

ANNEX E

WATER AND SOIL - SUPPLEMENTARY INFORMATION

CONTENTS

E.1	STATUS OF PUBLIC UTILITY SERVICES.....	E - 1
E.2	WATER POLLUTION SOURCES IN THE HRON BASIN	E - 12
E.3	SURFACE WATER QUALITY.....	E - 23
	1. LONG-TERM CHANGES IN HIGHLIGHTED INDICATORS OF SURFACE WATER QUALITY IN THE STUDY AREA	E - 23
	2. LATEST INFORMATION ON THE PRESENT STATE OF SURFACE WATER QUALITY	E - 35
E.4	GROUNDWATER AND SOIL.....	E - 38
E.5	ENVIRONMENTAL WATER QUALITY STANDARDS	E - 57
E.6	WATER QUALITY NUMERICAL MODEL	E - 60
	1. OUTLINE OF THE MODEL	E - 60
	2. MODEL DEVELOPMENT	E - 62
	3. RESULT OF THE MODEL	E - 65
E.7	INVESTMENT PROGRAMMES OF POVODIE HRONA AND STVAK.....	E - 75
	1. EXPLANATORY TEXT	E - 75

E.1 STATUS OF PUBLIC UTILITY SERVICES

Table E.1 - 1 (1/4) Status of Water Supply and Sewer System by Obec/Mesto 1996

NO	KRAJ	OK-RES	OBECE/MESTO	Population 1996	1996 data (same as Interim Report)									
					WS	WS_total	WS_person	WS_%	SW	SW_total	SW_person	SW_%	SW_STP	
67	BANSKA BYSTRICA	BB	BADIN	1615	y	340	1122	69	n	0	0	0	n	
27		BB	BALAZE	199	y	62	199	100	n	0	0	0	n	
38		BB	BANSKA BYSTRICA	85052	y	4086	85000	100	y	2394	81572	96	y	
8		BB	BRUSNO	2000	y	528	1742	87	n	0	0	0	n	
77		BB	CERIN	408	y	92	304	74	n	0	0	0	n	
78		BB	DOLNA MICINA	321	y	84	277	86	n	0	0	0	n	
9		BB	DOLNY HARMANEC	187	n	0	0	0	n	0	0	0	n	
7		BB	DONOVALY	147	y	198	147	100	n	0	0	0	n	
80		BB	DUBRAVICA	329	y	85	281	85	n	0	0	0	n	
1		BB	HARMANEC	925	y	95	314	34	n	0	0	0	n	
19		BB	HIADEL	552	y	195	552	100	n	0	0	0	n	
68		BB	HORNA MICINA	471	y	117	386	82	n	0	0	0	n	
71		BB	HORNE PRSANY	341	y	104	341	100	n	0	0	0	n	
87		BB	HROCHOT	1349	y	384	1267	94	n	0	0	0	n	
89		BB	HRONSEK	570	y	0	0	0	n	0	0	0	n	
42		BB	KORDIKY	214	y	47	155	72	n	0	0	0	n	
58		BB	KRALIKY	459	y	141	459	100	n	0	0	0	n	
56		BB	KYNCELOVA	295	n	0	0	0	n	0	0	0	n	
52		BB	LUBIETOVA	979	y	235	776	79	n	0	0	0	n	
40		BB	LUCATIN	499	y	150	495	99	n	0	0	0	n	
63		BB	MALACHOV	822	n	0	0	0	n	0	0	0	n	
29		BB	MEDZIBROD	1285	y	451	1285	100	n	0	0	0	n	
65		BB	MOLCA	300	y	76	251	84	n	0	0	0	n	
25		BB	MOSTENICA	155	y	48	156	100	n	0	0	0	n	
11		BB	MOTYCKY	104	y	73	104	100	n	0	0	0	n	
41		BB	NEMCE	1105	n	0	0	0	n	0	0	0	n	
73		BB	ORAVCE	131	y	43	131	100	n	0	0	0	n	
22		BB	PODKONICE	862	y	266	862	100	y	170	862	100	n/a	
16		BB	POHRONSKY BUKOVEC	105	y	40	105	100	n	0	0	0	n	
60		BB	PONIKY	1540	y	454	1498	97	n	0	0	0	n	
69		BB	POVRAZNIK	150	y	36	119	79	n	0	0	0	n	
36		BB	PRIECHOD	859	y	216	713	83	n	0	0	0	n	
46		BB	RIECKA	527	y	49	162	31	n	0	0	0	n	
94		BB	SEBEDIN - BECOV	340	y	122	340	100	n	0	0	0	n	
34		BB	SELCE	2022	y	586	1934	96	y	235	2022	100	n/a	
43		BB	SLOVENSKA LUPCA	2925	y	551	1818	62	y	392	2925	100	n/a	
32		BB	SPANIA DOLINA	136	y	55	136	100	n	0	0	0	n	
12		BB	STARE HORY	428	y	193	428	100	n	0	0	0	n	
66		BB	STRELNIKY	844	y	264	844	100	n	0	0	0	n	
51		BB	TAJOV	410	y	114	376	92	n	0	0	0	n	
13		BB	TURECKA	138	y	49	138	100	n	0	0	0	n	
75		BB	VLKANOVA	825	y	312	825	100	n	0	0	0	n	
149		BS	BANSKA BELA	1272	y	269	888	70	y	8	160	13	n/a	
153		BS	BANSKA STIAVNICA	10529	y	1376	10212	97	y	593	9518	90	y	
160		BS	BANSKY STUDENEC	450	n	0	0	0	n	0	0	0	n	
173		BS	DEKYS	254	y	56	185	73	n	0	0	0	n	
137		BS	KOZELNIK	205	y	49	162	79	n	0	0	0	n	
126		BS	MOCIAR	200	y	57	188	94	n	0	0	0	n	
175		BS	POCUVADLO	135	n	0	0	0	n	0	0	0	n	
139		BS	PODHORIE	399	y	127	399	100	y	4	80	20	n/a	
184		BS	STIAVNICKE BANE	828	y	19	63	8	n	0	0	0	n	
168		BS	VYSOKA	147	n	0	0	0	n	0	0	0	n	
15		BANSKA BYSTRICA	BR	BACUCH	1101	y	402	1101	100	n	0	0	0	n
23			BR	BENUS	1199	y	322	1063	89	n	0	0	0	n
21			BR	BRAVACOVO	741	y	234	741	100	n	0	0	0	n
4			BR	BREZNO	23007	y	1783	22888	99	y	907	21735	94	y
5			BR	BYSTRA	213	y	101	213	100	n	0	0	0	n
50			BR	CIERNY BALOG	5087	y	1046	3452	68	n	0	0	0	n
1			BR	DOLNA LEHOTÁ	707	y	247	707	100	n	0	0	0	n
14			BR	HELPA	3050	y	805	2657	87	n	0	0	0	n
3			BR	HORNA LEHOTÁ	634	y	302	634	100	n	0	0	0	n
44			BR	HRONEC	1157	y	388	1157	100	n	0	0	0	n
6			BR	JARABA	41	y	44	41	100	n	0	0	0	n
2			BR	JASENIE	1163	y	422	1163	100	n	0	0	0	n
47			BR	MICHALOVA	1371	y	370	1221	89	n	0	0	0	n
26			BR	MYTO POD DUMBIEROM	564	y	264	564	100	n	0	0	0	n
30			BR	NEMECKA	1743	y	454	1498	86	n	0	0	0	n
53			BR	OSRBLIE	367	y	184	367	100	n	0	0	0	n
35	BR		PODBREZOVA	4162	y	253	835	20	y	3	60	1	n/a	
18	BR		POHORELA	2804	y	789	2604	93	n	0	0	0	n	
54	BR		POHRONSKA POLHORA	1598	y	170	561	35	n	0	0	0	n	
10	BR		POLOMKA	3186	y	965	3185	100	n	0	0	0	n	
31	BR		PREDAJNA	1253	y	327	1079	86	n	0	0	0	n	
28	BR		RAZTOKA	323	y	122	323	100	n	0	0	0	n	
88	BR		SIHLA	193	y	54	178	92	n	0	0	0	n	
24	BR		SUMIAC	1492	y	471	1492	100	n	0	0	0	n	
20	BR		TELGART	1620	y	407	1343	83	n	0	0	0	n	
33	BR		VALASKA	3846	y	430	1419	37	y	91	1820	47	n/a	
39	BR		VALKOVNA	283	y	113	283	100	n	0	0	0	n	
17	BR		ZAVADKA NAD HRONOM	2578	y	518	1709	66	n	0	0	0	n	

Source: 1) Nitra Statistical Office, 2) Banska Bystrica Statistical Office Reference year 1996.

Note: Estimates by the Study Team are in "italics"; n/a - not available data

Table E.1 - 1 (2/4)

Status of Water Supply and Sewer System by Obec/Mesto 1996

NO	KRAJ	OK-RES	OBECE/MESTO	Population 1996	1996 data (same as Interim Report)									
					WS	WS_total	WS_person	WS_%	SW	SW_total	SW_person	SW_%	SW_STP	
109	BANSKA	DT	DETVA	15345	y	1121	12814	84	y	371	9565	62	y	
127	BYSTRICA	DT	DETVANSKA HUTA	803	n	0	0	0	n	0	0	0	n	
111		DT	DUBRAVA	999	n	0	0	0	n	0	0	0	n	
98		DT	HRINOVA	8536	y	367	6638	78	y	165	3885	46	y	
162		DT	KLOKOC	455	n	0	0	0	n	0	0	0	n	
138		DT	KORYTARKY	1045	n	0	0	0	y	100	1045	100	n/a	
146		DT	KRIVAN	1614	y	51	168	10	n	0	0	0	n	
151		DT	SLATINSKE LAZY	700	y	241	700	100	n	0	0	0	n	
157		DT	STARÁ HUTA	415	n	0	0	0	n	0	0	0	n	
142		DT	STOZOK	703	n	0	0	0	n	0	0	0	n	
131		DT	VIGLAS	1567	y	191	630	40	n	0	0	0	n	
155		DT	VIGLASSKA HUTA - KALIN	369	n	0	0	0	n	0	0	0	n	
49		RA	MURAN	1123	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
168		ZC	BREHY	1131	y	73	241	21	y	24	480	42	n/a	
166		ZC	HODRUSA - HAMRE	2361	y	451	1488	63	y	29	580	25	n/a	
136		ZC	HORNE HAMRE	665	y	122	403	61	n	0	0	0	n	
120		ZC	HRABICOV	601	y	129	426	71	y	41	601	100	n/a	
179		ZC	HRONSKY BENADIK	1176	y	312	1030	88	n	0	0	0	n	
92		ZC	KLAK	252	y	122	252	100	n	0	0	0	n	
132		ZC	MALA LEHOTA	1121	y	379	1121	100	n	0	0	0	n	
148		ZC	NOVA BANA	7542	y	1402	7867	100	y	94	5067	67	y	
171		ZC	OROVNICA	566	y	155	512	90	n	0	0	0	n	
100		ZC	OSTRY GRUN	599	y	137	452	75	n	0	0	0	n	
113		ZC	PILA	172	y	42	139	81	n	0	0	0	n	
163		ZC	RUDNO NAD HRONOM	546	n	0	0	0	n	0	0	0	n	
174		ZC	TEKOVSKA BREZNICA	1334	y	461	1334	100	n	0	0	0	n	
150		ZC	VELKA LEHOTA	1301	y	426	1301	100	y	52	1040	80	n/a	
114		ZC	VELKE POLE	482	n	0	0	0	n	0	0	0	n	
158		ZC	VOZNICA	628	n	0	0	0	n	0	0	0	n	
135		ZC	ZARNOVICA	6584	y	326	6322	96	y	55	3178	48	y	
121		ZC	ZUPKOV	719	y	32	106	15	n	0	0	0	n	
82	BANSKA	ZH	BARTOSOVA LEHOTKA	413	y	130	413	100	n	0	0	0	n	
125	BYSTRICA	ZH	BZENICA	559	y	89	294	53	n	0	0	0	n	
119		ZH	DOLNA TRNAVKA	341	y	38	125	37	y	95	341	100	n/a	
79		ZH	DOLNA VES	230	y	87	230	100	n	0	0	0	n	
124		ZH	DOLNA ZDANA	597	n	0	0	0	n	0	0	0	n	
129		ZH	HLINIK NAD HRONOM	2995	y	297	980	33	y	51	1020	34	n/a	
108		ZH	HORNA ZDANA	605	y	30	99	20	y	68	505	100	n/a	
112		ZH	HRONSKA DUBRAVA	372	y	151	372	100	n	0	0	0	n	
72		ZH	IHRAC	587	y	155	512	87	n	0	0	0	n	
70		ZH	JANOVA LEHOTA	851	y	310	851	100	y	50	851	100	n/a	
84		ZH	JASTRABA	587	y	182	587	100	n	0	0	0	n	
62		ZH	KOPERNICA	407	y	124	407	100	n	0	0	0	n	
64		ZH	KOSORIN	412	y	160	412	100	n	0	0	0	n	
55		ZH	KRAHULE	140	y	30	99	71	y	20	140	100	n/a	
57		ZH	KREMNICA	6622	y	1106	6580	99	y	455	6564	99	y	
48		ZH	KREMNICKE BANE	247	y	170	247	100	n	0	0	0	n	
45		ZH	KUNESOV	263	n	0	0	0	n	0	0	0	n	
115		ZH	LADOMERSKA VIESKA	807	y	228	752	93	y	20	400	50	n/a	
128		ZH	LEHOTKA POD BREHMI	338	y	144	338	100	y	85	338	100	n/a	
110		ZH	LOVCA	728	n	0	0	0	y	148	728	100	n/a	
83		ZH	LOVCA - TRUBIN	1468	y	398	1313	89	n	0	0	0	n	
61		ZH	LUCKY	198	n	0	0	0	n	0	0	0	n	
85		ZH	LUTILA	1145	y	342	1129	99	n	0	0	0	n	
74		ZH	NEVOLNE	421	y	152	421	100	n	0	0	0	n	
103		ZH	PITELOVA	645	y	5	17	3	n	0	0	0	n	
101		ZH	PRESTAVLKY	700	y	201	663	95	n	0	0	0	n	
90		ZH	PROCHOT	676	y	148	488	72	n	0	0	0	n	
134		ZH	REPISTE	327	n	0	0	0	n	0	0	0	n	
133		ZH	SKLENE TEPLICE	457	y	88	290	64	n	0	0	0	n	
59		ZH	SLASKA	453	y	242	453	100	n	0	0	0	n	
91		ZH	STARÁ KREMNICKA	958	y	335	958	100	n	0	0	0	n	
99		ZH	TRNAVA HORA	1134	y	409	1134	100	n	0	0	0	n	
140		ZH	VYHNE	1482	y	239	789	53	y	17	340	23	n/a	
105		ZH	ZIAR NAD HRONOM	20552	y	877	20409	99	y	354	20416	99	y	
165		ZV	BABINA	412	y	131	412	100	n	0	0	0	n	
143		ZV	BACUROV	97	n	0	0	0	n	0	0	0	n	
141		ZV	BREZINY	309	y	85	281	91	n	0	0	0	n	
118		ZV	BUDCA	1005	y	198	653	65	n	0	0	0	n	
154		ZV	DOBRA NIVA	1718	y	662	1718	100	y	96	1718	100	n/a	
147		ZV	DUBOVE	238	n	0	0	0	n	0	0	0	n	
123		ZV	HRONSKA BREZNICA	283	y	133	283	100	n	0	0	0	n	
106		ZV	KOVACOVA	1370	y	404	1333	97	y	41	820	60	n/a	
116		ZV	LIESKOVEC	1370	n	0	0	0	n	0	0	0	n	
93		ZV	LUKAVICA	154	n	0	0	0	n	0	0	0	n	
145		ZV	MICHALKOVA	49	n	0	0	0	n	0	0	0	n	
95		ZV	OCOVA	2580	y	534	1762	68	n	0	0	0	n	
130		ZV	OSTRA LUKA	240	y	75	240	100	n	0	0	0	n	
161		ZV	PLIESOVCE	2184	y	724	2184	100	y	248	2184	100	n/a	
144		ZV	PODZAMCOK	326	y	75	248	76	n	0	0	0	n	

Source; 1) Nitra Statistical Office, 2) Banská Bystrica Statistical Office Reference year 1996.

Note; Estimates by the Study Team are in "italics"; n/a - not available data

Table E.1 - 1 (3/4)

Status of Water Supply and Sewer System by Obec/Mesto 1996

NO	KRAJ	OK-RES	OBEC/MESTO	Population 1996	1996 data(same as Interim Report)								
					WS	WS_total	WS_person	WS_%	SW	SW_total	SW_person	SW_%	SW_STP
162		ZV	SASA	894	n	0	0	0	n	0	0	0	n
76		ZV	SIELNICA	1129	y	369	1129	100	n	0	0	0	n
86		ZV	SLIAC	4619	y	627	3812	83	y	181	2960	64	n
97		ZV	TRNIE	333	y	131	333	100	n	0	0	0	n
107		ZV	TUROVA	352	y	110	352	100	n	0	0	0	n
96		ZV	VELKA LUKA	405	y	118	389	96	n	0	0	0	n
81		ZV	ZELEZNA BREZNICA	529	y	n/a	n/a	n/a	n	0	0	0	n
104		ZV	ZVOLEN	44498	y	3757	43307	97	y	2296	40344	91	y
122		ZV	ZVOLENSKA SLATINA	2550	y	n/a	n/a	n/a	n	0	0	0	n
216	NITRA	LV	BAJKA	326	y	44	298	91	n	0	0	0	n
189		LV	BATOVICE	1024	y	450	1036	100	n	0	0	0	n
181		LV	BOHUNICE	1024	n	0	0	0	n	0	0	0	n
183		LV	CAJKOV	1083	n	0	0	0	n	0	0	0	n
234		LV	CAKA	949	n	0	0	0	n	0	0	0	n
248		LV	CATA	1220	n	0	0	0	n	0	0	0	n
182		LV	DEVICANY	424	y	14	228	54	y	440	0	0	n
203		LV	DOLNA SEC	415	y	5	138	33	n	0	0	0	n
220		LV	DOLNY PIAL	956	n	0	0	0	n	0	0	0	n
193		LV	DRZENICE	428	n	0	0	0	n	0	0	0	n
236		LV	FARNA	1440	n	0	0	0	n	0	0	0	n
219		LV	HONTIANSKA VRBICA	573	y	231	578	100	n	0	0	0	n
206		LV	HORNA SEC	481	y	184	488	100	n	0	0	0	n
214		LV	HORNY PIAL	305	n	0	0	0	n	0	0	0	n
239		LV	HRONOVCE	1486	n	0	0	0	n	0	0	0	n
201		LV	HRONSKE KLACANY	1488	y	425	1505	100	n	0	0	0	n
196		LV	HRONSKE KOSIHY	652	n	0	0	0	n	0	0	0	n
208		LV	INA	228	n	0	0	0	n	0	0	0	n
180		LV	JABLONOVCE	238	y	77	255	100	n	0	0	0	n
210		LV	JESENSKE	49	n	0	0	0	n	0	0	0	n
223		LV	JUR NAD HRONOM	942	n	0	0	0	n	0	0	0	n
191		LV	KALNA NAD HRONOM	2071	y	368	1937	94	y	252	1389	67	y
243		LV	KET	753	n	0	0	0	n	0	0	0	n
185		LV	KOZAROVCE	1881	n	0	0	0	n	0	0	0	n
203		LV	KRSKANY	753	n	0	0	0	n	0	0	0	n
229		LV	KUKUCINOV	595	n	0	0	0	n	0	0	0	n
241		LV	KURALANY	617	n	0	0	0	n	0	0	0	n
200		LV	LEVICE	38502	y	3174	39336	100	y	1797	35562	97	y
207		LV	LOK	1012	n	0	0	0	n	0	0	0	n
232		LV	MALAS	562	n	0	0	0	n	0	0	0	n
190		LV	MALE KOZMALOVCE	427	y	136	395	n/a	n	0	0	0	n
245		LV	MALE LUDINCE	215	n	0	0	0	n	0	0	0	n
211		LV	MYTNE LUDANY	892	y	248	781	88	n	0	0	0	n
187		LV	NOVA DEDINA	1581	y	97	1519	96	n	0	0	0	n
195		LV	NOVY TEKOV	927	y	293	905	98	n	0	0	0	n
237		LV	NYROVCE	567	n	0	0	0	n	0	0	0	n
221		LV	ONDREJOVCE	464	n	0	0	0	n	0	0	0	n
247		LV	PASTOVCE	552	y	70	270	49	n	0	0	0	n
192		LV	PECENICE	144	y	105	143	99	n	0	0	0	n
227		LV	PLAVE VOZOKANY	931	n	0	0	0	n	0	0	0	n
199		LV	PODLUZANY	784	n	0	0	0	n	0	0	0	n
246		LV	POHRONSKY RUSKOV	1368	n	0	0	0	n	0	0	0	n
177		LV	PUKANEC	2147	y	773	2332	100	y	20	681	32	y
184		LV	RYBNIK	1384	y	538	1405	100	n	0	0	0	n
238		LV	SALOV	409	n	0	0	0	n	0	0	0	n
225		LV	SAROVCE	1650	y	414	1628	98	n	0	0	0	n
231		LV	SIKENICA	841	n	0	0	0	n	0	0	0	n
215		LV	STARÝ HRADOK	181	n	0	0	0	n	0	0	0	n
198		LV	STARÝ TEKOV	1481	y	496	1484	100	n	0	0	0	n
224		LV	TEKOVSKÉ LUZANY	2877	n	0	0	0	n	0	0	0	n
213		LV	TEKOVSKÝ HRADOK	318	y	138	175	55	n	0	0	0	n
188		LV	TLMACE	4296	y	393	4330	100	y	131	3871	90	y
217		LV	TURA	255	n	0	0	0	n	0	0	0	n
172		LV	UHLISKA	248	n	0	0	0	n	0	0	0	n
194		LV	VELKE KOZMALOVCE	686	y	241	704	n/a	n	0	0	0	n
242		LV	VELKE LUDINCE	1708	n	0	0	0	n	0	0	0	n
202		LV	VELKY DUR	1323	y	435	1318	100	n	0	0	0	n
212		LV	VYSNE NAD HRONOM	192	y	137	194	100	n	0	0	0	n
249		LV	ZALABA	179	n	0	0	0	n	0	0	0	n
226		LV	ZBROJNIKY	534	n	0	0	0	n	0	0	0	n
230		LV	ZELIEZOVCE	7628	y	1126	7658	100	y	322	4972	65	y
197		LV	ZEMBEROVCE	1300	y	464	1760	100	n	0	0	0	n
218		LV	ZEMLIARE	176	y	4	159	90	n	0	0	0	n
265	NITRA	NZ	BAJTAVA	410	n	0	0	0	n	0	0	0	n
222		NZ	BARDONOVO	939	n	0	0	0	n	0	0	0	n
252		NZ	BINA	1434	n	0	0	0	n	0	0	0	n
253		NZ	BRUTY	732	y	224	751	100	n	0	0	0	n
228		NZ	DEDINKA	862	n	0	0	0	n	0	0	0	n
244		NZ	DUBNIK	1766	y	336	1680	95	n	0	0	0	n
262		NZ	GBELCE	1393	y	637	2216	100	n	0	0	0	n

Source: 1) Nitra Statistical Office, 2) Banská Bystrica Statistical Office Reference year 1996.

Note: Estimates by the Study Team are in "italics"; n/a - not available data

Table E.1 - 1 (4/4) Status of Water Supply and Sewer System by Obec/Mesto 1996

NO	KRAJ	OK-RES	OBEC/MESTO	Population 1996	1996 data (same as Interim Report)									
					WS	WS_total	WS_person	WS_%	SW	SW_total	SW_person	SW_%	SW_STP	
240		NZ	JASOVA	1246	y	272	1017	82	n	0	0	0	0	n
266		NZ	KAMENICA NAD HRONOM	1308	y	305	923	71	n	0	0	0	0	n
256		NZ	KAMENIN	1522	n	0	0	0	n	0	0	0	0	n
263		NZ	KAMENNY MOST	1063	y	293	1068	100	n	0	0	0	0	n
233		NZ	KOLTA	1473	y	41	175	12	n	0	0	0	0	n
261		NZ	LUBA	434	y	118	447	100	n	0	0	0	0	n
264		NZ	MALA NAD HRONOM	423	y	183	429	100	n	0	0	0	0	n
267		NZ	NANA	1121	y	331	1111	99	n	0	0	0	0	n
259		NZ	NOVA VIESKA	869	y	182	880	100	n	0	0	0	0	n
257		NZ	PAVLOVA	317	n	0	0	0	n	0	0	0	0	n
251		NZ	RUBAN	1075	n	0	0	0	n	0	0	0	0	n
258		NZ	SALKA	1112	n	0	0	0	n	0	0	0	0	n
260		NZ	SARKAN	392	y	125	389	99	n	0	0	0	0	n
235		NZ	SEMEROVO	1249	y	71	265	21	n	0	0	0	0	n
255		NZ	SIKENICKA	491	y	172	464	95	n	0	0	0	0	n
254		NZ	STREKOV	2302	y	525	2044	89	n	0	0	0	0	n
268		NZ	STUROVO	13497	y	1623	13504	100	y	576	10160	75	n	n
250		NZ	SVODIN	2679	y	961	2679	100	n	0	0	0	0	n
170		ZM	CARADICE	553	n	0	0	0	n	0	0	0	0	n
176		ZM	CIERNE KLACANY	1130	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
186		ZM	NEMCINANY	803	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
159		ZM	OBYCE	1506	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
169		ZM	TEKOVSKÉ NEMCE	1081	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
178		ZM	VOLKOVCE	1038	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
167		ZM	ZLATÉ MORAVCE	15610	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Source; 1) Nitra Statistical Office, 2) Banská Bystrica Statistical Office Reference year 1996.
 Note; Estimates by the Study Team are in "italics"; n/a - not available data.

Table E.1 - 2 (1/7) Status of Water Supply, Sewer System and Gas Supply by Obec/Mesto 1995-1998

NO	KRAJ	OK-RES	OBEC/MESTO	Population			Water supply			Sewerage			WWTP			Gas supply							
				Existing	No supply	Under preparation	Existing	No supply	Under preparation	Existing	No supply	Under preparation	Existing	No supply	Under preparation	Existing	No supply	Under preparation					
67	BANSKA	BB	BADIN	100%	0%	0%	15%	85%	0%	0%	0%	15%	85%	0%	0%	0%	0%	15%	85%	0%	0%	n.a.	
27	BYSTRICA	BB	BALAZE	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
38		BB	BANSKA BYSTRICA	98%	2%	0%	15%	85%	0%	0%	0%	15%	85%	0%	0%	0%	0%	80%	20%	0%	0%	80%	n.a.
8		BB	BRUSNO	100%	0%	0%	50%	50%	0%	0%	0%	50%	50%	0%	0%	0%	0%	70%	30%	0%	0%	100%	n.a.
77		BB	CERIN	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
78		BB	DOLNA MICINA	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
9		BB	DOLNY HARMANEC	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
7		BB	DONOVALY	100%	0%	0%	40%	60%	0%	0%	0%	40%	60%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
80		BB	DUBRAVICA	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
1		BB	HARMANEC	100%	0%	0%	90%	10%	0%	0%	90%	10%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
19		BB	HADEL	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	UP
68		BB	HORNA MICINA	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
71		BB	HORNE PRSANY	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
87		BB	HROCHOT	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
89		BB	HRONSEK	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
42		BB	KORDIKY	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
58		BB	KRALIKY	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
56		BB	KYNCELOVA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
52		BB	LYBIETOVA	100%	0%	0%	30%	70%	0%	0%	0%	30%	70%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
40		BB	LUCATIN	100%	0%	0%	25%	75%	0%	0%	0%	25%	75%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
63		BB	MALACHOV	20%	80%	0%	60%	40%	0%	0%	0%	60%	40%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
29		BB	MEZIBROD	100%	0%	0%	75%	25%	0%	0%	0%	75%	25%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
65		BB	MOLCA	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
25		BB	MOSTENICA	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
11		BB	MOTYCKY	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
41		BB	NEMCE	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
73		BB	ORAVCE	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
22		BB	PODKONICE	99%	1%	0%	90%	10%	0%	0%	90%	10%	0%	0%	0%	0%	0%	40%	60%	0%	0%	100%	n.a.
16		BB	POHRONSKY BUKOVEC	100%	0%	0%	40%	60%	0%	0%	0%	40%	60%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
60		BB	PONIKY	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
69		BB	POVRAZNIK	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
36		BB	PRIECHOD	100%	0%	0%	60%	40%	0%	0%	0%	60%	40%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
46		BB	RIEKA	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
94		BB	SEBEDIN - BECOV	100%	0%	0%	50%	50%	0%	0%	0%	50%	50%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
34		BB	SELCE	100%	0%	0%	50%	50%	0%	0%	0%	50%	50%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
43		BB	SLOVENSKA LUPCA	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
32		BB	SPANIA DOLINA	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
12		BB	STARE HORY	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
66		BB	STRELNIKY	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.
51		BB	TAJOV	100%	0%	0%	NB	100%	0%	0%	0%	NB	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	n.a.

Source: Prepared based on the information collected at various Slovak institutions such as Okres and Health offices

Table E.1 - 2 (2/7) Status of Water Supply, Sewer System and Gas Supply by Obec/Mesto 1995-1998

NO	KRAJ	OK-RES	OBEC/MESTO	Population			Water supply			Sewerage			WWTP			Gas supply		
				Existing	No supply	Under preparation	Existing	No supply	Under preparation	Existing	No supply	Under preparation	Existing	No supply	Under preparation	Existing	No supply	Under preparation
13	BANSKA	BB	TURECKA	100%	0%	0%	NB	100%	0%	NB	0%	NB	100%	0%	NB	100%	0%	NB
75	BYSTRICA	BB	VILKANOVA	100%	0%	0%	NB	100%	0%	NB	0%	NB	100%	0%	NB	100%	0%	NB
149	BANSKA	BS	BANSKA BELA	75%	5%	10%	80%	20%	n.a.	100%	0%	85%	0%	85%	15%	n.a.	n.a.	
153	STYABICA	BS	BANSKA STIAVNICA	85%	5%	10%	80%	10%	n.a.	100%	0%	85%	0%	85%	15%	n.a.	n.a.	
160		BS	BANSKY STUDENEC	0%	20%	80%	0%	100%	n.a.	100%	0%	0%	100%	0%	0%	100%	n.a.	
173		BS	DEKYS	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
137		BS	KOZELINK	80%	20%	n.a.	0%	100%	n.a.	100%	0%	0%	100%	0%	0%	100%	n.a.	
126		BS	MOCHAR	100%	0%	n.a.	0%	100%	n.a.	100%	0%	0%	100%	0%	0%	100%	n.a.	
175		BS	POCJUVADLO	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
139		BS	PODHORIE	80%	20%	n.a.	0%	100%	n.a.	100%	0%	0%	100%	0%	0%	100%	n.a.	
184		BS	STIAVNICKE BANE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
166		BS	VYSOKA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
15	BANSKA	BR	BACUCH	1,110	100%	0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
23	BYSTRICA	BR	BENUS	1,786	95%	5%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
21		BR	BRAVACOVO	930	97%	3%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
4		BR	BREZNO	22,700	99%	1%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
5		BR	BYSTRA	n.a.	#VALUE!	#VALUE!	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
50		BR	CIERNY BALOG	5,300	99%	1%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
1		BR	DOLNA LEHOTA	760	100%	0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
14		BR	HELPA	3,200	100%	0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
3		BR	HORNA LEHOTA	680	100%	0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
44		BR	HRONEC	1,200	100%	0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
6		BR	JARABA	36	100%	0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
2		BR	JASENE	1,250	100%	0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
47		BR	MICHALOVA	n.a.	#VALUE!	#VALUE!	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
26		BR	MYTO POD DUMBIEROU	460	100%	0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
30		BR	NEMECKA	1,722	100%	0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
53		BR	OSRBLIE	480	100%	0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
35		BR	PODBREZOVA	4,148	100%	0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
18		BR	POHORELA	2,234	100%	0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
54		BR	POHRONSKA POLHORA	n.a.	#VALUE!	#VALUE!	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
10		BR	POLOWKA	3,000	100%	0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
31		BR	PREDAJNA	1,300	100%	0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
28		BR	RAZTOKA	320	100%	0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
88		BR	SIHLA	210	100%	0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
24		BR	SUMIAC	1,900	100%	0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
20		BR	TELGART	1,800	100%	0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
33		BR	VALASKA	3,833	91%	9%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
39		BR	VALKOVNA	290	100%	0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
17		BR	ZAVADKA NAD HRONO	2,800	100%	0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	

Source: Prepared based on the information collected at various Slovak institutions such as Okres and Health offices

Table E.1 - 2 (3/7) Status of Water Supply, Sewer System and Gas Supply by Obec/Mesto 1995-1998

NO	KRAJ	OK-RES	OBEC/MESTO	Population	Water supply			Sewerage			WWTP			Gas supply		
					Existing	No supply	Under preparation	Existing	No supply	Under preparation	Existing	No supply	Under preparation	Existing	No supply	Under preparation
103	BANSKA	DT	DEŤVA	n.a.	87%	13%	n.a.	62%	38%	n.a.	yes	n.a.	n.a.	78%	24%	n.a.
127	BYSTRICA	DT	DEŤVIANSKA HUTA	n.a.	11%	89%	n.a.	0%	100%	n.a.	no	n.a.	n.a.	0%	100%	n.a.
111		DT	DUBRAVY	n.a.	76%	24%	n.a.	0%	100%	n.a.	yes	n.a.	n.a.	0%	100%	n.a.
98		DT	HRINOVA	n.a.	78%	22%	n.a.	40%	60%	n.a.	yes	n.a.	n.a.	41%	59%	n.a.
152		DT	KLOKOC	n.a.	33%	67%	n.a.	20%	80%	n.a.	no	n.a.	n.a.	0%	100%	UP
138		DT	KORYTARŤKY	n.a.	50%	50%	n.a.	41%	59%	n.a.	no	n.a.	n.a.	42%	58%	n.a.
146		DT	KRIVAN	n.a.	10%	90%	n.a.	71%	29%	n.a.	yes	n.a.	n.a.	20%	80%	n.a.
151		DT	SLATINSKE LAZY	n.a.	92%	8%	n.a.	81%	19%	n.a.	yes	n.a.	n.a.	0%	100%	UP
157		DT	STARA HUTA	n.a.	56%	44%	n.a.	0%	100%	n.a.	no	n.a.	n.a.	0%	100%	n.a.
142		DT	STOZOK	n.a.	71%	29%	n.a.	0%	100%	n.a.	no	n.a.	n.a.	31%	69%	n.a.
131		DT	VIGLAS	n.a.	88%	12%	n.a.	0%	100%	n.a.	no	n.a.	n.a.	76%	24%	n.a.
155		DT	VIGLASSKA HUTA - KAL	n.a.	78%	22%	n.a.	0%	100%	n.a.	yes	n.a.	n.a.	0%	100%	UP
49		RA	MURAN	1,123	84%	16%	n.a.	0%	100%	n.a.	0%	100%	UP	0%	100%	n.a.
168	BANSKA	ZC	BREHY	1,120	27%	73%	n.a.	0%	100%	n.a.	0	100%	n.a.	n.a.	n.a.	n.a.
156	BYSTRICA	ZC	HODRUSA - HAMRE	2,387	96%	4%	n.a.	88%	12%	n.a.	0	100%	n.a.	n.a.	n.a.	n.a.
136		ZC	HORNE HAMRE	699	100%	0%	n.a.	0%	100%	n.a.	0	100%	n.a.	n.a.	n.a.	n.a.
120		ZC	HRABICOV	627	70%	30%	n.a.	0%	100%	n.a.	0	100%	n.a.	n.a.	n.a.	n.a.
179		ZC	HRONSKY BENADIK	1,217	94%	6%	n.a.	0%	100%	n.a.	0	100%	n.a.	n.a.	n.a.	n.a.
92		ZC	KLAK	264	86%	14%	n.a.	0%	100%	n.a.	0	100%	n.a.	n.a.	n.a.	n.a.
132		ZC	MALA LEHOTA	1,179	94%	6%	n.a.	0%	100%	n.a.	0	100%	n.a.	n.a.	n.a.	n.a.
148		ZC	NOVA BANA	8,610	91%	9%	n.a.	58%	42%	n.a.	*note-1	*note-1	n.a.	n.a.	n.a.	n.a.
171		ZC	OVONICA	580	91%	9%	n.a.	0%	100%	n.a.	0	100%	n.a.	n.a.	n.a.	n.a.
100		ZC	OSTRY GRUN	582	91%	9%	n.a.	0%	100%	n.a.	0	100%	n.a.	n.a.	n.a.	n.a.
113		ZC	PILA	180	94%	6%	n.a.	0%	100%	n.a.	0	100%	n.a.	n.a.	n.a.	n.a.
163		ZC	RUDNO NAD HRONOM	583	0%	100%	n.a.	0%	100%	n.a.	0	100%	n.a.	n.a.	n.a.	n.a.
174		ZC	TEKOVSKA BREZNICA	1,368	96%	4%	n.a.	0%	100%	n.a.	0	100%	n.a.	n.a.	n.a.	n.a.
150		ZC	VELKA LEHOTA	1,319	99%	1%	n.a.	0%	100%	n.a.	0	100%	n.a.	n.a.	n.a.	n.a.
114		ZC	VELKE POLE	482	0%	100%	n.a.	0%	100%	n.a.	0	100%	n.a.	n.a.	n.a.	n.a.
158		ZC	VOZNICA	615	0%	100%	n.a.	0%	100%	n.a.	0	100%	n.a.	n.a.	n.a.	n.a.
135		ZC	ZARNOVICA	6,568	96%	4%	n.a.	48%	52%	n.a.	*note-2	*note-2	n.a.	n.a.	n.a.	n.a.
121		ZC	ZUPKOV	756	67%	33%	n.a.	0%	100%	n.a.	0	100%	n.a.	n.a.	n.a.	n.a.
82	BANSKA	ZH	BARTISOVA LEHOTKA	408	70%	30%	n.a.	0%	100%	n.a.	0	100%	n.a.	0%	100%	n.a.
125	BYSTRICA	ZH	BZENICA	553	0%	100%	UP	0%	100%	n.a.	0	100%	UP	0%	100%	n.a.
119		ZH	DOLNA TRNAVKA	342	90%	10%	n.a.	20%	80%	n.a.	0	100%	n.a.	0%	100%	UP
79		ZH	DOLNA VES	227	90%	10%	n.a.	0%	100%	n.a.	0	100%	n.a.	0%	100%	UP
124		ZH	DOLNA ZDANA	n.a.	0%	100%	n.a.	0%	100%	n.a.	0	100%	n.a.	0%	2%	n.a.
129		ZH	HULNIK NAD HRONOM	?	90%	10%	n.a.	70%	30%	n.a.	0	100%	n.a.	90%	8%	2%
108		ZH	HORNA ZDANA	496	50%	50%	n.a.	50%	50%	n.a.	0	100%	n.a.	95%	5%	n.a.
112		ZH	HRONSKA DUBRAVA	-	90%	10%	n.a.	40%	60%	n.a.	0	100%	n.a.	0%	100%	UP
72		ZH	JHRAC	597	60%	40%	n.a.	0%	100%	n.a.	0	100%	n.a.	0%	100%	n.a.

Source: Prepared based on the information collected at various Slovak institutions such as Okres and Health offices

Table E.1 - 2 (4/7) Status of Water Supply, Sewer System and Gas Supply by Obec/Mesto 1995-1998

NO	KRAJ	OK-RES	OBCEMESTO	Population	Water supply			Sewerage			VWVTP			Gas supply		
					Existing	No supply	Under preparation	Existing	No supply	Under preparation	Existing	No supply	Under preparation	Existing	No supply	Under preparation
70	BANSKA BYSTRICA	ZH	JANOVA LEHOTA	859	80%	20%	n.a.	40%	60%	n.a.	0%	100%	n.a.	0%	100%	n.a.
84		ZH	JASTRABA	598	60%	40%	n.a.	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.
62		ZH	KOPERNICA	410	90%	10%	n.a.	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.
64		ZH	KOSORIN	407	90%	10%	n.a.	60%	40%	n.a.	0%	100%	n.a.	0%	100%	n.a.
55		ZH	KRAHULE	140	70%	30%	n.a.	60%	40%	n.a.	60%	40%	n.a.	0%	100%	15%
57		ZH	KREMNICA	5,881	90%	10%	n.a.	20%	80%	n.a.	0%	100%	UP	50%	50%	n.a.
48		ZH	KREMNICKÉ BANE	252	90%	10%	n.a.	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.
45		ZH	KUNESOV	255	90%	10%	n.a.	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.
115		ZH	LADOMERSKA VIESKA		95%	5%	n.a.	50%	0%	50%	75%	0%	n.a.	25%	95%	5%
128		ZH	LEHOTKA POD BREHMÍ		80%	20%	n.a.	80%	20%	n.a.	0%	100%	n.a.	0%	100%	3%
110		ZH	LOYCA	n.a.	0%	100%	UP	80%	20%	n.a.	0%	100%	n.a.	0%	100%	13%
83		ZH	LOVCICA - TRUBIN	1,467	85%	15%	n.a.	10%	90%	n.a.	0%	100%	n.a.	0%	100%	UP
81		ZH	LUCKY	n.a.	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.
85		ZH	LUTILA		95%	5%	n.a.	75%	25%	n.a.	100%	0%	other WT	95%	5%	n.a.
74		ZH	NEVOLNE	470	80%	20%	n.a.	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.
103		ZH	PIELOVA	390	80%	20%	n.a.	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.
101		ZH	PRESTAVLY	682	90%	10%	n.a.	0%	100%	n.a.	0%	100%	n.a.	0%	100%	UP
90		ZH	PROCHOT	667	95%	5%	n.a.	30%	70%	n.a.	30%	0%	n.a.	0%	100%	n.a.
134		ZH	REPISTE	n.a.	40%	60%	n.a.	0%	100%	n.a.	0%	100%	n.a.	0%	100%	UP
133		ZH	SKLENE TEPLICE	456	90%	10%	n.a.	7%	93%	n.a.	50%	50%	n.a.	0%	100%	n.a.
59		ZH	SLASKA	448	80%	20%	n.a.	50%	50%	n.a.	50%	50%	n.a.	0%	100%	n.a.
91		ZH	STARÁ KREMNICKÁ	989	85%	15%	n.a.	0%	100%	n.a.	30%	0%	n.a.	0%	100%	n.a.
140		ZH	TRNAVA HORA	1,466	90%	10%	n.a.	70%	30%	n.a.	100%	0%	other WT	75%	15%	UP
105		ZH	VYHNE	n.a.	98%	2%	n.a.	95%	5%	n.a.	100%	0%	n.a.	50%	35%	15%
165	BANSKA BYSTRICA	ZV	ZIAR NAD HRONOM	422	90%	10%	n.a.	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.
143		ZV	BABINA	81	80%	20%	n.a.	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.
141		ZV	BACUROV	296	80%	20%	n.a.	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.
118		ZV	BREZINY	985	95%	5%	n.a.	98%	2%	n.a.	0%	100%	n.a.	0%	100%	n.a.
154		ZV	BUDCA	1,759	95%	5%	n.a.	45%	55%	n.a.	0%	100%	n.a.	0%	100%	n.a.
147		ZV	DOBRA NIVA	242	90%	10%	n.a.	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.
123		ZV	DUBOVE	232	100%	0%	n.a.	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.
106		ZV	HRONSKA BREZNICA	1,385	100%	0%	n.a.	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.
116		ZV	KOVACOVA	1,412	100%	0%	n.a.	20%	80%	n.a.	0%	100%	n.a.	0%	100%	n.a.
93		ZV	LIESKOVEC	162	70%	30%	n.a.	20%	80%	n.a.	0%	100%	n.a.	0%	100%	n.a.
145		ZV	LUKAVICA	45	53%	47%	n.a.	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.
95		ZV	MICHALKOVA	2,612	90%	10%	n.a.	40%	60%	n.a.	0%	100%	n.a.	0%	100%	n.a.
130		ZV	OCOVA	261	90%	10%	n.a.	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.
161		ZV	OSTRA LUKA	2,271	95%	5%	n.a.	70%	30%	n.a.	0%	100%	n.a.	0%	100%	n.a.
144		ZV	PLIESOVCE	332	80%	20%	n.a.	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.
		ZV	PODZAMCOK		80%	20%	n.a.	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.

Source: Prepared based on the information collected at various Slovak institutions such as Okres and Health offices

Table E.1 - 2 (5/7) Status of Water Supply, Sewer System and Gas Supply by Obec/Mesto 1995-1998

NO	KRAJ	OK-RES	OBEC/MESTO	Water supply			Sewerage			WWTP			Gas supply					
				Existing	No supply	Under preparation	Existing	No supply	Under preparation	Existing	No supply	Under preparation	Existing	No supply	Under preparation			
162	BANSKA	ZV	SASA	95%	5%	n.a.	0%	100%	n.a.	0%	100%	0%	100%	Prepare realisation of building	n.a.	n.a.		
76	BYSTRICA	ZV	SELINCA	95%	5%	n.a.	0%	100%	n.a.	0%	100%	Rary sewerage	0%	100%	Under construction	n.a.		
86		ZV	SLJAC	100%	0%	n.a.	60%	40%	n.a.	40%	60%	Slops sewerage (Mesto Zvolen)	0%	100%	Completed building	n.a.	n.a.	
97		ZV	TRNIE	80%	20%	n.a.	0%	100%	n.a.	0%	100%	0%	100%	Prepare realisation of building	n.a.	n.a.		
107		ZV	TUROVA	80%	20%	n.a.	0%	100%	n.a.	0%	100%	0%	100%	Prepare realisation of building	n.a.	n.a.		
96		ZV	VELKA LUKA	80%	20%	n.a.	0%	100%	n.a.	0%	100%	0%	100%	Under construction	n.a.	n.a.		
81		ZV	ZELEZNA BREZNICA	80%	20%	n.a.	0%	100%	n.a.	0%	100%	0%	100%	Prepare realisation of building	n.a.	n.a.		
104		ZV	ZVOLEN	100%	0%	n.a.	100%	0%	n.a.	0%	100%	WWTP of Mesto Zvolen	0%	100%	Completed building	n.a.	n.a.	
122		ZV	ZVOLENSKA SLATINA	95%	5%	n.a.	40%	60%	n.a.	60%	40%	Slops sewerage	0%	100%	Completed building	n.a.	n.a.	
216	NITRA	LV	BAJKA	CB	n.a.	n.a.	0%	100%	n.a.	0%	100%	0%	100%	0%	100%	n.a.	n.a.	
189		LV	BATOVICE	CB	n.a.	n.a.	CB	n.a.	n.a.	CB	n.a.	CB	0%	100%	0%	100%	n.a.	n.a.
181		LV	BOHUNICE	CB	n.a.	n.a.	0%	100%	n.a.	0%	100%	0%	100%	0%	100%	n.a.	n.a.	
183		LV	CAJKOV	n.a.	n.a.	UC	0%	100%	n.a.	0%	100%	0%	100%	CB	n.a.	n.a.		
234		LV	CAKA	n.a.	n.a.	UC	0%	100%	n.a.	0%	100%	0%	100%	0%	100%	n.a.	n.a.	
248		LV	CATA	n.a.	n.a.	UC	0%	100%	n.a.	0%	100%	0%	100%	n.a.	n.a.	UC		
182		LV	DEVICANY	n.a.	n.a.	n.a.	0%	100%	n.a.	0%	100%	0%	100%	CB	n.a.	n.a.		
209		LV	DOLNA SEC	CB	n.a.	n.a.	n.a.	n.a.	UC	0%	n.a.	n.a.	UC	CB	n.a.	n.a.		
220		LV	DOLNY PIAL	CB	n.a.	n.a.	0%	100%	n.a.	0%	100%	0%	100%	CB	n.a.	n.a.		
193		LV	DRENICE	0%	100%	n.a.	0%	100%	n.a.	0%	100%	0%	100%	0%	100%	n.a.	n.a.	
236		LV	FARNA	n.a.	n.a.	UC	0%	100%	n.a.	0%	100%	0%	100%	n.a.	n.a.	UC		
219		LV	HONTIANSKA VRBICA	CB	n.a.	n.a.	0%	100%	n.a.	0%	100%	0%	100%	n.a.	n.a.	UC		
206		LV	HORNA SEC	CB	n.a.	n.a.	0%	100%	n.a.	0%	100%	0%	100%	n.a.	n.a.	UC		
214		LV	HORNY PIAL	CB	n.a.	n.a.	0%	100%	n.a.	0%	100%	0%	100%	CB	n.a.	n.a.		
239		LV	HRONOVCE	CB	n.a.	n.a.	0%	100%	n.a.	0%	100%	0%	100%	CB	n.a.	n.a.		
201		LV	HRONSKE KLACANY	CB	n.a.	n.a.	n.a.	n.a.	UC	0%	100%	0%	100%	CB	n.a.	n.a.		
196		LV	HRONSKE KOSIHY	CB	n.a.	n.a.	0%	100%	n.a.	0%	100%	0%	100%	CB	n.a.	n.a.		
208		LV	INA	CB	n.a.	n.a.	0%	100%	n.a.	0%	100%	0%	100%	CB	n.a.	n.a.		
180		LV	JABLONOVCE	CB	n.a.	n.a.	0%	100%	n.a.	0%	100%	0%	100%	n.a.	n.a.	UC		
210		LV	JESENSKE	CB	n.a.	n.a.	0%	100%	n.a.	0%	100%	0%	100%	n.a.	n.a.	UC		
223		LV	JUR NAD HRONOM	CB	n.a.	n.a.	0%	100%	n.a.	0%	100%	0%	100%	CB	n.a.	n.a.		
191		LV	KALINA NAD HRONOM	CB	n.a.	n.a.	0%	100%	n.a.	0%	100%	0%	100%	CB	n.a.	n.a.		
243		LV	KET	CB	n.a.	n.a.	0%	100%	n.a.	0%	100%	0%	100%	CB	n.a.	n.a.		
185		LV	KOZAROVCE	CB	n.a.	n.a.	n.a.	n.a.	UC	0%	n.a.	n.a.	UC	CB	n.a.	n.a.		
203		LV	KRSKANY	n.a.	n.a.	UC	0%	100%	n.a.	0%	100%	0%	100%	CB	n.a.	n.a.		
229		LV	KUKUCINOV	0%	100%	n.a.	0%	100%	n.a.	0%	100%	0%	100%	CB	n.a.	n.a.		
241		LV	KURALANY	n.a.	n.a.	UC	0%	100%	n.a.	0%	100%	0%	100%	n.a.	n.a.	UC		
200		LV	LEVICE	CB	n.a.	n.a.	CB	n.a.	n.a.	CB	n.a.	n.a.	n.a.	CB	n.a.	n.a.		
207		LV	LOK	CB	n.a.	n.a.	0%	100%	n.a.	0%	100%	0%	100%	CB	n.a.	n.a.		
232		LV	MALAS	0%	100%	n.a.	0%	100%	n.a.	0%	100%	0%	100%	CB	n.a.	n.a.		
190		LV	MALE KOZMALOVCE	CB	n.a.	n.a.	0%	100%	n.a.	0%	100%	0%	100%	CB	n.a.	n.a.		
245		LV	MALE LUDICE	0%	100%	n.a.	0%	100%	n.a.	0%	100%	0%	100%	CB	n.a.	n.a.		

Source: Prepared based on the information collected at various Slovak institutions such as Okres and Health offices

Table E.1 - 2 (6/7) Status of Water Supply, Sewer System and Gas Supply by Obec/Mesto 1995-1998

NO	KRAJ	OK-RES	OBEC/MESTO	Population			Water supply			Sewerage			WWTP			Gas supply		
				Existing	No supply	Under preparation	Existing	No supply	Under preparation	Existing	No supply	Under preparation	Existing	No supply	Under preparation	Existing	No supply	Under preparation
211	NITRA	LV	MYTNE LUDANY	866	CB	n.a.	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
187		LV	NOVA DEDINA	1,578	CB	n.a.	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
195		LV	NOVÝ TEKOV	916	CB	n.a.	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
237		LV	NYROVCE	571	n.a.	n.a.	UC	n.a.	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	
221		LV	ONDREJOVCE	456	CB	n.a.	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
247		LV	PASTOVCE	1,796	CB	n.a.	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
192		LV	PECENICE	144	CB	n.a.	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
227		LV	PLAVE VOZOKANY	907	n.a.	n.a.	UC	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
199		LV	PODLUZANY	784	CB	n.a.	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
246		LV	POHRONSKY RUSKOV	1,373	n.a.	n.a.	UC	n.a.	0%	100%	n.a.	0%	100%	n.a.	n.a.	n.a.	UC	
177		LV	PUKANEC	2,147	CB	n.a.	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
184		LV	RYBNIK	1,384	CB	n.a.	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
238		LV	SALOV	419	CB	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
225		LV	SAROVCE	1,655	CB	n.a.	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
231		LV	SIKENICA	637	CB	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
215		LV	STARÝ HRADOK	181	CB	n.a.	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
198		LV	STARÝ TEKOV	1,483	CB	n.a.	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
224		LV	TEKOVSKÉ LUZANY	2,877	n.a.	n.a.	n.a.	UC	n.a.	n.a.	UC	n.a.	n.a.	UC	n.a.	n.a.	n.a.	
213		LV	TEKOVSKÝ HRADOK	314	CB	n.a.	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
188		LV	TLMAČE	4,297	CB	n.a.	n.a.	n.a.	0%	n.a.	n.a.	0%	n.a.	n.a.	CB	n.a.	n.a.	
217		LV	TURA	252	n.a.	n.a.	UC	n.a.	0%	100%	n.a.	0%	100%	n.a.	n.a.	n.a.	n.a.	
172		LV	UHLISKA	245	n.a.	n.a.	UC	n.a.	0%	100%	n.a.	0%	100%	n.a.	n.a.	n.a.	n.a.	
194		LV	VELKE KOZMALOVCE	686	CB	n.a.	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
242		LV	VELKE LUDINCE	1,672	n.a.	n.a.	UC	n.a.	0%	100%	n.a.	0%	100%	n.a.	n.a.	n.a.	n.a.	
202		LV	VELKÝ DUR	1,325	CB	n.a.	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
212		LV	VÝSNE NAD HRONOM	187	CB	n.a.	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
249		LV	ZALABA	166	CB	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	n.a.	n.a.	n.a.	
226		LV	ZBROJNÍKY	531	CB	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
230		LV	ZELIEZOVICE	7,660	CB	n.a.	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
197		LV	ZEMBEROVCE	1,298	CB	n.a.	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
218		LV	ZEMĽARE	182	CB	n.a.	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	CB	n.a.	n.a.	
265	NITRA	NZ	BAJTAVA	442	CB	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	n.a.	n.a.	n.a.	
222		NZ	BARDONOVO	986	CB	70%	30%	n.a.	0%	100%	n.a.	0%	100%	n.a.	n.a.	n.a.	n.a.	
252		NZ	BINA	1,454	CB	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	n.a.	n.a.	n.a.	
253		NZ	BRUTY	795	CB	96%	4%	n.a.	0%	100%	n.a.	0%	100%	n.a.	n.a.	n.a.	n.a.	
228		NZ	DEDINKA	880	CB	45%	55%	n.a.	0%	100%	n.a.	0%	100%	n.a.	n.a.	n.a.	n.a.	
244		NZ	DUBNÍK	1,857	CB	92%	8%	n.a.	0%	100%	n.a.	0%	100%	n.a.	n.a.	n.a.	n.a.	
262		NZ	GBELCE	2,374	CB	100%	0%	n.a.	0%	100%	n.a.	0%	100%	n.a.	n.a.	n.a.	n.a.	
240		NZ	JASOVA	1,275	CB	97%	3%	n.a.	0%	100%	n.a.	0%	100%	n.a.	n.a.	n.a.	n.a.	
266		NZ	KAMENICA NAD HRONOM	1,393	CB	67%	33%	n.a.	0%	100%	n.a.	0%	100%	n.a.	n.a.	n.a.	n.a.	
256		NZ	KAMENIN	1,575	CB	0%	100%	n.a.	0%	100%	n.a.	0%	100%	n.a.	n.a.	n.a.	n.a.	

Source: Prepared based on the information collected at various Slovak institutions such as Okres and Health offices

Table E.1 - 2 (7/7) Status of Water Supply, Sewer System and Gas Supply by Obec/Mesto 1995-1998

NO	KRAJ	OK-RES	OBEC/MESTO	Population	Water supply			Sewerage			WWTP			Gas supply		
					Existing	No supply	Under preparation	Existing	No supply	Under preparation	Existing	No supply	Under preparation	Existing	No supply	Under preparation
263	NITRA	NZ	KAMENNY MOST	1,109	97%	3%	n.a.	0%	100%	n.a.	0%	100%	21%	79%	n.a.	
233		NZ	KOLTA	1,498	56%	44%	n.a.	0%	100%	n.a.	0%	100%	28%	72%	n.a.	
261		NZ	LUBA	471	95%	5%	n.a.	0%	100%	n.a.	0%	100%	23%	77%	n.a.	
264		NZ	MALA NAD HRONOM	431	100%	0%	n.a.	0%	100%	n.a.	0%	100%	0%	100%	n.a.	
267		NZ	NANA	1,133	98%	2%	n.a.	6%	94%	n.a.	0%	100%	28%	72%	n.a.	
269		NZ	NOVA VIESKA	896	100%	0%	n.a.	0%	100%	n.a.	0%	100%	21%	73%	n.a.	
257		NZ	PAVLOVA	343	0%	100%	n.a.	0%	100%	n.a.	0%	100%	0%	100%	n.a.	
251		NZ	RUBAN	1,161	0%	100%	n.a.	0%	100%	n.a.	0%	100%	24%	76%	n.a.	
268		NZ	SALKA	1,150	80%	20%	n.a.	0%	100%	n.a.	0%	100%	0%	100%	n.a.	
260		NZ	SARKAN	396	98%	2%	n.a.	0%	100%	n.a.	0%	100%	29%	71%	n.a.	
235		NZ	SEMEROVO	1,290	74%	26%	n.a.	0%	100%	n.a.	0%	100%	30%	70%	n.a.	
255		NZ	SIKENICKA	507	92%	8%	n.a.	0%	100%	n.a.	0%	100%	0%	100%	n.a.	
254		NZ	STREKOV	2,394	98%	2%	n.a.	0%	100%	n.a.	0%	100%	28%	72%	n.a.	
266		NZ	STUROVO	13,347	92%	8%	n.a.	76%	24%	n.a.	0%	100%	8%	92%	n.a.	
250		NZ	SVODIN	2,734	98%	2%	n.a.	0%	100%	n.a.	0%	100%	29%	71%	n.a.	
170	NITRA	ZM	CARADICE	n.a.	86%	14%	-	0%	100%	-	0%	100%	0%	0%	-	
176		ZM	CIERNE KLACANY	n.a.	100%	0%	-	0%	100%	-	0%	100%	100%	0%	-	
186		ZM	NEVICINANY	n.a.	100%	0%	-	30%	70%	UP	0%	100%	100%	0%	-	
159		ZM	OBYCE	n.a.	100%	0%	-	0%	100%	-	0%	100%	0%	0%	-	
169		ZM	TEKOVSKÉ NEMCE	n.a.	70%	30%	-	0%	100%	-	0%	100%	100%	0%	-	
178		ZM	VOLKOVCE	n.a.	100%	0%	-	0%	100%	-	0%	100%	100%	0%	-	
167		ZM	ZLATE MORAVCE	n.a.	90%	10%	-	75%	25%	UP	100%	0%	75%	25%	UP	

Source: Prepared based on the information collected at various Slovak institutions such as Okres and Health offices

Notes:	BANSKA BYSTRICA	BREZINO	DETVA	ZARNOVICA	ZIAR NAD HRONOM	LEVICE
Complete building	Date of Data	Date of Data	Date of Data	Date of Data	Date of Data	Date of Data
Under Construction	Pop=n.a.	Pop=n.a.	Pop=n.a.	Pop=n.a.	Pop=n.a.	Pop=31.12.1996
Not Built Yet	Infra=0625/1998	Infra=1998	Infra=1998	Infra=1997	Infra=31.12.1998	Infra=31.12.1998
Under Preparation	Hlink nH system involve	ZVOLEN	Capacity: 3,100 m ³ d ⁻¹	**1) ZIAR NAD HRONOM	NOVE ZAMKY	Date of Data
	Lehotka pod Brehmi	Date of Data	Supply: n.a.	Date of Data	Date of Data	Pop=?
	Ziar system involves;	Pop=?	Efficiency: 65-45%	Pop=?	Pop=?	Infra=31.12.1998
	Hronska Dubrava	Infra=01.01.1997	*note-2	Infra=1998	Infra=1998	
	Stara Kiemnica		PREGLEJKA Plant			
	Trnava Hora		(town connect)			
	Lutia		Capacity: 3,036 m ³ d ⁻¹			
	Ladomerska Vieska		Supply: 1,926 m ³ d ⁻¹			
			Efficiency: 94.3%			
			IZOMAT Plant			
			Supply: 99.2 m ³ d ⁻¹			

E.2 WATER POLLUTION SOURCES IN THE HRON BASIN

Table E.2 - 1 (1 / 8) List of Wastewater Effluents

Monitoring 1)	River(km)	Recipient	Class 2)	Location No. of GISmap	Name	Type
*	168,4	Hron	1	89	StVaK -VK BB effluent of WW to Hron	municipal WWTP
*	2,2	Podlužianka	1	188-1	ZsVaK VK Levice effluent of WW to Hron	municipal sewerage
*	153,3	Hron	1	138-1	StVaK VK Zvolen effluent of WW to Hron	municipal sewerage
*	218,6	Hron	1	14	StVaK - VK Brezno effluent of WW - Hron	municipal sewerage
*	152	Hron	1	138-3	StVaK VK Zvolen effluent of WW from WTP to Hron	municipal sewerage
*	73,4	Hron	1	183	ZsVaK VK Timace effluent of WW to Hron	municipal energetic Industry
*	16	Kremnický creek-1	1	150-2	StVaK -VK Kremnica effluent of WW to Kremnický potok	municipal sewerage
*	0,5	Čierny Hron	1	21	StVaK - VK Valaska effluent of WW - Hron	municipal sewerage
*	126,7	Hron	1	154	StVaK VK Ziar nad Hronom effluent of WW to Hron	municipal sewerage
*	214,4	Hron	1	33-1	Municipality Podbrezova effluent of WW to Hron	municipal sewerage
*	1,5	Vrbovec-1	1	196	ZsVaK VK Zellezovce effluent of WW to Vrbovec	municipal sewerage
*	13,5	Kremnický creek-1	1	150-2	StVaK -VK Kremnica effluent of WW to Kremnický potok	municipal sewerage
*	28,6	Slatina-1	1	104	StVaK VK Detva effluent of WW from WTP from Slatina	municipal sewerage
*	106,1	Hron	1	169	StVaK VK Zamovica effluent of WW to Hron	municipal sewerage
*	93,2	Hron	1	178-1	StVaK VK Nova Bana effluent of WW to Hron	municipal sewerage
			1	178-2	StVaK VK Nova Bana effluent of ww to Kyzový brook	municipal sewerage
*	0,2	Hron	1	138-2	StVaK VK Zvolen effluent of WW to Slatina	municipal sewerage
*	212,1	Hron	1	33-3	StVaK - VK Podbrezova effluent of WW to Hron	municipal sewerage
*	1,5	Podkonický creek	1	55	StVaK - VK Podkonice effluent of WW to the Podkonický brook	municipal sewerage
*	2	Malachovský creek	1	89	StVaK VK BB effluent of WW to Malachovský creek	municipal sewerage
*	212,2	Hron	1	33-2	StVaK - VK Podbrezova effluent of WW to Bystránka	municipal sewerage
*	221,8	Hron	1	14	StVaK - VK Brezno effluent of WW - Hron	municipal sewerage
*	221,8	Hron	1	14	StVaK - VK Brezno effluent of WW - Hron	municipal sewerage
*	185,8	Hron	1	54	StVaK - VK Slov. Lupca effluent of WW to the Hron	municipal sewerage
*	185,4	Hron	1	54	StVaK - VK Slov. Lupca effluent of WW to the Hron	municipal sewerage
*	0,2	Lupčica	1	54	StVaK - VK Slov. Lupca effluent of WW to the Hron	municipal sewerage
*	13,5	Kremnický creek-1	1	150-2	StVaK -VK Kremnica effluent of WW to Kremnický potok	municipal sewerage
*	2,2	Selčiansky creek-1	1	89	StVaK VK BB effluent of WW to Selčiansky creek-1	municipal sewerage
*	14	Kremnický creek-1	1	150-2	StVaK -VK Kremnica effluent of WW to Kremnický potok	municipal sewerage
*	14	Kremnický creek-1	1	150-1	StVaK VK Kremnica effluent of WW to Rudnica	municipal sewerage
*	181	Hron	1	89	StVaK -VK BB effluent of WW to Hron	municipal sewerage
*	222,3	Hron	1	14	StVaK - VK Brezno effluent of WW - Hron	municipal sewerage
*	6,8	Vyhnianský creek	1	162	StVaK VK Vyhne effluent of WW to Vyhnianský brook	municipal sewerage
*	5,1	Vyhnianský creek	1	162	StVaK VK Vyhne effluent of WW to Vyhnianský brook	municipal sewerage
*	2	Selčiansky creek-1	1	89	StVaK VK BB effluent of WW to Selčiansky creek-1	municipal sewerage
*	3	Hutná	1	51	StVaK - VK Lubietova effluent of WW to the Hutná	municipal sewerage
*	118	Hron	1	158	StVaK VK Hliník nad Hronom effluent of WW to Hron	municipal sewerage
*	172	Hron	1	89	StVaK -VK BB effluent of WW to Hron	municipal sewerage
*	2,6	Bystrica-1	1	89	StVaK VK BB effluent of WW to Bystrica	municipal sewerage
*	1,5	Bystrica-1	1	89	StVaK VK BB effluent of WW to Bystrica	municipal WWTP
*		Hron	1	14	StVaK - VK Brezno effluent of WW - Hron	municipal sewerage
*	9	Čierny Hron	1	36	Interhotel Ruzomberok - channel Tale effluent of WW to the Bystránka	municipal WWTP
*	1,8	Selčiansky creek-1	1	89	StVaK VK BB effluent of WW to Selčiansky creek-1	municipal sewerage

Table E.2 - 1 (2 / 8) List of Wastewater Effluents

Monitoring 1)	River(km)	Recipient	Class 2)	Location No. of GISmap	Name	Type
*	2.1	Selčiansky creek-1	1	89	StVaK VK BB effluent of WW to Selčiansky creek-1	municipal sewerage
*	3.2	Bystrica-1	1	89	StVaK VK BB effluent of WW to Bystrica	municipal sewerage
*	13.5	Kremnický creek-1	1	150-2	StVaK VK Kremnica effluent of WW to Kremnický potok	municipal sewerage
*	13.5	Kremnický creek-1	1	150-2	StVaK VK Kremnica effluent of WW to Kremnický potok	municipal sewerage
*	2.3	Selčiansky creek-1	1	89	StVaK VK BB effluent of WW to Selčiansky creek-1	municipal sewerage
*	0.8	Bystrica-1	1	89	StVaK VK BB effluent of WW to Bystrica	municipal sewerage
*	1.8	Bystrica-1	1	89	StVaK VK BB effluent of WW to Bystrica	municipal sewerage
*	1.6	Malachovský creek	1	89	StVaK VK BB effluent of WW to Malachovský creek	municipal sewerage
*	15	Kremnický creek-1	1	150-2	StVaK VK Kremnica effluent of WW to Kremnický potok	municipal sewerage
				1 35	Interhotel Ruzomberok WTP Trangoska hotel effluent to Bystrianka	municipal WWTP
				1 47	Army unit- Nemecka effluent of WW to the Hron	municipal sewerage
				1 48	Brusno spa effluent of WW to the Brusnianska	municipal spa
				1 60-2	StVaK VK Slov.Lupca effluent of sewage to the Lupca	municipal sewerage
				1 84	Mototechna BB factory 09 effluent to the Hron	municipal service
				1 96	Army unit- Sliac effluent of WW to the WTP Hron	municipal army
				1 101	StVaK - VK Hrinova effluent of WW to Slatina	municipal sewerage
				1 110	Heating station Zvolen effluent of ww to Zolna	municipal energetic industry
*	0.38	Bien	1	139	VVO Agropol Budca effluent of WW to Hron	municipal sewerage
				1 156	Sklene Teplice spa effluent of WW to Tepla	municipal spa
*	2.2	Podlužianka	1	188-2	ZsVaK VK Levice effluent of WW to Podlužianka	municipal sewerage
				1 203	VVO Svodin effluent of WW to Svodinsky brook	municipal sewerage
*	183.8	Brusnianska	1	61-1	Biotika Slov.Lupca effluent of WW to the Hron	industry pharmacy
*	9.0	Selčiansky creek-1	1	71	Harmanecke paper factory Harmanec effluent	industry paper-industry
*	183.8	Hron	1	61-2	Biotika Slov.Lupca effluent of cold waters to the Hron	industry pharmacy
*	125.3	Hron	1	155-2	ZSNP Ziar nad Hronom effluent of WW to Hron (B)	industry smelting
*	3.7	Hodrušský creek	1	124-1	Bucina Zvolen effluent of WW to Slatina	industry wood-processing
*	1.1	Sikenica	1	124-3	Bucina Zvolen effluent of ww to Zolna	industry wood-processing
*	203.5	Hron	1	46	Petrochema Dubova effluent of WW to the Hron	industry petro-chemical industry
*	108.3	Slatina-1	1	167	Preglejka Zarnovica effluent of WW to Hron	industry wood-processing
*	73.45	Hron	1	184	AEMO Nuclear power plant Mochovce effluent of WW	industry power-plant
*	153.8	Hron	1	124-2	Bucina Zvolen effluent of WW to Hron	industry wood-processing
*	128.9	Hron	1	155-1	ZSNP Ziar nad Hronom effluent of WW to Hron (A)	industry smelting
*	216.2	Bystrianka	1	19	Iron factory Podbrezova effluent of industrial waste to Hron	industry smelting
*	1.8	Hodrušský creek	1	124-1	Bucina Zvolen effluent of WW to Slatina	industry wood-processing
*	1	Sikenica	1	124-3	Bucina Zvolen effluent of ww to Zolna	industry wood-processing
*	213.3	Hron	1	19	Iron factory Podbrezova effluent of industrial waste to Hron	industry smelting
*	166.5	Zolná	1	91	Vikanova Strojame effluent of WW to Hron	industry machinery
*	1.2	Hron	1	6	Horehronska wood factory effluent of WW - Hron	industry wood-processing
*	249.3	Hron	1	5	Slovpump Zavadka nad Hronom effluent of WW - Hron	industry machinery
*	1.2	Hodrušský creek	1	124-1	Bucina Zvolen effluent of WW to Slatina	industry wood-processing
*	4.05	Hron	1	163	Brewery Vyhne effluent of WW to Vyhniansky brook	industry brewery
*	258	Hron	1	3	Strojsmalt Pohorela effluent of WW, Hron	industry machinery

Table E.2 - 1 (3 / 8) List of Wastewater Effluents

Monitoring 1) River(km)	Recipient	Class 2)	Location No. of GISmap	Name	Type
* 213.1	Hrusné	1	19	Iron factory Podbrezova effluent of industrial waste to Hron	Industry smelting
* 0.8	Slatina-1	1	60-1	ZTS Slov.Lupca effluent of WW to Istebnik	Industry machinery
* 93.45	Hron	1	179	Izomat Nova Bana effluent of WW to Hron	Industry construction
* 2	Čiemy Hron	1	31-1	Zlievame Hronec (foundry) effluent of WW (sewage) to the Ciemy Hron	Industry smelting
* 2	Čiemy Hron	1	31-2	Foundry Hronec effluent of WW - industrial to the Ciemy Hron	Industry smelting
* 1.2	Istebnik	1	66	MiddleSlovakia cement factory BB effluent of WW to Selciansky brook	Industry cement
* 1.5	Sikenica	1	124-3	Bucina Zvolen effluent of ww to Zolna	Industry wood-processing
* 213.4	Hron	1	19	Iron factory Podbrezova effluent of industrial waste to Hron	Industry smelting
* 1.7	Zolná	1	20	Strojame Piesok (engine factory- ESPE) effluent to the flow Bystrianka	Industry machinery
* 0.9	Zolná	1	78	Slovenka (textile factory) BB effluent of WW to the Bystrica	Industry textile industry
* 117.9	Hron	1	159	Pohronske strojame Hlinik nad Hronom effluent of WW to Hron	Industry machinery
* 0.5	Novobanský creek	1	179	Izomat Nova Bana effluent of WW to Hron	Industry construction
			1	SSL-MS-CER.SKALA effluent of WW Hron	Industry wood-processing
			1	2 Metal invest Nova Masa) effluent of WW - Hron	Industry machinery
			1	22 Smrecina Janosovka effluent of WW to the Hron	Industry wood-processing
			1	32 Smrecina Stlavnicka effluent of WW to the Hron	Industry wood-processing
			1	33-4 StVak - VK Podbrezova effluent of industrial sewage to the Hron	Industry sewage
			1	41 RB - (ZSNP) factory Vajskova effluent of WW to the Vajskovsky potok	Industry mining
			1	56 Engine factory of state forests (ESSEL) Slov.Lupca effluent of WW to Lupcica	Industry machinery
			1	72 Chemika Neuber - OS Ulanka effluent of WW to the Bystrica	Industry chemistry warehouse
			1	73 Rudne Bane (mining company) Spánia Dolina effluent from sludge remove area Banský brook	Industry mining
			1	74 Smrecina BB factory Ulanka effluent of industrial waste to the Bystrica	Industry wood-processing
			1	100 Strojame Hrinova effluent of WW to Slatina	Industry machinery
			1	141 SMZ Dynas Banska Bela effluent of WW to Jasenica	Industry construction
			1	151-1 Rudne Bane (mining company)Kremnica effluent of WW to Rudnica	Industry mining
			1	151-2 Rudne Bane (mining company) Kremnica effluent of WW to Kremnický brook	Industry mining
			1	160 ZTS factory Vyhne effluent of WW to Vyhniansky brook	Industry machinery
			1	185 STAZ Kalna nad Hronom effluent of WW to Hron	Industry machinery
			1	200 Pohronska sugar factory Pohronsky Ruskov effluent of WW to Hron	Industry food industry
			1	201 Canning factory Pohronsky Ruskov effluent of WW to Hron	Industry food industry
			1	211 TOS Jasova effluent of WW to Pariz	Industry machinery
* 1.25	Zolná	1	67	SAD - bus transport company BB effluent to the Selciansky brook	transport transport
			1	148-1 SAD - bus transport company Kremnica effluent to the Rudnica	transport transport
			1	148-2 SAD - bus transport company Kremnica effluent to the Kremnický brook	transport transport
			1	166 SAD Zamovica bus transpor company effluent of WW to Hron	transport transport
* 12.3	Hradná	1	212	Wine Gbelce effluent of WW to Pariz	agriculture food industry
			1	197 ZSMP shambles Zelizovce influent	agriculture food industry
* 62.2	Hron	2	186	Obec Kalna nad Hronom WWTP	municipal sewerage
* 6	Osrblianka	2	29	Obec Osrblie WWTP	municipal sewerage
* 243	Hron	2	7	Municipality Polomka WWTP	municipal sewerage
* 20.5	Neresnica	2	128	Obec Pliesovca WWTP	municipal dwelling management
* 8.7	Hučava	2	114	Letisko Ocova	municipal airfield
* 15.3	Slatina-1	2	136	TSM Zvolen	municipal municipal services

Table E.2 - 1 (4 / 8) List of Wastewater Effluents

Monitoring 1)	River(km)	Recipient	Class 2)	Location No. of GISmap	Name	Type
*	2.5	Hron	2	65	Stvak VK Selce	municipal sewerage
			2	18	STVAK WWTP Brezno	municipal sewerage
			2	26	Obec Sihla	municipal sewerage
			2	39	SOU Zelezame Podbrezova	municipal sewerage
			2	42	Obec Dilha Lehota WWTP	municipal sewerage
			2	44	Obec Jasenle - WWTP	municipal sewerage
			2	45	Obec Predajna	municipal sewerage
			2	49	Obec Brusno	municipal sewerage
			2	68	TSM Banska Bystrica	municipal municipal services
			2	76	PSP Banska Bystrica	municipal construction
			2	82	Pekame Banska Bystrica	municipal bakery
			2	83	Stavoindustria Banska Bystrica	municipal construction
			2	87	SPK Banska Bystrica	municipal quarry
			2	93	VU Hronsek	municipal army
			2	109	Obec Viglas	municipal sewerage
			2	123	Lesomeliorny zavod Zvolen	municipal construction
			2	126	VU Pracovna Zvolen - Podborova	municipal army
			2	127	VLM Plietovce	municipal management of territory
			2	142	StVaK VK Banska Bela	municipal sewerage
			2	146	Obec Krahule	municipal sewerage
			2	165	Zdroj Zamovica	municipal food trade
			2	170	StVaK VK Hodrusa Hamre	municipal sewerage
			2	180	VVO Masoprodukt Tekovska Breznica	municipal sewerage
			2	182	Obec Hronsky Benadik	municipal sewerage
*	62.2	Hron	2	187	VVO Pohonakup Tekov Velky Dur	municipal sewerage
			2	190	ZsVaK Pukanec WWTP	municipal sewerage
			2	198	UVJS Zeelezovce	municipal prison
			2	199	Psychiatricka liecebna Zeelezovce	municipal sanitarium
			2	209	KVUS Zvolen	municipal army
			2	216	USS Velke Pole	municipal construction
*	1.6	Selciansky creek-1	2	108	Podpolianske strojarne Detva	industry machinery
*	4.2	Slatina-1	2	172	ZSNP Strojil Hodrusa Hamre	industry machinery
*	6.5	Bystrica-1	2	115	AP-VEKAF Lieskovec	industry sanitation
*	2.5	Kremnický creek-1	2	118	Hydinarske zavody Zvolen	industry poultry
*	2.7	Hron	2	173	Slovenska Banska spolocnost Hodrusa Hamre	industry mining
*	6.5	Malanka	2	195	Hronfrukt Zeelezovce	industry food industry
*	1.4	Bystrianka	2	28	SSL MS Hronec	industry wood-processing
*	171.5	Hron	2	86	ZVT Trading BB	industry electronic industry

Table E.2 - 1 (5 / 8) List of Wastewater Effluents

Monitoring 1) River(km)	Recipient	Class 2)	Location No. of GISmap	Name	Type
* 36,8	Hron	2	189	Labina Pukanec	industry wood-processing
* 154,7	Pariž	2	117	Doprastav OS Zvolen	industry construction
* 16	Zolná	2	192	STS Krskany	industry service
* 4,9	Zolná	2	173	Slovenska Banska spolocnost Hodrusa Hamre	industry mining
* 14,7	Hron	2	147	Mincovna Kremnica	industry mint
* 37	Slatina-1	2	189	Labina Pukanec	industry wood-processing
			8	SSL MS Benus	industry wood-processing
			10	Harmanec paper factory Bujakovo	industry paper factory
			11	Smrecina Brezno - Halny	industry wood-processing
			12	SSL MS Brezno	industry wood-processing
			13	RD Brezno	industry mining
			23	SSL MS Cierny Balog	industry wood-processing
			52	VDI Rozkvet Kovo Lubietova	industry metal coating
			53	VDI Rozkvet Keramika - Lubietova	industry ceramic
			57	SSL MS Slovenska Lupca	industry wood-processing
			64	DMS Zvolenske Nemce	industry transport
			70	VKU Harmanec	industry cartography
			92	K&K Company Hronsek	industry construction
			95	Raselinove Zavody EBA Lukavica	industry mining of turf
			99	NAKO Hrinova	industry metal coating
			102	SSL MS Krivan	industry wood-processing
			116	Ipelske Tehelne Lieskovec	industry brick production
			120	Stavoindustria Zvolen	industry construction
			121	SSL MS Zvolen	industry wood-processing
			122	Doprastav OS Lieskovec	industry construction
			125	Polnohospodarske stavby Zvolen	industry construction
			132	Liaz Zvolen	industry automobile industry
			133	Panelaren PS Zvolen	industry construction
			134	Robstav Zvolen	industry construction
			137	Agrozet Zvolen	industry machinery
			140	RB Banska Stavnica	industry mining
			143	SSL MS Sasovske Podhradie	industry wood-processing
			144	Bucina Sasovske Podhradie	industry wood processing
			145	Kremnicka banska spolocnost Kremnica	industry mining
			161	RZ Agrostav Vyhne	industry construction
			164	SKS Sokolec	industry ???????????
			168	Illichmann Zamovica	industry smelting
			171	Kovolesk Hodrusa Hamre	industry service
			175	Kveta VDI Nova Bana	industry service
			191	SSL MS Bohunice	industry wood-processing
			202	Mlyny a cestoviname Pohronsky Ruskov	industry food industry
			204	Doprastav OS Benus	industry construction
			213	Hronfrukt Levice	industry food industry
			214	ZERZ Levice	industry machinery
			218	SVP PH Levice	industry management of territory

Table E.2 - 1 (6 / 8) List of Wastewater Effluents

Monitoring 1)	River(km)	Recipient	Class 2)	Location No. of GISmap	Name	Type
*	24,55	Bystrica-1	2	112	Benzinol Cs Zvolen	transport fuel-station
*	82,3	Hron	2	181	Benzinol OS Hronsky Benadik	transport warehouse
			2	15	ASO VD Brezno	transport transport
			2	16	SAD Brezno	transport transport
			2	17	ZSR VS Brezno	transport transport
			2	69	PZ Autodieline Smkova	transport service
			2	77	Aso mototrans Jakub	transport service
			2	80	Autoumyvaren Mototrans Stivnický	transport car-wash
			2	81	Autoservis VD Banska Bystrica	transport service
			2	85	ASO Mototrans Banska Bystrica	transport service
			2	103	SAD Detva	transport transport
			2	105	Benzinol CS Detva	transport fuel station
			2	106	Bezninol Stozok	transport warehouse
			2	111	Autoservis Zvolen	transport service
			2	135	ASO VD Zvolen Straz	transport service
			2	149	ASO Mototrans Kremnica	transport service
			2	153	Benzinol Cs Ziar nad Hronom	transport fuel station
			2	176	ASO VD Nova Bana	transport service
			2	177	SAD Nova Bana	transport transport
			2	215	SAD Levica	transport transport
*	13,39	Neresnica	2	130	RD Dobra Niva	agriculture agricultural production
			2	24	Obec Cierny Balog WWTP	agriculture agricultural production
			2	25	RD Lom nad Rimavicou	agriculture agricultural production
			2	43	RD Jasenie	agriculture agricultural production
			2	50	RD Medzibrod	agriculture agricultural products
			2	62	RD Mliekaren Selce	agriculture milk products
			2	94	RD Micna	agriculture agricultural production
			2	107	Obec Slatinske Lazy WWTP	agriculture agricultural production
			2	113	RD Hrochol	agriculture agricultural production
			2	119	Mliekaren Zvolen	agriculture milk products
			2	129	Jednota SD Vyrobná Masa	agriculture agricultural production
			2	131	PNZP Breziny	agriculture agricultural production
			2	152	Obec Stara Kremnicka WWTP	agriculture mining
			2	174	PD Masovyroba Voznica	agriculture agricultural production
			2	194	Vinarske zavody Zellezovce	agriculture food industry

Table E.2 - 1 (7 / 8) List of Wastewater Effluents

Monitoring 1	River(km)	Recipient	Class 2)	Location No. of GISmap	Name	Type
*	29.6	Perec	2	210	Bitunok Podvrble Zbrojniky	agriculture food industry
			2	4	Ustav socialnej starostlivosti Pohorela Masa	
			2	27	Chata Kamenica	
			2	30	DT Osrbie	
			2	34	WWTP Podbrezova Slavnicka	
			2	37	DT Bystra	
			2	40	WWTP Krpacova	
			2	59	Sprava hmotnych rezerv - Slovenska lupca	
			2	63	Hotel Sachticky	
			2	75	Motorest Ulianka	
			2	79	Bopa Rz Tajov	
			2	88	Gukotex Banska Bystrica	
			2	97	Slovenske Kuple Kovacova	
			2	98	Upravovna vody Hrinova	
			2	157	Sanatorium ZSNP Sklené Teplice	
			2	193	RZ Margita Ilona	
			2	205	RZ Celprojekt hotel Bystra	
			2	206	DT Zelezarne Podbrezova Bystra	
			2	207	RZ Drudob Bratislava Bystra	
			2	208	SAD Hotel Sielnica	
			2	217	Hotel Rozkvet Levica	
*	1	Jaseniarsky creek	3		StVak - VK Predajna effluent of WW to the Hron	
*	3	Selciarsky creek-1	3		StVak VK Selca effluent of industrial waste to Selciarsky brook (A)	
*	2.6	Selciarsky creek-1	3		StVak VK Selca effluent of industrial waste to Selciarsky brook (B)	
*	164.5	Selciarsky creek-1	3		FNMO VSB Slac effluent of industrial waste to Hron	
*	45.2	Hron	3		ZTS Detva effluent of WW to Hradna	
*	161.1	Hron	3		StVak VK Slac effluent of WW to Hron	
*	28.8	Zolna	3		Psych. institute in Hronovce effluent of WW to Hron	
*	165.3	Vyhniarsky creek	3		FNMO VSB Vikanova effluent of industrial waste to Hron	
*	16.5	Bystrianka	3		Interhotel Ruzomberok Hotel - Srdiecko effluent of WW to Bystrianka	
			3		Car servise Krakova effluent of WW to the Hron	
*	46	Hron	3		ZTS Detva effluent of WW to Slatina	
			3		SSM - Kremnica effluent of WW to Kremnický brook	
			3		Rudne Bane -mining company - BB factory Malachov effluent to Malachov	
			3		Sandric Dolne Hamre effluent of sludge waste to Hodrusky brook	
			3		StVak - VK Predajna effluent of WW to the Jaseniarsky brook	
			3		Loandries and cleaner shops BB effluent of waste water to the Bystrica	
			3		SHZ Zvolen effluent of WW to Zolna	
			3		VaV Lieskovec effluent of WW to Zolna	
			3		ZTS Detva effluent of WW from WTP to Hradna	
			3		SSM - Kremnica effluent of WW to Rudnica	
			3		Preglejka Sasovske Podhradie effluent of WW to Rudnica	

Table E.2 - 1 (8 / 8) List of Wastewater Effluents

Monitoring 1) River(km)	Recipient	Class 2)	Location No. of GISmap	Name	Type	
* 46	Hron	3		Rudne bane Hodrusa effluent of WW to Hodrusky brook		
		3		Sandric Dolne Hamre effluent of WW to Hodrusovsky brook		
		3		Smreclna Pukanec effluent of WW to Sikenica		
		3		StVaK BB VK Malachov effluent of industrial waste water to Malachovsky brook		
		3		Rozkvet VDI Hrinova effluent of WW to Slatina		
		3		StVaK VK Ziar nad Hronom effluent of WW to Lutisky brook		
		3		Sandric Dolne Hamre effluent of industrial waste to Hodrusky potok		
		3		ZsVaK VK Kalna nad Hronom effluent of WW to Hron		
		3		UZNV Zelezovce effluent of WW to Malanka		
		3		Psychiatric Institute in Zelezovce effluent of WW to Hron		
		3		Cosmetics Levice effluent of WW to Podluzianka	industry	cosmetic industry
		3		Levitex Levice effluent of WW to Podluzianka	industry	textile industry
		3		StVaK VK Kovacova effluent of WW to Kovacovsky brook	municipal	sewerage
		3		Svermove iron factory - Hron		
		3		SES Timace effluent of WW to Hron		
* 42.6	Slatina	4				
* 11	Kremnický creek-1	4				
* 154.7	Paríž	4				
* ?	?	4				
* ?	Novobanský creek	4				
* 29.5	Sikenica	4				

1) Monitoring point recorded by SHMU in 1997

2) Following classification by Povodie Hrona 1:most important sources 2:new registered sources of pollution

Source: Created by JICA team based on the data from SHMU and Povodie Hrona

Table E.2 - 2

**Wastewater Treatment Plants Managed by Waterworks in the Hron Basin
with Effluent Monitoring Points (1997)**

(1) Wastewater treatment plants managed by waterworks

NEC	Name - Locality	River(km)	Recipient
R2330DVA	VK Nová Baňa	93,2	Hron
R2430DVA	VK Tlmače	73,4	Hron
R0250DVA	VK Brezno	218,6	Hron
R0250DVB	VK Brezno	221,8	Hron
R0250DVC	VK Brezno	221,8	Hron
R0250DVD	VK Brezno	222,3	Hron
R0250DVE	VK Brezno		Hron
R0280DVA	VK Valaská	0,5	Cierny Hron
R0400DVA	VK Podbrezová	214,4	Hron
R0450DVA	VK Predajná	1,0	Jaseniansky creek
R0560DVA	VK Lubietova	3,0	Hutná
R0600DVA	VK Podkonice	1,5	Podkonický creek
R0620DVA	VK Slov. Lupča	185,8	Hron
R0620DVB	VK Slov. Lupča	185,4	Hron
R0620DVC	VK Slov. Lupča	0,2	Lupčica
R0660DVA	VK Selce	3,0	Selciarsky creek-1
R0660DVB	VK Selce	2,6	Selciarsky creek-1
R0950DVA	VK Ban. Bystrica	2,0	Selciarsky creek-1
R0950DVB	VK Ban. Bystrica	2,3	Selciarsky creek-1
R0950DVC	VK Ban. Bystrica	1,8	Selciarsky creek-1
R0950DVD	VK Ban. Bystrica	2,1	Selciarsky creek-1
R0950DVE	VK Ban. Bystrica	2,2	Selciarsky creek-1
R0950DVF	VK Ban. Bystrica	2,0	Malachovský creek
R0950DVG	VK Ban. Bystrica	1,6	Malachovský creek
R0950DVH	VK Ban. Bystrica	1,5	Bystrica-1
R0950DVI	VK Ban. Bystrica	1,8	Bystrica-1
R0950DVJ	VK Ban. Bystrica	0,8	Bystrica-1
R0950DVK	VK Ban. Bystrica	2,6	Bystrica-1
R0950DVL	VK Ban. Bystrica	3,2	Bystrica-1
R1010DVA	VK Ban. Bystrica	168,4	Hron
R1010DVB	VK Ban. Bystrica	172,0	Hron
R1010DVC	VK Ban. Bystrica	181,0	Hron
R1130DVA	VK Zvolen	153,3	Hron
R1130DVB	VK Zvolen	0,2	Hron
R1130DVC	VK Zvolen	152,0	Hron
R1190DVA	VK Detva	28,6	Slatina-1
R1770DVA	VK Kremnica	14,0	Kremnický creek-1
R1770DVB	VK Kremnica	13,5	Kremnický creek-1
R1770DVC	VK Kremnica	13,5	Kremnický creek-1
R1770DVD	VK Kremnica	15,0	Kremnický creek-1
R1770DVE	VK Kremnica	13,5	Kremnický creek-1
R1770DVF	VK Kremnica	14,0	Kremnický creek-1
R1770DVG	VK Kremnica	13,5	Kremnický creek-1
R1770DVH	VK Kremnica	15,0	Kremnický creek-1
R1790DVA	COV Horná Ves	11,0	Kremnický creek-1
R1850DVA	VK Ziar nad Hronom	126,7	Hron
R2000DVA	VK Hliník	118,0	Hron
R2110DVA	VK Vyhne	6,8	Vyhniarsky creek
R2110DVB	VK Vyhne	5,1	Vyhniarsky creek
R2230DVA	VK Zarnovica	106,1	Hron
R2640DVA	VK Levice	2,2	Podluzianka
R3020DVA	VK Zliezovce	1,5	Vrbovec-1

Source: Waste water effluents data, SHMU BA 3

Table E.2 - 3 Industrial Wastewater Treatment Plants in the Hron Basin with Effluent Monitoring Points (in 1997)

(2) Industrial wastewater treatment plants			
NEC	Name - Locality	River(km)	Recipient
R0110PVA	Strojsmalt a.s. Pohorela	258,0	Hron
R0130PVA	SLOVPUMP Závadka	249,3	Hron
R0280PVA	COV Trangoška /SKI Jasná a.s. Demänovská dolina	18,5	Bystrianka
R0360PVA	zlievareň a.s. Hronec	1,4	Bystrianka
R0380PVB	zlievareň a.s. Hronec	2,0	Cierny Hron
R0365PVA	BEZA spol. s r.o. Martin (before COV Tále interhotel Ruzomberok)	9,0	Cierny Hron
R0400PVA	Železiarne Podbrezová	215,2	Bystrianka
R0400PVC	Železiarne Podbrezová	213,4	Hron
R0400PVD	Železiarne Podbrezová	213,1	Hrusné
R0400PVE	Železiarne Podbrezová	213,3	Hron
R0480PVA	Petrochema Dubová	203,5	Hron
R0510PVA	Kúpele Brusno-Horehronská lieč. spol. a.s.	1,2	Hron
R0620PVA	BIOTIKA Slov. Lupča	183,8	Brusnianka
R0620PVB	BIOTIKA Slov. Lupča	183,8	Hron
R0660PVA	mliekareň Selce	2,5	Hron
R0700PVA	Cementáreň Ban. Bystrica	1,2	Istebník
R0730PVA	HP Harmanec	9,8	Selčiansky creek-1
R1120PVA	VSB-VU 4977 Slac	164,5	Selčiansky creek-1
R1190PVA	Podpolianske strojárne Detva	1,6	Selčiansky creek-1
R1200PVA	Benzinol a.s. obchod. závod Stozok	24,55	Bystrica-1
R1440PVA	VEKAF s r.o. Lieskovec (before Asanačný kaf. podnik Lieskovec)	5,5	Bystrica-1
R1770PVA	Stat. mincovňa Kremnica	14,7	Hron
R2000PVA	Pohronské strojárne Hliník	117,9	Hron
R2110PVB	Pivovar Vyhne (HERS spol. s r.o.)	4,05	Hron
R2240PVA	Slov. banská spol. s r.o. Hodruša - Hamre (before RB Hodruša)	2,7	Hron
R2240PVB	Slov. banská spol. s r.o. Hodruša - Hamre (before RB Hodruša)	4,9	Zolná
R2330PVA	IZOMAT Nová Baňa	93,45	Hron
R2330PVB	IZOMAT Nová Baňa	0,5	Novobanský creek
R2380PVA	Slovnaft a.s. Hron. Benadik	82,3	Hron
R2440PVA	EMO Mochovce	73,45	Hron
R2750PVA	UNA Pukanec-Exunako a.s.	36,8	Hron
R2750PVB	UNA Pukanec-Exunako a.s.	37,0	Slatina-1
R2910PVA	Ústav sociálnej starostlivosti pre mládež, Krškany	16,0	Zolná
R3620PVA	psychiatr. nemocnica Hronovce	28,8	Zolná
R0280QVA	ESPE Piesok	1,7	Zolná
R0700QVA	SAD Ban. Bystrica	1,25	Zolná
R1020QVA	Vikanovské strojárne	166,5	Zolná
R1850QVA	Z SNP Ziar nad Hronom	128,9	Hron
R1850QVB	Z SNP Ziar nad Hronom	125,3	Hron
R2230QVA	Preglejška a.s. Zarnovica	108,3	Slatina-1
R2280QVA	Sandrik Dol. Hamre a.s. Hodruša-Hámre	4,2	Slatina-1
R3520QVB	VINO Gbeloc	12,3	Hradná
R0620RVA	ZTS Slov. Lupča	0,8	Slatina-1
R0950RVA	Slovenka Ban. Bystrica	0,9	Zolná
R1130RVA	Hydinársky priemysel Zvolen	2,5	Kremnický creek-1
R1160RVA	ZTS Hrinová	46,0	Hron
R1160RVB	ZTS Hrinová	45,2	Hron
R0990SVA	ZVT Ban. Bystrica	171,5	Hron
R1020SVA	VSB-VU 7863 Vikanová	165,3	Vyhnianský creek
R1130SVA	Bučina Zvolen	153,8	Hron
R1130SVB	Bučina Zvolen	3,7	Hodrušský creek
R1130SVC	Bučina Zvolen	1,8	Hodrušský creek
R1130SVD	Bučina Zvolen	1,2	Hodrušský creek
R1130SVE	Bučina Zvolen	1,5	Sikenica
R1130SVF	Bučina Zvolen	1,1	Sikenica
R1130SVC	Bučina Zvolen	1,0	Sikenica
R3020SVA	OZNV Železovce	5,5	Malanka
R11301VA	Doprastav Zvolen	154,7	Paríž
R11301VC	T.B.S. spol. s r.o. Borova voda	158,4	Luzianka

Source: Waste water effluents data, SHMU BA 3

Table E.2 - 4 Agricultural Farms and Other Municipal Wastewater Discharges in the Hron Basin with Effluent Monitoring Points

(3) Other discharges in municipalities

NEC	Name - Locality	River(km)	Recipient
R0140AVA	obec Polomka	243,0	Hron
R0350AVA	Obec Osrblie	6,0	Osrblianka
R0400AVA	obec Podbrezová	212,2	Hron
R0400AVE	obec Podbrezová	212,1	Hron
R1120AVA	mesto Sliac-Kollárová ul. (56 b.j.)	161,1	Hron
R1290AVA	obec Zvolenská Slatina	15,3	Slatina-1
R1400AVA	obec Očová	8,7	Hučava
R1470AVA	obec Pliešovce	20,5	Neresnica
R1490AVA	COV Dobrá Niva	13,39	Neresnica
R2330AVA	USS Nová Baňa, Hrabiny		Novobanský creek
R2510AVA	obec Kalná nad Hronom	62,2	Hron
R2770AVA	obec Bätovce	29,5	Sikenica

(4) Agricultural farm (animals)

NEC	Name - Locality	River(km)	Recipient
R1560FVA	AGROSPOL V.P. s r.o. Budča (before Vejkovýkrmňa Budča)	0,38	Bien
R2490FVA	VVO Vejký Dúr-Koopera a.s.	62,2	Hron
R3310FVA	Bitúnok Zbrojníky	29,6	Perec

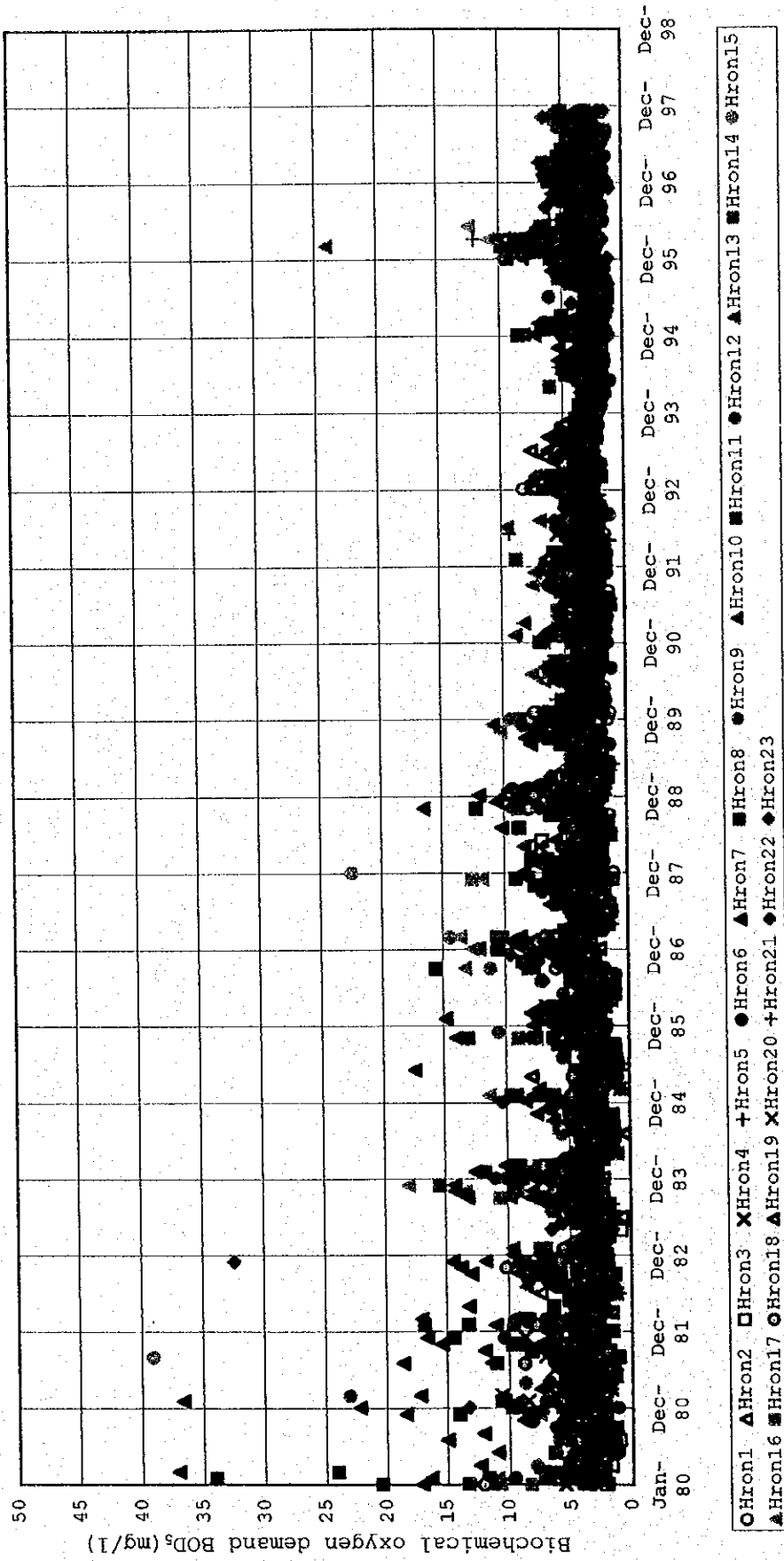
Source: Waste water effluents data, SHMU BA 3

E.3 SURFACE WATER QUALITY

1. LONG-TERM CHANGES IN HIGHLIGHTED INDICATORS OF SURFACE WATER QUALITY IN THE STUDY AREA

These are shown in Figures E.3 - 1 through E.3 - 11.

A02 Biochemical oxygen demand (BOD₅)



Source: Based on the digital data provided by SHMU

Figure E.3 - 1 Long-term Changes in Biochemical Oxygen Demand (BOD₅)

B08 Ammonium nitr. ($\text{NH}_4^+ - \text{N}$)

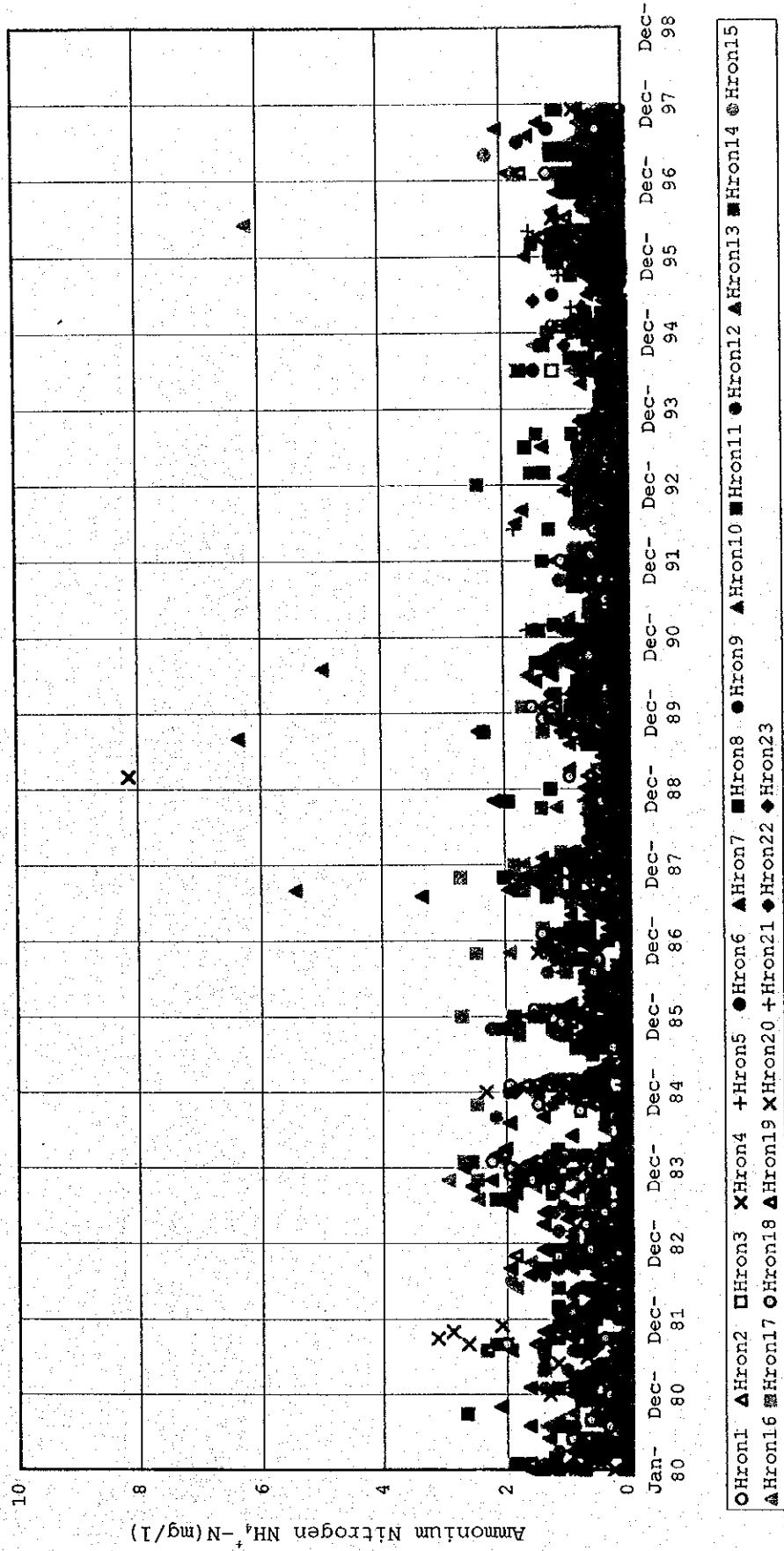


Figure E.3 - 2 Long-term Changes in Ammonium Nitrogen ($\text{NH}_4^+ - \text{N}$)

Source: Based on the digital data provided by SHMU

B10 Nitrate nitrogen (NO₃⁻-N)

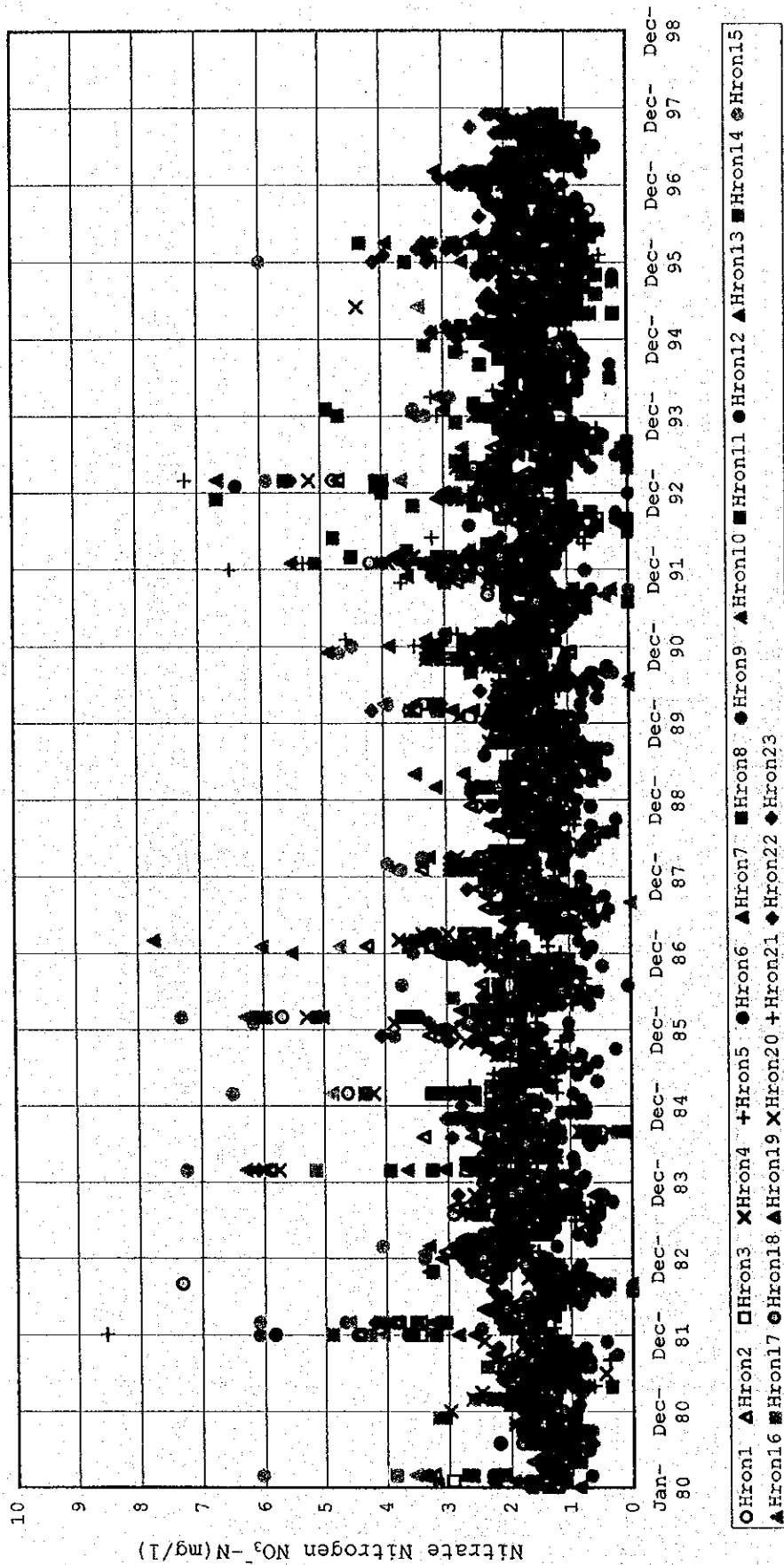


Figure E.3 - 3 Long-term Changes in Nitrate Nitrogen (NH₃-N) Source: Based on the digital data provided by SHMU

B12 Total phosphorus (P)

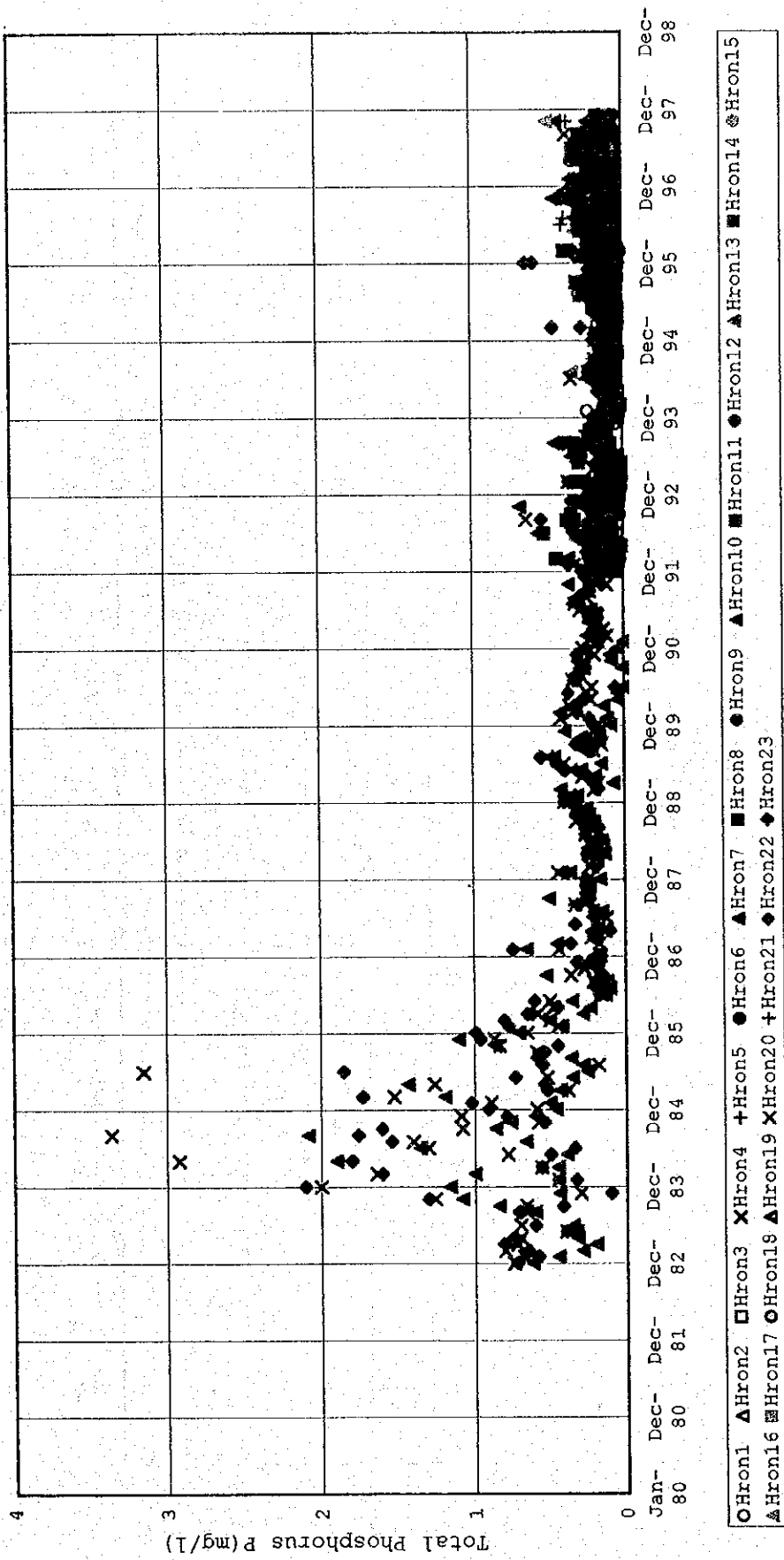


Figure E.3 - 4 Long-term Changes in Total Phosphorus (T-P) Source: Based on the digital data provided by SHMU

D01 Mercury (Hg)

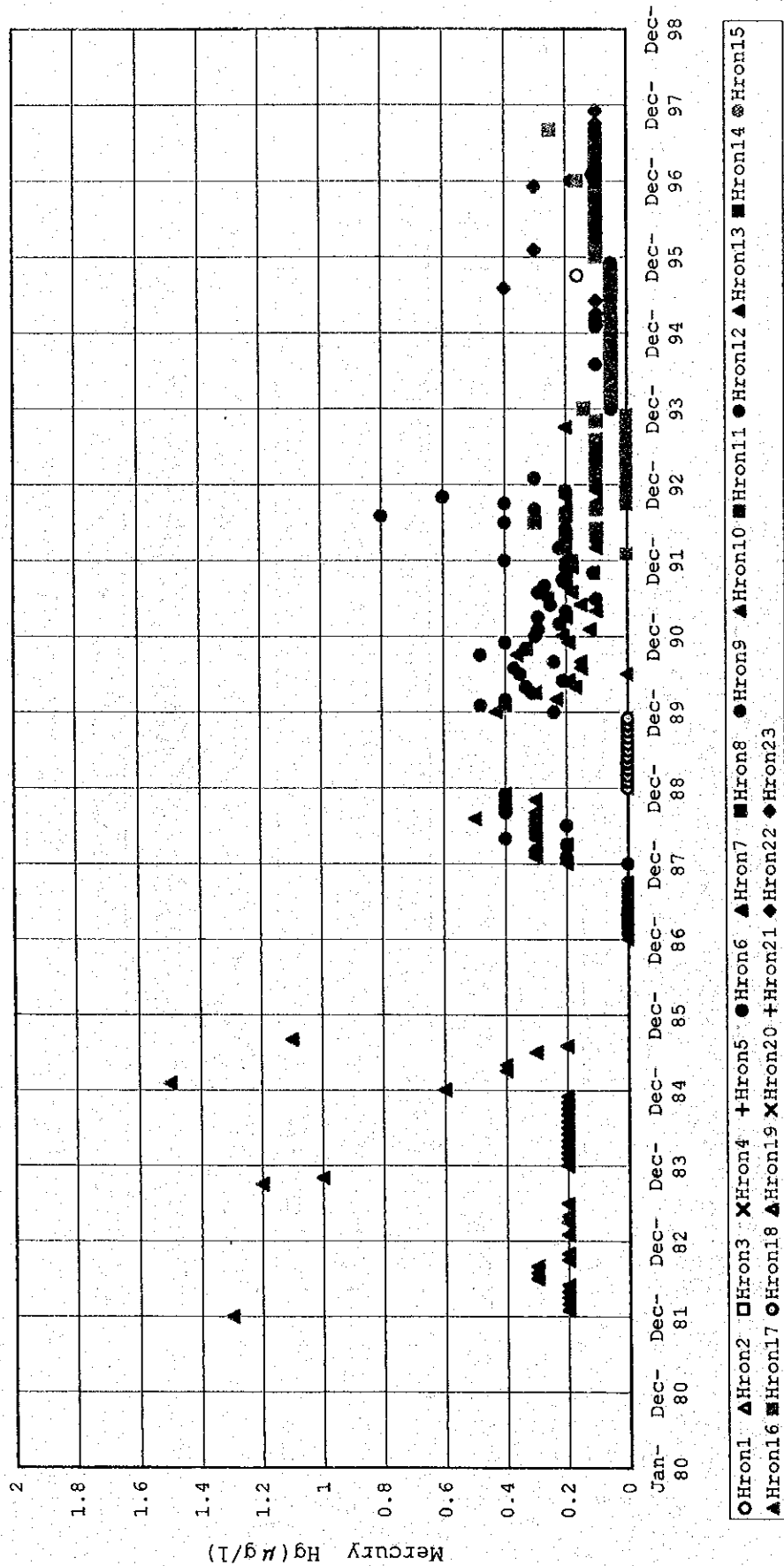


Figure E.3 - 5 Long-term Changes in Mercury (Hg)

Source: Based on the digital data provided by SFMU

D02 Cadmium (Cd)

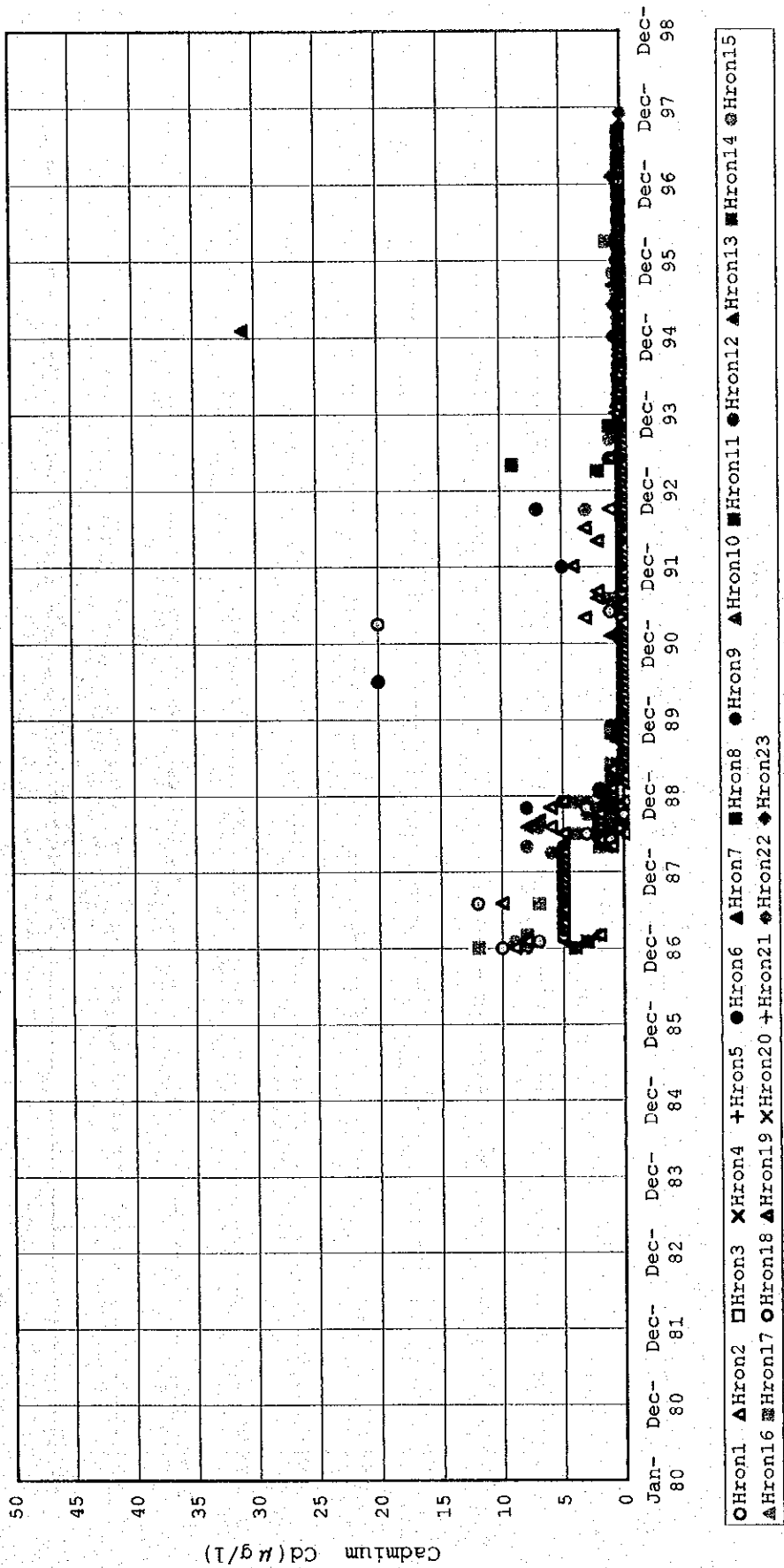
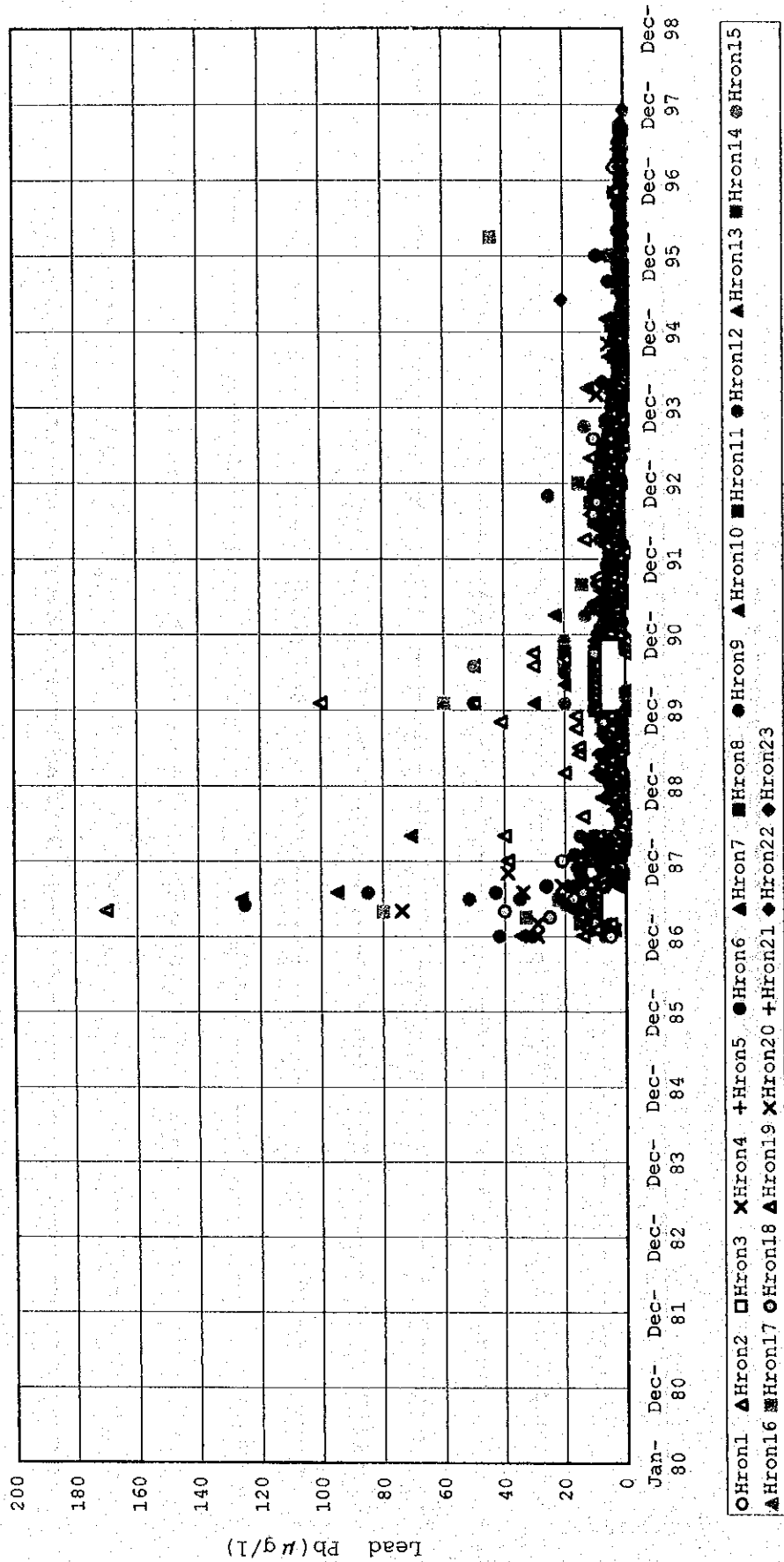


Figure E.3 - 6 Long-term Changes in Cadmium (Cd) Source: Based on the digital data provided by SHMU

D03 Lead (Pb)



Source: Based on the digital data provided by SFMU

Figure E.3 - 7 Long-term Changes in Lead (PB)

D05 Copper (Cu)

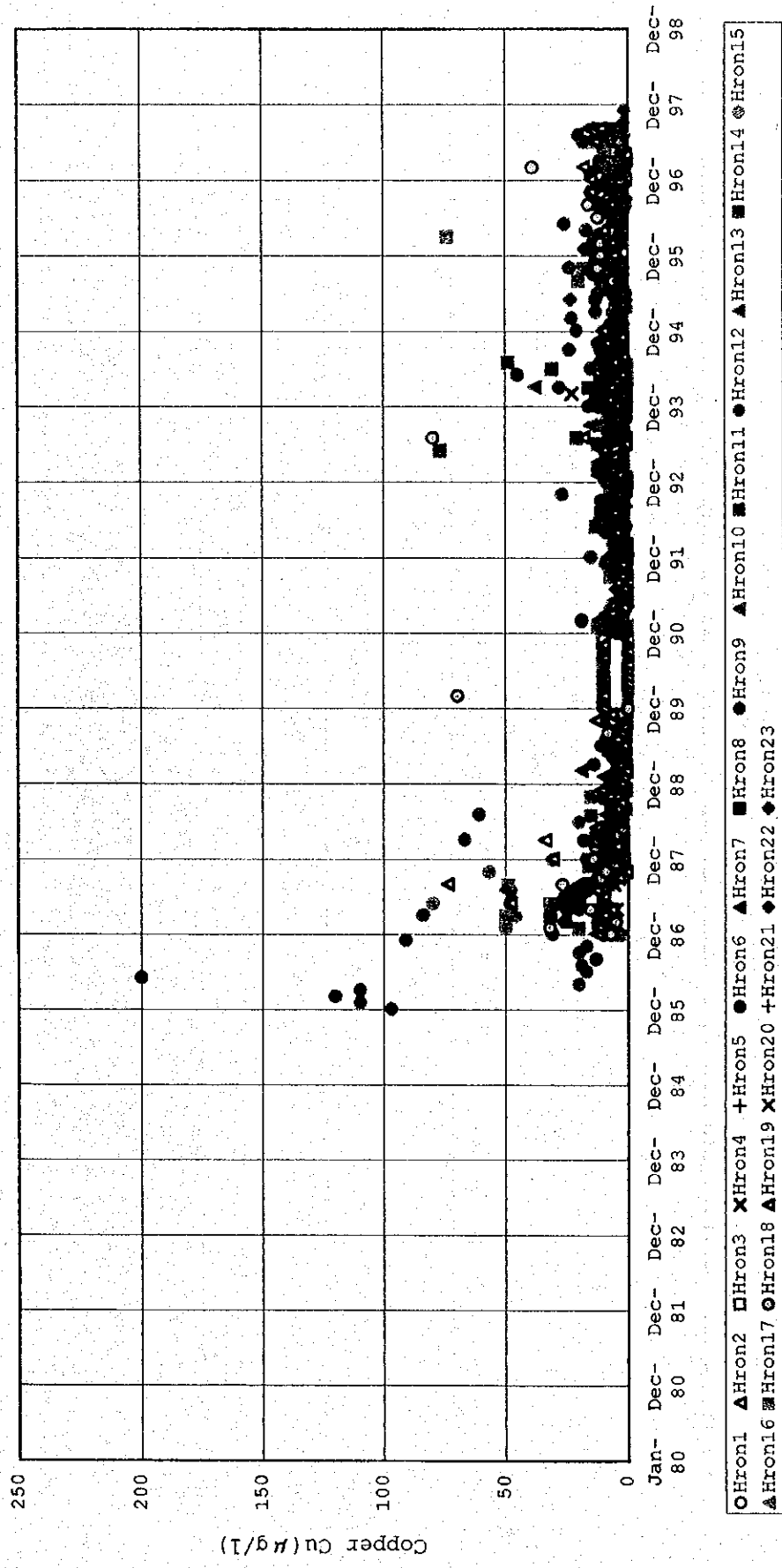


Figure E.3 - 8 Long-term Changes in Copper (Cu) Source: Based on the digital data provided by SHMU

E03 Coliform bacteria

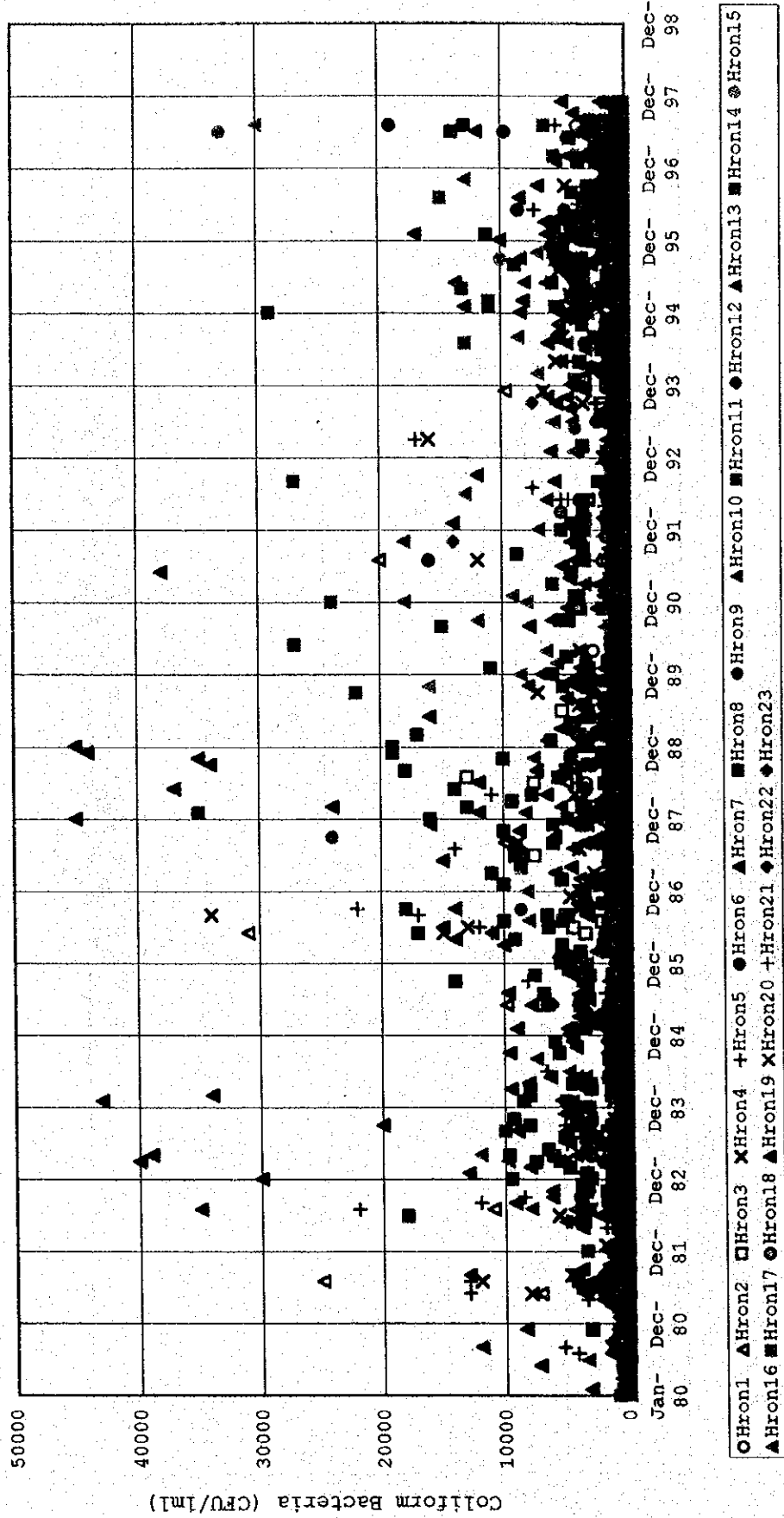
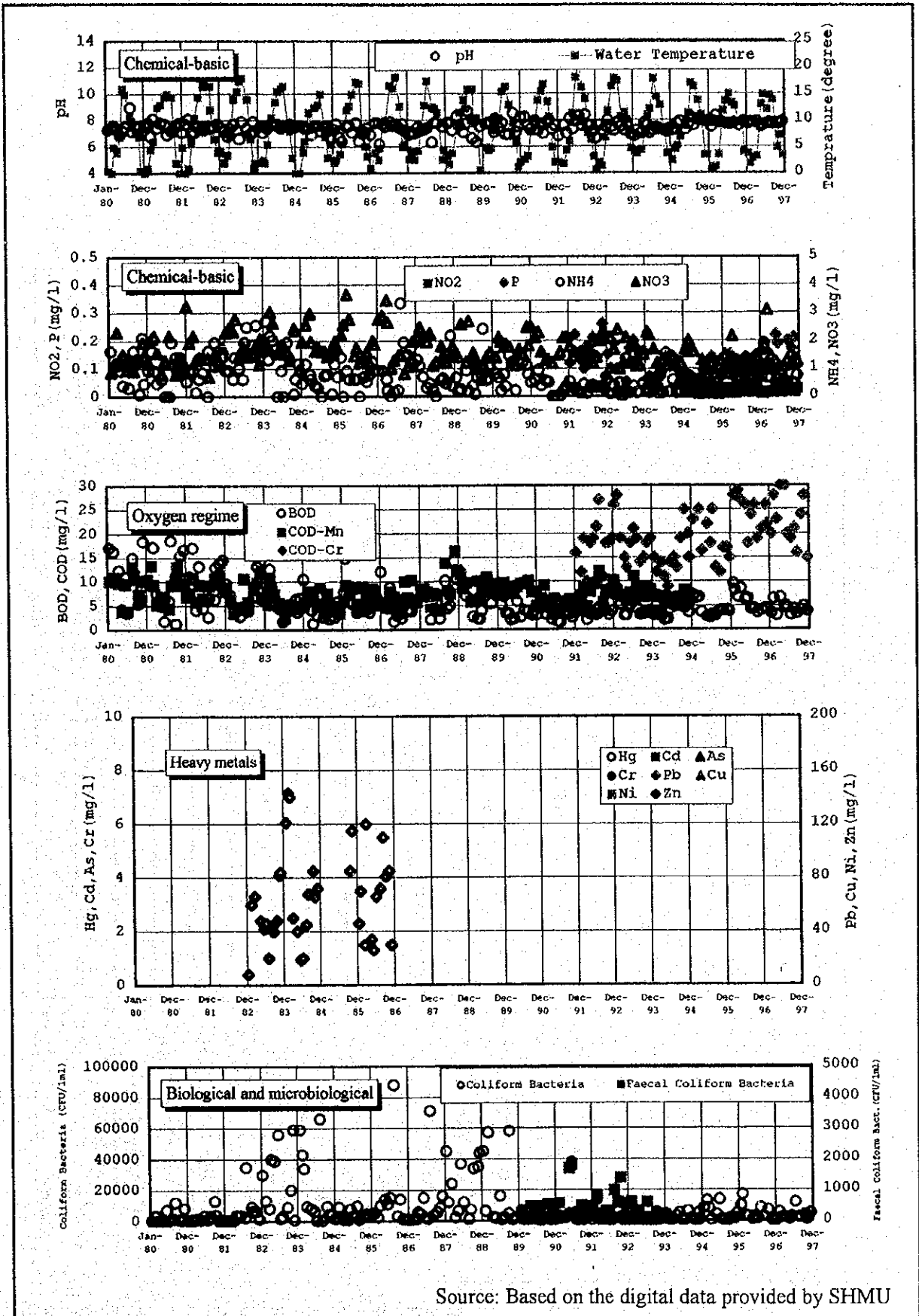


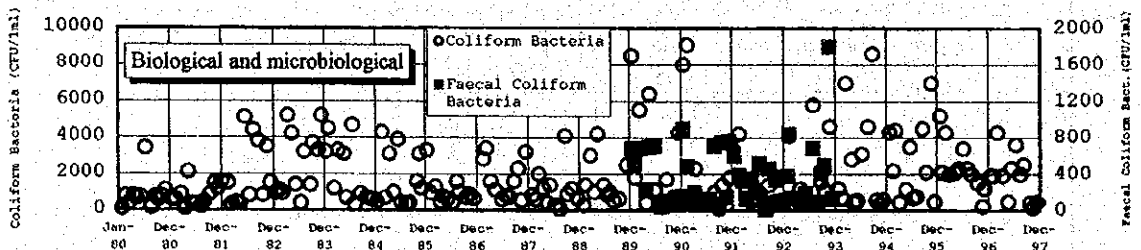
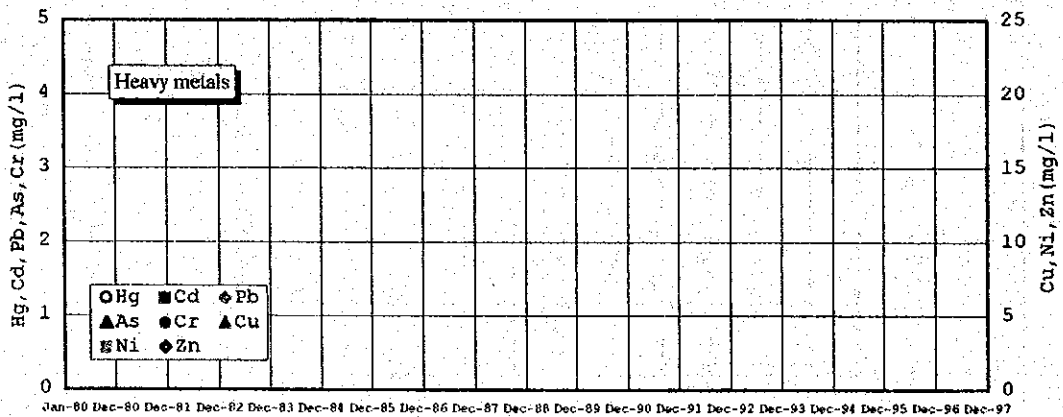
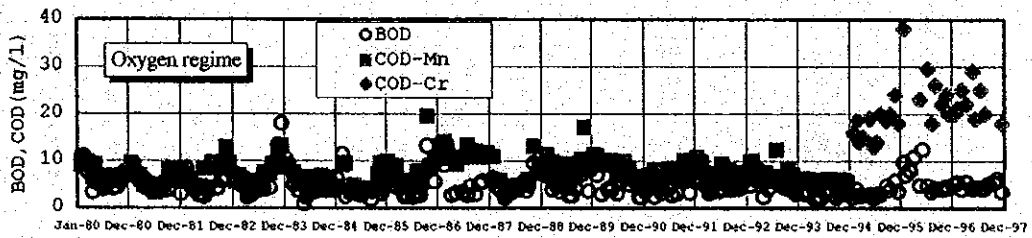
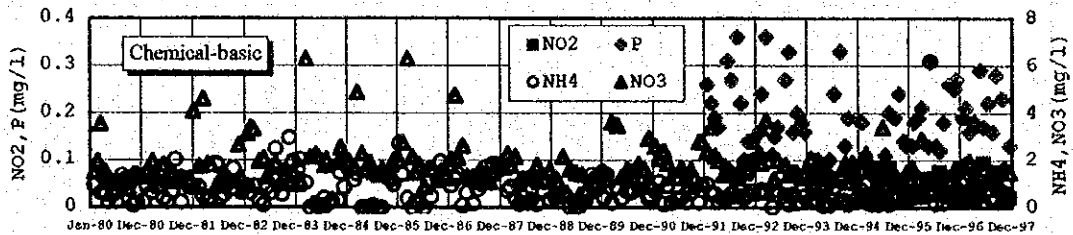
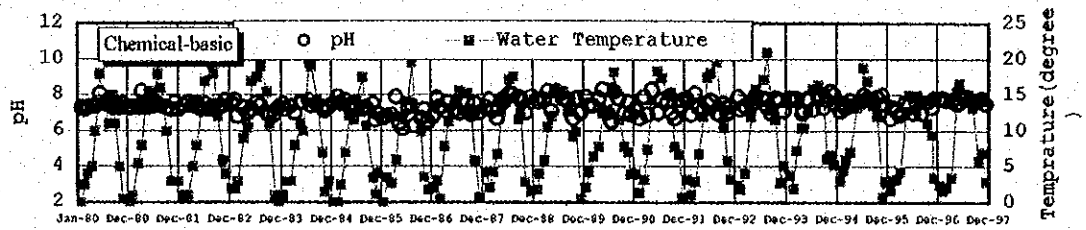
Figure E.3 - 9 Long-term Changes in Coliform Bacteria

Source: Based on the digital data provided by SHMU



Source: Based on the digital data provided by SHMU

Figure E.3 - 10 Long-term Changes in Water Quality at Slovakia (around Banska Bystrica)



Source: Based on the digital data provided by SHMU

Figure E.3 - 11 Long-term Changes in Water Quality at Hron/Budca

2. LATEST INFORMATION ON THE PRESENT STATE OF SURFACE WATER QUALITY

According to water quality assessment of **Povodie Hrona**, there are currently 30 water quality monitoring profiles in the area of Hron river catchment. On the basis of water quality assessment, pursuant to STN 75 7221 in 1997-1998 at separate control profiles, Hron river in its upper parts is considered to be effected by anthropogenic activity. For the **Valkovňa** profile, the oxygen regime indicators BOD_5 and COD_{Cr} reach in their characteristic values (C 90) the II. purity class, however, because of higher content of non-polar extractable particles as well as microbial contamination in water, it is classified under the IV. - V. purity class. As far as **Brezno**, the water remains to be classified just as at the **Polomka** profile. However, increase in nutrient contamination is becoming apparent within specific purity classes, which points to the effect of run-off water contamination from villages where this water is still not treated. Increase in $N-NH_4^+$ nutrients and P_{tot} in the **Valaská** profile shows the effect of discharged water from the complex of Brezno municipality.

Apparent in the **Nemecká** profile is the effect of large industrial source - **Petrochema Dubová** documented by increase in non-polar extractable particles, which classify this water under the V. purity class.

As for the **Šáľková** profile that has been selected as a profile to document the effect of **Biotika - Slov. Ľupča**, acceptable degree of contamination pursuant to SR Government Order No. 242/93 Coll. for BOD_5 , COD_{Cr} , ammonia nitrogen, and nitrogen of nitrous anhydrid is being exceeded in their maximum values. Increase in ammonia nitrogen there is several times higher compared to the **Nemecká** profile.

In the longitudinal profile through several indicators, water quality is improving within a given purity class ($N-NH_4^+$), however, in the **Sliač** profile there has been an increase in $N-NH_4^+$ and P_{tot} as the result of insufficiently treated water from the municipality of **Banská Bystrica**. This waste water characteristics is applicable as far as **Budča**, where deterioration in the oxygen regime indicators to the IV. purity class is apparent. The main classification factor here is COD_{Cr} with characteristic value of C 90 - 46,3 mg/l exceeding acceptable contamination limits.

From **Žiar nad Hronom** there is continuous biological breakdown of organic compounds with improvement in the oxygen regime to the III. purity class as far as **Kalná nad Hronom**, from where water is under the II. purity class, as far as its outfall.

In the group of general chemical deterioration there are mainly nutrients, such as (N-NH_4^+), (N-NO_3), P_{tot} , and organic nitrogen. In upper parts of the river, the water is pure (under the II. class), water quality is progressively deteriorating to the III. and IV. purity class as the content of nutrient rises from Žiar nad Hronom to the outfall, with a jump as high as the V. purity class in the part of Sliač - Budča.

The most adverse situation in water quality is in microbial indicators, where all the profiles except Slatina - Hriňová water dam with the II. purity class, are classified under the IV. and V. water purity class.

For the group C - Supplementary chemical indicators, water is defined as heavily contaminated in 14 profiles (IV. and V. purity class) where non-polar extractable particles have been monitored. For other profiles where these particles have not been monitored, water is under the I. and II. purity class, which is considered pure water.

For the group of heavy metals - D, the prevalent classification element is Zinc, on the basis of which the following profiles are classified under the III. water purity class:

- Bystrica Banská Bystrica
- Hron - Kamenín
- Kľakovský brook - outfall
- and under the IV. purity class:
- Kremnický brook - outfall.

Water in other profiles monitored for metals is considered pure, under the I. and II. purity class.

Through assessing the balance of surface water by indicators BOD_5 , COD_{Cr} , N-NH_4^+ and P_{tot} (selection of indicators is pursuant to assessment under Qualitative water management balance of surface water) the following profiles showed tense balance in 1997-1998 in partial Hron river catchment:

- | | |
|------------------------------|--|
| - Hron Šáľková - | N-NH_4^+ |
| - Banská Bystrica - | BOD_5 |
| - Sliač - | COD_{Cr} , N-NH_4^+ |
| - Zvolen - | COD_{Cr} |
| - Budča - | COD_{Cr} |
| - Selčiansky brook - outfall | BOD_5 , P_{tot} |

Passive balance was recorded in the profile of Selčiansky brook - outfall for the N-NH_4^+ indicator.

Concluding from the assessment of surface water quality and contamination sources impact assessment, and their treatment we can say, that in the partial Hron river catchment, provided that waste water is treated at the level of current technological knowledge and emission limits compliance with Government Order No. 242/93 Coll., is ensured, tense states will be eliminated and acceptable contamination values at current run-off conditions will be followed.

Supplement data tables provided by Povodie Hrona

Table E.3 - 1 Volume of wastewater discharges in the Hron River Basin

Year	Number of Wastewater effluent	Wastewater volume			
		Total volume		Treated volume	
		m ³ /yr	l/s	m ³ /yr	l/s
1990	216	111 352 910	3 945	53 415 600	2 029
1995	230	105 125 130	3 768	53 897 040	2 084
1998	247	84 125 196	2 667	67 487 040	2 140
2005	280	84 500 000	2 679	72 533 000	2300

Table E.3 – 2 Contamination balance in the Hron River Basin

Number of Wastewater effluent	Monitoring Indicators	produced substances			discharged substances		
		t/yr	g/s	mg/l	t/yr	g/s	mg/l
Unit							
in 1990							
216	BOD ₅	16 546	579	148,6	7 877	275	70,7
	COD	43 392	1 478	389,7	19 479	663	174,9
	Diss.part.	61 125	2 248	548,9	53 858	1 980	483,7
	Non-dis.p.	36 556	1 189	328,0	7 440	264	66,8
in 1995							
230	BOD ₅	15 880	567	151,1	5 253	187	50,0
	COD	34 328	1 432	326,6	14 385	604	136,8
	Diss.part.	51 944	1 966	494,1	46 819	1 772	445,4
	Non-dis.p.	32 357	1 135	307,8	5 561	195	52,9
in 1998							
247	BOD ₅	16 286	516	193	2304	73	27,1
	COD	38 424	1 216	456,8	7109	225	85,4
	Diss.part.	49 909	1 582	593,4	44 702	1 404	526,7
	Non-dis.p.	16 666	526	198,2	2355	74	28,0
in 2005							
280	BOD ₅	16 500	523	195,5	2 100	66	24,9
	COD	39 000	1 236	461,6	6 700	212	79,3
	Diss.part.	50 000	1 585	541,8	44 000	1 395	520,8
	Non-dis.p.	17 000	539,1	201,2	2 200	69,8	26,0