

Formato 1. Plantas o Unidades Hidráulica

Nombre	Capacidad Efectiva Neta (MW)	Eficiencia (MW/m3/s)	IHF (%)
GUATAPE	560.00	6.9915	18.4466
PLAYAS	207.00	1.7193	8.9926

estamos ahí.

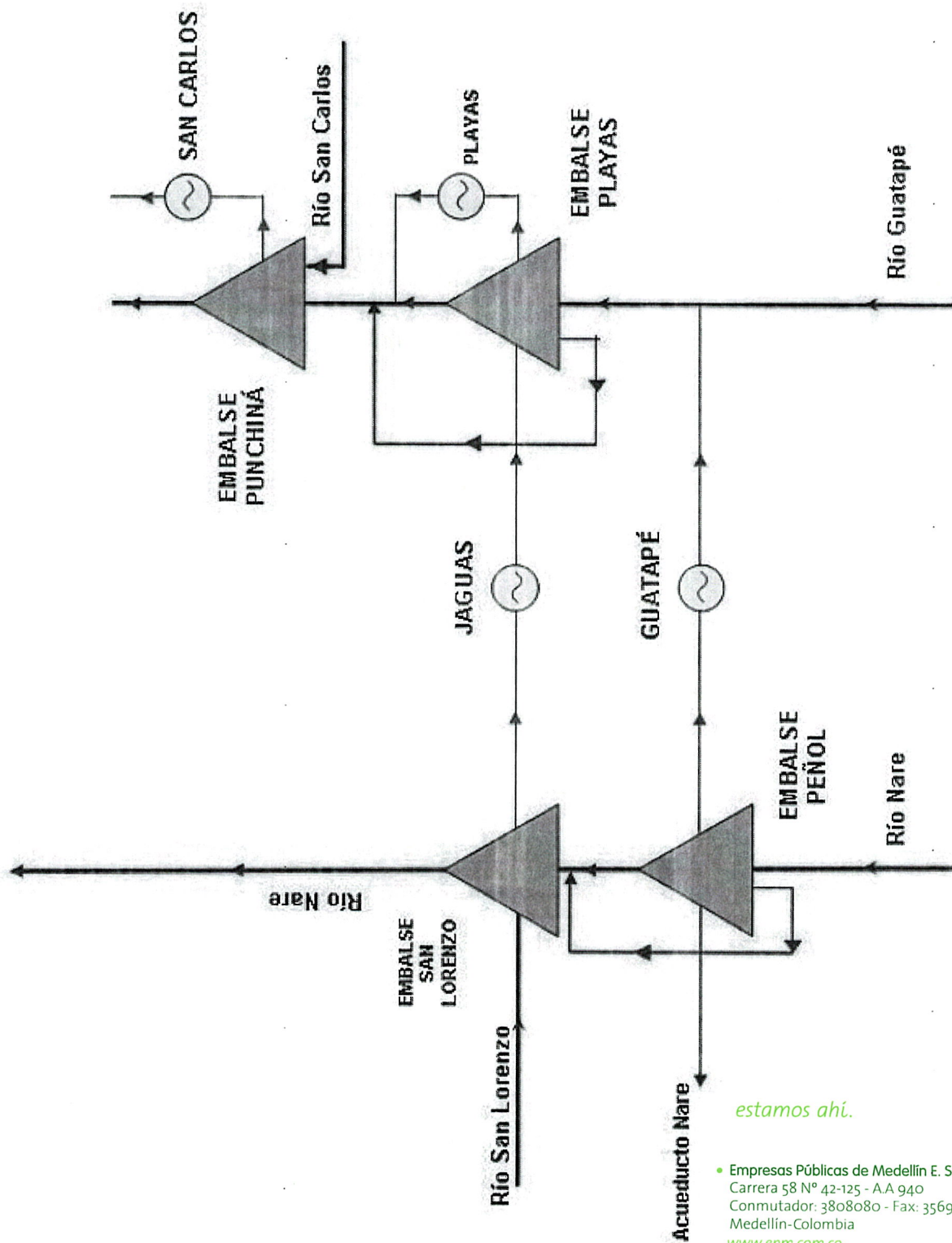
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Formato 2. Topología Plantas Hidráulicas

Nombre Sistema	Elemento Clase	Elemento Nombre	Aportes Río		Aportes Embalse		Aportes Planta		Descarga Río	Descarga Embalse		Descargas Planta		Descarga Otro		Vertimientos Río		Vertimientos Embalse		Vertimientos Planta		Vertimiento Otro	
Guatape	E	Penol		NARE								GUATAPE		Acueducto Nare				San Lorenzo					
Guatape	P	Guatape			PENOL					Playas													
Guatape	E	Playas		GUATAPE			GUATAPE-JAG UAS					PLAYAS						Punchina					
Guatape	P	Playas			PLAYAS					Punchina													
Guatape	F	Acueducto NARE			PENOL					Porce2													

estamos ahí.

CADENA GUATAPÉ-PLAYAS



estamos ahí.

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Formato 4. Caudal Medio Mensual

Rio	Año	Caudal Enero (m³/s)	Caudal Febrero (m³/s)	Caudal Marzo (m³/s)	Caudal Abril (m³/s)	Caudal Mayo (m³/s)	Caudal Junio (m³/s)	Caudal Julio (m³/s)	Caudal Septiembre (m³/s)	Caudal Octubre (m³/s)	Caudal Noviembre (m³/s)	Caudal Diciembre (m³/s)
NARE	1955	65.20	56.60	52.40	48.90	87.00	73.80	53.60	47.90	59.40	79.00	68.00
NARE	1956	37.90	31.30	24.70	46.00	58.00	46.70	38.00	59.50	65.20	90.00	59.10
NARE	1957	20.70	20.70	24.70	29.90	47.30	28.80	23.40	43.40	41.10	40.50	44.40
NARE	1958	17.50	17.50	19.40	26.00	38.30	39.20	32.80	36.80	39.00	40.50	37.00
NARE	1959	25.10	23.00	27.50	32.00	46.40	43.90	52.50	36.40	56.40	51.10	30.70
NARE	1960	30.60	29.10	28.20	34.00	33.20	41.40	37.30	32.00	57.20	48.00	54.80
NARE	1961	29.40	25.50	37.60	46.20	85.70	84.70	52.90	59.00	59.00	80.60	47.30
NARE	1962	31.60	42.10	45.10	59.10	62.20	43.20	46.20	46.80	50.60	67.70	43.60
NARE	1963	27.60	21.80	21.60	41.80	36.80	55.50	55.50	54.60	63.30	61.60	43.20
NARE	1964	31.80	27.10	25.50	34.10	30.70	35.60	30.90	45.20	63.70	75.90	46.00
NARE	1965	30.60	25.50	30.30	30.50	36.20	55.10	45.60	57.10	49.90	69.10	66.00
NARE	1966	42.20	30.30	32.70	56.30	65.90	71.00	49.20	45.50	60.00	48.20	34.70
NARE	1967	26.40	23.80	28.20	48.40	65.40	65.40	66.70	47.00	73.40	71.90	68.30
NARE	1968	38.20	23.80	23.10	53.60	55.10	43.00	21.70	50.20	59.10	84.30	45.90
NARE	1969	36.10	25.00	26.40	34.20	75.90	51.70	49.00	42.40	59.80	93.00	68.00
NARE	1970	52.60	44.10	55.40	61.40	97.00	80.90	90.70	108.50	96.50	106.30	61.40
NARE	1971	32.64	32.64	33.76	45.11	95.72	67.96	48.20	45.40	45.54	52.40	46.00
NARE	1972	29.09	22.69	24.09	27.31	35.16	53.24	36.14	54.93	104.97	72.73	38.81
NARE	1973	28.01	48.20	41.19	58.57	61.23	63.62	73.01	62.92	92.91	96.70	73.01
NARE	1974	52.40	36.28	35.30	36.70	49.60	55.35	68.52	79.74	77.91	96.00	81.14
NARE	1975	34.32	38.81	33.20	66.42	74.83	37.27	35.44	29.56	30.26	57.73	49.46
NARE	1976	49.60	38.81	33.20	66.42	74.83	37.27	35.44	29.56	30.26	57.73	49.46
NARE	1977	23.81	25.07	21.85	27.03	35.58	45.68	67.00	41.29	42.03	61.51	35.72
NARE	1978	30.84	30.84	43.85	95.74	76.75	68.69	67.00	41.29	42.03	61.51	35.72
NARE	1979	32.80	29.78	33.46	44.11	59.34	60.99	37.66	45.31	64.10	83.53	55.16
NARE	1980	35.32	29.83	25.52	31.53	36.35	42.60	32.18	33.36	32.72	62.04	60.78
NARE	1981	27.83	23.30	26.48	40.87	86.81	90.51	65.57	41.34	68.81	74.91	50.91
NARE	1982	50.50	46.96	40.93	71.81	95.75	47.48	32.98	32.31	34.44	51.88	53.33
NARE	1983	26.55	24.74	25.94	48.92	51.08	39.38	48.66	35.99	48.66	48.80	41.15
NARE	1984	41.24	33.02	28.44	30.04	59.10	83.02	66.94	56.95	61.96	84.14	47.31
NARE	1985	32.93	30.35	30.35	43.38	76.27	56.49	74.34	74.34	59.26	59.26	45.90
NARE	1986	31.95	37.70	41.63	53.24	47.90	52.62	37.67	40.15	38.92	56.14	38.24
NARE	1987	27.67	25.93	24.56	33.20	55.90	31.81	34.98	48.14	51.26	78.61	63.86
NARE	1988	32.88	31.13	30.32	36.77	42.54	57.87	61.45	82.77	91.94	104.95	76.64
NARE	1989	55.11	42.30	44.62	49.43	66.03	60.23	40.54	80.62	83.98	67.06	50.50
NARE	1990	35.13	35.16	30.06	43.37	55.75	49.68	44.81	33.01	47.51	82.79	62.19
NARE	1991	31.25	26.40	30.24	42.30	55.31	50.19	39.87	38.19	31.78	55.17	40.23
NARE	1992	28.01	24.03	24.03	27.54	39.89	35.28	25.00	40.87	35.15	38.01	49.63
NARE	1993	34.39	25.36	28.17	37.65	61.70	33.35	43.54	43.00	69.77	60.95	53.67
NARE	1994	35.67	31.26	31.27	51.36	55.91	47.27	38.66	33.33	41.57	72.40	39.92
NARE	1995	26.51	22.52	33.55	35.52	59.77	64.36	60.42	89.46	57.72	58.03	54.20
NARE	1996	41.99	37.77	54.45	52.15	87.80	79.72	79.74	58.30	59.16	77.02	49.92
NARE	1997	41.40	40.18	40.31	48.66	35.79	61.96	30.37	24.82	28.30	32.35	37.63
NARE	1998	18.78	18.67	18.87	24.80	44.73	48.77	48.77	47.87	71.16	62.94	58.91
NARE	1999	51.59	67.88	83.28	71.40	87.21	74.21	49.87	37.71	85.32	89.91	104.18
NARE	2000	50.22	51.62	52.78	50.85	88.92	108.15	87.40	80.27	107.83	88.76	73.81
NARE	2001	40.49	30.02	36.90	34.07	46.18	46.43	41.02	27.37	35.75	38.25	51.02
NARE	2002	27.72	25.45	27.06	65.31	57.62	57.27	38.22	28.45	33.40	40.00	38.03
NARE	2003	23.60	22.29	31.43	45.75	48.69	79.23	40.00	35.13	40.60	50.19	65.15
NARE	2004	33.92	29.75	35.13	50.77	69.08	49.52	59.00	42.13	76.76	79.70	109.70
NARE	2005	38.88	32.33	36.58	48.16	87.34	80.33	53.04	36.80	48.40	79.40	87.25
NARE	2006	39.43	34.49	39.88	70.31	103.81	68.61	39.11	42.97	58.72	61.38	86.60
NARE	2007	35.97	29.55	30.10	61.99	97.33	71.25	46.76	59.12	83.35	112.36	53.32
NARE	2008	48.97	59.08	79.45	70.06	111.52	102.87	94.15	109.79	94.61	111.47	128.30
NARE	2009	57.70	52.55	50.03	66.15	77.14	64.70	55.94	40.35	47.43	47.43	67.52
NARE	2010	22.45	22.45	24.43	34.36	50.02	77.58	98.88	68.54	117.74	115.42	138.69
NARE	2011	57.35	50.72	92.06	201.99	114.77	102.16	86.11	62.28	63.89	95.65	117.81
NARE	2012	64.23	45.53	43.21	108.30	128.98	51.00	46.66	47.20	35.63	60.95	51.26
NARE	2013	31.92	41.82	44.93	36.58	81.52	63.30	43.31	52.95	53.95	71.36	69.59
NARE	2014	41.54	41.80	41.80	33.95	62.09	48.12	32.54	38.35	53.62	69.40	72.64
NARE	2015	28.96	35.63	28.60	35.88	32.84	29.19	31.59	30.39	30.39	33.19	50.34
NARE	2016	17.16	18.08	15.82	27.53	45.90	32.64	32.64	32.64	32.64	68.23	73.02
NARE	2017	45.43	35.24	78.60	73.96	104.31	74.59	46.81	41.03	73.02	83.01	57.72
NARE	2018	45.87	64.71	66.07	66.07	118.61	68.61	42.53	38.27	60.76	55.85	48.46
GUATAPE	1959	20.39	12.77	12.79	19.22	32.13	28.45	19.76	23.27	34.19	39.72	42.24
GUATAPE	1960	17.55	12.58	13.56	19.51	34.87	28.19	35.35	23.58	32.82	34.40	29.89
GUATAPE	1961	14.06	11.90	20.19	23.82	19.89	26.68	24.07	20.13	35.93	43.38	26.35
GUATAPE	1962	21.42	18.16	26.47	25.27	43.42	35.80	24.10	29.24	33.79	34.82	36.34
GUATAPE	1963	19.26	14.45	20.29	30.71	34.38	20.66	24.53	28.05	35.56	43.05	30.39
GUATAPE	1964	12.64	10.40	10.85	19.85	19.90	26.02	26.32	24.48	32.12	36.05	42.75
GUATAPE	1965	21.59	18.19	14.68	23.40	43.60	25.10	15.53	25.10	47.43	38.50	27.12
GUATAPE	1966	29.67	17.76	21.16	24.67	33.18	35.63	21.48	31.05	30.42	45.31	37.01

GUATAPE	1967	28.18	20.84	24.04	45.73	41.48	31.48	34.56	26.48	31.91	35.95	30.31	22.97
GUATAPE	1968	17.65	12.76	16.59	33.61	32.65	24.88	39.35	38.82	53.71	52.75	40.73	25.74
GUATAPE	1969	24.67	14.89	14.36	30.20	30.84	25.63	13.29	30.74	50.09	49.03	44.67	30.63
GUATAPE	1970	24.57	16.17	15.31	21.70	39.14	22.97	32.97	41.08	47.55	69.02	45.73	29.88
GUATAPE	1971	34.03	27.76	46.79	37.33	37.60	34.14	34.14	41.08	45.94	47.11	42.10	32.87
GUATAPE	1972	31.51	20.80	23.13	30.45	16.65	29.76	14.41	23.62	20.22	39.19	36.99	24.88
GUATAPE	1973	15.79	10.62	13.83	22.22	26.13	36.30	18.36	37.53	45.22	79.25	57.47	21.57
GUATAPE	1974	8.41	24.97	13.96	35.48	50.34	37.97	27.19	44.20	46.78	49.03	54.02	26.09
GUATAPE	1975	19.14	18.24	24.65	43.16	38.23	43.83	40.21	30.91	44.72	48.23	40.41	39.44
GUATAPE	1976	22.96	18.33	27.93	51.17	43.30	23.70	10.93	11.45	15.13	41.59	31.76	15.61
GUATAPE	1977	12.93	13.35	16.84	18.26	30.38	27.14	27.28	33.90	33.18	35.02	38.61	17.72
GUATAPE	1978	12.35	4.85	19.48	41.12	40.41	29.21	30.34	19.89	28.34	32.92	35.17	31.57
GUATAPE	1979	14.69	13.90	15.67	20.79	32.33	28.98	19.70	26.41	31.50	49.12	37.57	22.49
GUATAPE	1980	14.47	15.45	11.65	20.65	24.09	21.82	27.84	21.82	27.84	42.91	44.83	22.41
GUATAPE	1981	11.81	14.96	13.56	20.49	49.70	42.73	26.85	22.31	30.16	44.36	35.64	22.89
GUATAPE	1982	18.33	26.28	39.53	43.89	40.32	23.24	17.74	17.93	51.06	38.33	28.58	21.02
GUATAPE	1983	46.71	7.51	7.39	24.18	33.33	22.29	25.81	21.65	37.24	40.68	34.05	37.35
GUATAPE	1984	29.04	31.27	20.22	27.03	39.65	43.90	29.82	31.16	46.28	53.14	49.54	49.54
GUATAPE	1985	23.88	20.78	27.47	32.68	44.88	26.69	20.44	37.02	38.12	31.68	26.57	25.93
GUATAPE	1986	28.33	25.83	21.74	48.08	45.18	28.74	17.56	26.56	34.87	49.27	48.57	30.95
GUATAPE	1987	19.66	16.29	28.21	45.33	29.42	40.95	40.95	48.01	66.44	71.78	53.57	25.24
GUATAPE	1988	18.80	32.63	28.15	55.30	46.44	38.60	34.46	48.01	68.15	58.12	73.09	47.00
GUATAPE	1989	59.00	33.07	50.24	45.69	45.38	45.38	24.40	38.49	63.65	57.68	63.65	31.75
GUATAPE	1990	26.63	22.28	19.31	34.41	27.46	34.56	28.49	32.08	49.59	77.74	56.41	39.84
GUATAPE	1991	24.95	21.87	22.93	32.76	40.07	52.74	23.43	16.36	21.72	32.40	44.99	33.61
GUATAPE	1992	21.33	20.76	22.67	27.98	42.19	24.04	20.84	30.46	43.08	35.63	30.36	34.31
GUATAPE	1993	28.91	14.12	23.56	36.20	34.88	15.57	59.80	24.20	59.80	53.75	37.05	30.90
GUATAPE	1994	26.54	28.19	34.12	47.79	46.86	31.65	33.00	31.78	26.38	42.18	49.33	40.44
GUATAPE	1995	36.19	30.47	36.50	57.67	52.81	53.27	36.75	46.16	46.90	51.28	53.13	44.29
GUATAPE	1996	31.32	35.41	41.99	59.23	58.25	46.39	39.00	37.35	38.47	63.01	45.92	34.21
GUATAPE	1997	27.38	28.32	34.92	42.35	26.06	30.10	16.41	17.00	40.73	31.32	37.70	15.53
GUATAPE	1998	16.80	20.50	15.50	25.60	37.40	21.80	27.10	27.50	37.50	50.70	49.30	44.20
GUATAPE	1999	42.50	42.50	34.20	46.20	41.70	44.10	32.50	33.10	49.90	58.50	46.70	39.20
GUATAPE	2000	21.30	25.20	27.90	30.70	49.60	48.80	37.40	33.90	49.90	52.90	44.80	31.10
GUATAPE	2001	22.36	15.36	23.69	24.35	38.20	26.75	33.25	15.88	35.03	49.54	40.65	32.86
GUATAPE	2002	24.03	21.40	23.51	36.49	24.05	33.47	20.68	19.54	35.81	37.14	29.46	28.38
GUATAPE	2003	13.31	16.41	22.32	42.23	43.25	51.98	29.24	28.49	32.00	40.92	34.14	37.46
GUATAPE	2004	25.31	18.80	26.37	36.37	39.64	21.37	36.43	24.56	45.79	43.62	54.81	34.40
GUATAPE	2005	23.94	14.85	16.41	32.80	43.57	49.36	31.30	28.42	34.95	41.92	59.89	27.53
GUATAPE	2006	27.04	28.89	41.75	42.05	44.90	29.00	22.46	26.43	33.09	50.33	57.99	42.16
GUATAPE	2007	32.01	17.70	28.29	36.55	53.31	35.06	33.54	44.61	61.37	68.76	45.46	36.33
GUATAPE	2008	30.42	30.74	38.14	43.04	54.42	37.99	51.03	48.98	44.73	56.29	64.27	35.68
GUATAPE	2009	49.56	37.57	44.43	35.30	40.07	36.48	22.97	35.97	32.20	37.60	31.06	31.64
GUATAPE	2010	14.87	13.75	19.08	28.58	56.75	40.77	43.61	48.17	57.27	58.91	74.96	49.64
GUATAPE	2011	32.97	29.38	48.67	67.62	50.57	46.51	40.76	51.68	39.52	56.14	55.88	58.83
GUATAPE	2012	43.61	26.44	36.88	56.15	59.91	29.29	25.75	27.26	29.64	48.38	45.43	32.07
GUATAPE	2013	23.50	26.65	27.80	24.28	45.26	33.18	28.13	57.27	46.27	41.73	52.72	39.39
GUATAPE	2014	28.37	39.88	31.01	32.49	38.19	31.60	19.90	32.88	31.75	56.42	40.50	29.03
GUATAPE	2015	24.03	28.04	20.15	48.59	37.75	22.91	37.78	35.38	36.28	30.79	38.23	22.87
GUATAPE	2016	14.20	15.33	14.78	29.58	25.94	15.74	22.28	29.86	54.73	55.95	37.34	40.09
GUATAPE	2017	40.39	22.92	41.29	39.77	53.56	53.89	34.68	38.18	49.00	45.00	62.43	47.82
GUATAPE	2018	43.25	34.32	35.17	49.05	68.16	34.62	33.92	31.75	47.97	46.11	51.07	30.84

estamos ahí.

Formato 5. Embalses

Nombre	Mínimo Técnico (Mm3)	Máximo Técnico (Mm3)
PENOL	77.83	1121.85
PLAYAS	19.93	69.09

estamos ahí.

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Formato 10. Capacidad Máxima Arco Generación

Nombre	Flujo Mínimo (m3/s)	Flujo Máximo (m3/s)
GUATAPE	0.00	84.00
PLAYAS	0.00	130.00

estamos ahí.

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Formato 13. Demanda Acueducto y Riego

Nombre	Año T (m3/s)	Año T+1 (m3/s)	Año T+2 (m3/s)	Año T+3 (m3/s)	Año T+4 (m3/s)	Año T+5 (m3/s)	Factor Recuperación
INARE					5.47		85.00

estamos ahí.