4	mud	0	0	0	1	5	0
251MI	4	mud	0	0	0	0	25	0
251MJ	4	mud	0	0	0	0	75	0
239MA	4	gravel	0	0	0	0	0	0

MITZ - lower middle zone (1.5 mete

110 samples

51 species

		Q	Q	Q	Q	Q	Q
	Species Code	Pseud(C)	Red_cr(Q)	Siph(C)	Tape(C)	Ulvo(Q)	Upog(C)
	Family	Montacutidae	Unidentified encrusting	Unidentified cla	Veneridae		
239MB	4	gravel	0	0	0	0	0
239MC	4	gravel	0	1	3	0	0
239MD	4	gravel	0	0	0	0	0
239ME	4	gravel	0	0	0	0	0
239MF	4	gravel	0	0	0	0	0
239MG	4	gravel	0	0	0	0	0
239MH	4	gravel	0	0	0	0	0
239MI	4	gravel	0	0	0	0	0
239MJ	4	gravel	0	0	0	0	0
263MA	4	gravel	0	0	0	0	0
263MB	4	gravel	0	0	0	5	0
263MC	4	gravel	0	0	0	0	0
263MD	4	gravel	0	0	0	0	0
263ME	4	gravel	0	0	0	0	0
263MF	4	gravel	0	0	0	1	1
263MG	4	gravel	0	0	0	1	0
263MH	4	gravel	0	0	0	5	0
263MI	4	gravel	0	0	0	1	0
263MJ	4	gravel	0	0	0	5	0
299MA	4	gravel	0	0	0	0	0
299MB	4	gravel	0	1	3	0	1
299MC	4	gravel	0	1	0	0	0
299MD	4	gravel	0	0	0	0	0
299ME	4	gravel	0	0	0	0	0
299MF	4	gravel	0	1	0	0	0
299MG	4	gravel	0	1	1	0	0
299MH	4	gravel	0	5	1	0	0
299MI	4	gravel	0	1	1	0	0
299MJ	4	gravel	0	1	1	0	0
103MA	1	gravel	0	1	0	1	0
103MB	1	gravel	0	1	0	0	0

MITZ - lower middle zone (1.5 mete

110 samples

51 species

			Q	Q	Q	Q	Q	Q
	Species Code	Pseud(C)	Red_cr(Q)	Siph(C)	Tape(C)	Ulvo(Q)	Upog(C)	
	Family	Montacutidae	Unidentified encrusting	Unidentified cla	Veneridae			
103MC	1	gravel	0	5	0	1	0	0
103MD	1	gravel	0	5	0	0	0	0
103ME	1	gravel	0	1	0	0	0	0
103MF	1	gravel	0	5	0	5	0	0
103MG	1	gravel	0	1	0	1	0	0
103MH	1	gravel	0	5	0	0	0	0
103MI	1	gravel	0	0	0	0	0	0
103MJ	1	gravel	0	1	0	2	0	0
303MA	1	gravel	0	0	0	0	0	0
303MB	1	gravel	0	0	0	1	0	0
303MC	1	gravel	0	0	0	4	0	0
303MD	1	gravel	0	0	0	1	0	0
303ME	1	gravel	0	0	0	1	0	0
303MF	1	gravel	0	0	0	0	0	0
303MG	1	gravel	0	0	0	5	0	0
303MH	1	gravel	0	0	0	0	0	0
303MI	1	gravel	0	0	0	0	0	0
303MJ	1	gravel	0	0	0	1	0	0

LITZ - lower zone (0 meters)

200 samples

100 species

			Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
	Species Cod		A_eleg(Q)	A_rubr(C)	Acro(Q)	Amph(C)	Artac(C)	Callia(C)	Canc(Q)	Cap_c(C)	Capit(C)	Cario(Q)	Chaet(C)	Clino(C)	Comp(C)
	Family		Actiniidae	Maldanidae	Acrosiphoniaceae	Amphiuridae	Terebellidae	Callianassidae	Cancridea	Capitellidae	Capitellidae	Cirripedia	Cirratulidae	Cardiidae	Veneridae
146LB	3	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
146LC	3	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
146LD	3	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
146LE	3	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
146LF	3	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
146LG	3	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
146LH	3	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
146LI	3	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
146LJ	3	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
164LA	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
164LB	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
164LC	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
164LD	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
164LE	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
164LF	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
164LG	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
164LH	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
164LI	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
164LJ	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
173LA	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
173LB	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
173LC	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
173LD	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
173LE	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
173LF	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
173LG	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
173LH	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
173LI	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
173LJ	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0
194LA	4	mud	0	0	0	0	0	0	0	1	0	0	0	0	0
194LB	4	mud	0	0	0	0	0	0	1	0	0	0	0	0	0

LITZ - lower zone (0 meters)

200 samples

100 species

			Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
	Species Cod		A_eleg(Q)	A_rubr(C)	Acro(Q)	Amph(C)	Artac(C)	Callia(C)	Canc(Q)	Cap_c(C)	Capit(C)	Cario(Q)	Chaet(C)	Ctino(C)	Comp(C)
	Family		Actiniidae	Maldanidae	Acrosiphoniaceae	Amphiuridae	Terebellidae	Callianassidae	Cancridea	Capitellidae	Capitellidae	Cirripedia	Cirratulidae	Cardiidae	Veneridae
239LD	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
239LE	4	gravel	0	0	1	0	0	0	0	0	0	0	0	0	0
239LF	4	gravel	0	0	1	0	0	0	0	0	0	0	0	0	0
239LG	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
239LH	4	gravel	0	0	1	0	0	0	2	0	0	0	0	0	0
239LI	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
239LJ	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
251LA	4	mud	0	0	0	0	0	0	0	0	0	0	0	1	0
251LB	4	mud	0	0	0	0	0	0	0	2	0	0	0	0	0
251LC	4	mud	0	0	0	0	0	0	0	0	0	0	0	0	0
251LD	4	mud	0	0	0	0	0	0	0	0	0	0	0	0	0
251LE	4	mud	0	0	0	0	0	0	0	0	0	0	0	0	0
251LF	4	mud	0	0	0	0	0	0	0	0	0	0	0	0	0
251LG	4	mud	0	0	0	0	0	2	0	0	0	0	0	0	0
251LH	4	mud	0	0	0	0	0	0	0	0	0	0	0	0	0
251LI	4	mud	0	0	0	0	1	0	0	0	0	0	0	0	0
251LJ	4	mud	0	0	0	0	0	0	0	0	0	0	0	0	0
263LA	4	gravel	0	1	0	0	1	0	0	0	0	1	0	0	0
263LB	4	gravel	0	0	0	0	0	0	0	0	0	1	0	0	0
263LC	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
263LD	4	gravel	0	1	0	0	1	0	0	0	0	0	0	0	0
263LE	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
263LF	4	gravel	0	2	0	0	0	0	0	0	0	0	0	0	0
263LG	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
263LH	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
263LI	4	gravel	2	1	0	0	0	0	0	0	0	5	0	0	0
263LJ	4	gravel	0	0	0	1	0	0	0	0	0	0	0	0	0
299LA	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
299LB	4	gravel	0	0	1	0	0	0	1	0	0	0	1	0	0
299LC	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
299LD	4	gravel	0	0	1	0	0	0	0	1	0	0	0	0	0

LITZ - lower zone (0 meters)

200 samples

100 species

Segment	Block	Substrate	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q		
			Species Cod Family	Crepid(Q) Calyptraeid	Crypt(C) Myidae	Decam(C) Capitellidae	Dendr(Q) Dendrasterida	Edwar(C) Edwardsiidae	Eggs(Q)	Endo(Q)	Entero(Q)	Euc_z(C) Maldanidae	Eupol(C) Terebellidae	Fila_r(Q) Unidentified f	G_ann(C) Goniadidae
103LA	1	gravel		0	0	0	0	0	0	0	25	1	0	0	0
103LB	1	gravel		0	0	0	0	0	0	0	25	0	0	0	0
103LC	1	gravel		0	0	0	0	0	0	0	25	0	0	0	0
103LD	1	gravel		0	0	0	0	0	0	0	25	0	0	0	0
103LE	1	gravel		0	0	0	0	0	0	0	5	0	0	0	1
103LF	1	gravel		0	0	0	0	0	0	0	5	0	0	0	0
103LG	1	gravel		0	0	0	0	0	0	0	5	1	0	0	0
103LH	1	gravel		0	0	0	0	0	0	0	5	0	0	0	1
103LI	1	gravel		0	0	0	0	0	0	0	25	0	0	0	0
103LJ	1	gravel		0	0	0	0	0	0	0	25	0	0	0	0
108LA	2	sand		0	0	0	85	0	0	0	0	0	0	0	0
108LB	2	sand		0	0	0	85	0	0	0	0	0	0	0	0
108LC	2	sand		0	0	0	80	0	0	0	0	0	0	0	0
108LD	2	sand		0	0	0	105	0	0	0	0	0	0	0	0
108LE	2	sand		0	0	0	80	0	0	0	0	0	0	0	0
108LF	2	sand		0	0	0	100	0	0	0	0	0	0	0	0
108LG	2	sand		0	0	0	90	0	0	0	0	0	0	0	0
108LH	2	sand		0	0	0	110	0	0	0	0	0	0	0	0
108LI	2	sand		0	0	0	70	0	0	0	0	0	0	0	0
108LJ	2	sand		0	0	0	85	0	0	0	0	0	0	0	0
116LA	2	sand		0	0	0	0	0	0	0	0	0	6	0	0
116LB	2	sand		0	0	0	0	0	0	0	0	0	3	0	0
116LC	2	sand		0	0	0	0	0	5	0	0	0	2	0	0
116LD	2	sand		0	0	0	0	0	5	0	0	0	3	0	0
116LE	2	sand		0	0	0	0	0	0	0	0	0	1	0	0
116LF	2	sand		0	0	0	0	1	5	0	0	0	5	0	0
116LG	2	sand		0	0	0	1	0	0	0	0	0	2	0	0
116LH	2	sand		0	0	0	0	1	0	0	0	0	3	0	0
116LI	2	sand		0	0	0	1	0	5	0	0	0	2	0	0
116LJ	2	sand		0	0	0	1	0	0	0	0	0	1	0	0

LITZ - lower zone (0 meters)

200 samples

100 species

		Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
	Species Cod	Crepid(Q)	Crypt(C)	Decam(C)	Dendr(Q)	Edwar(C)	Eggs(Q)	Endo(Q)	Entero(Q)	Euc_z(C)	Eupol(C)	Fila_r(Q)	G_ann(C)
	Family	Calyptraeid	Myidae	Capitellidae	Dendrasterida	Edwardsiidae				Maldanidae	Terebellidae	Unidentified f	Goniadidae
146LB	3	sand	0	0	0	0	0	0	0	0	0	0	0
146LC	3	sand	0	0	0	0	0	0	0	0	0	0	0
146LD	3	sand	0	0	0	0	0	0	0	0	0	0	0
146LE	3	sand	0	0	0	4	0	0	0	0	0	0	0
146LF	3	sand	0	0	0	3	0	0	0	0	0	0	0
146LG	3	sand	0	0	0	5	0	0	0	0	0	0	0
146LH	3	sand	0	0	0	6	0	0	0	0	0	0	0
146LI	3	sand	0	0	0	12	0	0	0	0	0	0	0
146LJ	3	sand	0	0	0	19	0	0	0	0	0	0	0
164LA	4	sand	0	0	0	120	0	0	0	0	0	0	0
164LB	4	sand	0	0	0	70	0	0	0	0	0	0	0
164LC	4	sand	0	0	0	95	0	0	0	0	0	0	0
164LD	4	sand	0	0	0	70	0	0	0	0	0	1	0
164LE	4	sand	0	0	0	10	0	0	0	0	0	0	0
164LF	4	sand	0	0	0	60	0	0	0	0	0	0	0
164LG	4	sand	0	0	0	45	0	0	0	0	0	0	0
164LH	4	sand	0	0	0	0	0	0	0	0	0	0	0
164LI	4	sand	0	0	0	5	0	0	0	0	0	0	0
164LJ	4	sand	0	0	0	10	0	0	0	0	0	0	0
173LA	4	sand	0	0	0	0	0	0	0	0	0	0	0
173LB	4	sand	0	0	0	50	0	0	0	0	0	0	0
173LC	4	sand	0	0	0	85	0	0	0	0	0	0	0
173LD	4	sand	0	0	0	85	0	0	0	0	0	0	0
173LE	4	sand	0	0	0	5	0	0	0	0	0	0	0
173LF	4	sand	0	0	0	5	0	0	0	0	0	0	0
173LG	4	sand	0	0	0	0	0	0	0	0	0	0	0
173LH	4	sand	0	0	0	5	0	0	0	0	0	0	0
173LI	4	sand	0	0	0	0	0	0	0	0	0	0	0
173LJ	4	sand	0	0	0	0	0	0	0	0	0	0	0
194LA	4	mud	0	0	0	35	0	0	0	0	0	0	0
194LB	4	mud	0	0	0	35	0	0	0	0	0	0	0

LITZ - lower zone (0 meters)

200 samples

100 species

			Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
	Species Cod	Family	Crepid(Q)	Crypt(C)	Decam(C)	Dendr(Q)	Edwar(C)	Eggs(Q)	Endo(Q)	Entero(Q)	Euc_z(C)	Eupo(C)	Fila_r(Q)	G_ann(C)
			Calyptraeid	Myidae	Capitellidae	Dendrasterida	Edwardsiidae				Maldanidae	Terebellidae	Unidentified f	Goniadidae
194LC	4	mud	0	0	0	85	0	0	0	0	0	0	0	0
194LD	4	mud	0	0	0	70	0	0	0	0	0	0	0	0
194LE	4	mud	0	0	0	60	0	0	0	0	0	0	0	0
194LF	4	mud	0	0	0	5	0	0	0	0	0	0	0	0
194LG	4	mud	0	0	0	5	0	0	0	0	0	0	0	1
194LH	4	mud	0	0	0	20	0	0	0	0	0	0	0	0
194LI	4	mud	0	0	0	5	0	0	0	0	0	0	0	0
194LJ	4	mud	0	0	0	10	0	0	0	0	0	0	0	0
216LA	4	sand	0	0	0	108	0	0	0	0	0	0	0	0
216LB	4	sand	0	0	0	150	0	0	0	0	0	0	1	0
216LC	4	sand	0	0	0	95	0	0	0	0	0	0	0	0
216LD	4	sand	0	0	0	95	0	0	0	0	0	0	0	0
216LE	4	sand	0	0	0	140	0	0	0	0	0	0	0	0
216LF	4	sand	0	0	0	110	0	0	0	0	0	0	0	0
216LG	4	sand	0	0	0	15	0	0	0	0	0	0	0	0
216LH	4	sand	0	0	0	55	0	0	0	0	0	0	0	0
216LI	4	sand	0	0	0	120	0	0	0	0	0	0	0	0
216LJ	4	sand	0	0	0	85	0	0	0	0	0	0	0	0
233LA	4	mud	0	0	0	0	0	1	0	0	0	0	0	0
233LB	4	mud	0	0	0	0	0	1	0	0	0	0	0	0
233LC	4	mud	0	0	0	0	0	0	0	0	0	0	0	0
233LD	4	mud	0	1	0	0	0	0	0	0	0	0	0	0
233LE	4	mud	0	0	0	0	1	1	0	0	0	0	0	0
233LF	4	mud	0	0	0	2	2	1	0	0	0	0	0	0
233LG	4	mud	0	0	0	2	0	1	0	0	0	0	0	0
233LH	4	mud	0	0	0	0	0	1	0	0	0	0	0	0
233LI	4	mud	0	0	0	0	0	1	0	0	0	0	0	0
233LJ	4	mud	0	0	0	0	0	1	0	0	0	0	0	0
239LA	4	gravel	1	0	0	0	0	0	0	25	0	0	0	0
239LB	4	gravel	0	0	0	0	0	0	0	25	0	0	0	0
239LC	4	gravel	2	0	0	0	0	0	0	5	0	0	0	0

LITZ - lower zone (0 meters)

200 samples

100 species

		Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
	Species Cod	Crepid(Q)	Crypt(C)	Decam(C)	Dendr(Q)	Edwar(C)	Eggs(Q)	Endo(Q)	Entero(Q)	Euc_z(C)	Eupol(C)	Fila_r(Q)	G_ann(C)
	Family	Calyptraeid	Myidae	Capitellidae	Dendrasterida	Edwardsiidae				Maldanidae	Terebellidae	Unidentified f	Goniadidae
239LD	4	gravel	0	0	0	0	0	0	0	5	0	0	0
239LE	4	gravel	2	0	0	0	0	0	0	25	0	0	0
239LF	4	gravel	2	0	0	0	0	0	0	5	0	0	0
239LG	4	gravel	2	0	0	0	0	0	0	5	0	0	0
239LH	4	gravel	0	0	0	0	0	0	0	25	0	0	0
239LI	4	gravel	2	0	0	0	0	0	0	25	0	0	0
239LJ	4	gravel	3	0	0	0	0	0	0	5	0	0	0
251LA	4	mud	0	0	0	0	0	0	0	0	0	0	0
251LB	4	mud	0	0	0	0	0	5	0	0	0	0	1
251LC	4	mud	0	0	0	0	0	1	0	0	0	0	0
251LD	4	mud	0	0	0	0	0	5	0	0	0	0	0
251LE	4	mud	0	0	0	0	0	5	0	0	0	0	0
251LF	4	mud	0	0	0	0	0	5	0	0	0	0	0
251LG	4	mud	0	0	0	0	0	5	0	0	0	0	0
251LH	4	mud	0	0	0	0	0	1	0	0	0	0	0
251LI	4	mud	0	0	0	0	0	1	0	0	0	0	0
251LJ	4	mud	0	1	0	0	0	1	0	0	0	0	0
263LA	4	gravel	2	0	0	0	0	0	0	25	0	0	0
263LB	4	gravel	0	0	0	0	0	0	0	25	0	0	0
263LC	4	gravel	0	0	0	0	0	0	0	25	0	0	1
263LD	4	gravel	5	0	0	0	0	0	0	25	0	0	0
263LE	4	gravel	3	0	0	0	0	0	0	5	0	0	0
263LF	4	gravel	8	0	0	0	0	0	0	25	0	0	0
263LG	4	gravel	2	0	0	0	0	0	0	75	0	0	1
263LH	4	gravel	3	0	0	0	0	0	0	75	0	0	0
263LI	4	gravel	3	0	0	0	0	0	0	25	0	0	0
263LJ	4	gravel	0	0	0	0	0	0	0	25	0	0	0
299LA	4	gravel	0	0	0	0	0	0	0	5	0	0	0
299LB	4	gravel	2	0	0	0	0	0	0	25	0	0	0
299LC	4	gravel	0	0	0	0	0	0	0	5	0	0	0
299LD	4	gravel	0	0	0	0	0	0	0	25	0	0	1

LITZ - lower zone (0 meters)

200 samples

100 species

		Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
	Species Cod	Crepid(Q)	Crypt(C)	Decam(C)	Dendr(Q)	Edwar(C)	Eggs(Q)	Endo(Q)	Entero(Q)	Euc_z(C)	Eupol(C)	Fila_r(Q)	G_ann(C)
	Family	Calyptraeid	Myidae	Capitellidae	Dendrasterida	Edwardsiidae				Maldanidae	Terebellidae	Unidentified f	Goniadidae
299LE	4	gravel	0	0	0	0	0	0	0	25	0	0	0
299LF	4	gravel	0	0	0	0	0	0	0	50	0	0	0
299LG	4	gravel	3	0	0	0	0	0	0	5	0	0	0
299LH	4	gravel	0	0	0	0	0	0	0	75	0	0	0
299LI	4	gravel	0	0	0	0	0	0	0	50	0	0	0
299LJ	4	gravel	2	0	0	0	0	0	0	5	0	0	0
303LA	1	gravel	0	0	0	0	0	0	0	0	0	0	0
303LB	1	gravel	0	0	0	0	0	0	0	0	0	0	0
303LC	1	gravel	0	0	0	0	0	0	0	0	0	0	0
303LD	1	gravel	0	0	0	0	0	0	0	0	1	0	0
303LE	1	gravel	0	0	0	0	0	0	0	0	0	0	0
303LF	1	gravel	0	0	0	0	0	0	1	0	0	0	0
303LG	1	gravel	0	0	0	0	0	0	0	0	0	0	0
303LH	1	gravel	0	0	0	0	0	0	0	0	0	0	0
303LI	1	gravel	0	0	0	0	0	0	0	0	0	0	0
303LJ	1	gravel	0	0	0	0	0	0	0	0	0	0	0
59LA	1	mud	0	0	0	0	0	0	0	1	0	0	0
59LB	1	mud	0	2	0	0	0	0	0	0	0	0	0
59LC	1	mud	0	12	0	0	0	0	0	1	0	0	0
59LD	1	mud	0	5	0	0	0	0	0	1	0	0	1
59LE	1	mud	0	0	0	0	0	0	0	1	0	0	0
59LF	1	mud	0	2	0	0	0	0	0	0	0	0	1
59LG	1	mud	0	2	0	0	1	0	0	0	0	0	0
59LH	1	mud	0	0	0	0	0	0	0	0	0	0	0
59LI	1	mud	0	5	0	0	1	0	0	5	0	0	0
59LJ	1	mud	0	0	0	0	0	0	0	0	0	0	1
82LA	1	mud	0	0	0	0	0	0	0	25	0	0	0
82LB	1	mud	0	0	0	0	0	0	0	5	0	0	0
82LC	1	mud	0	0	0	0	0	0	0	0	0	0	0
82LD	1	mud	0	0	0	0	0	0	0	5	0	2	1
82LE	1	mud	0	0	0	0	0	0	0	5	0	3	0

LITZ - lower zone (0 meters)

200 samples

100 species

Segment	Block	Substrate	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	
			Species Cod	Gelid(Q)	Gland(Q)	Gpoly(C)	Grac(Q)	Gsiph(C)	Gten(C)	Hami(C)	Hem_o(Q)	Hemip(C)	Hipp(C)	Holes(Q)	L_sac(Q)	L_squa(C)	L_strig(Q)
			Family	Lepadidae		Sphaeromatidae	Glyceridae			Glyceridae	Atyidae	Grapsidae	Glyceridae		Hippolytidae	Polynoidae	Lottiidae
103LA	1	gravel	0	5	0	0	0	0	0	0	0	1	0	0	0	0	0
103LB	1	gravel	0	5	0	0	0	0	0	0	0	2	0	0	0	0	0
103LC	1	gravel	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
103LD	1	gravel	1	25	0	0	0	0	0	0	0	0	0	0	0	0	1
103LE	1	gravel	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
103LF	1	gravel	0	5	0	0	0	0	0	0	0	2	0	0	0	0	0
103LG	1	gravel	0	25	0	0	0	0	0	0	0	3	0	0	0	0	0
103LH	1	gravel	0	25	0	0	0	0	0	0	0	3	0	0	0	0	0
103LI	1	gravel	0	25	0	0	0	0	0	0	0	0	0	0	0	0	5
103LJ	1	gravel	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
108LA	2	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108LB	2	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108LC	2	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108LD	2	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108LE	2	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108LF	2	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108LG	2	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108LH	2	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108LI	2	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108LJ	2	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
116LA	2	sand	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0
116LB	2	sand	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0
116LC	2	sand	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
116LD	2	sand	0	0	0	0	0	0	1	0	0	0	0	24	0	0	0
116LE	2	sand	0	0	0	0	0	1	2	0	0	0	0	4	0	0	0
116LF	2	sand	0	0	0	0	0	0	0	0	0	0	0	30	0	0	0
116LG	2	sand	0	0	0	0	0	0	1	0	0	0	0	24	0	0	0
116LH	2	sand	0	0	0	1	1	0	0	0	0	0	0	12	0	0	0
116LI	2	sand	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0
116LJ	2	sand	0	0	0	0	0	0	0	0	0	0	0	40	0	0	0

LITZ - lower zone (0 meters)

200 samples

100 species

		Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
	Species Cod	Gelid(Q)	Gland(Q)	Gpoly(C)	Grac(Q)	Gsiph(C)	Gten(C)	Hami(C)	Hem_o(Q)	Hemip(C)	Hipp(C)	Holes(Q)	L_sac(Q)	L_squa(C)	L_strig(Q)	
	Family	Lepadidae		Sphaeromatidae	Glyceridae		Glyceridae	Atyidae	Grapsidae	Glyceridae	Hippolytidae			Polynoidae	Lottiidae	
146LB	3	sand	0	0	0	0	0	0	0	0	0	0	3	0	0	0
146LC	3	sand	0	0	0	0	0	0	0	0	0	0	4	0	0	0
146LD	3	sand	0	0	0	0	0	0	0	0	0	0	6	0	0	0
146LE	3	sand	0	0	0	0	0	0	0	0	0	0	2	0	0	0
146LF	3	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
146LG	3	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
146LH	3	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
146LI	3	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
146LJ	3	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164LA	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164LB	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164LC	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164LD	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164LE	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164LF	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164LG	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164LH	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164LI	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164LJ	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
173LA	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
173LB	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
173LC	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
173LD	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
173LE	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
173LF	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
173LG	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
173LH	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
173LI	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
173LJ	4	sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
194LA	4	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
194LB	4	mud	0	0	0	0	0	0	0	0	1	0	0	0	0	0

LITZ - lower zone (0 meters)

200 samples

100 species

		Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Species	Cod	Gelid(Q)	Gland(Q)	Gpoly(C)	Grac(Q)	Gsiph(C)	Gten(C)	Hami(C)	Hem_o(Q)	Hemip(C)	Hipp(C)	Holes(Q)	L_sac(Q)	L_squa(C)	L_strig(Q)	
Family		Lepadidae		Sphaeromatidae	Glyceridae			Glyceridae	Atyidae	Grapsidae	Glyceridae		Hippolytidae	Polynoidae		Lottiidae
82LF	1	mud	0	0	0	0	0	0	0	0	1	0	0	0	0	0
82LG	1	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
82LH	1	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
82LI	1	mud	0	0	0	0	0	0	1	0	0	0	0	0	0	0
82LJ	1	mud	0	0	0	0	0	0	0	0	1	0	0	0	0	0
93LA	1	mud	0	1	0	0	0	0	0	0	0	0	0	0	0	0
93LB	1	mud	0	1	0	0	0	0	0	0	0	0	0	0	0	0
93LC	1	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
93LD	1	mud	0	1	0	0	0	0	0	0	0	0	0	0	0	0
93LE	1	mud	0	1	0	0	0	0	0	0	0	0	0	0	0	0
93LF	1	mud	0	1	0	0	0	0	0	0	2	0	0	0	0	0
93LG	1	mud	0	1	0	0	0	0	0	0	1	0	0	0	0	0
93LH	1	mud	0	5	0	0	0	0	0	0	0	0	0	0	0	0
93LI	1	mud	0	1	0	0	0	0	0	0	0	0	0	0	0	0
93LJ	1	mud	0	0	0	0	0	0	0	0	1	0	0	0	0	0

LITZ - lower zone (0 meters)

200 samples

100 species

			Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Species Cod	Lepto(C)	Litt_s(Q)	M_dub(C)	M_edu(Q)	M_nas(C)	M_sar(C)	M_sect(C)	Macom(C)	Magel(C)	Mald(C)	Masto(Q)	N_bran(C)	N_caec(C)	N_ferr(C)	
Family	Synaptidae	Littorinidae	Hesionidae	Mytilidae	Tellinidae	Malvanidae	Tellinidae	Tellinidae	Magelonidae	Malvanidae		Nereidae	Nephtyidae	Nephtyidae	
239LD	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
239LE	4	gravel	0	0	1	0	0	0	0	0	0	0	0	0	0
239LF	4	gravel	0	0	1	0	0	0	0	0	0	0	0	0	0
239LG	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
239LH	4	gravel	0	0	1	0	0	0	0	0	0	0	0	0	0
239LI	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
239LJ	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
251LA	4	mud	0	0	0	0	0	0	1	0	0	0	0	0	0
251LB	4	mud	0	0	0	0	0	0	5	0	0	0	0	0	0
251LC	4	mud	0	1	0	0	2	0	1	0	0	0	0	0	0
251LD	4	mud	0	0	0	0	0	0	3	0	0	0	0	0	0
251LE	4	mud	0	0	0	0	0	1	0	0	0	0	1	0	0
251LF	4	mud	0	0	0	0	0	0	3	0	0	0	0	0	0
251LG	4	mud	0	0	0	0	0	0	0	0	0	0	0	0	0
251LH	4	mud	0	0	0	0	0	0	3	0	0	0	0	0	0
251LI	4	mud	0	0	0	0	0	0	0	0	0	0	0	0	0
251LJ	4	mud	0	0	0	0	0	0	1	0	0	0	0	0	0
263LA	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
263LB	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
263LC	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
263LD	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
263LE	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
263LF	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
263LG	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
263LH	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
263LI	4	gravel	0	0	2	0	0	0	0	0	0	1	0	0	0
263LJ	4	gravel	0	2	0	0	0	0	0	0	0	0	0	0	0
299LA	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0
299LB	4	gravel	0	0	2	0	0	0	0	0	0	0	0	0	0
299LC	4	gravel	0	0	0	0	0	0	0	0	0	1	0	0	1
299LD	4	gravel	0	0	0	0	0	0	0	0	0	1	0	0	0

LITZ - lower zone (0 meters)

200 samples

100 species

			Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
	Species Cod	Lepto(C)	Litt_s(Q)	M_dub(C)	M_edu(Q)	M_nas(C)	M_sar(C)	M_sect(C)	Macom(C)	Magel(C)	Mald(C)	Masto(Q)	N_bran(C)	N_caec(C)	N_ferr(C)	
	Family	Synaptidae	Littorinidae	Hesionidae	Mytilidae	Tellinidae	Malदानidae	Tellinidae	Tellinidae	Magelonidae	Malदानidae		Nereidae	Nephtyidae	Nephtyidae	
299LE	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
299LF	4	gravel	0	0	0	0	0	0	0	0	0	0	1	0	0	0
299LG	4	gravel	0	0	1	0	0	0	0	0	0	0	1	0	0	0
299LH	4	gravel	0	0	0	0	0	0	0	0	0	0	5	0	0	0
299LI	4	gravel	0	0	0	0	0	0	0	0	0	0	1	0	0	0
299LJ	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
303LA	1	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
303LB	1	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
303LC	1	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
303LD	1	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
303LE	1	gravel	0	0	1	0	0	0	0	0	0	0	1	0	0	0
303LF	1	gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
303LG	1	gravel	0	0	0	0	0	0	0	0	0	0	1	0	0	0
303LH	1	gravel	0	0	1	0	0	0	0	0	0	0	0	0	0	0
303LI	1	gravel	0	0	2	0	0	0	0	0	0	0	0	0	0	0
303LJ	1	gravel	0	0	1	0	0	0	0	0	0	0	1	0	0	0
59LA	1	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59LB	1	mud	0	0	0	0	0	0	0	1	0	0	0	0	0	0
59LC	1	mud	0	0	0	0	0	0	0	2	0	0	0	0	0	0
59LD	1	mud	0	0	0	0	0	0	0	1	0	0	0	0	0	0
59LE	1	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59LF	1	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59LG	1	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59LH	1	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59LI	1	mud	0	0	0	0	0	0	0	1	0	0	0	0	0	0
59LJ	1	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
82LA	1	mud	0	0	0	0	0	0	0	1	0	0	0	0	0	0
82LB	1	mud	0	0	0	0	0	0	0	1	0	0	0	0	0	0
82LC	1	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
82LD	1	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
82LE	1	mud	0	0	0	0	0	0	0	2	0	0	0	0	0	0

LITZ - lower zone (0 meters)

200 samples

100 species

			Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
	Species Cod	Pagur(Q)	Pect_m(C)	Pectin(C)	Petro(Q)	PinEb(C)	Pin_tu(C)	Pinno(C)	Platy(C)	Pods(Q)	Polin(C)	Polyn(C)	Porph(Q)	Proto(C)	Pseud(C)	
	Family	Paguridae	Pectinariidae	Pectinariidae		Pinnotheridae	Pinnotheridae	Pinnotheridae	Nereidae	Amphipods	Naticidae	Polynoidae		Veneridae	Montacutidae	
82LF	1	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
82LG	1	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
82LH	1	mud	0	0	0	0	1	0	3	0	0	0	0	0	0	0
82LI	1	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
82LJ	1	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
93LA	1	mud	0	0	0	0	0	0	1	0	0	0	0	0	0	1
93LB	1	mud	0	0	0	0	0	0	1	0	0	0	0	0	0	1
93LC	1	mud	0	0	0	0	0	0	8	0	0	0	0	0	0	3
93LD	1	mud	0	0	0	0	0	0	2	0	0	0	0	0	0	0
93LE	1	mud	0	0	0	0	0	0	1	0	0	0	0	0	0	0
93LF	1	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	1
93LG	1	mud	0	0	0	0	0	0	0	0	0	0	0	0	0	0
93LH	1	mud	0	0	0	0	0	0	2	0	0	0	0	0	1	0
93LI	1	mud	0	0	0	0	0	0	2	0	0	0	0	0	0	0
93LJ	1	mud	0	0	0	0	0	0	3	0	0	0	0	0	0	0

LITZ - lower zone (0 meters)

200 samples

100 species

			Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
	Species Cod	Red_cr(Q)	S_acme(C)	S_berk(C)	Sacco(C)	Scler(C)	Scolo(C)	Scyto(Q)	Siph(C)	Spio(C)	Spio_c(C)	T_strom(C)	Tana(C)	
	Family	Unidentified	Orbiniidae	Spionidae	Unid	Pinnotheridae	Orbiniidae		Unidentified cla	Spionidae	Chaetopteridae	Trichobranchidae	Tanaidacea	
122LA	2	sand	0	0	0	0	0	0	0	0	0	0	0	0
122LB	2	sand	0	0	0	0	0	3	0	0	0	0	0	0
122LC	2	sand	0	0	0	0	0	0	0	0	0	0	0	0
122LD	2	sand	0	0	0	0	0	0	0	0	0	0	0	0
122LE	2	sand	0	0	0	0	0	0	0	0	0	0	0	0
122LF	2	sand	0	0	0	0	0	0	0	0	0	0	0	0
122LG	2	sand	0	0	0	0	0	0	0	0	0	0	0	0
122LH	2	sand	0	0	0	0	0	1	0	0	0	0	0	0
122LI	2	sand	0	0	0	0	0	0	0	0	0	0	0	0
122LJ	2	sand	0	0	0	0	0	0	0	0	0	0	0	0
128LA	3	sand	0	0	0	0	0	0	0	0	0	18	0	0
128LB	3	sand	0	0	0	0	0	0	0	0	0	7	0	0
128LC	3	sand	0	0	0	0	0	0	0	0	0	13	0	0
128LD	3	sand	0	0	0	0	0	0	0	0	0	23	0	0
128LE	3	sand	0	0	0	0	0	1	0	0	0	31	0	0
128LF	3	sand	0	0	0	0	0	0	0	0	0	50	0	0
128LG	3	sand	0	0	0	0	0	0	0	0	0	16	0	0
128LH	3	sand	0	0	0	0	0	0	0	0	0	12	0	0
128LI	3	sand	0	0	0	0	0	0	0	0	0	33	0	0
128LJ	3	sand	0	0	0	0	0	1	0	0	0	57	0	0
133LA	3	sand	0	0	0	0	0	0	0	0	0	3	0	0
133LB	3	sand	0	0	0	0	0	0	0	0	0	0	0	0
133LC	3	sand	0	0	0	0	0	0	0	0	0	14	0	0
133LD	3	sand	0	0	0	0	0	0	0	0	0	3	0	0
133LE	3	sand	0	0	0	0	0	0	0	0	0	9	0	0
133LF	3	sand	0	0	0	0	0	0	0	0	0	5	0	0
133LG	3	sand	0	0	0	0	0	0	0	0	0	1	0	0
133LH	3	sand	0	0	0	0	0	0	0	0	0	4	0	0
133LI	3	sand	0	0	0	0	0	2	0	0	0	6	0	0
133LJ	3	sand	0	0	0	0	0	0	0	0	0	6	0	0
146LA	3	sand	0	0	0	0	0	0	0	0	0	2	0	0

LITZ - lower zone (0 meters)

200 samples

100 species

			Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
	Species Cod	Red_cr(Q)	S_acme(C)	S_berk(C)	Sacco(C)	Scler(C)	Scolo(C)	Scyto(Q)	Siph(C)	Spio(C)	Spio_c(C)	T_strom(C)	Tana(C)	
	Family	Unidentified	Orbiniidae	Spionidae	Unid	Pinnotheridae	Orbiniidae		Unidentified cla	Spionidae	Chaetopteridae	Trichobranchidae	Tanaidacea	
239LD	4	gravel	5	0	0	0	0	0	0	0	0	0	0	0
239LE	4	gravel	1	0	0	0	0	0	0	0	0	0	0	0
239LF	4	gravel	1	0	0	0	0	0	0	0	0	0	0	0
239LG	4	gravel	1	0	0	0	0	0	0	0	0	0	0	0
239LH	4	gravel	1	0	0	0	0	0	0	0	0	0	0	0
239LI	4	gravel	1	0	0	0	0	0	0	0	0	0	0	0
239LJ	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0
251LA	4	mud	0	0	0	0	0	0	0	0	0	0	0	0
251LB	4	mud	0	0	0	0	0	0	0	0	0	0	0	0
251LC	4	mud	0	0	0	0	0	0	0	0	0	0	0	0
251LD	4	mud	0	0	0	0	0	0	0	0	0	0	0	0
251LE	4	mud	0	0	0	0	0	0	0	0	0	0	0	0
251LF	4	mud	0	0	0	0	0	0	0	0	0	0	0	0
251LG	4	mud	0	0	0	2	0	0	0	0	0	0	0	0
251LH	4	mud	0	0	0	0	0	0	0	0	0	0	0	0
251LI	4	mud	0	0	0	0	0	0	0	0	0	0	0	0
251LJ	4	mud	0	0	0	0	0	0	0	0	0	0	0	0
263LA	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0
263LB	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0
263LC	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0
263LD	4	gravel	0	0	0	0	0	0	0	0	0	1	0	0
263LE	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0
263LF	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0
263LG	4	gravel	0	0	0	0	0	1	0	0	0	0	0	0
263LH	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0
263LI	4	gravel	0	0	0	0	0	0	0	1	0	0	0	0
263LJ	4	gravel	0	0	0	0	0	0	0	0	0	0	0	0
299LA	4	gravel	0	0	0	0	0	0	0	3	0	0	0	0
299LB	4	gravel	1	0	0	0	0	0	0	4	0	0	0	0
299LC	4	gravel	0	0	0	0	0	0	0	5	0	0	0	0
299LD	4	gravel	0	0	0	0	0	0	1	4	0	0	0	0

LITZ - lower zone (0 meters)

200 samples

100 species

			Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
	Species Cod	Red_cr(Q)	S_acme(C)	S_berk(C)	Sacco(C)	Scler(C)	Scolo(C)	Scyto(Q)	Siph(C)	Spio(C)	Spio_c(C)	T_strom(C)	Tana(C)	
	Family	Unidentified	Orbiniidae	Spionidae	Unid	Pinnotheridae	Orbiniidae		Unidentified cla	Spionidae	Chaetopteridae	Trichobranchidae	Tanaidacea	
82LF	1	mud	0	0	0	0	0	0	0	0	0	0	0	0
82LG	1	mud	0	0	1	0	0	0	0	0	0	0	1	0
82LH	1	mud	0	0	1	0	3	0	0	0	0	0	0	0
82LI	1	mud	0	0	0	0	0	0	0	0	0	0	0	0
82LJ	1	mud	0	0	0	0	0	0	0	0	0	0	0	0
93LA	1	mud	0	0	0	0	0	0	0	0	0	0	0	0
93LB	1	mud	0	0	0	0	1	0	0	0	0	0	0	0
93LC	1	mud	0	0	0	0	10	0	0	1	0	0	0	0
93LD	1	mud	0	0	0	0	2	0	0	0	0	0	0	0
93LE	1	mud	0	0	0	0	1	0	0	0	0	0	0	0
93LF	1	mud	0	0	0	0	0	0	0	0	0	0	0	0
93LG	1	mud	0	0	0	0	0	0	0	0	0	0	0	0
93LH	1	mud	0	0	0	0	1	0	0	2	0	0	0	0
93LI	1	mud	0	0	0	0	0	0	0	0	0	0	0	0
93LJ	1	mud	0	0	0	0	3	0	0	0	0	0	0	0

LITZ - lower zone (0 meters)

200 samples

100 species

Segment	Block	Substrate	Q	Q	Q	Q
			Telli(C)	Thary(C)	Ulvo(Q)	Upog(C)
Species Cod			Tellinidae	Cirratulidae		
103LA	1	gravel	0	0	0	0
103LB	1	gravel	0	0	0	0
103LC	1	gravel	0	0	0	0
103LD	1	gravel	0	0	0	0
103LE	1	gravel	0	0	0	0
103LF	1	gravel	0	0	0	0
103LG	1	gravel	0	0	0	0
103LH	1	gravel	0	0	0	0
103LI	1	gravel	0	0	0	0
103LJ	1	gravel	0	0	0	0
108LA	2	sand	0	0	0	0
108LB	2	sand	0	0	0	0
108LC	2	sand	0	0	0	0
108LD	2	sand	0	0	0	0
108LE	2	sand	0	0	0	0
108LF	2	sand	0	0	0	0
108LG	2	sand	0	0	0	0
108LH	2	sand	0	0	5	0
108LI	2	sand	0	0	0	0
108LJ	2	sand	0	0	0	0
116LA	2	sand	0	1	0	0
116LB	2	sand	0	0	0	0
116LC	2	sand	1	0	3	0
116LD	2	sand	0	0	5	0
116LE	2	sand	1	0	6	0
116LF	2	sand	0	0	0	0
116LG	2	sand	0	0	0	0
116LH	2	sand	0	0	1	0
116LI	2	sand	0	0	1	0
116LJ	2	sand	0	0	1	0

LITZ - lower zone (0 meters)

200 samples

100 species

			Q	Q	Q	Q
		Species Cod	Telli(C)	Thary(C)	Ulvo(Q)	Upog(C)
		Family	Tellinidae	Cirratulidae		
122LA	2	sand	0	0	0	0
122LB	2	sand	0	0	0	0
122LC	2	sand	0	0	0	0
122LD	2	sand	0	0	0	0
122LE	2	sand	0	0	0	0
122LF	2	sand	0	0	0	0
122LG	2	sand	0	0	0	0
122LH	2	sand	0	0	0	0
122LI	2	sand	0	0	0	0
122LJ	2	sand	0	0	0	0
128LA	3	sand	0	0	0	0
128LB	3	sand	0	0	0	0
128LC	3	sand	0	0	0	0
128LD	3	sand	1	0	0	0
128LE	3	sand	0	0	0	0
128LF	3	sand	0	0	1	0
128LG	3	sand	0	0	0	0
128LH	3	sand	0	0	5	0
128LI	3	sand	0	0	5	0
128LJ	3	sand	1	0	1	0
133LA	3	sand	0	0	0	0
133LB	3	sand	0	0	0	0
133LC	3	sand	0	0	0	0
133LD	3	sand	0	0	0	0
133LE	3	sand	0	0	0	0
133LF	3	sand	0	0	0	0
133LG	3	sand	0	0	0	0
133LH	3	sand	0	0	0	0
133LI	3	sand	0	0	0	0
133LJ	3	sand	0	0	0	0
146LA	3	sand	0	0	0	0

LITZ - lower zone (0 meters)

200 samples

100 species

	Species Cod	Family	Q	Q	Q	Q
			Telli(C)	Thary(C)	Ulvo(Q)	Upog(C)
			Tellinidae	Cirratulidae		
146LB	3	sand	0	0	0	0
146LC	3	sand	0	0	0	0
146LD	3	sand	0	0	0	0
146LE	3	sand	0	0	0	0
146LF	3	sand	0	0	5	0
146LG	3	sand	0	0	1	0
146LH	3	sand	0	0	1	0
146LI	3	sand	0	0	1	0
146LJ	3	sand	0	0	0	0
164LA	4	sand	0	0	0	0
164LB	4	sand	0	0	0	0
164LC	4	sand	0	0	0	0
164LD	4	sand	0	0	1	0
164LE	4	sand	0	0	25	0
164LF	4	sand	0	0	1	0
164LG	4	sand	0	0	1	0
164LH	4	sand	0	0	1	0
164LI	4	sand	0	0	1	0
164LJ	4	sand	0	0	0	0
173LA	4	sand	0	0	0	0
173LB	4	sand	0	0	1	0
173LC	4	sand	0	0	25	0
173LD	4	sand	0	0	1	0
173LE	4	sand	0	0	1	0
173LF	4	sand	0	0	0	0
173LG	4	sand	0	0	0	0
173LH	4	sand	0	0	0	0
173LI	4	sand	0	0	0	0
173LJ	4	sand	0	0	0	0
194LA	4	mud	0	0	25	0
194LB	4	mud	0	0	25	0

LITZ - lower zone (0 meters)

200 samples

100 species

Species Cod			Q	Q	Q	Q
			Telli(C)	Thary(C)	Ulvo(Q)	Upog(C)
Family			Tellinidae	Cirratulidae		
194LC	4	mud	0	0	0	0
194LD	4	mud	0	0	25	0
194LE	4	mud	0	0	5	0
194LF	4	mud	0	0	5	0
194LG	4	mud	0	0	0	0
194LH	4	mud	0	0	5	0
194LI	4	mud	0	0	0	0
194LJ	4	mud	0	0	25	0
216LA	4	sand	0	0	5	0
216LB	4	sand	0	0	2	0
216LC	4	sand	0	0	1	0
216LD	4	sand	0	0	5	0
216LE	4	sand	0	0	1	0
216LF	4	sand	0	0	5	0
216LG	4	sand	0	0	5	0
216LH	4	sand	0	0	5	0
216LI	4	sand	0	0	5	0
216LJ	4	sand	0	0	5	0
233LA	4	mud	1	0	1	0
233LB	4	mud	1	0	5	0
233LC	4	mud	0	0	1	0
233LD	4	mud	1	0	1	0
233LE	4	mud	1	0	1	0
233LF	4	mud	0	0	0	0
233LG	4	mud	0	0	1	0
233LH	4	mud	0	0	5	0
233LI	4	mud	2	0	25	0
233LJ	4	mud	0	0	5	0
239LA	4	gravel	0	0	0	0
239LB	4	gravel	0	0	0	0
239LC	4	gravel	0	0	0	0

LITZ - lower zone (0 meters)

200 samples

100 species

			Q	Q	Q	Q
		Species Cod	Telli(C)	Thary(C)	Ulvo(Q)	Upog(C)
		Family	Tellinidae	Cirratulidae		
239LD	4	gravel	0	0	0	0
239LE	4	gravel	0	0	0	0
239LF	4	gravel	0	0	0	0
239LG	4	gravel	0	0	0	0
239LH	4	gravel	0	0	0	0
239LI	4	gravel	0	0	0	0
239LJ	4	gravel	0	0	0	0
251LA	4	mud	0	0	5	0
251LB	4	mud	0	0	0	0
251LC	4	mud	0	0	1	0
251LD	4	mud	0	0	5	0
251LE	4	mud	0	0	0	0
251LF	4	mud	0	0	1	0
251LG	4	mud	0	0	1	0
251LH	4	mud	1	0	0	0
251LI	4	mud	0	0	0	0
251LJ	4	mud	0	0	1	0
263LA	4	gravel	0	0	0	0
263LB	4	gravel	0	0	0	0
263LC	4	gravel	0	0	0	0
263LD	4	gravel	0	0	0	0
263LE	4	gravel	0	0	0	0
263LF	4	gravel	0	0	0	0
263LG	4	gravel	0	0	0	0
263LH	4	gravel	0	0	0	0
263LI	4	gravel	0	0	0	0
263LJ	4	gravel	0	0	0	0
299LA	4	gravel	0	0	0	0
299LB	4	gravel	0	0	0	1
299LC	4	gravel	0	0	0	0
299LD	4	gravel	0	0	0	0

LITZ - lower zone (0 meters)

200 samples

100 species

			Q	Q	Q	Q
		Species Cod	Telli(C)	Thary(C)	Ulvo(Q)	Upog(C)
		Family	Tellinidae	Cirratulidae		
299LE	4	gravel	0	0	0	0
299LF	4	gravel	0	0	0	0
299LG	4	gravel	0	0	0	0
299LH	4	gravel	0	0	0	0
299LI	4	gravel	0	0	0	0
299LJ	4	gravel	0	0	0	0
303LA	1	gravel	0	0	0	0
303LB	1	gravel	0	0	0	0
303LC	1	gravel	0	0	0	0
303LD	1	gravel	0	0	0	0
303LE	1	gravel	0	0	0	0
303LF	1	gravel	0	0	0	0
303LG	1	gravel	0	0	0	0
303LH	1	gravel	0	0	0	0
303LI	1	gravel	0	0	0	0
303LJ	1	gravel	0	0	0	0
59LA	1	mud	0	0	0	0
59LB	1	mud	0	0	0	0
59LC	1	mud	0	0	0	0
59LD	1	mud	0	0	0	0
59LE	1	mud	0	0	0	0
59LF	1	mud	0	0	0	0
59LG	1	mud	0	0	0	0
59LH	1	mud	0	0	0	0
59LI	1	mud	0	0	0	0
59LJ	1	mud	0	1	0	0
82LA	1	mud	2	0	0	0
82LB	1	mud	2	0	0	0
82LC	1	mud	0	0	0	0
82LD	1	mud	0	0	0	0
82LE	1	mud	0	0	0	0

LITZ - lower zone (0 meters)

200 samples

100 species

			Q	Q	Q	Q
		Species Cod	Telli(C)	Thary(C)	Ulvo(Q)	Upog(C)
		Family	Tellinidae	Cirratulidae		
82LF	1	mud	2	0	0	0
82LG	1	mud	0	0	0	0
82LH	1	mud	0	0	0	0
82LI	1	mud	0	0	0	0
82LJ	1	mud	0	0	0	0
93LA	1	mud	0	0	0	0
93LB	1	mud	0	0	0	0
93LC	1	mud	0	0	0	0
93LD	1	mud	0	0	0	0
93LE	1	mud	0	0	0	0
93LF	1	mud	0	0	0	1
93LG	1	mud	0	0	0	0
93LH	1	mud	0	0	0	0
93LI	1	mud	0	0	0	0
93LJ	1	mud	0	0	0	0