

## DAFTAR PUSTAKA

- Adytama, A. 2016. Analisis Unsur Hara Makro Dengan Metode Vermikomposting Pada Sampah Daun Kering. Program Studi Teknik Lingkungan. Fakultas Teknik Sipil dan Perencanaan UII. Yogyakarta
- Anggorowati, D.A. 2004. Bioeliminasi Nitrat oleh *Gracilaria salicornia* pada Kegiatan Marikultur. UPT Loka Pengembangan Bio-Industri Mataram-Puslit Oseanografi. 297 – 303 Hlm.
- Ardani., L.O.A. Afu., & Ira. 2020. Identifikasi Jenis Sedimen Berdasarkan Karakteristik Fisik Oseanografi Di Perairan Bungkutoko Sulawesi Tenggara. Sapa Laut. Vol.5(2) : 145-151.
- Arvianto, S. E., Satriadi, A., Handoyo, G. 2016. Pengaruh Arus Terhadap Sebaran Sedimen Tersuspensi Di Muara Sungai Silugonggo Kabupaten Pati. Jurnal Oseanografi. Volume 5. Nomor 1.116–125.
- Aslan, M., 1999. Budidaya Rumput Laut. Kanisius. Yogyakarta.
- Asngad, A. 2013. Inovasi Pupuk Organik Kotoran Ayam Dan Eceng Gondok Dikombinasi Dengan Bioteknologi Mikoriza Bentuk Granul. Jurnal MIPA. Vol. 36 (1): 1-7.
- Atmanisa, A., A. Mustarin., N.A.S. Taufieq. 2020. Analisis Kualitas Air pada Kawasan Budidaya Rumput Laut *Eucheuma Cottoni* di Kabupaten Jeneponto. Jurnal Pendidikan Teknologi Pertanian. Volume 6 Nomor 1 : 11-12.
- Badan Pusat Statistik. 2017. Takalar.
- Bahri, A.F. 2010. Analisis Nitrat dan Fosfat pada sedimen Mangrove. Skripsi. UNDIP. Semarang.
- Barker A.V., and D.J Pilbeam. 2007. Hand Book of Plant Nutrition. CRC Press. New York.
- Bengen , D.G. 2000. Pengenalan dan Pengelolaan Ekosistem Mangrove. Pusat Kajian Sumberdaya Pesisir dan Lautan Institut Pertanian Bogor, Bogor.
- Bray R.H., and L.T. Kurtz. 1945. Determination of total, organic and available forms of phosphorus in soils. Soil Sci. 59:39-45.
- Budiyani, Felycia Belri., Ken Suwartimah., Sunaryo. 2012. Pengaruh Penambahan Nitrogen dengan Konsentrasi yang Berbeda terhadap Laju Pertumbuhan Rumput Laut *Caulerpa racemosa var. uvifera*. Journal of marine research. Volume 1, Nomor 1.10-18.
- Burdames, Yanis., Ngangi E.L.A. 2014. Kondisi Lingkungan Perairan Budi Daya Rumput Laut di Desa Arakan, Kabupaten Minahasa Selatan. Budidaya perairan. Volume 2. Nomor 3.69-75.
- Burhanuddin, A.I. 2019. Biologi Kelautan. Yogyakarta : Lily Publisher.
- Chester, R. 1993. Marine Geochemistry. Unwin Hyman Ltd. London.

- Compton, J., D. Mallinson, C.R. Glenn, Prevolucas & J. Lucas. 2000. Variation in the Global Phosphorus Cycle, Marine Authigenesis: from Global to Microbial, Eds., SEPM. Spec. Publ : 35-51.
- Dahuri R., J. Rais, S.P. Ginting, M.J. Sitepu, 2004. Pengelolaan Sumber Daya Pesisir Dan Lautan Secara Terpadu. Pradnya Pramita. Jakarta.
- Edward., M.S. Tarigan. 2003. Pengaruh Musim Terhadap Fluktuasi Kadar Fosfat Dan Nitrat di Laut Banda. Makara, Sains, Volume 7 Nomor 2. 82-89.
- Effendi, H. 2003. Telaah Kualitas Air bagi Pengelolaan Sumber Daya dan Lingkungan Perairan. Cetakan Kelima. Kanisius, Yogyakarta.
- Effendy, Zulhan. 2015. Analisis Ukuran Butir Sedimen Untuk Identifikasi Lingkungan Pengendapan Daerah Muara Sungai Bogowonto Dan Sekitarnya. Jurnal Bumi Indonesia. Vol 4. No. 4
- Eviati dan Sulaeman. 2009. Analisis Kimia Tanah, Tanaman, Air, Dan Pupuk. Balai Penelitian Tanah. Bogor.
- Fahmi, Arifin., Syamsuddin., Utami S.N.H., Radjagukguk, B. 2010. Pengaruh Interaksi Hara Nitrogen dan Fosfor Terhadap Pertumbuhan Tanaman Jagung (*Zea Mays L*) Pada Tanah Regosol Dan Latosol. Berita Biologi. Vol 10. No.3.
- Fairhurst, R.A. and K.A. Graham. 2003. Seagrass bed-sediment characteristics of Manly Lagoon. In: Freshwater Ecology Report 2003. Department of Environmental Sciences, University of Technology, Sydney.
- Faradiba., Anna R.A., Fransiskus A.B.L. 2018. Analisis Parameter Fisika Perairan Cilincing DKI Jakarta. Jurnal Ilmiah Sains dan Rekayasa Teknik. Vol 02.
- Felycia, B.B., Ken Suwartimah., Sunaryo. 2012. Pengaruh Penambahan Nitrogen dengan Konsentrasi yang Berbeda terhadap Laju Pertumbuhan Rumput Laut *Caulerpa racemosa* var. *uvifera*. Volume 1, Nomor 1, 10-18.
- Fixen, P.E. and J.H. Grove. 1990. Testing soils for phosphorus. p. 141-180. In R.L. Westerman (ed.) Soil Testing and Plant Analysis. SSSA, Madison, WI.
- Fong P, Boyer K.E., Kamer K, Boyle K.A. 2003, Influence of initial tissue nutrient status of tropical marine algae on response to nitrogen and phosphorus additions. *Mar Ecol Prog Ser* 262: III-123.
- Garrison, T. 2006. Oceanography: An Invitation to Marine Science. 5ed. Thomson Learning, Inc. USA.
- Gunawan., Wijawanto, N., Budi, S.W. 2019. Karakteristik Sifat Kimia Tanah Dan Status Kesuburan Tanah Pada Agroforestri Tanaman Sayuran Berbasis *Eucalyptus* Sp. *Jurnal Silvikultur Tropika*. Vol. 10 No. 02. 63-69
- Hambali, R. 2016. Studi Karakteristik Sedimen Dan Laju Sedimentasi Sungai Daeng – Kabupaten Bangka Barat. *Jurnal Fropil*. Vol. 4 No. 2
- Handayani, D.R., Armid., E. 2016. Hubungan Kandungan Nutrien Dalam Substrat Terhadap Kepadatan Lamun Di Perairan Desa Lalowaru Kecamatan Moramo Utara. *Jurnal Sapa Laut*. Vol. 1 (2). 42-53

- Hardjowigeno, S. 2003. Klasifikasi Tanah dan Pedogenesis. Jakarta : Akademika Pressindo. 250 hal.
- Havlin JL, JD Beaton, SL Tisdale and WL Nelson. 2005. Soil Fertility and Fertilizers. An introduction to nutrient management. Seventh Edition. Pearson Education Inc. Upper Saddle River, New Jersey.
- Hutabarat dan Evans. 2001. Pegantar Oseanografi. Universitas Indonesia. Jakarta.
- Hutabarat, S dan S.M. Evans. 2014. Pengantar Oseanografi. Jakarta : UI Press.
- Idham. 2014. Studi Sedimentasi Di Perairan Pulau Dompok Kecamatan Bukit Bestari Kota Tanjungpinang Provinsi Kepulauan Riau. Skripsi. Universitas Maritim Raja Ali Haji
- Kementrian Negara Lingkungan Hidup. 2004. Keputusan Menteri Negara Lingkungan Hidup Tentang Baku Mutu Biota Air Laut. KEP. No-51/MNLH/2004. Jakarta.
- Khatimah, Khusnul. 2016. Analisis Kandungan Logam Timbal (Pb) Pada *Caulerpa Racemosa* Yang Dibudidayakan Di Perairan Dusun Puntondo, Kabupaten Takalar. Skripsi. Fakultas Ilmu Kelautan Dan Perikanan, Universitas Hasanuddin.
- Kinasih, A.R.N., Purnomo, P.W., dan Ruswahyuni. 2015. Analisis Hubungan Tekstur Sedimen Dengan Bahan Organik, Logam Berat (Pb Dan Cd) Dan Makrozoobentos Di Sungai Betahwalang, Demak. Journal of Maquares Management of Aquatic Resources. Vol. 4. No.3.99-107.
- Kohongia, K.. 2002. Karakteristik Sedimen Dasar Teluk Buyat. [Skripsi]. Program Studi Ilmu Kelautan. Fakultas Perikanan dan Ilmu Kelautan-Unsrat. Manado.
- Kordi K., 2010.,Budidaya Biota Akuatik Untuk Pangan, kosmetik dan Obat-obatan. Lily Publisher. Yogyakarta. 215 Hal
- Kurniawan, M.C., Aryawati, R., dan Putri, W.A.E. 2018. Pertumbuhan Rumput Laut *Euclima Spinosum* Dengan Perlakuan Asal Thallus Dan Bobot Berbeda Di Teluk Lampung Provinsi Lampung. Maspari Journal Vol.10(2)Hal :161-168
- Lasabuda, R. 2013. Pembangunan Wilayah Pesisir Dan Lautan Dalam Perspektif Negara Kepulauan Republik Indonesia. Jurnal Ilmiah Platax. Vol. 1-2
- Liferdi, L. 2010. Efek Pemberian Fosfor Terhadap Pertumbuhan dan Status Hara Pada Bibit Manggis. Jurnal Hort. Vol. 20(1). 18-26
- Lopulisa, C. 2004. Tanah- Tanah Utama Dunia Lembaga Penerbitan Universitas Hasanuddin. Cetakan 1. Makassar
- Ma'ruf , Kasim. 2016. Makro Alga. Penebar Swadaya. Jakarta.
- Masluhah, Lilik., Indrayanti. E., Rifai. A. 2014. Sebaran Material Organik dan Zat Hara Oleh Arus Pasang Surut di Muara Sungai Demaan, Jepara. Ilmu Kelautan. Volume 19(4). Hal 189-194.
- Meirinawati, Hanny. 2015. Siklus Fosfor Di Lautan. Jurnal Oseana. Volume XI. No.4. 31-40.

- Nugroho, S. H. & Basit, A. 2013. Sebaran Sedimen Berdasarkan Analisis Ukuran Butir Di Teluk Weda, Maluku Utara. Pusat Penelitian Laut Dalam LIPI Ambon. Ambon.
- Nybakken, J.W. 1992. Biologi Laut Suatu Pendekatan Ekologis. PT Gramedia. 459 hal.
- Nybakken, J.W. 2000. Biologi Laut Suatu Pendekatan Ekologis. PT Gramedia. Jakarta.
- Olsen, S.R., C.V. Cole, F.S. Watanabe, and L.A. Dean. 1954. Estimation of available phosphorus in soils by extraction with sodium bicarbonate. USDA Circular 939. U.S. Government Printing Office, Washington D.C.
- Pakambanan, Naomi. 2016. Analisis Logam Timbal (Pb) Pada *Gracilaria Verrucosa* Yang Berasal Dari Areal Budidaya Rumput Laut Di Perairan Dusun Puntondo, Kabupaten Takalar Dan Pantai Kuri Ca'di, Kabupaten Maros. Skripsi. Fakultas Ilmu Kelautan Dan Perikanan, Universitas Hasanuddin.
- Patty, Simon., Hairati, A., Malik S.A. 2015. Zat Hara (Fosfat, Nitrat), Oksigen Terlarut Dan Ph Kaitannya Dengan Kesuburan Di Perairan Jikumerasa, Pulau Buru. Jurnal Pesisir dan Laut Tropis. Volume 1, Nomor 1.
- Pradipta, N. 2016. Studi Kandungan Nitrogen (N) Dan Fosfor (P) Pada Sedimen Mangrove Di Wilayah Ekowisata Wonorejo Surabaya Dan Pesisir Jenu Kabupaten Tuban. Skripsi. Fakultas Perikanan dan Kelautan. Program Studi Budidaya Perairan. Universitas Airlangga. Surabaya
- Pranoto, H. R., Atmodjo, W., & S, D. N. (2016). Studi Sedimentasi Pada Bangunan Groyin Di Perairan Timbulloko, Kabupaten Demak. 5, 86–95.
- Priono, B. 2013. Budidaya Rumput Laut Dalam Upaya Peningkatan Industrialisasi Perikanan. Pusat Penelitian dan Pengembangan Perikanan Budidaya
- Puspitasari, N. 2012. Keanekaragaman Makrozoobenthos Di Perairan Desa Malang Rapat Kecamatan Gunung Kijang Kabupaten Bintan Provinsi Kepulauan Riau. Skripsi Universitas Maritim Raja Ali Haji. Tanjungpinang
- Reynold, S. C. 1971. A Manual of Introductory Soil Science and Simple Soil Analysis Methods. South Pasific, Nouena New Caledonia.
- Rifardi. 2008. Ukuran Butir Sedimen Perairan Pantai Dumai Selat Rupa Bagian Timur Sumatera. Perikanan dan Ilmu Kelautan. Volume 2. Nomor 2.12-21.
- Rosyida, E., Suradwidjaja, E.H., Suseno, S.H., Supriyono, E. 2013. Teknologi Pengkayaan Unsur-Unsur N, P, Fe Pada Rumput Laut *Gracilaria verrucosa*. Jurnal Kelautan Nasional. Vol. 8 No. 3
- Saleh, M.S. 2002 . Perlakuan Fisik dan Kalium Nitrat Untuk Mempercepat Perkecambahan Benih Aren dan Pengaruhnya Terhadap Pertumbuhan Kecambah. J.Agroland 9(4): 36–330.
- Serdiati, Novalina., Widiastuti I.M. 2010. Pertumbuhan Dan Produksi Rumput Laut *Euclima cottonii* Pada Kedalaman Penanaman Yang Berbeda. Media Litbang Sulteng III (I). Hal 21-26.
- Setiadi, R., Mihardja, K., Dadang, 1988. Makalah : Analisis Pasang-Surut di Daerah Cilacap dan Surabaya, PASANG-SURUT, Lembaga Ilmu Pengetahuan Indonesia, Pusat Penelitian dan Pengembangan Oseanologi, Jakarta.

- Setiapermana, Deddy. 2006. Siklus Nitrogen Di Laut. *Jurnal Oseana*. Volume XXXI. No. 2. Hal : 19-31.
- Silvia, Mega., Vanny,M.A.T., Irwan, Said. 2014. Distribusi Unsur Hara N Dan P Dalam Sedimen Di Ekosistem Lamun (Seagrass) Di Wilayah Pesisir Desa Kabonga Besar Kabupaten Donggala. Universitas Tadulako.
- Subandi. 2013. Peran Dan Pengelolaan Hara Kalium Untuk Produksi Pangan Di Indonesia. Balai Penelitian Kacang-kacangan dan Umbi-umbian. Malang
- Suharianto, Benny. 2016. Analisa Karakteristik Ketebalan Sedimen Di Dasar Perairan Senggarang Kelurahan Senggarang Kota Tanjungpinang. Skripsi Universitas Maritim Raja Ali Haj.i Tanjungpinang
- Sundareshwar, P.V., & J.T. Morris. 1999. Phosphorus Sorption Characteristics of intertidal marsh sediment along an estuarine salinity gradient. *Limnol. Oceanogr.* 44: 1693-1701.
- Surinati, Dewi. 2007. Pasang Surut Dan Energinya. *Oseana*. Volume 32. Nomor 1. Halaman 15-22.
- Sutanto, Rachman. 2005. Dasar-Dasar Ilmu Tanah Konsep dan Kenyataan. Penerbit Kanisius. Yogyakarta.
- Sutika, N., 1989. Ilmu Air. Universitas Padjadjaran. Bunpad Bandung. Bandung.
- Thurman, H. V. and A. P. Trujillo. 2004. *Introductory Oceanography*. Pearson Prentice Hall. New Jersey. 608 hlm.
- Tinsley, I. J. 1979. *Chemical Concepts in Pollutant Behavior*. John Wiley & Sons, New York.
- Umaternate, Ghazali. R., Abidjulu, J., Wuntu, A.D. 2014. Uji Metode Olsen dan Bray dalam Menganalisis Kandungan Fosfat Tersedia pada Tanah Sawah di Desa Konarom Barat Kecamatan Dumoga Utara. *Jurnal Mipa Unsrat Online* 3 (1) 6-10.
- Wardoyo, S.T.H. 1975. *Pengelolaan Kualitas Air*. Institute Pertanian Bogor, Bogor. 1-40
- Wibisono, M. S. 2005. *Pengantar Ilmu Kelautan*. Penerbit PT. Grasindo. Jakarta .
- Wijayanto, T., Hendri, M., dan Aryawati, R. 2011. Studi Pertumbuhan Rumput Laut *Euचेuma cottonii* dengan Berbagai Metode Penanaman yang berbeda di Perairan Kalianda, Lampung Selatan. Program Studi Ilmu Kelautan FMIPA Universitas Sriwijaya. *Indralaya Indonesia*. Vol. 03 Hal : 51-57
- Yuanto, T.F., Ruswahyuni & N. Widyorini. 2014. Kerapatan Rumput Laut Pada Kedalaman yang Berbeda Di Perairan Pantai Bandengan Jepara. *Diponegoro Journal of Maquares*. Vol 3 No 2 : 58-65.
- Yulma., Gazali. S.,Yakob. S. 2018. Analisis Bahan Organik Nitrogen (N) dan Fosfor (P) Pada Sedimen Di Kawasan Konservasi Mangrove Dan Bekantan (KKMB) Kota Tarakan. *Jurnal Borneo Saintek*. Volume 1. Nomor 2. Hal 75-82.
- Zuraida, R., Gerhaneu, N.Y., Sulistyawan, I.H. 2017. Karakteristik Sedimen Pantai Dan Dasar Laut Di Teluk Papela, Kabupaten Rote, Provinsi Ntt. *Jurnal Geologi Kelautan* Vol.15 No. 2

# LAMPIRAN

**Lampiran 1. Hasil Analisis Kandungan Nitrogen di Sedimen**

<b>KANDUNGAN NITROGEN</b>			
<b>Stasiun</b>		<b>N (%)</b>	<b>N (ppm)</b>
Stasiun 1	S1.1	0.10	10
	S1.2	0.14	14
	S1.3	0.22	22
	Rata-rata	0.15	15.33
Stasiun 2	S2.1	0.11	11
	S2.2	0.16	16
	S2.3	0.19	19
	Rata-rata	0.15	15.33
Stasiun 3	S3.1	0.22	22
	S3.2	0.19	19
	S3.3	0.30	30
	Rata-rata	0.24	23.67
Stasiun 4	S4.1	0.22	22
	S4.2	0.25	25
	S4.3	0.13	13
	Rata-rata	0.20	20
Stasiun 5	S5.1	0.28	28
	S5.2	0.22	22
	S5.3	0.25	25
	Rata-rata	0.25	25

**Lampiran 2. Hasil Analisis Kandungan Fosfor di Sedimen**

<b>KANDUNGAN PHOSFOR</b>		
<b>Stasiun</b>		<b>P(ppm)</b>
Stasiun 1	S1.1	15.43
	S1.2	14.32
	S1.3	15.26
	Rata-rata	15.00
Stasiun 2	S2.1	13.44
	S2.2	14.89
	S2.3	19.23
	Rata-rata	15.85
Stasiun 3	S3.1	15.98
	S3.2	17.94
	S3.3	22.29
	Rata-rata	18.74
Stasiun 4	S4.1	19.23
	S4.2	25.05
	S4.3	26.82
	Rata-rata	23.70
Stasiun 5	S5.1	21.04
	S5.2	24.47
	S5.3	17.72
	Rata-rata	21.08



**Lampiran 3. Hasil Uji Statistik One Way ANOVA Nitrogen antar stasiun**

**Descriptives**

NITROGEN

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
STASIUN 1	3	15.3333	6.11010	3.52767	.1550	30.5117	10.00	22.00
STASIUN 2	3	15.3333	4.04145	2.33333	5.2938	25.3729	11.00	19.00
STASIUN 3	3	23.6667	5.68624	3.28295	9.5413	37.7921	19.00	30.00
STASIUN 4	3	20.0000	6.24500	3.60555	4.4866	35.5134	13.00	25.00
STASIUN 5	3	25.0000	3.00000	1.73205	17.5476	32.4524	22.00	28.00
Total	15	19.8667	6.05766	1.56408	16.5120	23.2213	10.00	30.00

**Test of Homogeneity of Variances**

NITROGEN

Levene Statistic	df1	df2	Sig.
.751	4	10	.580

**ANOVA**

NITROGEN

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	245.733	4	61.433	2.292	.131
Within Groups	268.000	10	26.800		
Total	513.733	14			

### Lampiran 4. Hasil Uji Statistik One Way ANOVA Fosfor antar stasiun

#### Descriptives

FOSFOR

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					STASIUN 1	3		
STASIUN 2	3	15.8533	3.01281	1.73945	8.3691	23.3376	13.44	19.23
STASIUN 3	3	18.7367	3.22956	1.86459	10.7140	26.7593	15.98	22.29
STASIUN 4	3	23.7000	3.97101	2.29266	13.8355	33.5645	19.23	26.82
STASIUN 5	3	21.0767	3.37515	1.94864	12.6923	29.4610	17.72	24.47
Total	15	18.8740	4.23297	1.09295	16.5299	21.2181	13.44	26.82

#### Test of Homogeneity of Variances

FOSFOR

Levene Statistic	df1	df2	Sig.
1.389	4	10	.306

#### ANOVA

FOSFOR

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	156.802	4	39.201	4.168	.031
Within Groups	94.050	10	9.405		
Total	250.852	14			

### Multiple Comparisons

Dependent Variable: FOSFOR

Tukey HSD

(I) STASIUN	(J) STASIUN	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
STASIUN 1	STASIUN 2	-.85000	2.50400	.997	-9.0909	7.3909
	STASIUN 3	-3.73333	2.50400	.590	-11.9742	4.5075
	STASIUN 4	-8.69667*	2.50400	.038	-16.9375	-.4558
	STASIUN 5	-6.07333	2.50400	.185	-14.3142	2.1675
STASIUN 2	STASIUN 1	.85000	2.50400	.997	-7.3909	9.0909
	STASIUN 3	-2.88333	2.50400	.777	-11.1242	5.3575
	STASIUN 4	-7.84667	2.50400	.064	-16.0875	.3942
	STASIUN 5	-5.22333	2.50400	.297	-13.4642	3.0175
STASIUN 3	STASIUN 1	3.73333	2.50400	.590	-4.5075	11.9742
	STASIUN 2	2.88333	2.50400	.777	-5.3575	11.1242
	STASIUN 4	-4.96333	2.50400	.339	-13.2042	3.2775
	STASIUN 5	-2.34000	2.50400	.877	-10.5809	5.9009
STASIUN 4	STASIUN 1	8.69667*	2.50400	.038	.4558	16.9375
	STASIUN 2	7.84667	2.50400	.064	-.3942	16.0875
	STASIUN 3	4.96333	2.50400	.339	-3.2775	13.2042
	STASIUN 5	2.62333	2.50400	.828	-5.6175	10.8642
STASIUN 5	STASIUN 1	6.07333	2.50400	.185	-2.1675	14.3142
	STASIUN 2	5.22333	2.50400	.297	-3.0175	13.4642
	STASIUN 3	2.34000	2.50400	.877	-5.9009	10.5809
	STASIUN 4	-2.62333	2.50400	.828	-10.8642	5.6175

\*. The mean difference is significant at the 0.05 level.

### FOSFOR

Tukey HSD<sup>a</sup>

STASIUN	N	Subset for alpha = 0.05	
		1	2
STASIUN 1	3	15.0033	
STASIUN 2	3	15.8533	15.8533
STASIUN 3	3	18.7367	18.7367
STASIUN 5	3	21.0767	21.0767
STASIUN 4	3		23.7000
Sig.		.185	.064

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

**Lampiran 5. Hasil Uji Statistik Korelasi Pearson BOT- NITROGEN - FOSFOR STASIUN 1**

**Correlations**

		BOT	FOSFOR	NITROGEN
BOT	Pearson Correlation	1	1.000**	.064
	Sig. (1-tailed)		.005	.480
	N	3	3	3
FOSFOR	Pearson Correlation	1.000**	1	.047
	Sig. (1-tailed)	.005		.485
	N	3	3	3
NITROGE N	Pearson Correlation	.064	.047	1
	Sig. (1-tailed)	.480	.485	
	N	3	3	3

\*\* . Correlation is significant at the 0.01 level (1-tailed).

**STASIUN 2**

**Correlations**

		BOT	FOSFOR	NITROGEN
BOT	Pearson Correlation	1	.876	.601
	Sig. (1-tailed)		.160	.295
	N	3	3	3
FOSFOR	Pearson Correlation	.876	1	.911
	Sig. (1-tailed)	.160		.135
	N	3	3	3
NITROGE N	Pearson Correlation	.601	.911	1
	Sig. (1-tailed)	.295	.135	
	N	3	3	3

STASIUN 3

**Correlations**

		BOT	FOSFOR	NITROGEN
BOT	Pearson Correlation	1	-.787	-.324
	Sig. (1-tailed)		.212	.395
	N	3	3	3
FOSFOR	Pearson Correlation	-.787	1	.839
	Sig. (1-tailed)	.212		.183
	N	3	3	3
NITROGE N	Pearson Correlation	-.324	.839	1
	Sig. (1-tailed)	.395	.183	
	N	3	3	3

STASIUN 4

**Correlations**

		BOT	FOSFOR	NITROGEN
BOT	Pearson Correlation	1	-.937	.760
	Sig. (1-tailed)		.114	.225
	N	3	3	3
FOSFOR	Pearson Correlation	-.937	1	-.484
	Sig. (1-tailed)	.114		.339
	N	3	3	3
NITROGE N	Pearson Correlation	.760	-.484	1
	Sig. (1-tailed)	.225	.339	
	N	3	3	3

STASIUN 5

**Correlations**

		BOT	FOSFOR	NITROGEN
BOT	Pearson Correlation	1	-.547	-.444
	Sig. (1-tailed)		.316	.354
	N	3	3	3
FOSFOR	Pearson Correlation	-.547	1	-.508
	Sig. (1-tailed)	.316		.330
	N	3	3	3
NITROGEN	Pearson Correlation	-.444	-.508	1
	Sig. (1-tailed)	.354	.330	
	N	3	3	3

**Lampiran 6. Kecepatan Arus**

<b>Stasiun</b>	<b>SubStasiun</b>	<b>Jarak (m)</b>	<b>Waktu (t)</b>	<b>Konversi Waktu (s)</b>	<b>Kecepatan Arus (m/s)</b>
1	1.1	10	8'9"	489	0.02
	1.2		7'20"	440	0.02
	1.3		7'47"	467	0.02
2	2.1	10	4'32"	272	0.04
	2.2		5'8"	308	0.03
	2.3		4'41"	281	0.04
3	3.1	10	3'18"	198	0.05
	3.2		4'20"	260	0.04
	3.3		5'10"	310	0.03
4	4.1	10	2'18"	138	0.07
	4.2		2'22"	142	0.07
	4.3		2'52"	172	0.06
5	5.1	10	6'20"	380	0.03
	5.2		4'45"	285	0.04
	5.3		4'2"	242	0.04

**Lampiran 7. Data Parameter Oseanografi Fisika dan Kimia**

<b>Ulangan</b>	<b>Parameter Fisik Kimia</b>	<b>S1</b>	<b>S2</b>	<b>S3</b>	<b>S4</b>	<b>S5</b>
<b>1</b>	<b>Suhu (°C)</b>	27	27	28	28	28
<b>2</b>		28	28	28	28	28
<b>3</b>		28	28	29	29	28
	<b>Rata-rata</b>	27.7	27.7	28.3	28.3	28
<b>1</b>	<b>Salinitas (‰)</b>	34	33	33	31	34
<b>2</b>		33	33	32	33	33
<b>3</b>		34	33	31	33	33
	<b>Rata-rata</b>	33.7	33.0	32.0	32.3	33.3
<b>1</b>	<b>Kecepatan Arus (m/s)</b>	0.02	0.04	0.05	0.07	0.03
<b>2</b>		0.02	0.03	0.04	0.07	0.04
<b>3</b>		0.02	0.04	0.03	0.06	0.04
	<b>Rata-rata</b>	0.02	0.04	0.04	0.07	0.04
<b>1</b>	<b>pH</b>	7.39	7.08	7.09	8.00	7.09
<b>2</b>		7.08	7.08	7.08	7.08	8.00
<b>3</b>		7.09	7.08	7.09	8.00	8.00
	<b>Rata-rata</b>	7.19	7.08	7.09	7.69	7.70
<b>1</b>	<b>BOT (mg/L)</b>	20.65	4.10	20.32	5.49	18.37
<b>2</b>		8.22	3.93	16.73	4.17	18.93
<b>3</b>		18.95	4.57	16.41	2.55	19.63
	<b>Rata-rata</b>	15.94	4.20	17.82	4.07	18.98
<b>1</b>	<b>Kekeruhan (NTU)</b>	3.15	3.49	6.38	2.16	3.73
<b>2</b>		4.59	3.58	3.43	2.3	3.40
<b>3</b>		3.41	2.27	4.09	2.09	3.01
	<b>Rata-rata</b>	3.72	3.11	4.63	2.18	3.38



**Lampiran 8. Data Kedalaman**

Stasiun	Sub Stasiun	Waktu	Kedalaman (m)	Koreksi	Kedalaman terkoreksi	Rata-Rata
I	I.I	10:23	8.09	5.7	7.5	6.5
	I.II	10:45	5.13	2.7	4.5	
	I.III	11:00	8.08	5.8	7.6	
II	II.I	11:09	9.09	6.8	8.6	8.7
	II.II	11:20	9.26	7.0	8.8	
	II.III	11:36	9.22	6.9	8.7	
III	III.I	11:50	1.25	-1.1	0.8	1.0
	III.II	12:20	1.40	-0.7	1.1	
	III.III	12:40	1.36	-0.7	1.1	
IV	IV.I	12:50	1.04	-1.1	0.7	0.3
	IV.II	13:02	0.09	-1.7	0.1	
	IV.III	13:38	0.07	-1.7	0.1	
V	V.I	14:11	8.94	7.4	9.2	8.8
	V.II	14:23	8.56	7.1	8.9	
	V.III	14:50	8.10	6.6	8.4	

**Lampiran 9. Data Hasil Analisis BOT**

No.	Berat cawan kosong (gr)	Berat Sampel (gr)	B.ck + B.sp (B.awal)	Berat Setelah Pijar (B.akhir)	B.aw - B.ak (Kandungan Bahan Organik)	Berat BO/B.sampel	%	LOI
1.1	11.575	5.013	16.588	15.553	1.035	0.206	100	20.65
	11.774	5.003	16.777	16.366	0.411	0.082	100	8.22
	12.021	5.013	17.034	16.084	0.95	0.190	100	18.95
2.1	27.240	5.004	32.244	32.039	0.205	0.041	100	4.10
	28.025	5.011	33.036	32.839	0.197	0.039	100	3.93
	26.856	5.010	31.866	31.637	0.229	0.046	100	4.57
3.1	28.301	5.006	33.307	32.29	1.017	0.203	100	20.32
	27.027	5.002	32.029	31.192	0.837	0.167	100	16.73
	29.025	5.008	34.033	33.211	0.822	0.164	100	16.41
4.1	27.775	5.012	32.787	32.512	0.275	0.055	100	5.49
	30.799	5.011	35.810	35.601	0.209	0.042	100	4.17
	28.513	5.011	33.524	33.396	0.128	0.026	100	2.55
5.1	13.340	5.002	18.342	17.423	0.919	0.184	100	18.37
	11.855	5.002	16.857	15.91	0.947	0.189	100	18.93
	11.702	5.007	16.709	15.726	0.983	0.196	100	19.63

**Lampiran 10. Data Hasil Analisis Ukuran Butir Sedimen**

Stasiun	Substasiun		Berat Hasil Ayakan (gr)					
			2 mm	1 mm	0,5 mm	0,25 mm	0,125 mm	0,063 mm
1	1.1		18		52		30	
	1.2		28		57		15	
	1.3		21		55		24	
		rata-rata	22.33		54.67		23	
2	2.1		18		64		19	
	2.2		19		60		21	
	2.3		28		49		23	
		rata-rata	21.67		57.67		21	
3	3.1		25		52		22	
	3.2		15		50		35	
	3.3		21		51		28	
		rata-rata	20.33		51		28.33	
4	4.1		11		67		22	
	4.2		9		67		24	
	4.3		11		67		22	
		rata-rata	10.33		67		22.67	
5	5.1		9		69		22	
	5.2		9		65		26	
	5.3		10		56		34	
		rata-rata	9.33		63.33		27.33	

## Lampiran 11. Data Hasil Analisis Gradistat

### STASIUN I

#### STASIUN I.1

SAMPLE STATISTICS						
SAMPLE IDENTITY: <b>SEDIMEN</b>			ANALYST & DATE: BESAR BUTIR,			
SAMPLE TYPE: Polymodal, Poorly Sorted			TEXTURAL GROUP: Slightly Gravelly Sand			
SEDIMENT NAME: Slightly Very Fine Gravelly Medium Sand						
	$\mu\text{m}$	$\phi$	GRAIN SIZE DISTRIBUTION			
MODE 1:	302.5	1.747	GRAVEL:	2.6%	COARSE SAND:	24.9%
MODE 2:	605.0	0.747	SAND:	97.1%	MEDIUM SAND:	26.8%
MODE 3:	152.5	2.737	MUD:	0.3%	FINE SAND:	25.8%
D <sub>10</sub> :	134.9	-0.251			V FINE SAND:	4.3%
MEDIAN or D <sub>50</sub> :	323.4	1.629	V COARSE GRAVEL:	0.0%	V COARSE SILT:	0.1%
D <sub>90</sub> :	1189.8	2.890	COARSE GRAVEL:	0.0%	COARSE SILT:	0.1%
(D <sub>90</sub> / D <sub>10</sub> ):	8.818	-11.524	MEDIUM GRAVEL:	0.0%	MEDIUM SILT:	0.1%
(D <sub>90</sub> - D <sub>10</sub> ):	1054.9	3.140	FINE GRAVEL:	0.0%	FINE SILT:	0.1%
(D <sub>75</sub> / D <sub>25</sub> ):	3.853	4.053	V FINE GRAVEL:	2.6%	V FINE SILT:	0.1%
(D <sub>75</sub> - D <sub>25</sub> ):	476.0	1.946	V COARSE SAND:	15.3%	CLAY:	0.1%
	METHOD OF MOMENTS		FOLK & WARD METHOD			
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	$\mu\text{m}$	$\mu\text{m}$	$\phi$	$\mu\text{m}$	$\phi$	
MEAN ( $\bar{x}$ ):	520.7	360.7	1.471	367.3	1.445	Medium Sand
SORTING ( $\sigma$ ):	469.7	2.348	1.231	2.333	1.222	Poorly Sorted
SKEWNESS ( $S_k$ ):	1.928	-0.080	0.080	0.197	-0.197	Coarse Skewed
KURTOSIS ( $K$ ):	7.434	3.210	3.210	0.716	0.716	Platykurtic
Setelah dibagi 1000						
0.3673						

#### STASIUN I.2

SAMPLE STATISTICS						
SAMPLE IDENTITY: <b>SEDIMEN</b>			ANALYST & DATE: BESAR BUTIR,			
SAMPLE TYPE: Polymodal, Poorly Sorted			TEXTURAL GROUP: Gravelly Sand			
SEDIMENT NAME: Very Fine Gravelly Coarse Sand						
	$\mu\text{m}$	$\phi$	GRAIN SIZE DISTRIBUTION			
MODE 1:	605.0	0.747	GRAVEL:	8.4%	COARSE SAND:	28.9%
MODE 2:	302.5	1.747	SAND:	91.5%	MEDIUM SAND:	27.8%
MODE 3:	1200.0	-0.243	MUD:	0.1%	FINE SAND:	12.7%
D <sub>10</sub> :	154.5	-0.445			V FINE SAND:	2.5%
MEDIAN or D <sub>50</sub> :	543.8	0.879	V COARSE GRAVEL:	0.0%	V COARSE SILT:	0.0%
D <sub>90</sub> :	1361.4	2.694	COARSE GRAVEL:	0.0%	COARSE SILT:	0.0%
(D <sub>90</sub> / D <sub>10</sub> ):	8.811	-6.053	MEDIUM GRAVEL:	0.0%	MEDIUM SILT:	0.0%
(D <sub>90</sub> - D <sub>10</sub> ):	1206.9	3.139	FINE GRAVEL:	0.0%	FINE SILT:	0.0%
(D <sub>75</sub> / D <sub>25</sub> ):	3.728	-24.394	V FINE GRAVEL:	8.4%	V FINE SILT:	0.0%
(D <sub>75</sub> - D <sub>25</sub> ):	770.7	1.898	V COARSE SAND:	19.7%	CLAY:	0.0%
	METHOD OF MOMENTS		FOLK & WARD METHOD			
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	$\mu\text{m}$	$\mu\text{m}$	$\phi$	$\mu\text{m}$	$\phi$	
MEAN ( $\bar{x}$ ):	716.8	500.8	0.998	552.3	0.856	Coarse Sand
SORTING ( $\sigma$ ):	620.8	2.340	1.227	2.284	1.192	Poorly Sorted
SKEWNESS ( $S_k$ ):	1.551	-0.104	0.104	0.021	-0.021	Symmetrical
KURTOSIS ( $K$ ):	4.764	2.873	2.873	0.884	0.884	Platykurtic
Setelah dibagi 1000						
0.5523						

### STASIUN I.3

<b>SAMPLE STATISTICS</b>						
SAMPLE IDENTITY: <b>SEDIMEN</b>			ANALYST & DATE: BESAR BUTIR,			
SAMPLE TYPE: Polymodal, Poorly Sorted			TEXTURAL GROUP: Slightly Gravelly Sand			
SEDIMENT NAME: Slightly Very Fine Gravelly Coarse Sand						
	$\mu\text{m}$	$\phi$	GRAIN SIZE DISTRIBUTION			
MODE 1:	605.0	0.747	GRAVEL: 2.7%	COARSE SAND: 31.3%		
MODE 2:	302.5	1.747	SAND: 97.2%	MEDIUM SAND: 23.8%		
MODE 3:	152.5	2.737	MUD: 0.1%	FINE SAND: 21.5%		
$D_{10}$ :	142.2	-0.293		V FINE SAND: 2.3%		
MEDIAN or $D_{50}$ :	513.1	0.963	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%		
$D_{90}$ :	1224.9	2.814	COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%		
$(D_{90} / D_{10})$ :	8.615	-9.615	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%		
$(D_{90} - D_{10})$ :	1082.8	3.107	FINE GRAVEL: 0.0%	FINE SILT: 0.0%		
$(D_{75} / D_{25})$ :	2.674	3.542	V FINE GRAVEL: 2.7%	V FINE SILT: 0.0%		
$(D_{75} - D_{25})$ :	425.2	1.419	V COARSE SAND: 18.3%	CLAY: 0.0%		
	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	$\mu\text{m}$	$\mu\text{m}$	$\phi$	$\mu\text{m}$	$\phi$	
MEAN ( $\bar{x}$ ):	580.9	419.9	1.252	445.8	1.165	Medium Sand
SORTING ( $\sigma$ ):	474.0	2.245	1.167	2.313	1.210	Poorly Sorted
SKEWNESS ( $S_k$ ):	1.713	-0.106	0.106	-0.196	0.196	Fine Skewed
KURTOSIS ( $K$ ):	6.650	2.602	2.602	0.971	0.971	Mesokurtic

Setelah dibagi 1000

0.4458

### STASIUN II

#### STASIUN II.1

<b>SAMPLE STATISTICS</b>						
SAMPLE IDENTITY: <b>SEDIMEN</b>			ANALYST & DATE: BESAR BUTIR,			
SAMPLE TYPE: Polymodal, Poorly Sorted			TEXTURAL GROUP: Slightly Gravelly Sand			
SEDIMENT NAME: Slightly Very Fine Gravelly Coarse Sand						
	$\mu\text{m}$	$\phi$	GRAIN SIZE DISTRIBUTION			
MODE 1:	605.0	0.747	GRAVEL: 1.6%	COARSE SAND: 35.1%		
MODE 2:	302.5	1.747	SAND: 98.3%	MEDIUM SAND: 28.5%		
MODE 3:	1200.0	-0.243	MUD: 0.1%	FINE SAND: 17.1%		
$D_{10}$ :	149.5	-0.232		V FINE SAND: 1.5%		
MEDIAN or $D_{50}$ :	514.0	0.960	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%		
$D_{90}$ :	1174.7	2.741	COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%		
$(D_{90} / D_{10})$ :	7.856	-11.800	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%		
$(D_{90} - D_{10})$ :	1025.2	2.974	FINE GRAVEL: 0.0%	FINE SILT: 0.0%		
$(D_{75} / D_{25})$ :	2.443	3.149	V FINE GRAVEL: 1.6%	V FINE SILT: 0.0%		
$(D_{75} - D_{25})$ :	389.8	1.289	V COARSE SAND: 16.0%	CLAY: 0.0%		
	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	$\mu\text{m}$	$\mu\text{m}$	$\phi$	$\mu\text{m}$	$\phi$	
MEAN ( $\bar{x}$ ):	557.6	425.8	1.232	448.9	1.155	Medium Sand
SORTING ( $\sigma$ ):	415.7	2.079	1.056	2.217	1.149	Poorly Sorted
SKEWNESS ( $S_k$ ):	1.765	-0.173	0.173	-0.202	0.202	Fine Skewed
KURTOSIS ( $K$ ):	7.441	2.993	2.993	1.043	1.043	Mesokurtic

Setelah dibagi 1000

0.4489

## STASIUN II.2

<b>SAMPLE STATISTICS</b>						
SAMPLE IDENTITY: <b>SEDIMEN</b>			ANALYST & DATE: BESAR BUTIR,			
SAMPLE TYPE: Polymodal, Poorly Sorted			TEXTURAL GROUP: Slightly Gravelly Sand			
SEDIMENT NAME: Slightly Very Fine Gravelly Coarse Sand						
	$\mu\text{m}$	$\phi$	GRAIN SIZE DISTRIBUTION			
MODE 1:	605.0	0.747	GRAVEL: 2.3%	COARSE SAND: 30.8%		
MODE 2:	302.5	1.747	SAND: 97.6%	MEDIUM SAND: 29.2%		
MODE 3:	152.5	2.737	MUD: 0.1%	FINE SAND: 18.9%		
D <sub>10</sub> :	145.7	-0.261		V FINE SAND: 2.0%		
MEDIAN or D <sub>50</sub> :	354.1	1.498	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%		
D <sub>90</sub> :	1198.4	2.779	COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%		
(D <sub>90</sub> / D <sub>10</sub> ):	8.227	-10.645	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%		
(D <sub>90</sub> - D <sub>10</sub> ):	1052.7	3.040	FINE GRAVEL: 0.0%	FINE SILT: 0.0%		
(D <sub>75</sub> / D <sub>25</sub> ):	2.527	3.255	V FINE GRAVEL: 2.3%	V FINE SILT: 0.0%		
(D <sub>75</sub> - D <sub>25</sub> ):	400.6	1.337	V COARSE SAND: 16.7%	CLAY: 0.0%		
	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	$\mu\text{m}$	$\mu\text{m}$	$\phi$	$\mu\text{m}$	$\phi$	
MEAN ( $\bar{x}$ ):	560.4	414.9	1.269	394.6	1.341	Medium Sand
SORTING ( $\sigma$ ):	449.8	2.156	1.108	2.263	1.178	Poorly Sorted
SKEWNESS ( $S_k$ ):	1.829	-0.056	0.056	0.160	-0.160	Coarse Skewed
KURTOSIS ( $K$ ):	7.295	2.780	2.780	1.019	1.019	Mesokurtic
						Setelah dibagi 1000
						0.3946

## STASIUN II.3

<b>SAMPLE STATISTICS</b>						
SAMPLE IDENTITY: <b>SEDIMEN</b>			ANALYST & DATE: BESAR BUTIR,			
SAMPLE TYPE: Polymodal, Poorly Sorted			TEXTURAL GROUP: Gravelly Sand			
SEDIMENT NAME: Very Fine Gravelly Coarse Sand						
	$\mu\text{m}$	$\phi$	GRAIN SIZE DISTRIBUTION			
MODE 1:	605.0	0.747	GRAVEL: 5.9%	COARSE SAND: 27.5%		
MODE 2:	1200.0	-0.243	SAND: 93.5%	MEDIUM SAND: 21.3%		
MODE 3:	302.5	1.747	MUD: 0.6%	FINE SAND: 21.1%		
D <sub>10</sub> :	143.7	-0.395		V FINE SAND: 1.3%		
MEDIAN or D <sub>50</sub> :	536.9	0.897	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.1%		
D <sub>90</sub> :	1315.2	2.799	COARSE GRAVEL: 0.0%	COARSE SILT: 0.1%		
(D <sub>90</sub> / D <sub>10</sub> ):	9.155	-7.081	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.1%		
(D <sub>90</sub> - D <sub>10</sub> ):	1171.6	3.195	FINE GRAVEL: 0.0%	FINE SILT: 0.1%		
(D <sub>75</sub> / D <sub>25</sub> ):	4.059	-29.170	V FINE GRAVEL: 5.9%	V FINE SILT: 0.1%		
(D <sub>75</sub> - D <sub>25</sub> ):	789.4	2.021	V COARSE SAND: 22.2%	CLAY: 0.1%		
	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	$\mu\text{m}$	$\mu\text{m}$	$\phi$	$\mu\text{m}$	$\phi$	
MEAN ( $\bar{x}$ ):	671.9	459.2	1.123	468.3	1.094	Medium Sand
SORTING ( $\sigma$ ):	576.3	2.483	1.312	2.521	1.334	Poorly Sorted
SKEWNESS ( $S_k$ ):	1.523	-0.484	0.484	-0.109	0.109	Fine Skewed
KURTOSIS ( $K$ ):	5.114	4.115	4.115	0.810	0.810	Platykurtic
						Setelah dibagi 1000
						0.4683

### STASIUN III

#### STASIUN III.1

<b>SAMPLE STATISTICS</b>						
SAMPLE IDENTITY: <b>SEDIMEN</b>			ANALYST & DATE: BESAR BUTIR,			
SAMPLE TYPE: Polymodal, Poorly Sorted			TEXTURAL GROUP: Slightly Gravelly Sand			
SEDIMENT NAME: Slightly Very Fine Gravelly Coarse Sand						
	$\mu\text{m}$	$\phi$	GRAIN SIZE DISTRIBUTION			
MODE 1:	605.0	0.747	GRAVEL: 4.0%	COARSE SAND: 28.3%		
MODE 2:	302.5	1.747	SAND: 95.9%	MEDIUM SAND: 24.1%		
MODE 3:	1200.0	-0.243	MUD: 0.1%	FINE SAND: 20.2%		
$D_{10}$ :	144.6	-0.349		V FINE SAND: 1.8%		
MEDIAN or $D_{50}$ :	523.6	0.933	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%		
$D_{90}$ :	1274.0	2.790	COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%		
$(D_{90} / D_{10})$ :	8.811	-7.986	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%		
$(D_{90} - D_{10})$ :	1129.4	3.139	FINE GRAVEL: 0.0%	FINE SILT: 0.0%		
$(D_{75} / D_{25})$ :	3.862	#####	V FINE GRAVEL: 4.0%	V FINE SILT: 0.0%		
$(D_{75} - D_{25})$ :	745.9	1.949	V COARSE SAND: 21.4%	CLAY: 0.0%		
	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	$\mu\text{m}$	$\mu\text{m}$	$\phi$	$\mu\text{m}$	$\phi$	
MEAN ( $\bar{x}$ ):	629.5	447.7	1.160	460.8	1.118	Medium Sand
SORTING ( $\sigma$ ):	522.4	2.296	1.199	2.336	1.224	Poorly Sorted
SKEWNESS ( $S_k$ ):	1.599	-0.098	0.098	-0.185	0.185	Fine Skewed
KURTOSIS ( $K$ ):	5.780	2.556	2.556	0.711	0.711	Platykurtic

Setelah dibagi 1000

0.4608

#### STASIUN III.2

<b>SAMPLE STATISTICS</b>						
SAMPLE IDENTITY: <b>SEDIMEN</b>			ANALYST & DATE: BESAR BUTIR,			
SAMPLE TYPE: Polymodal, Poorly Sorted			TEXTURAL GROUP: Gravelly Sand			
SEDIMENT NAME: Very Fine Gravelly Medium Sand						
	$\mu\text{m}$	$\phi$	GRAIN SIZE DISTRIBUTION			
MODE 1:	302.5	1.747	GRAVEL: 5.5%	COARSE SAND: 20.3%		
MODE 2:	152.5	2.737	SAND: 94.1%	MEDIUM SAND: 30.2%		
MODE 3:	605.0	0.747	MUD: 0.4%	FINE SAND: 28.0%		
$D_{10}$ :	130.2	-0.246		V FINE SAND: 6.4%		
MEDIAN or $D_{50}$ :	297.9	1.747	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.1%		
$D_{90}$ :	1185.8	2.941	COARSE GRAVEL: 0.0%	COARSE SILT: 0.1%		
$(D_{90} / D_{10})$ :	9.105	-11.963	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.1%		
$(D_{90} - D_{10})$ :	1055.5	3.187	FINE GRAVEL: 0.0%	FINE SILT: 0.1%		
$(D_{75} / D_{25})$ :	3.748	3.530	V FINE GRAVEL: 5.5%	V FINE SILT: 0.1%		
$(D_{75} - D_{25})$ :	434.9	1.906	V COARSE SAND: 9.1%	CLAY: 0.1%		
	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	$\mu\text{m}$	$\mu\text{m}$	$\phi$	$\mu\text{m}$	$\phi$	
MEAN ( $\bar{x}$ ):	503.3	324.1	1.626	307.5	1.701	Medium Sand
SORTING ( $\sigma$ ):	551.0	2.458	1.298	2.431	1.282	Poorly Sorted
SKEWNESS ( $S_k$ ):	2.310	0.181	-0.181	0.128	-0.128	Coarse Skewed
KURTOSIS ( $K$ ):	8.036	3.573	3.573	1.003	1.003	Mesokurtic

Setelah dibagi 1000

0.3075

### STASIUN III.3

<b>SAMPLE STATISTICS</b>						
SAMPLE IDENTITY: <b>SEDIMEN</b>			ANALYST & DATE: BESAR BUTIR,			
SAMPLE TYPE: Polymodal, Poorly Sorted			TEXTURAL GROUP: Gravelly Sand			
SEDIMENT NAME: Very Fine Gravelly Medium Sand						
	$\mu\text{m}$	$\phi$	GRAIN SIZE DISTRIBUTION			
MODE 1:	302.5	1.747	GRAVEL: 9.2%		COARSE SAND: 23.4%	
MODE 2:	605.0	0.747	SAND: 90.5%		MEDIUM SAND: 27.3%	
MODE 3:	152.5	2.737	MUD: 0.3%		FINE SAND: 21.8%	
$D_{10}$ :	133.0	-0.452			V FINE SAND: 6.0%	
MEDIAN or $D_{50}$ :	331.0	1.595	V COARSE GRAVEL: 0.0%		V COARSE SILT: 0.1%	
$D_{90}$ :	1367.6	2.911	COARSE GRAVEL: 0.0%		COARSE SILT: 0.1%	
$(D_{90} / D_{10})$ :	10.29	-6.445	MEDIUM GRAVEL: 0.0%		MEDIUM SILT: 0.1%	
$(D_{90} - D_{10})$ :	1234.7	3.363	FINE GRAVEL: 0.0%		FINE SILT: 0.1%	
$(D_{75} / D_{25})$ :	3.923	4.416	V FINE GRAVEL: 9.2%		V FINE SILT: 0.1%	
$(D_{75} - D_{25})$ :	499.4	1.972	V COARSE SAND: 12.0%		CLAY: 0.1%	
	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	$\mu\text{m}$	$\mu\text{m}$	$\phi$	$\mu\text{m}$	$\phi$	
MEAN ( $\bar{x}$ ):	626.0	391.8	1.352	383.1	1.384	Medium Sand
SORTING ( $\sigma$ ):	651.8	2.604	1.381	2.774	1.472	Poorly Sorted
SKEWNESS ( $S_k$ ):	1.775	0.068	-0.068	0.192	-0.192	Coarse Skewed
KURTOSIS ( $K$ ):	5.213	2.978	2.978	0.999	0.999	Mesokurtic
Setelah dibagi 1000						
<b>0.3831</b>						

### STASIUN IV

#### STASIUN IV.1

<b>SAMPLE STATISTICS</b>						
SAMPLE IDENTITY: <b>SEDIMEN</b>			ANALYST & DATE: BESAR BUTIR,			
SAMPLE TYPE: Polymodal, Poorly Sorted			TEXTURAL GROUP: Slightly Gravelly Sand			
SEDIMENT NAME: Slightly Very Fine Gravelly Medium Sand						
	$\mu\text{m}$	$\phi$	GRAIN SIZE DISTRIBUTION			
MODE 1:	302.5	1.747	GRAVEL: 1.2%		COARSE SAND: 32.9%	
MODE 2:	605.0	0.747	SAND: 96.9%		MEDIUM SAND: 34.0%	
MODE 3:	152.5	2.737	MUD: 1.8%		FINE SAND: 18.8%	
$D_{10}$ :	142.6	-0.055			V FINE SAND: 1.4%	
MEDIAN or $D_{50}$ :	333.7	1.583	V COARSE GRAVEL: 0.0%		V COARSE SILT: 0.3%	
$D_{90}$ :	1038.9	2.810	COARSE GRAVEL: 0.0%		COARSE SILT: 0.3%	
$(D_{90} / D_{10})$ :	7.286	-50.994	MEDIUM GRAVEL: 0.0%		MEDIUM SILT: 0.3%	
$(D_{90} - D_{10})$ :	896.3	2.865	FINE GRAVEL: 0.0%		FINE SILT: 0.3%	
$(D_{75} / D_{25})$ :	2.375	2.764	V FINE GRAVEL: 1.2%		V FINE SILT: 0.3%	
$(D_{75} - D_{25})$ :	354.6	1.248	V COARSE SAND: 9.9%		CLAY: 0.3%	
	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	$\mu\text{m}$	$\mu\text{m}$	$\phi$	$\mu\text{m}$	$\phi$	
MEAN ( $\bar{x}$ ):	480.4	354.9	1.494	330.3	1.598	Medium Sand
SORTING ( $\sigma$ ):	372.6	2.346	1.230	2.015	1.011	Poorly Sorted
SKEWNESS ( $S_k$ ):	2.203	-1.440	1.440	0.069	-0.069	Symmetrical
KURTOSIS ( $K$ ):	10.29	8.462	8.462	1.067	1.067	Mesokurtic
Setelah dibagi 1000						
<b>0.3303</b>						



## STASIUN IV.2

<b>SAMPLE STATISTICS</b>						
SAMPLE IDENTITY: <b>SEDIMEN</b>			ANALYST & DATE: BESAR BUTIR,			
SAMPLE TYPE: Polymodal, Poorly Sorted			TEXTURAL GROUP: Slightly Gravelly Sand			
SEDIMENT NAME: Slightly Very Fine Gravelly Medium Sand						
	$\mu\text{m}$	$\phi$	GRAIN SIZE DISTRIBUTION			
MODE 1:	302.5	1.747	GRAVEL: 0.5%		COARSE SAND: 31.5%	
MODE 2:	605.0	0.747	SAND: 99.3%		MEDIUM SAND: 35.6%	
MODE 3:	152.5	2.737	MUD: 0.2%		FINE SAND: 20.4%	
$D_{10}$ :	140.1	0.513			V FINE SAND: 3.4%	
MEDIAN or $D_{50}$ :	322.8	1.631	V COARSE GRAVEL: 0.0%		V COARSE SILT: 0.0%	
$D_{90}$ :	700.6	2.836	COARSE GRAVEL: 0.0%		COARSE SILT: 0.0%	
$(D_{90} / D_{10})$ :	5.002	5.524	MEDIUM GRAVEL: 0.0%		MEDIUM SILT: 0.0%	
$(D_{90} - D_{10})$ :	560.5	2.323	FINE GRAVEL: 0.0%		FINE SILT: 0.0%	
$(D_{75} / D_{25})$ :	2.350	2.635	V FINE GRAVEL: 0.5%		V FINE SILT: 0.0%	
$(D_{75} - D_{25})$ :	340.6	1.233	V COARSE SAND: 8.3%		CLAY: 0.0%	
	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	$\mu\text{m}$	$\mu\text{m}$	$\phi$	$\mu\text{m}$	$\phi$	
MEAN ( $\bar{x}$ ):	444.1	345.7	1.533	320.7	1.641	Medium Sand
SORTING ( $\sigma$ ):	323.4	2.024	1.017	2.001	1.001	Poorly Sorted
SKEWNESS ( $S_k$ ):	1.996	-0.317	0.317	0.075	-0.075	Symmetrical
KURTOSIS ( $K$ ):	9.556	4.025	4.025	1.060	1.060	Mesokurtic

Setelah dibagi 1000

0.3207

## STASIUN IV.3

<b>SAMPLE STATISTICS</b>						
SAMPLE IDENTITY: <b>SEDIMEN</b>			ANALYST & DATE: BESAR BUTIR,			
SAMPLE TYPE: Polymodal, Poorly Sorted			TEXTURAL GROUP: Slightly Gravelly Sand			
SEDIMENT NAME: Slightly Very Fine Gravelly Medium Sand						
	$\mu\text{m}$	$\phi$	GRAIN SIZE DISTRIBUTION			
MODE 1:	302.5	1.747	GRAVEL: 1.0%		COARSE SAND: 30.8%	
MODE 2:	605.0	0.747	SAND: 98.8%		MEDIUM SAND: 35.9%	
MODE 3:	152.5	2.737	MUD: 0.2%		FINE SAND: 18.2%	
$D_{10}$ :	141.2	-0.053			V FINE SAND: 3.6%	
MEDIAN or $D_{50}$ :	328.1	1.608	V COARSE GRAVEL: 0.0%		V COARSE SILT: 0.0%	
$D_{90}$ :	1037.4	2.824	COARSE GRAVEL: 0.0%		COARSE SILT: 0.0%	
$(D_{90} / D_{10})$ :	7.345	-53.325	MEDIUM GRAVEL: 0.0%		MEDIUM SILT: 0.0%	
$(D_{90} - D_{10})$ :	896.2	2.877	FINE GRAVEL: 0.0%		FINE SILT: 0.0%	
$(D_{75} / D_{25})$ :	2.358	2.713	V FINE GRAVEL: 1.0%		V FINE SILT: 0.0%	
$(D_{75} - D_{25})$ :	349.1	1.237	V COARSE SAND: 10.1%		CLAY: 0.0%	
	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	$\mu\text{m}$	$\mu\text{m}$	$\phi$	$\mu\text{m}$	$\phi$	
MEAN ( $\bar{x}$ ):	471.1	360.1	1.474	327.4	1.611	Medium Sand
SORTING ( $\sigma$ ):	362.2	2.076	1.054	2.018	1.013	Poorly Sorted
SKEWNESS ( $S_k$ ):	2.132	-0.315	0.315	0.081	-0.081	Symmetrical
KURTOSIS ( $K$ ):	9.861	4.166	4.166	1.080	1.080	Mesokurtic

Setelah dibagi 1000

0.3274

**STASIUN V**  
**STASIUN V.1**

<b>SAMPLE STATISTICS</b>						
SAMPLE IDENTITY: <b>SEDIMEN</b>			ANALYST & DATE: BESAR BUTIR,			
SAMPLE TYPE: Polymodal, Moderately Sorted			TEXTURAL GROUP: Slightly Gravelly Sand			
SEDIMENT NAME: Slightly Very Fine Gravelly Medium Sand						
	$\mu\text{m}$	$\phi$	GRAIN SIZE DISTRIBUTION			
MODE 1:	302.5	1.747	GRAVEL: 1.1%		COARSE SAND: 28.0%	
MODE 2:	605.0	0.747	SAND: 98.7%		MEDIUM SAND: 40.8%	
MODE 3:	152.5	2.737	MUD: 0.2%		FINE SAND: 19.2%	
$D_{10}$ :	142.4	0.515			V FINE SAND: 2.9%	
MEDIAN or $D_{50}$ :	317.2	1.657	V COARSE GRAVEL: 0.0%		V COARSE SILT: 0.0%	
$D_{90}$ :	699.9	2.812	COARSE GRAVEL: 0.0%		COARSE SILT: 0.0%	
$(D_{90} / D_{10})$ :	4.914	5.461	MEDIUM GRAVEL: 0.0%		MEDIUM SILT: 0.0%	
$(D_{90} - D_{10})$ :	557.4	2.297	FINE GRAVEL: 0.0%		FINE SILT: 0.0%	
$(D_{75} / D_{25})$ :	2.268	2.504	V FINE GRAVEL: 1.1%		V FINE SILT: 0.0%	
$(D_{75} - D_{25})$ :	324.3	1.181	V COARSE SAND: 7.8%		CLAY: 0.0%	
	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	$\mu\text{m}$	$\mu\text{m}$	$\phi$	$\mu\text{m}$	$\phi$	
MEAN ( $\bar{x}$ ):	443.8	344.2	1.539	320.3	1.642	Medium Sand
SORTING ( $\sigma$ ):	349.2	2.002	1.001	1.985	0.989	Moderately Sorted
SKEWNESS ( $S_k$ ):	2.548	-0.174	0.174	0.106	-0.106	Coarse Skewed
KURTOSIS ( $K$ ):	12.55	4.469	4.469	1.107	1.107	Mesokurtic

Setelah dibagi 1000 0.3203

**STASIUN V.2**

<b>SAMPLE STATISTICS</b>						
SAMPLE IDENTITY: <b>SEDIMEN</b>			ANALYST & DATE: BESAR BUTIR,			
SAMPLE TYPE: Polymodal, Poorly Sorted			TEXTURAL GROUP: Slightly Gravelly Sand			
SEDIMENT NAME: Slightly Very Fine Gravelly Medium Sand						
	$\mu\text{m}$	$\phi$	GRAIN SIZE DISTRIBUTION			
MODE 1:	302.5	1.747	GRAVEL: 1.9%		COARSE SAND: 22.3%	
MODE 2:	605.0	0.747	SAND: 97.8%		MEDIUM SAND: 42.6%	
MODE 3:	152.5	2.737	MUD: 0.3%		FINE SAND: 21.5%	
$D_{10}$ :	137.8	0.508			V FINE SAND: 4.0%	
MEDIAN or $D_{50}$ :	305.3	1.712	V COARSE GRAVEL: 0.0%		V COARSE SILT: 0.0%	
$D_{90}$ :	703.1	2.859	COARSE GRAVEL: 0.0%		COARSE SILT: 0.0%	
$(D_{90} / D_{10})$ :	5.100	5.625	MEDIUM GRAVEL: 0.0%		MEDIUM SILT: 0.0%	
$(D_{90} - D_{10})$ :	565.2	2.351	FINE GRAVEL: 0.0%		FINE SILT: 0.0%	
$(D_{75} / D_{25})$ :	3.123	2.936	V FINE GRAVEL: 1.9%		V FINE SILT: 0.0%	
$(D_{75} - D_{25})$ :	377.5	1.643	V COARSE SAND: 7.5%		CLAY: 0.0%	
	METHOD OF MOMENTS			FOLK & WARD METHOD		
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	$\mu\text{m}$	$\mu\text{m}$	$\phi$	$\mu\text{m}$	$\phi$	
MEAN ( $\bar{x}$ ):	435.1	324.6	1.623	310.1	1.689	Medium Sand
SORTING ( $\sigma$ ):	392.5	2.076	1.054	2.016	1.012	Poorly Sorted
SKEWNESS ( $S_k$ ):	2.838	0.021	-0.021	0.127	-0.127	Coarse Skewed
KURTOSIS ( $K$ ):	13.18	4.487	4.487	0.815	0.815	Platykurtic

Setelah dibagi 1000 0.3101

### STASIUN V.3

<b>SAMPLE STATISTICS</b>						
SAMPLE IDENTITY: <b>SEDIMEN</b>			ANALYST & DATE: BESAR BUTIR,			
SAMPLE TYPE: Polymodal, Poorly Sorted			TEXTURAL GROUP: Slightly Gravelly Sand			
SEDIMENT NAME: Slightly Very Fine Gravelly Medium Sand						
	$\mu\text{m}$	$\phi$	GRAIN SIZE DISTRIBUTION			
MODE 1:	302.5	1.747	GRAVEL: 1.6%	COARSE SAND: 22.2%		
MODE 2:	152.5	2.737	SAND: 97.5%	MEDIUM SAND: 33.9%		
MODE 3:	605.0	0.747	MUD: 0.8%	FINE SAND: 25.6%		
$D_{10}$ :	127.7	0.497		V FINE SAND: 7.7%		
MEDIAN or $D_{50}$ :	294.8	1.762	V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.1%		
$D_{90}$ :	708.4	2.970	COARSE GRAVEL: 0.0%	COARSE SILT: 0.1%		
$(D_{90} / D_{10})$ :	5.549	5.972	MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.1%		
$(D_{90} - D_{10})$ :	580.8	2.472	FINE GRAVEL: 0.0%	FINE SILT: 0.1%		
$(D_{75} / D_{25})$ :	3.533	3.168	V FINE GRAVEL: 1.6%	V FINE SILT: 0.1%		
$(D_{75} - D_{25})$ :	400.6	1.821	V COARSE SAND: 8.2%	CLAY: 0.1%		
	METHOD OF MOMENTS		FOLK & WARD METHOD			
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description
	$\mu\text{m}$	$\mu\text{m}$	$\phi$	$\mu\text{m}$	$\phi$	
MEAN ( $\bar{x}$ ):	419.6	294.8	1.762	297.8	1.748	Medium Sand
SORTING ( $\sigma$ ):	393.5	2.320	1.214	2.232	1.158	Poorly Sorted
SKEWNESS ( $S_k$ ):	2.594	-0.377	0.377	0.023	-0.023	Symmetrical
KURTOSIS ( $K$ ):	11.85	4.829	4.829	0.899	0.899	Platykurtic

Setelah dibagi 1000

**0.2978**

### Lampiran 12. Dokumentasi pengambilan data dilapangan



**Gambar 8. Pengambilan Data Pasang Surut**



**Gambar 9. Pengambilan Sampel Sedimen**



**Gambar 10. Pengambilan Titik Koordinat Lokasi Pengambilan Sampel**



**Gambar 11. Pengambilan Data Suhu**



**Gambar 12. Pengambilan Data Kecepatan Arus**



**Gambar 13. Pengambilan Sampel Air**

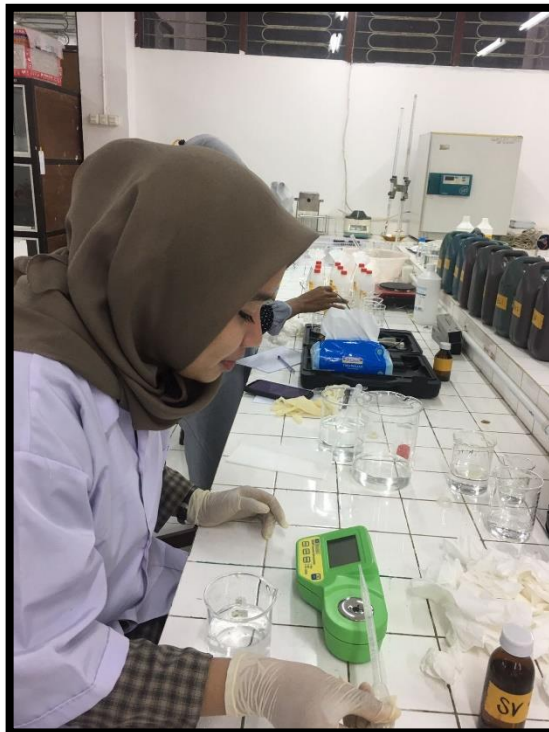


**Gambar 14. Pengambilan Data Kedalaman**

### Lampiran 13. Analisis Laboratorium



**Gambar 15. Pengeringan Sampel Sedimen**



**Gambar 16. Analisis Data Salinitas**



**Gambar 17. Analisis Data Kekeruhan**



**Gambar 18. Analisis Besar Butir Sedimen**





**Gambar 19. Analisis BOT**



