GOVERNO DO ESTADO DO CEARÁ
SECRETARIA DOS RECURSOS HÍDRICOS - SRH

PROJETO EXECUTIVO DE IRRIGAÇÃO DE 30 HA DO AÇUDE TUCUNDUBA

ESTUDOS BÁSICOS

ESTUDOS HIDROLÓGICOS

SIRAC
Serviços Intergrado de Assessoria e Consultoria

FORTALEZA- CE
JANEIRO DE 1988

GOVERNO DO ESTADO DO CEARÁ
SECRETARIA DE RECURSOS HÍDRICOS

PROJETO EXECUTIVO DE IRRIGAÇÃO DE UMA ÁREA DE 30 HA NO AÇUDE TUCUNDUBA

ESTUDOS BÁSICOS

ESTUDOS HIDROLÓGICOS

0035/02
ex.1

JANEIRO / 88

SUMÁRIO

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PÁGINAS

1 - INTRODUÇÃO

1 - INTRODUÇÃO

Os estudos hidroclimatológicos objetivam fornecer as informações e elementos relativos ao clima e aos recursos hídricos de superfície necessários ao desenvolvimento do Projeto Executivo de irrigação a ser implantado no Açude Tucunduba,situado entre os municípios de Senador Sá e Marco no Estado do Ceará.

Medindo cerca de 293Km^2 a bacia hidrográfica do Açude Tucunduba se encontra situada na micro-região de Senador Sá, com índices pluviométricos que atingem em média 1.000mm. O vale tem sentido Norte-Sul com 31,5Km de comprimento, sua nascente se encontra próximo à Serra do Mucuripe, com altitude de 200m e declividades que variam de 0,0006 a 0,116, sendo a média de 0,002.

A bacia em estudo apresenta as características predominantes do semi-árido nordestino com relevo do tipo R6, segundo a classificação de NOUVELOT, 1/ desenvolvendo-se sobre terrenos de formação geológica cristalina e, portanto, impermeáveis com cobertura vegetal pouco densa do tipo hiperxerófila (caatinga).

Deve-se observar que a bacia está sujeita a um clima de alto poder evaporante, provocando consequentemente, um regime de escoamento superficial também de alta variabilidade com cursos d'água intermitentes, apresentando vazões nulas por longos períodos, exatamente quando é mais acentuado o déficit hídrico.

A bacia do Rio Tucunduba possui os seguintes parâmetros de caracterização física:

- Área .... A = 293,8Km^2;
- Comprimento do talvegue .... L = 31,5Km;

1/ NOUVELOT, J.F. - "Planificações de Implantação de Bacias Representativas", SUDENE, 1974.

- Índice de compacidade .... Kc = 1,24;
- Fator de forma .... Kf = 0,30;
- Declividade média 0,002;
- Tipo de relevo R6;
- Tipo de vegetação .... Hiperxerófila.

2 - CLIMATOLOGIA

2.1 - PLUVIOMETRIA

Os estudos a este nível tiveram como objetivo principal a caracterização do regime pluviométrico tanto a nível mensal como anual, bem como fornecer elementos indispensáveis aos estudos subsequentes de deflúvios.

Analisando-se a nível anual constata-se claramente a irregularidade do regime pluviométrico da região cujo indicador CV, que indica o grau de dispersão em relação à média, mostrou pouca variação, tendo-se apresentado em torno de 0,40.

A média pluviométrica anual é da ordem de 1.000mm; crescendo na direção do centro geométrico da bacia e diminuindo na circunvizinhança.

A nível mensal, a heterogeneidade da repartição temporal se constitui numa caracterização básica do regime pluviométrico da região, bem como do semi-árido nordestino.

As precipitações se concentram fortemente entre os meses de janeiro e junho, sendo insignificantes os índices dos meses restantes. A Figura 1 permite uma visualização gráfica de repartição mensal da pluviometria, através do ietograma relativo ao posto do Açude Tucunduba.

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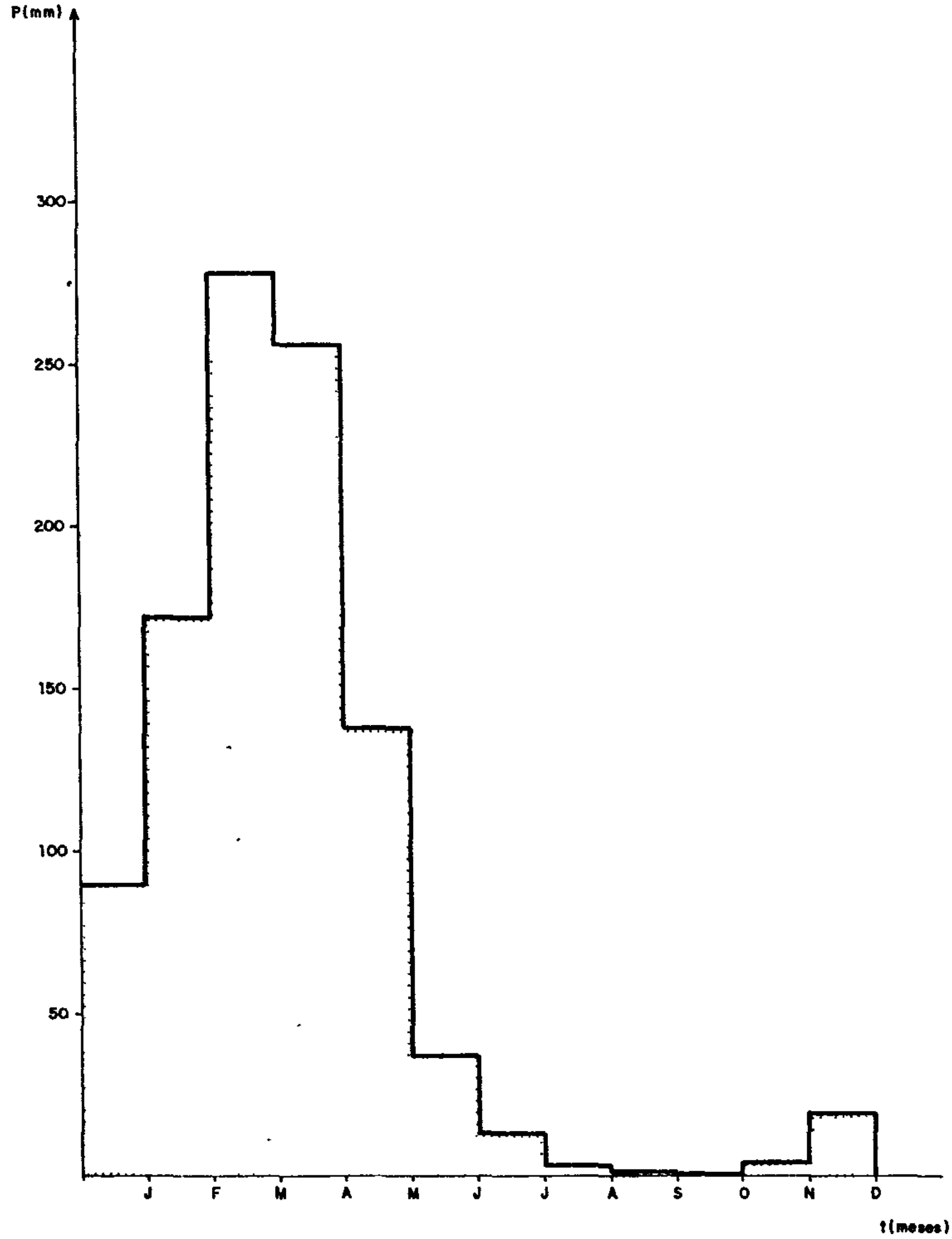

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AÇUDE TUCUNDUBA

IETOGRAMA DE TUCUNDUBA

SERVIÇOS INTEGRADOS DE ASSESSORIA E CONSULTORIA LTDA | FIG Nº 1

2.2 - EVAPORAÇÃO

Para a evaporação na área do projeto foram utilizados os dados da estação de Sobral.

Observações iniciadas pela SUDENE a partir de 1965, em tanques evaporimétricos classes A do USWB fornecem, para o período de 1965/72, uma média anual da ordem de 2.500 mm.

A seguir, o Quadro 1 mostra para a estação de Sobral, os valores médios mensais da evaporação calculados para o período de 1965 a 1972.

QUADRO 1

VALORES MÉDIOS MENSAIS DA EVAPORAÇÃO (mm)

POSTO	PERÍODO	MESES												
		J	F	M	A	M	J	J	A	S	O	N	D	ANO
Sobral	1965/72	228	187	160	138	147	152	203	235	259	296	281	276	2562

FONTE: PROJETO ACARAÚ-PLANO DIRETOR-Climatologia-DNOCS.

2.3 - VENTOS

Os ventos no interior da bacia são fracos. O Quadro 2 mostra, para o posto de Sobral, as velocidades médias para o período compreendido entre 1920 a 1942.

A direção predominante dos ventos em Sobral é NE. As calmarias são frequentes em todos os meses e não será fator limitante ao uso de irrigação através do método de aspersão.

Verifica-se que no litoral os ventos são muito mais fortes do que em Sobral, mais interiorizado.

QUADRO 2

VALORES MÉDIOS ANUAIS DA VELOCIDADE DOS VENTOS

P O S T O	VELOCIDADE	
	(m/s)	(km/h)
Sobral	1,2	4,3

FONTE: PROJETO ACARAÚ - Plano Diretor
Climatologia - DNOCS

2.4 - EVAPOTRANSPIRAÇÃO POTENCIAL x DÉFICIT HÍDRICO

O Quadro 3 mostra os valores médios mensais da evapotranspiração potencial no Açude Tucunduba, obtidos pela aplicação do método de Hargreaves.

QUADRO 3

VALORES DA EVAPOTRANSPIRAÇÃO POTENCIAL MENSAL E ANUAL, SEGUNDO HARGREAVES (mm)

POSTO \ MESES	JAN	FEV	MAR	ABR	MAI	JUN	JUL	AGO	SET	OUT	NOV	DEZ	TOTAL
TUCUNDUBA	113	92	91	83	77	83	94	112	125	130	125	123	1.248

FONTE: Disponibilidades e deficiências de umidade para a produção agrícola no Ceará-Brasil-George H. Hargreaves.

Quanto ao déficit hídrico a Figura 2 apresenta, para o posto de Tucunduba, curvas da precipitação média mensal, da evapotranspiração potencial e da precipitação calculada para 75% de confiabilidade, segundo as recomendações da FAO 1/.

Da análise dessa ilustração verifica-se que se tem um déficit de umidade em quase todos os meses do ano, com exceção de março e abril.

1/ FAO IRRIGATION AND DRAINAGE PAPER Nº 24.

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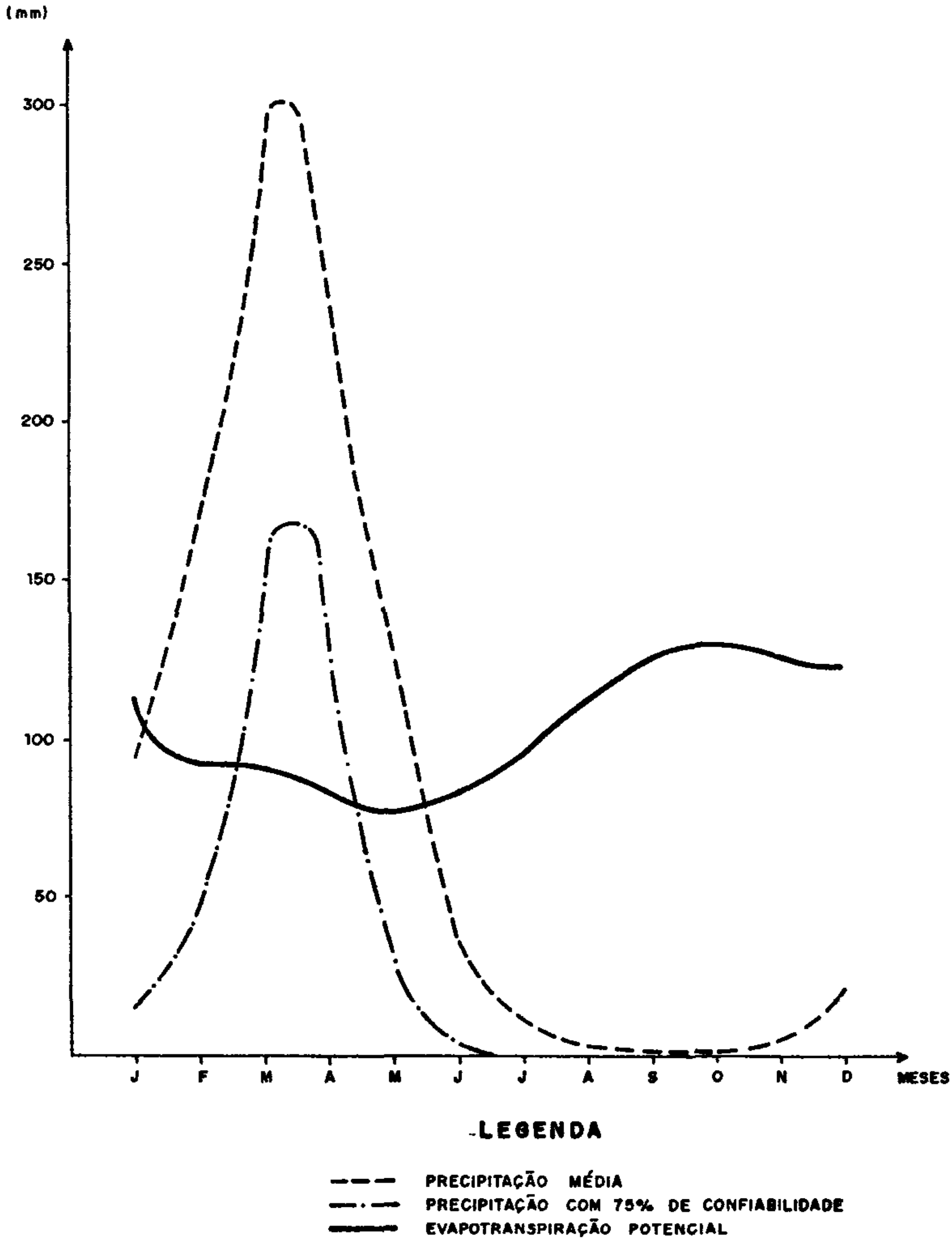
BALANÇO HÍDRICO PARA O POSTO DE TUCUNDUBA

SERVIÇOS INTEGRADOS DE ASSESSORIA E CONSULTORIA LTDA | FIG Nº 2



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2.5 - SINOPSE CLIMÁTICA

Em síntese, o clima da bacia em estudo é caracterizado pelos seguintes indicadores (segundo a estação de Sobral):

- Pluviometria média anual .... 1.000 mm;
- Semestre chuvoso e índice de concentração .. jan/jun(93%);
- Trimestre úmido .... março/maio;
- Trimestre seco .... set/novembro;
- Mês de maior pluviosidade .... março;
- Velocidade média dos ventos .... 1,2 m/s;
- Evaporação média anual .... 2.500 mm.

3 - ESTUDOS DOS DEFLÚVIOS

3.1 - DADOS DISPONÍVEIS

Devido à inexistência de dados pluviométricos relativos à região estudada, tornou-se necessário empregar uma metodologia que permitisse, através do uso de dados de outras bacias hidrologicamente homogêneas, a geração de uma série histórica de vazões para o Açude Tucunduba.

Verifica-se que a região estudada mantém as mesmas características hidrológicas do Rio Coreaú e, portanto, possível de uma transposição de dados desta para aquela.

3.2 - O MODELO CHUVA-DEFLÚVIO

Considerando as condições existentes optou-se pelo uso de modelo CN-3S em razão de:

- Modelos mais sofisticados se mostraram inviáveis, visto exigirem um conhecimento aprofundado das características físicas e geométricas das bacias, incompatíveis com o nível do estudo e informações disponíveis;

- A utilização deste modelo foi desenvolvida com sucesso para estudos semelhantes em diversas bacias do semi-árido nordestino, inclusive no próprio Estado do Ceará;
- Possibilidade de estimar os parâmetros essenciais do modelo, tanto a partir dos estudos básicos realizados para as bacias, como dos resultados alcançados em outras aplicações para bacias de acentuada semelhança hidrológica.

O modelo chuva x deflúvio CN-3S, desenvolvido no Departamento de Hidrologia da SIRAC, para ser aplicado na geração de vazões médias mensais, para a simulação de operação de reservatórios no Nordeste, tem as seguintes características citadas a seguir:

O CN-3S utiliza curvas semelhantes às CN (Curve Number) do Soil Conservation Service para a determinação do complexo solo-vegetação.

Os valores das curvas CN são modificados cada mês (Variable - one step) sob o efeito da chuva do mês antecedente obtendo-se, assim, o CNV's (Curve Number Variable).

Os valores de SV (diferença potencial máxima entre a chuva e o escoamento), calculados com CNV, são compatibilizados a nível médio mensal.

O modelo simula a parcela que infiltra no depósito subterrâneo e calcula a depleção desse depósito como escoamento básico.

A somatória do escoamento superficial (QUP) e o escoamento básico (QLOW) fornece o escoamento calculado (QCAL).

As perdas por evaporação e evapotranspiração estão implícitas no modelo.

O CN-3S tem seis parâmetros de calibragem, quatro para o Q (SUP) e dois para o Q (LOW).

Os seis parâmetros de calibragem ajustam-se procurando minimizar a função erro.

$$FOB = \sum (QOB - QCAL)^2$$

O modelo CN-3S (nos cálculos efetuados para as bacias do Nordeste), além de reproduzir com grande fidelidade as vazões observadas, preserva de forma razoável os parâmetros estatísticos de média, desvio padrão e coeficiente de assimetria dessas vazões. A Figura 3 mostra o Fluxograma do modelo CN-3S.

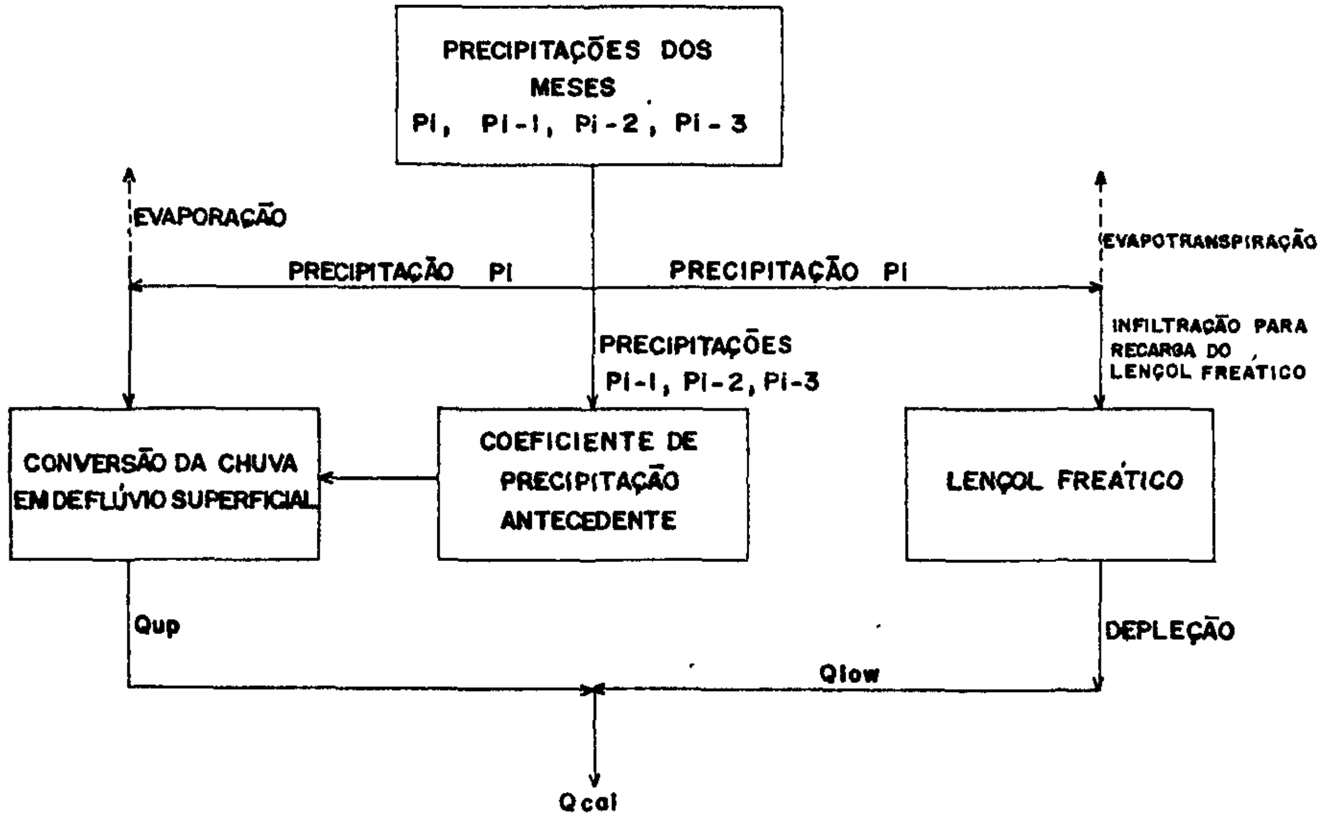
3.3 - A CALIBRAÇÃO DO MODELO

Dada a pequena quantidade de dados de imput que precisa o modelo de simulação chuva x deflúvio CN-3S, optou-se pelo emprego de uma calibração automática dos parâmetros de ajuste do modelo, baseado no método univariacional, onde se procura a otimização (minimização) da função erro através de tentativas modificando um parâmetro e mantendo os demais fixos até atingir um valor mínimo na função erro; a seguir efetua-se o mesmo procedimento para os parâmetros restantes. Findo um primeiro ciclo análogo ao anterior.

O processo de ajustamento automático termina quando todos os parâmetros de calibragem mantêm-se constantes de um ciclo para o próximo, atingindo o mesmo valor na função erro.

A maior ou menor qualidade do processo de ajuste depende do vulto de cada incremento (ou decremento) adotado para os parâmetros de ajuste. A Figura 4 mostra o processo de ajustamento automático do modelo através do método univariacional.

Os parâmetros de calibragem para a bacia de Granja com área de 3.993 km² são mostrados no Quadro 4.



Qup = ESCOAMENTO DIRETO

Qlow = ESCOAMENTO BÁSICO

Qcal = Qup + Qlow = ESCOAMENTO CALCULADO

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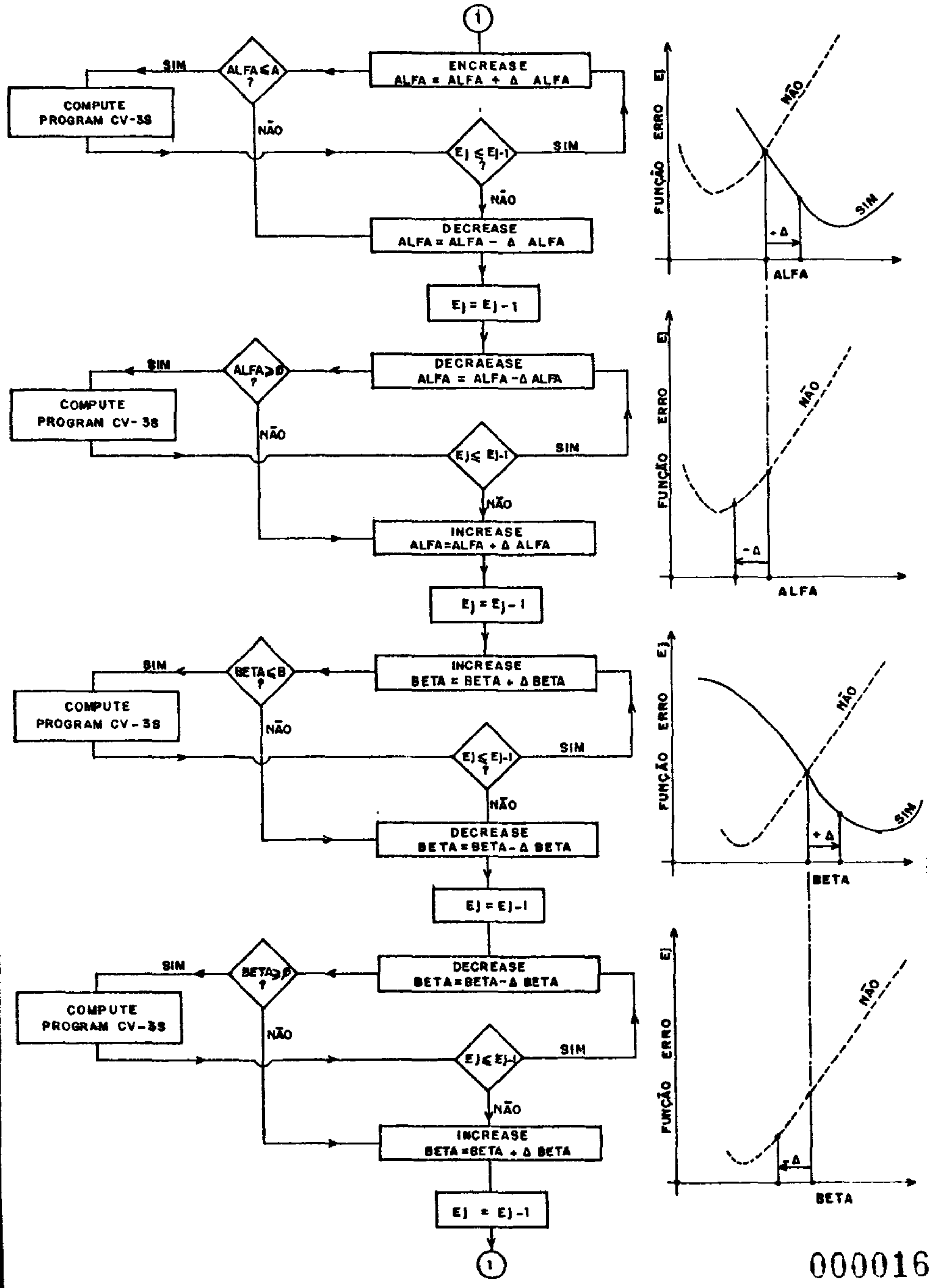
MODELO CHUVA X DEFLÚVIO – CN-3S

SERVIÇOS INTEGRADOS DE ASSESSORIA E CONSULTORIA LTDA

FIG Nº 3



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AÇUDE TUCUNDUBA

FLUXOGRAMA DO MÉTODO UNIVARIACIONAL

SERVIÇOS INTEGRADOS DE ASSESSORIA E CONSULTORIA LTDA

FIG Nº 4

QUADRO 4

MODELO CHUVA-DEFLUVIO CN-3S

(CURVE NUMBER WITH THREE

STEP ANTECEDENT PRECIPITATION) 15

BACIA :GRANJA AREA : 3993 KM2

PARAMETROS INICIAIS :

```
RO   =  0.0000
P12  = %100.8000
P11  =  3.3000
P10  =  7.2000
```

PARAMETROS DE CALIBRAGEM :

```
CNI  = 19.0000
ALFA =  0.2000
BETA =  0.0009
KO   =  0.7300
K1   =  0.0635
K2   =  0.4500
```

```
SOMA DOS QUADRADOS DAS DIFERENCAS ->  3149.980
SOMA DAS DIFERENCAS ABSOLUTAS -        282.400
COEFICIENTE DE CORRELACAO ->             0.950
```

VAZOES OBSERVADAS :

```
MEDIA ->              11.787
DESVIO PADRAO ->      21.283
ASSIMETRIA ->          2.285
```

VAZOES CALCULADAS :

```
MEDIA ->              11.771
DESVIO PADRAO ->      20.546
ASSIMETRIA ->          2.633
```

A geração conseguida para este posto, através do emprego do modelo CN-3S, pode ser considerada relativamente boa, sob o ponto de vista global. A Figura 5 mostra a comparação entre as vazões observadas e calculadas.

As precipitações utilizadas como "INPUT" e as vazões observadas e geradas pelo modelo são apresentadas nos Quadros 5, 6, e 7, respectivamente.

Da análise da Figura e dos Quadros,conclui-se que os valores obtidos pela calibração do modelo são perfeitamente exequíveis para representar o escoamento superficial desta bacia.

3.4 - DEFLÚVIOS GERADOS

Com os parâmetros calibrados para o posto de Granja, foram gerados os deflúvios afluentes ao Açude Tucunduba, para o período de 1913 a 1979, período com disponibilidades pluviométricas.

As precipitações usadas e as vazões geradas constam nos Quadros 8 e 9 respectivamente.

4 - SIMULAÇÃO DA OPERAÇÃO DO RESERVATÓRIO

4.1 - OBJETIVO

A simulação da operação de um reservatório objetiva estabelecer a capacidade de regularização de oferta d'água deste associada ao respectivo nível de garantia.

A definição da curva vazão regularizável x frequência permite obter, para qualquer volume liberado no açude, o nível de garantia correspondente, considerada uma vazão contínua.

4.2 - METODOLOGIA

A simulação da operação foi desenvolvida a nível mensal para o período de 1913/79, portanto abrangendo 67 anos, a partir do seguinte balanço hidráulico dos reservatórios.

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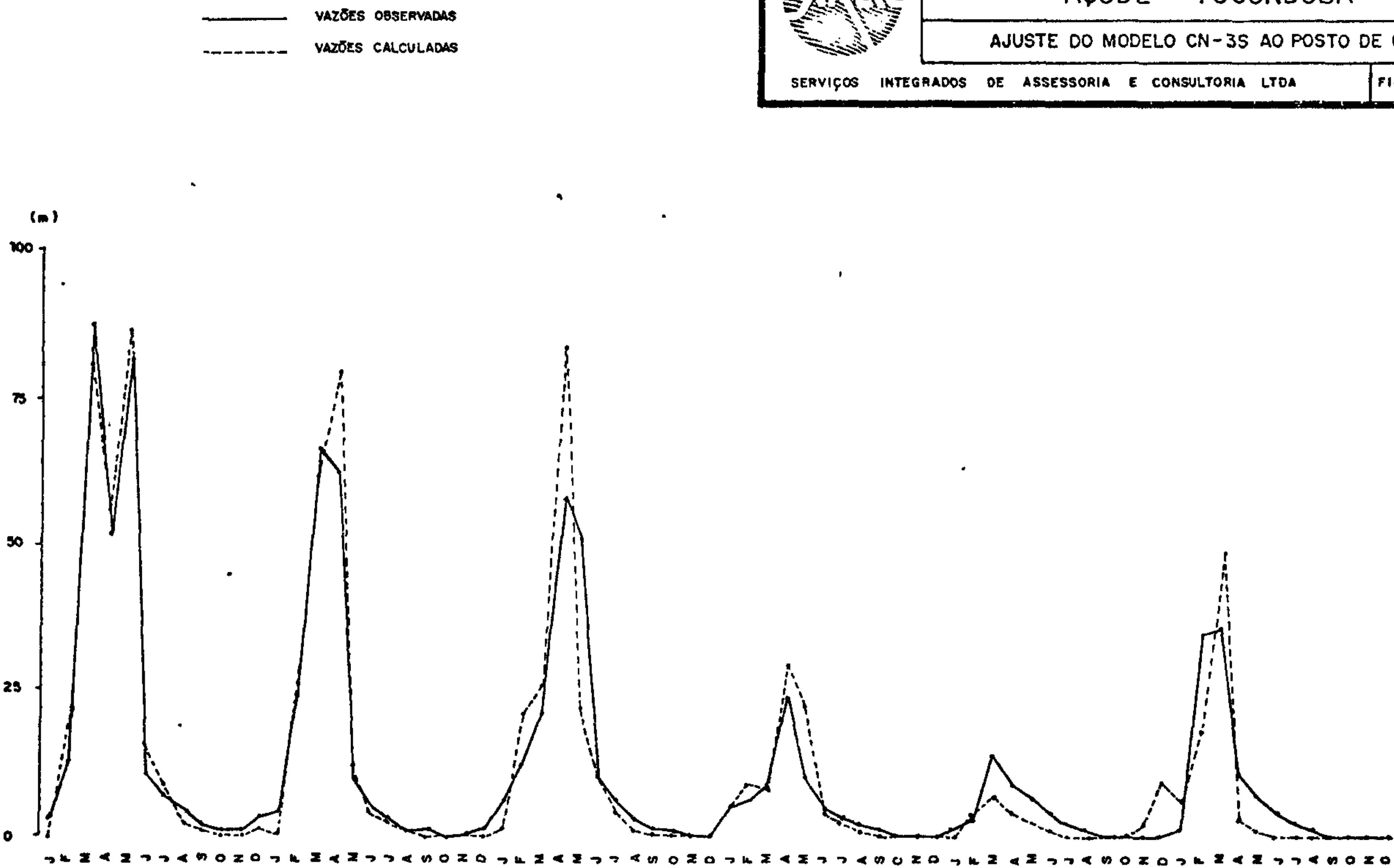
AJUSTE DO MODELO CN-3S AO POSTO DE GRANJA

SERVIÇOS INTEGRADOS DE ASSESSORIA E CONSULTORIA LTDA | FIG Nº 5



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QUADRO 5

BACIA :GRANJA AREA : 3993 KM2

PRECIPITACOES (MM) :

ANO	JAN	FEV	MAR	ABR	MAI	JUN	JUL	AGO	SET	OUT	NOV	DEZ	ANUAL
1	124.4	264.5	439.4	289.9	350.5	64.3	40.3	4.1	13.5	0.0	7.6	118.4	1716.9
2	81.4	306.0	375.9	325.5	51.2	3.4	6.2	3.5	0.0	0.0	14.1	22.2	1189.4
3	206.5	229.5	243.7	393.4	195.5	81.6	21.5	0.0	0.0	0.0	0.5	8.2	1380.4
4	165.1	115.7	193.2	268.7	130.8	1.1	27.8	0.0	0.0	0.0	2.4	11.7	916.5
5	48.2	92.6	265.4	146.7	96.6	4.3	1.1	0.0	0.0	0.0	0.0	10.5	665.4
6	55.2	380.3	290.7	130.0	60.8	8.9	2.3	0.5	0.0	0.0	4.0	5.4	938.1
MED	113.5	231.4	301.4	259.0	147.6	27.3	16.5	1.4	2.3	0.0	4.8	29.4	1134.5

QUADRO 6

VAZOES OBSERVADAS (LAMINA EM MM):

ANO	JAN	FEV	MAR	ABR	MAI	JUN	JUL	AGO	SET	OUT	NOV	DEZ	ANUAL
1	0.7	22.3	82.6	56.4	87.9	16.8	9.1	2.6	1.3	0.5	0.2	1.0	281.4
2	0.5	29.2	62.2	80.6	12.4	4.8	2.0	1.0	0.2	0.0	0.0	0.0	192.9
3	1.7	21.1	26.6	59.6	51.6	10.4	4.0	1.6	0.3	0.0	0.0	0.0	176.9
4	5.1	9.2	8.0	30.1	22.1	4.3	2.1	1.0	0.1	0.0	0.0	0.0	82.0
5	0.0	4.6	7.1	4.2	6.3	1.4	0.1	0.0	0.0	0.0	2.0	10.2	35.9
6	6.8	18.8	49.2	3.1	1.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	79.6
MED	2.5	17.5	39.3	39.0	30.3	6.3	2.9	1.0	0.3	0.1	0.4	1.9	141.5

QUADRO 7

VAZOES CALCULADAS (LAMINA EM MM):

ANO	JAN	FEV	MAR	ABR	MAI	JUN	JUL	AGO	SET	OUT	NOV	DEZ	ANUAL
1	3.5	13.8	88.5	52.5	83.7	11.0	7.2	4.1	2.6	1.4	1.0	3.9	273.2
2	4.4	24.0	67.6	63.9	10.4	5.8	3.3	1.9	1.0	0.5	0.7	1.0	184.5
3	6.4	12.8	21.4	84.2	22.1	10.1	6.1	3.4	1.8	1.0	0.5	0.5	170.3
4	5.0	6.0	9.1	25.7	10.4	5.7	3.9	2.1	1.1	0.6	0.4	0.5	70.5
5	1.6	3.5	14.2	9.3	7.9	4.4	2.4	1.3	0.7	0.4	0.2	0.4	46.3
6	1.8	35.4	36.0	11.3	7.9	4.6	2.6	1.4	0.7	0.4	0.3	0.3	102.7
MED	3.8	15.9	39.5	41.2	23.7	6.9	4.3	2.4	1.3	0.7	0.5	1.1	141.3

MODELO CHUVA-DEFLUVIO CN-3SS
(CURVE NUMBER WITH THREE STEP ANTECEDENT PRECIPITATION)

BACIA REPRESENTATIVA: GRANJA
BACIA DE PROJETO : TUCUNDUBA

PARAMETROS INICIAIS :

RO = 0.0000
P12 = 0.0000
P11 = 0.0000
P10 = 0.0000

PARAMETROS CALIBRADOS :

CNI = 19.0000
ALFA = 0.2000
BETA = 0.0009
KO = 0.7300
K1 = 0.0655
K2 = 0.4500

VAZOES GERADAS P/ BACIA DE PROJETO (HM3):

MEDIA	5.690
DESVIO PADRAO	16.936
ASSIMETRIA =,	5.387

Coef. precipitacao na bacia representativa: 1

Coef. p/ conversao vazao bacia rep. p/ de projeto: .495

QUADRO 8

PRECIPITACOES (MM):

ANO	JAN	FEV	MAR	ABR	MAI	JUN	JUL	AGO	SET	OUT	NOV	DEZ	ANUAL
1	0.0	134.8	339.5	310.2	282.1	63.5	42.3	0.0	0.0	0.0	0.0	9.0	1181.8
2	224.9	117.6	106.9	223.6	63.6	34.9	4.7	13.7	2.8	0.0	0.0	0.0	792.7
3	18.0	13.0	118.8	92.5	21.1	9.8	0.1	0.3	0.0	0.0	0.0	46.2	319.8
4	104.7	237.8	396.1	238.9	43.3	24.0	0.0	0.0	0.0	0.0	15.5	29.5	1092.0
5	351.6	453.6	562.3	465.3	600.7	71.2	0.0	0.0	14.0	23.0	15.9	59.0	2596.6
6	161.6	111.3	552.3	115.1	217.3	221.4	24.8	0.0	45.5	0.0	0.0	70.7	1520.0
7	49.0	66.1	23.4	19.7	60.2	4.0	0.0	2.3	0.0	0.0	0.0	7.5	231.7
8	2.0	78.3	654.0	272.7	121.1	26.4	17.6	49.8	0.0	0.0	3.6	51.3	1276.8
9	25.1	147.5	286.0	271.9	425.2	28.8	15.6	0.0	3.0	0.3	0.4	0.6	1204.4
10	23.9	30.8	94.3	285.1	116.7	34.7	25.6	2.5	0.0	0.0	61.2	0.0	674.8
11	100.4	342.4	208.4	301.8	122.7	39.9	15.2	0.0	0.0	0.0	0.0	0.0	1130.8
12	190.1	229.3	416.7	406.8	252.1	166.5	2.0	0.0	0.0	0.0	0.0	14.5	1678.0
13	198.9	180.8	218.2	190.7	108.0	43.6	12.9	14.3	0.0	0.0	0.0	0.0	967.4
14	85.1	291.3	381.9	349.5	169.8	25.7	6.7	0.0	0.0	0.0	0.0	0.0	1310.0
15	66.8	112.0	196.7	328.5	93.4	43.9	7.9	0.0	0.0	0.0	0.0	5.2	854.4
16	106.7	67.9	225.6	257.6	49.4	25.2	0.0	0.0	0.0	0.0	0.0	0.0	732.4
17	149.8	326.9	344.0	311.7	64.5	17.4	7.8	0.0	0.0	0.0	0.0	90.7	1312.8
18	74.1	252.4	476.6	211.2	75.4	106.4	12.6	6.3	0.0	0.0	0.0	0.0	1215.0
19	139.8	292.6	260.6	193.4	71.7	29.9	4.6	0.0	7.8	0.0	0.0	0.0	995.4
20	70.0	105.7	161.6	46.1	2.0	37.7	23.4	0.0	0.0	0.0	0.0	0.0	446.5
21	170.5	245.2	202.5	323.7	84.1	10.1	7.5	0.0	2.3	0.0	0.0	15.2	1061.1
22	65.2	279.3	378.1	347.1	188.5	36.6	0.0	0.0	8.5	0.0	2.3	86.9	1392.7
23	176.7	191.6	252.3	535.0	242.9	98.0	3.2	0.0	0.0	0.0	0.0	0.0	1499.7
24	35.7	207.1	72.7	126.6	77.6	4.6	3.0	0.0	0.0	0.0	0.0	0.0	527.3
25	16.3	181.8	99.9	189.9	125.0	51.0	13.0	0.0	0.0	0.0	0.0	0.0	676.9
26	82.7	16.0	354.1	190.0	84.9	24.7	9.3	12.7	0.0	0.0	0.0	0.0	774.4
27	25.0	150.8	284.7	163.7	87.6	13.4	29.2	0.0	13.6	10.2	0.0	6.6	784.8
28	209.0	167.8	235.8	235.6	117.3	24.4	23.4	3.5	0.0	0.0	0.0	0.0	1017.8
29	15.5	57.8	220.8	133.4	19.3	40.8	7.8	0.0	0.0	0.0	0.0	0.0	495.4
30	106.1	89.1	213.0	103.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	51.8	563.3
31	63.5	41.6	107.6	168.9	79.8	0.0	18.2	0.0	0.0	0.0	12.8	112.3	604.7
32	63.0	105.8	303.3	212.2	99.6	12.4	0.0	0.0	0.0	0.0	0.0	72.7	869.0
33	178.9	334.7	295.0	227.2	153.0	29.0	0.0	0.0	0.0	0.0	0.0	0.0	1217.8
34	146.0	128.4	149.5	210.0	53.0	16.0	0.0	0.0	0.0	0.0	10.0	14.0	726.9
35	0.0	246.0	250.0	195.0	128.0	49.0	16.0	0.0	0.0	0.0	121.0	0.0	1005.0
36	50.0	150.0	415.0	116.0	97.0	23.0	0.0	0.0	0.0	0.0	0.0	0.0	851.0
37	44.0	165.0	213.0	156.0	154.0	33.0	0.0	0.0	0.0	0.0	0.0	0.0	805.0
38	87.0	77.0	375.0	303.0	67.0	14.0	26.0	0.0	0.0	0.0	0.0	0.0	952.0
39	0.0	0.0	94.0	118.0	77.0	12.0	0.0	0.0	0.0	0.0	0.0	43.0	344.0
40	75.0	98.0	246.0	187.0	102.0	10.0	0.0	0.0	0.0	0.0	0.0	43.0	761.0
41	52.0	135.0	150.0	197.0	62.0	26.0	0.0	0.0	0.0	0.0	0.0	0.0	622.0
42	0.0	157.0	169.0	134.0	25.0	48.0	0.0	0.0	0.0	0.0	0.0	0.0	535.0
43	132.0	145.0	122.0	242.0	112.0	12.0	10.0	0.0	0.0	0.0	0.0	5.0	780.0
44	26.0	242.0	285.5	218.0	32.0	28.0	6.0	0.0	0.0	0.0	0.0	0.0	837.5
45	135.0	91.0	263.4	280.0	160.0	20.0	5.0	0.0	0.0	0.0	0.0	0.0	954.4
46	21.0	0.0	30.0	60.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	36.0	154.0
47	63.0	129.0	356.0	81.0	79.0	27.0	0.0	9.0	0.0	0.0	0.0	0.0	744.0
48	0.0	43.0	325.0	191.0	8.0	32.0	30.0	0.0	0.0	0.0	0.0	69.0	698.0
49	47.0	354.0	426.0	120.0	195.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1142.0
50	81.3	222.8	710.6	360.0	90.0	0.0	20.0	0.0	0.0	0.0	0.0	150.0	1634.7
51	132.0	107.0	623.8	506.0	113.0	0.0	33.0	29.0	0.0	0.0	0.0	144.0	1687.8
52	277.0	478.3	436.9	603.1	331.7	32.6	59.2	0.0	0.0	0.0	0.0	21.0	2239.7
53	129.0	81.4	324.2	758.7	227.1	105.3	0.0	0.0	0.0	0.0	0.0	0.0	1625.7
54	0.0	219.5	181.7	133.6	218.0	97.4	51.5	0.0	0.0	0.0	1.2	0.0	902.9
55	173.1	407.5	545.9	478.9	323.0	8.2	0.0	0.0	0.0	0.0	0.0	0.0	1936.6
56	133.3	182.1	374.3	653.7	472.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1326.1

QUADRO 8

PRECIPITACOES (MM):

ANO	JAN	FEV	MAR	ABR	MAI	JUN	JUL	AGO	SET	OUT	NOV	DEZ	ANUAL
157	94.4	170.8	177.3	207.8	82.1	0.0	44.0	0.0	0.0	0.0	0.0	0.0	776.4
58	24.0	65.8	157.1	94.5	24.6	0.0	24.1	0.0	0.0	0.0	0.0	0.0	390.1
[illegible]	25.2	117.3	226.2	122.4	153.6	43.0	31.0	0.0	0.0	0.0	0.0	0.0	718.7
160	20.0	43.5	127.7	196.0	163.2	15.0	0.0	48.3	0.0	0.0	0.0	0.0	613.7
161	196.1	179.4	393.5	331.7	146.8	70.6	15.0	8.0	0.0	0.0	0.0	0.0	1341.1
62	239.3	243.7	510.4	700.5	337.3	125.2	29.1	0.0	21.0	0.0	0.0	0.0	2206.5
163	0.0	491.0	329.4	470.6	414.7	52.0	72.0	0.0	0.0	0.0	0.0	0.0	1829.7
164	0.0	188.5	222.9	230.3	23.4	1.6	14.6	0.0	0.0	0.0	21.0	0.0	702.3
65	92.6	262.6	104.0	276.1	189.9	60.0	19.6	0.0	0.0	0.0	0.0	0.0	1004.8
66	105.0	138.1	144.9	203.4	137.1	45.1	0.0	0.0	0.0	0.0	0.0	0.0	773.6
167	37.6	119.9	127.5	181.9	61.6	47.8	0.0	0.0	0.0	0.0	0.0	0.0	576.3
MED	89.4	172.3	278.1	256.1	137.7	36.6	12.6	3.0	1.7	0.5	4.0	18.7	1010.7

QUADRO 9

VAZOES GERADAS (EM HM3/MES):

ANO	JAN	FEV	MAR	ABR	MAI	JUN	JUL	AGO	SET	OUT	NOV	DEZ	ANUAL
1	0.00	1.37	14.38	20.80	21.79	4.46	2.81	1.31	0.48	0.07	0.00	0.00	67.42
2	2.82	2.97	2.90	6.37	3.11	1.97	0.91	0.45	0.05	0.00	0.00	0.00	21.55
3	0.00	0.00	1.34	1.80	1.05	0.48	0.02	0.00	0.00	0.00	0.00	0.15	4.84
4	1.32	4.89	32.96	14.72	4.01	2.30	1.03	0.32	0.00	0.00	0.00	0.08	61.63
5	12.41	48.29	102.58	84.37	141.59	5.93	3.07	1.47	0.74	0.49	0.25	0.73	402.62
6	2.45	2.68	64.65	5.46	10.40	11.28	3.34	1.60	1.28	0.46	0.01	0.77	104.38
7	0.87	1.18	0.74	0.44	0.85	0.28	0.00	0.00	0.00	0.00	0.00	0.00	4.36
8	0.00	0.63	75.45	22.57	5.51	3.14	1.73	1.42	0.54	0.06	0.00	0.40	111.45
9	0.33	2.03	9.87	14.01	51.10	4.48	2.44	1.10	0.41	0.00	0.00	0.00	85.72
10	0.00	0.14	1.17	8.06	3.79	2.33	1.41	0.57	0.07	0.00	0.51	0.04	18.09
11	1.20	14.62	7.37	21.60	5.11	3.13	1.70	0.69	0.14	0.00	0.00	0.00	55.56
12	2.20	5.20	38.90	52.74	21.83	8.21	3.15	1.49	0.58	0.05	0.00	0.00	[illegible]
13	2.49	3.69	6.61	6.37	4.08	2.62	1.38	0.72	0.16	0.00	0.00	0.00	28.07
14	0.73	7.59	30.77	36.29	8.74	3.57	1.87	0.76	0.18	0.00	0.00	0.00	[illegible]
15	0.48	1.60	3.45	19.28	4.33	2.76	1.39	0.57	0.05	0.00	0.00	0.00	33.86
16	1.07	1.31	[illegible]	10.21	3.36	1.96	0.94	0.72	0.00	0.00	0.00	0.00	[illegible]
17	1.67	13.32	26.89	28.70	4.69	2.59	[illegible]	0.47	0.02	0.00	0.00	[illegible]	80.43
18	1.77	5.66	52.14	17.13	4.47	3.73	[illegible]	0.94	0.28	0.00	0.00	[illegible]	[illegible]
19	1.50	9.16	12.20	7.83	3.86	2.31	1.09	0.30	0.00	0.00	0.00	0.00	38.33
20	0.50	1.53	2.89	2.00	0.89	0.78	[illegible]	[illegible]	0.00	0.00	0.00	0.00	9.15
21	1.91	5.86	6.13	24.16	4.54	2.40	1.19	0.41	0.07	0.00	0.00	0.00	46.62
22	3.56	6.47	27.14	34.82	10.59	3.63	[illegible]	0.76	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	2.73	4.10	10.38	[illegible]	[illegible]	5.22	[illegible]	[illegible]	0.44	0.00	0.00	0.00	[illegible]
24	0.06	0.72	[illegible]	2.81	2.40	1.14	[illegible]	0.00	0.00	[illegible]	0.00	[illegible]	[illegible]
25	0.00	0.18	2.67	3.85	3.59	2.45	1.09	0.47	0.07	0.00	0.00	0.00	[illegible]
26	0.65	[illegible]	13.95	5.90	[illegible]	2.15	1.07	0.53	0.05	[illegible]	0.00	[illegible]	[illegible]
27	0.00	1.90	9.11	4.77	3.55	1.90	[illegible]	[illegible]	0.19	0.01	0.00	0.00	[illegible]
28	2.56	[illegible]	7.94	10.70	[illegible]	[illegible]	1.57	0.65	0.11	0.00	0.00	0.00	[illegible]
29	0.00	0.44	3.21	3.36	1.88	1.37	0.62	0.10	0.00	0.00	0.00	0.00	[illegible]
30	1.00	1.57	3.93	[illegible]	1.53	0.60	[illegible]	0.00	0.00	0.00	0.00	[illegible]	12.16
31	0.78	0.78	1.71	3.09	2.59	1.18	0.67	0.13	0.00	0.00	0.00	[illegible]	12.14
32	1.32	1.98	17.16	7.63	4.14	[illegible]	0.98	[illegible]	0.00	0.00	0.00	[illegible]	[illegible]
33	2.60	17.29	20.31	13.14	5.88	3.16	1.50	0.58	0.08	0.00	0.00	0.00	64.54
34	1.59	[illegible]	[illegible]	5.67	2.97	1.67	0.65	[illegible]	0.00	0.00	0.00	0.00	[illegible]
35	0.00	[illegible]	7.89	[illegible]	4.41	1.88	1.07	0.67	0.10	0.00	1.37	[illegible]	[illegible]
36	0.75	2.29	28.83	[illegible]	3.79	2.17	0.95	0.28	0.00	0.00	0.00	0.00	[illegible]
37	0.15	2.16	4.41	4.14	5.76	2.84	1.30	0.49	0.03	0.00	0.00	0.00	21.28
38	0.75	[illegible]	20.04	[illegible]	4.33	2.34	1.41	0.54	0.05	0.00	0.00	0.00	51.66
39	0.00	0.00	0.61	1.87	1.88	0.96	[illegible]	0.00	0.00	0.00	0.00	[illegible]	5.97
40	[illegible]	[illegible]	5.97	5.11	3.75	[illegible]	0.84	0.27	0.00	0.00	0.00	0.14	[illegible]
41	0.57	1.98	2.97	[illegible]	2.93	1.74	0.72	0.15	0.00	0.00	0.00	[illegible]	[illegible]
42	0.00	1.73	3.10	3.36	[illegible]	1.52	0.59	0.09	[illegible]	0.00	0.00	[illegible]	[illegible]
43	[illegible]	[illegible]	[illegible]	7.71	3.92	[illegible]	[illegible]	[illegible]	0.00	0.00	0.00	0.00	[illegible]
44	0.00	3.47	11.81	[illegible]	3.73	1.97	0.94	[illegible]	0.00	0.00	0.00	[illegible]	[illegible]
45	[illegible]	[illegible]	7.47	14.81	5.56	2.93	[illegible]	0.50	0.06	0.00	0.00	0.00	[illegible]
46	0.00	[illegible]	0.00	[illegible]	0.19	0.09	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]
47	0.66	[illegible]	[illegible]	[illegible]	3.08	[illegible]	[illegible]	[illegible]	0.00	[illegible]	0.00	0.00	[illegible]
48	0.00	0.10	9.55	5.39	2.50	[illegible]	[illegible]	0.34	0.00	0.00	0.00	[illegible]	[illegible]
49	0.71	[illegible]	44.08	5.54	8.54	[illegible]	1.28	0.46	0.01	0.00	0.00	0.00	[illegible]
50	0.67	[illegible]	[illegible]	50.30	[illegible]	[illegible]	1.67	0.65	0.12	0.00	0.00	[illegible]	[illegible]
51	[illegible]	2.69	86.76	87.40	[illegible]	3.22	2.00	1.77	0.46	0.01	0.00	1.67	[illegible]
52	[illegible]	[illegible]	55.00	131.57	[illegible]	[illegible]	[illegible]	1.06	0.61	0.10	0.00	[illegible]	[illegible]
53	[illegible]	[illegible]	[illegible]	146.59	21.83	5.50	[illegible]	[illegible]	0.47	0.07	0.00	0.00	[illegible]
54	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.79	2.57	1.17	0.41	[illegible]	0.00	[illegible]	[illegible]
55	2.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.55	0.28	0.00	0.00	[illegible]	[illegible]
56	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.90	[illegible]	1.03	[illegible]	0.00	0.00	[illegible]	[illegible]
57	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

QUADRO 9

AZOES GERADAS (EM HM3/MES):

ANO	JAN	FEV	MAR	ABR	MAI	JUN	JUL	AGO	SET	OUT	NOV	DEZ	ANUAL
58	0.00	0.61	2.32	2.37	1.41	0.54	0.39	0.00	0.00	0.00	0.00	0.00	7.64
59	0.00	1.33	4.18	3.51	3.86	2.49	1.57	0.62	0.10	0.00	0.00	0.00	17.66
[illegible]	0.00	0.27	1.71	3.51	3.98	2.16	0.95	0.96	0.29	0.00	0.00	0.00	13.83
[illegible]	2.31	3.57	31.47	31.79	6.45	3.99	2.16	1.06	0.34	0.00	0.00	0.00	83.14
62	3.05	7.11	65.30	159.71	54.79	7.46	3.59	1.73	1.01	0.31	0.00	0.00	304.06
[illegible]	0.00	31.58	26.30	71.09	68.93	5.21	3.64	1.76	0.73	0.16	0.00	0.00	209.40
[illegible]	0.00	2.19	4.85	8.13	2.94	1.40	0.74	0.16	0.00	0.00	0.00	0.00	20.41
65	0.90	5.72	3.38	12.50	6.81	3.54	1.98	0.85	0.23	0.00	0.00	0.00	35.91
[illegible]	1.02	2.27	3.06	5.06	4.06	2.63	1.21	0.42	0.00	0.00	0.00	0.00	19.73
[illegible]	0.05	1.48	2.38	3.65	2.63	1.88	0.79	0.20	0.00	0.00	0.00	0.00	13.06
MED	1.20	5.55	19.80	24.12	12.79	2.87	1.45	0.61	0.18	0.03	0.03	0.16	68.25

Variação na reserva = volume afluente ao reservatório + precipitação direta sobre o espelho d'água - perdas por evaporação - perdas por sangria - volume retirado para satisfazer as demandas.

Este balanço se traduz através da equação básica:

$$V_i = V_{i-1} + C_i + VP_i - VE_i - S_i - Ar_i$$

onde:

V_i → volume acumulado na barragem no mês i;

V_i-1 → volume acumulado na barragem no mês i-1;

C_i → volume afluente à barragem, decorrente da bacia de contribuição, no mês i;

VP_i → volume decorrente da precipitação direta sobre o espelho d'água, no mês i;

VE_i → volume correspondente as perdas por evaporação;

S_i → volume sangrado, no mês i;

Qr_i → volume retirado, no mês i, correspondente à vazão liberada.

O Fluxograma do modelo de simulação de operação dos reservatórios é mostrado na Figura 6.

A caracterização geométrica do açude é retratada através da sua curva cota x área x volume e da definição dos parâmetros de controle relativos ao volume máximo de acumulação e volume útil mínimo.

Os valores das contribuições mensais C_i correspondem aos deflúvios determinados para a bacia em estudo. As alturas de chuva P_i, de pequena influência no balanço, foram tomadas relativas ao posto mais próximo ao açude, enquanto que os índices de evaporação E_i correspondem as observações de Tanque Classe "A", corrigidos pelo valor de 0,70. A aplicação destas alturas à área média no passo fornece os volumes evaporados e precipitados no mês. Os volumes sangrados são determináveis a partir do conhecimento do volume máximo de acumulação.

O método consiste em simular a operação para diversos valores de Qr, considerada fixa e contínua em cada processamento. Quando o estado do reservatório não permite a vazão Qr, estabelecida no processamento, identifica-se o colapso no mês; a relação $\frac{n}{m}$ onde n representa o número de meses em que ocorre colapso e o m o número de meses total da série, define a frequência de colapso.

A repetição do procedimento para diferente Qr possibilita traçar-se a curva vazão regularizável x frequência ou nível de garantia.

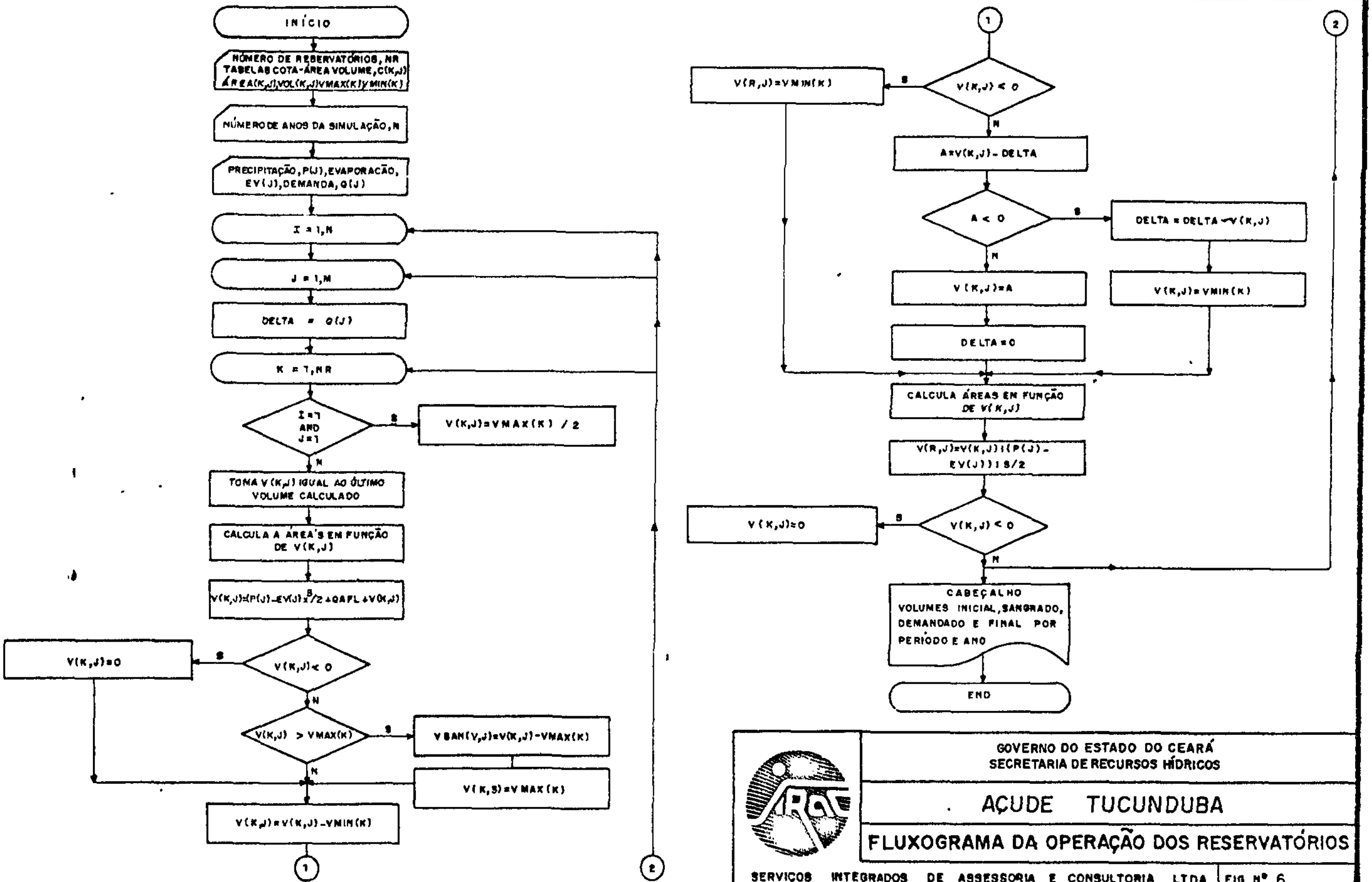
Para o Açude Tucunduba, os valores dos encrementos de demanda foram da ordem de 0,50 hm^3/mês até atingir a vazão regularizável de 3 hm^3/mês. O Gráfico de curvas de garantia por vazão regularizável da Figura 7 melhora o entendimento.

Para o nível de 95% de garantia, os resultados mostram que o açude atende a demanda de 0,65 m^3/s. O que corresponde a aproximadamente 650 ha para irrigação. Estes resultados estão em detalhes no Anexo A.

5 - ANÁLISE DA QUALIDADE DA ÁGUA

5.1 - PRELIMINARES

A qualidade da água para irrigação depende principalmente do conteúdo de limo e dos constituintes salinos. Entre os fatores salinos mais importantes para a qualidade da água estão: a concentração total, a proporção de sódio e outros cátions, e a presença de ions especialmente tóxicos como o borato; para algumas culturas, possivelmente o cloro, o sódio e o bicarbonato.



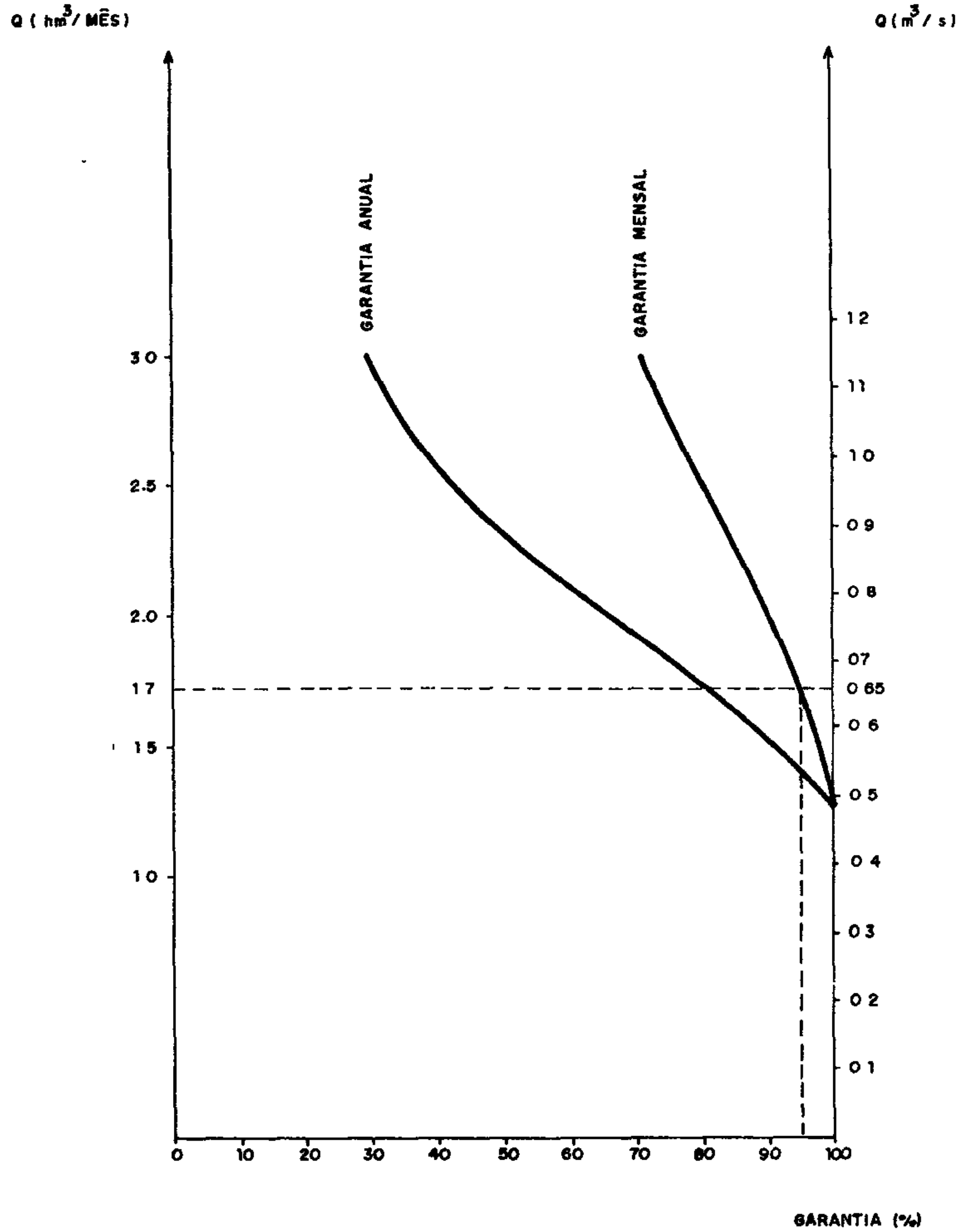
GOVERNO DO ESTADO DO CEARÁ
SECRETARIA DE RECURSOS HÍDRICOS

AÇUDE TUCUNDUBA

FLUXOGRAMA DA OPERAÇÃO DOS RESERVATÓRIOS

SERVIÇOS INTEGRADOS DE ASSESSORIA E CONSULTORIA LTDA | FIG Nº 6

000028 26



GOVERNO DO ESTADO DO CEARÁ
SECRETARIA DE RECURSOS HÍDRICOS

AÇUDE TUCUNDUBA

CURVAS DE GARANTIA x VAZÃO REGULARIZÁVEL

SERVIÇOS INTEGRADOS DE ASSESSORIA E CONSULTORIA LTDA | FIG Nº 7

Geralmente, os constituintes do sal se classificam como álcali branco (sais neutros) ou álcali negro (sais alcalinos cáusticos). No primeiro caso as águas são consideradas boas se contêm menos de 1.000 partes por milhão de sólidos solúveis totais; qualquer concentração apreciável de álcali negro torna a água inadequada para a irrigação.

Devido a segurança e facilidade de determinação, a condutividade elétrica tem sido o procedimento normal para a determinação do sal total nas águas de irrigação. A condutividade elétrica é hoje aceita universalmente como padrão de medida de qualidade da água.

Os cátions dos colóides do solo estão em equilíbrio com os íons de solução do solo. O aumento das proporções de sódio tende a alcalinizar o solo. O laboratório de salinidade dos EEUU, indica a relação sódio-adsorção (SAR) como um critério mais seguro para determinar o perigo de sódio na água.

$$SAR = \frac{NA^{+}}{Ca^{++} + Mg^{++})/2}$$

5.2 - QUALIDADE DA ÁGUA NA ÁREA DO PROJETO

Para se avaliar a qualidade da água na área do projeto, a Consultora colheu no próprio açude e de um poço à jusante deste, duas amostras em dezembro de 1987. Tais amostras foram entregues ao Laboratório de Recursos, Análises e Investigações de Solos LTDA (RAIS) para processar a análise.

Segundo os Quadros 10 e 11, onde são apresentados os resultados do laboratório RAIS, a classificação da amostra d'água foi C_2 S_1, segundo os critérios do U.S. Salinity Laboratory Staff.

Como pode ser visto no diagrama de Riverside na Figura 8, a categoria C_2 S_1 indica uma água com média salinidade e de baixo conteúdo de sódio intercambiável, podendo ser usada para irrigação em quase todos os tipos de solos e culturas sem perigo de salinização e sodificação.

QUADRO 10

RAIS

RECURSOS ANALISES E INVESTIGACÁO DE SOLOS LTDA.

Avenida da Universidade 1989 - Fone. 226-0118 e 251 0427

Benfica Cep 60 000 - Fortaleza - Ceara

FICHA DE ANALISE DE ÁGUA PARA IRRIGAÇÃO

INTERESSADO SIRAC-PROJETO TUCUNDUBA

PROCEDENCIA

DATA 09 12 87

AMOSTRA Nº	NOME	CATIONS (meq / l)					ANIONS meq/ l					CE MICROMHO / CM a 25° c	RAS	p^H	SÓLIDOS DISSOLVIDO (mg/ l)	CLASSIFICAÇÃO*
		Ca^{++}	Mg^{++}	Na^{+}	K^{+}	SOMA S	Cl^{-}	SO_4^{--}	HCO_3^{-}	CO_3^{--}	SOMA S					
410/87	ACUDE	0,76	0,72	1,43	0,18	3,09	2,19	0,20	0,68	0,0	3,07	300,0	1,7	6,2		C_2S_1

Obs .

*Observe no verso da folha o significado pratico da classificação da água

Responsavel Tecnico

000031

QUADRO 11

RECURSOS ANÁLISES E INVESTIGAÇÃO DE SOLOS LTDA.
Avenida da Universidade, 1989 - Fones 226-0118 e 251-0427
Benfica Cep 60.000 Fortaleza Ceara
RAIS

FICHA DE ANÁLISE DE ÁGUA PARA IRRIGAÇÃO

INTERESSADO SIRAC-PROJETO TUCUNDUBA

PROCEDÊNCIA

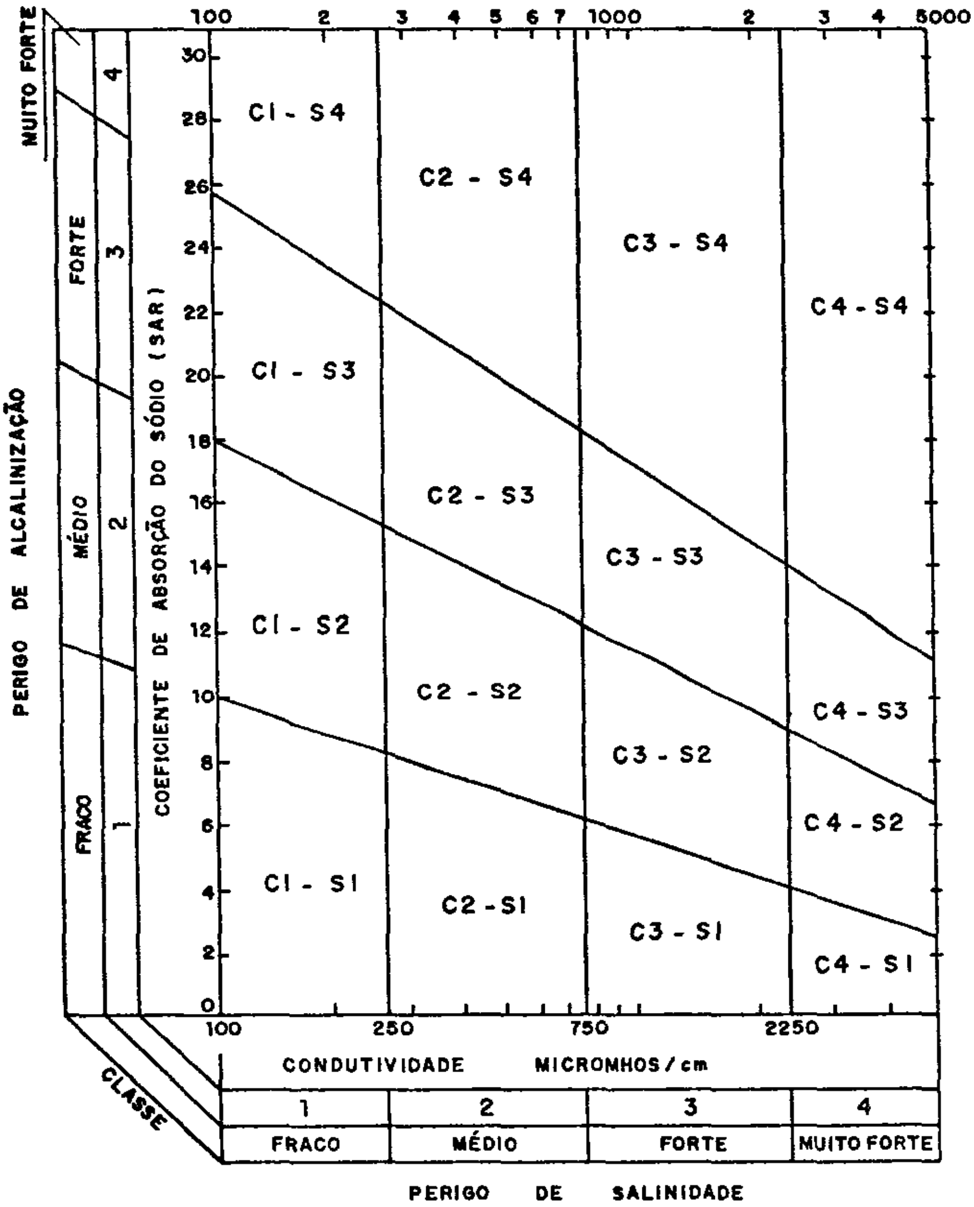
DATA 09.12.87

AMOSTRA Nº	NOME	CATIONS (meq/l) Ca^{++}	Mg^{++}	Na^{+}	K^{+}	SOMA S	ANIONS meq/l Cl^{-}	SO_4^{--}	HCO_3^{-}	CO_3	SOMA S	CE MICROMHO/CM a 25° c	RAS	p^H	SÓLIDOS DISSOLVIDO (mg/l)	CLASSIFICAÇÃO*
411/87	POÇO	1,24	1,88	3,57	0,53	7,22	6,18	0,30	0,70	0,0	7,18	720,0	2,9	6,0		C_2S_1

Obs.

*Observe no verso da folha o significado prático da classificação da água.

Responsavel Tecnico



GOVERNO DO ESTADO DO CEARÁ
SECRETARIA DE RECURSOS HÍDRICOS

AÇUDE TUCUNDUBA

DIAGRAMA PARA CLASSIFICAÇÃO DE ÁGUA PARA IRRIGAÇÃO

SERVIÇOS INTEGRADOS DE ASSESSORIA E CONSULTORIA LTDA | 8

ANEXO A

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUDUNBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
1	1	6.21	20.10	-0.22	0.00	0.00	1.50	-0.21	0.00	5.91	18.17	
	2	5.91	18.17	+0.13	1.37	0.00	1.50	+0.13	0.00	5.93	18.29	
	3	5.93	18.29	+0.49	14.38	0.00	1.50	+0.65	0.00	8.23	32.31	
	4	8.23	32.31	+0.64	20.80	13.55	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	21.79	21.37	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	4.46	2.76	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	2.81	0.19	1.50	-0.73	0.00	10.94	37.97	
	8	10.94	37.97	-0.89	1.31	0.00	1.50	-0.84	0.00	10.02	36.04	
	9	10.02	36.04	-0.90	0.48	0.00	1.50	-0.81	0.00	8.71	33.31	
	10	8.71	33.31	-0.88	0.02	0.00	1.50	-0.77	0.00	7.51	30.19	
	11	7.51	30.19	-0.72	0.00	0.00	1.50	-0.70	0.00	7.18	27.26	
	12	7.18	27.26	-0.63	0.00	0.00	1.50	-0.61	0.00	6.88	24.52	
2	1	6.88	24.52	-0.24	2.82	0.00	1.50	-0.25	0.00	6.97	25.35	
	2	6.97	25.35	+0.15	2.97	0.00	1.50	+0.15	0.00	7.17	27.13	
	3	7.17	27.13	+0.59	2.90	0.00	1.50	+0.61	0.00	7.46	29.72	
	4	7.46	29.72	+0.58	6.37	0.00	1.50	+0.74	0.00	9.96	35.91	
	5	9.96	35.91	+0.17	3.11	0.00	1.50	+0.19	0.00	10.90	37.88	
	6	10.90	37.88	-0.38	1.97	0.00	1.50	-0.38	0.00	10.76	37.59	
	7	10.76	37.59	-0.70	0.91	0.00	1.50	-0.66	0.00	9.83	35.64	
	8	9.83	35.64	-0.80	0.45	0.00	1.50	-0.72	0.00	8.59	33.07	
	9	8.59	33.07	-0.77	0.05	0.00	1.50	-0.68	0.00	7.51	30.17	
	10	7.51	30.17	-0.76	0.00	0.00	1.50	-0.73	0.00	7.18	27.18	
	11	7.18	27.18	-0.69	0.00	0.00	1.50	-0.67	0.00	6.86	24.32	
	12	6.86	24.32	-0.60	0.00	0.00	1.50	-0.57	0.00	6.46	21.65	
3	1	6.46	21.65	-0.23	0.00	0.00	1.50	-0.22	0.00	6.15	19.70	
	2	6.15	19.70	+0.13	0.00	0.00	1.50	+0.13	0.00	5.95	18.46	
	3	5.95	18.46	+0.49	1.34	0.00	1.50	+0.49	0.00	6.08	19.28	
	4	6.08	19.28	+0.47	1.80	0.00	1.50	+0.48	0.00	6.28	20.53	
	5	6.28	20.53	+0.11	1.05	0.00	1.50	+0.11	0.00	6.24	20.30	
	6	6.24	20.30	-0.22	0.48	0.00	1.50	-0.21	0.00	6.01	18.85	
	7	6.01	18.85	-0.39	0.02	0.00	1.50	-0.37	0.00	5.59	16.61	
	8	5.59	16.61	-0.45	0.00	0.00	1.50	-0.42	0.00	5.05	14.24	
	9	5.05	14.24	-0.45	0.00	0.00	1.50	-0.41	0.00	4.54	11.88	
	10	4.54	11.88	-0.46	0.00	0.00	1.50	-0.43	0.00	4.21	9.49	
	11	4.21	9.49	-0.41	0.00	0.00	1.50	-0.37	0.00	3.61	7.21	
	12	3.61	7.21	-0.32	0.15	0.00	1.50	-0.24	0.00	2.65	5.31	
4	1	2.65	5.31	-0.09	1.32	0.00	1.50	-0.09	0.00	2.47	4.94	
	2	2.47	4.94	+0.05	4.89	0.00	1.50	+0.09	0.00	4.07	8.47	
	3	4.07	8.47	+0.33	32.96	1.57	1.50	+0.93	0.00	11.74	39.63	
	4	11.74	39.63	+0.91	14.72	15.06	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	4.01	3.59	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	2.30	0.60	1.50	-0.40	0.00	11.11	38.30	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUDUMBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	11.11	38.30	-0.72	1.03	0.00	1.50	-0.68	0.00	10.21	36.43	
	8	10.21	36.43	-0.83	0.32	0.00	1.50	-0.75	0.00	8.88	33.67	
	9	8.88	33.67	-0.80	0.00	0.00	1.50	-0.70	0.00	7.56	30.68	
	10	7.56	30.68	-0.76	0.00	0.00	1.50	-0.74	0.00	7.23	27.68	
	11	7.23	27.68	-0.70	0.00	0.00	1.50	-0.67	0.00	6.91	24.81	
	12	6.91	24.81	-0.60	0.08	0.00	1.50	-0.58	0.00	6.55	22.20	
5	1	6.55	22.20	-0.23	12.41	0.00	1.50	-0.30	0.00	8.36	32.58	
	2	8.36	32.58	+0.18	48.29	40.85	1.50	+0.24	0.00	11.41	38.94	
	3	11.41	38.94	+0.94	102.98	102.66	1.50	+0.93	0.00	11.74	39.63	
	4	11.74	39.63	+0.91	84.37	84.71	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	141.99	141.57	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	5.93	4.23	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	3.02	0.40	1.50	-0.73	0.00	10.94	37.97	
	8	10.94	37.97	-0.89	1.42	0.00	1.50	-0.85	0.00	10.07	36.15	
	9	10.07	36.15	-0.90	0.74	0.00	1.50	-0.83	0.00	8.88	33.66	
	10	8.88	33.66	-0.90	0.49	0.00	1.50	-0.80	0.00	7.59	30.95	
	11	7.59	30.95	-0.73	0.25	0.00	1.50	-0.71	0.00	7.29	28.25	
	12	7.29	28.25	-0.64	0.73	0.00	1.50	-0.62	0.00	7.07	26.22	
6	1	7.07	26.22	-0.25	2.45	0.00	1.50	-0.25	0.00	7.12	26.67	
	2	7.12	26.67	+0.15	2.68	0.00	1.50	+0.16	0.00	7.28	28.16	
	3	7.28	28.16	+0.60	64.65	53.20	1.50	+0.93	0.00	11.74	39.63	
	4	11.74	39.63	+0.91	5.46	5.80	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	10.40	9.98	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	11.28	9.58	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	3.34	0.72	1.50	-0.73	0.00	10.94	37.97	
	8	10.94	37.97	-0.89	1.60	0.00	1.50	-0.86	0.00	10.16	36.32	
	9	10.16	36.32	-0.91	1.28	0.00	1.50	-0.86	0.00	9.20	34.33	
	10	9.20	34.33	-0.93	0.46	0.00	1.50	-0.83	0.00	7.85	31.53	
	11	7.85	31.53	-0.76	0.01	0.00	1.50	-0.71	0.00	7.33	28.57	
	12	7.33	28.57	-0.64	0.77	0.00	1.50	-0.63	0.00	7.11	26.57	
7	1	7.11	26.57	-0.25	0.87	0.00	1.50	-0.25	0.00	6.98	25.44	
	2	6.98	25.44	+0.15	1.18	0.00	1.50	+0.15	0.00	6.98	25.42	
	3	6.98	25.42	+0.57	0.74	0.00	1.50	+0.57	0.00	7.02	25.80	
	4	7.02	25.80	+0.54	0.44	0.00	1.50	+0.54	0.00	7.02	25.82	
	5	7.02	25.82	+0.12	0.85	0.00	1.50	+0.12	0.00	6.98	25.42	
	6	6.98	25.42	-0.24	0.28	0.00	1.50	-0.24	0.00	6.79	23.72	
	7	6.79	23.72	-0.44	0.00	0.00	1.50	-0.42	0.00	6.41	21.35	
	8	6.41	21.35	-0.52	0.00	0.00	1.50	-0.49	0.00	6.01	18.84	
	9	6.01	18.84	-0.54	0.00	0.00	1.50	-0.50	0.00	5.52	16.30	
	10	5.52	16.30	-0.56	0.00	0.00	1.50	-0.51	0.00	4.93	13.73	
	11	4.93	13.73	-0.48	0.00	0.00	1.50	-0.44	0.00	4.46	11.32	
	12	4.46	11.32	-0.39	0.00	0.00	1.50	-0.37	0.00	4.15	9.06	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUOUNGA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
8	1	4.15	9.06	-0.15	0.00	0.00	1.50	-0.13	0.00	3.64	7.28	
	2	3.64	7.28	+0.08	0.63	0.00	1.50	+0.07	0.00	3.28	6.56	
	3	3.28	6.56	+0.27	75.45	42.08	1.50	+0.93	0.00	11.74	39.63	
	4	11.74	39.63	+0.91	22.57	22.91	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	5.51	5.09	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	3.14	1.44	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	1.73	0.00	1.50	-0.71	0.00	10.53	37.11	
	8	10.53	37.11	-0.85	1.42	0.00	1.50	-0.82	0.00	9.69	35.36	
	9	9.69	35.36	-0.87	0.54	0.00	1.50	-0.79	0.00	8.44	32.74	
	10	8.44	32.74	-0.85	0.06	0.00	1.50	-0.76	0.00	7.45	29.69	
	11	7.45	29.69	-0.72	0.00	0.00	1.50	-0.70	0.00	7.13	26.77	
	12	7.13	26.77	-0.62	0.40	0.00	1.50	-0.61	0.00	6.87	24.44	
9	1	6.87	24.44	-0.24	0.33	0.00	1.50	-0.24	0.00	6.64	22.79	
	2	6.64	22.79	+0.14	2.03	0.00	1.50	+0.15	0.00	6.77	23.61	
	3	6.77	23.61	+0.56	9.82	0.00	1.50	+0.68	0.00	8.64	33.16	
	4	8.64	33.16	+0.67	14.01	7.64	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	51.10	50.68	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	4.48	2.78	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	2.44	0.00	1.50	-0.73	0.00	10.86	37.79	
	8	10.86	37.79	-0.88	1.10	0.00	1.50	-0.83	0.00	9.85	35.68	
	9	9.85	35.68	-0.88	0.41	0.00	1.50	-0.80	0.00	8.52	32.92	
	10	8.52	32.92	-0.86	0.00	0.00	1.50	-0.76	0.00	7.47	29.79	
	11	7.47	29.79	-0.72	0.00	0.00	1.50	-0.70	0.00	7.14	26.88	
	12	7.14	26.88	-0.62	0.00	0.00	1.50	-0.60	0.00	6.84	24.15	
10	1	6.84	24.15	-0.24	0.00	0.00	1.50	-0.23	0.00	6.54	22.17	
	2	6.54	22.17	+0.14	0.14	0.00	1.50	+0.14	0.00	6.37	21.09	
	3	6.37	21.09	+0.52	1.17	0.00	1.50	+0.52	0.00	6.48	21.80	
	4	6.48	21.80	+0.50	8.06	0.00	1.50	+0.57	0.00	7.43	29.44	
	5	7.43	29.44	+0.13	3.79	0.00	1.50	+0.14	0.00	8.08	32.00	
	6	8.08	32.00	-0.28	2.33	0.00	1.50	-0.29	0.00	8.20	32.25	
	7	8.20	32.25	-0.53	1.41	0.00	1.50	-0.51	0.00	7.66	31.12	
	8	7.66	31.12	-0.62	0.57	0.00	1.50	-0.60	0.00	7.37	28.96	
	9	7.37	28.96	-0.66	0.07	0.00	1.50	-0.64	0.00	7.07	26.23	
	10	7.07	26.23	-0.71	0.00	0.00	1.50	-0.69	0.00	6.73	23.33	
	11	6.73	23.33	-0.65	0.51	0.00	1.50	-0.62	0.00	6.37	21.07	
	12	6.37	21.07	-0.56	0.04	0.00	1.50	-0.53	0.00	5.96	18.52	
11	1	5.96	18.52	-0.21	1.20	0.00	1.50	-0.21	0.00	5.85	17.80	
	2	5.85	17.80	+0.13	14.62	0.00	1.50	+0.16	0.00	7.70	31.21	
	3	7.70	31.21	+0.63	7.37	0.00	1.50	+0.89	0.00	11.25	38.60	
	4	11.25	38.60	+0.87	21.60	20.87	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	5.11	4.69	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	3.13	1.43	1.50	-0.40	0.00	11.11	38.30	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUDUMBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	11.11	38.30	-0.72	1.70	0.00	1.50	-0.71	0.00	10.52	37.08	
	8	10.52	37.08	-0.85	0.69	0.00	1.50	-0.79	0.00	9.34	34.63	
	9	9.34	34.63	-0.84	0.14	0.00	1.50	-0.74	0.00	7.93	31.69	
	10	7.93	31.69	-0.80	0.00	0.00	1.50	-0.75	0.00	7.34	28.64	
	11	7.34	28.64	-0.71	0.00	0.00	1.50	-0.68	0.00	7.02	25.75	
	12	7.02	25.75	-0.61	0.00	0.00	1.50	-0.59	0.00	6.68	23.04	
12	1	6.68	23.04	-0.24	2.22	0.00	1.50	-0.24	0.00	6.72	23.28	
	2	6.72	23.28	+0.14	5.22	0.00	1.50	+0.15	0.00	7.19	27.30	
	3	7.19	27.30	+0.59	38.80	26.49	1.50	+0.93	0.00	11.74	39.63	
	4	11.74	39.63	+0.91	52.74	53.08	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	21.83	21.41	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	8.21	6.51	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	3.15	0.53	1.50	-0.73	0.00	10.94	37.97	
	8	10.94	37.97	-0.89	1.49	0.00	1.50	-0.85	0.00	10.10	36.22	
	9	10.10	36.22	-0.90	0.58	0.00	1.50	-0.83	0.00	8.83	33.57	
	10	8.83	33.57	-0.89	0.08	0.00	1.50	-0.78	0.00	7.54	30.48	
	11	7.54	30.48	-0.73	0.00	0.00	1.50	-0.70	0.00	7.22	27.54	
	12	7.22	27.54	-0.63	0.00	0.00	1.50	-0.61	0.00	6.91	24.80	
13	1	6.91	24.80	-0.25	2.49	0.00	1.50	-0.25	0.00	6.97	25.30	
	2	6.97	25.30	+0.15	3.69	0.00	1.50	+0.16	0.00	7.24	27.79	
	3	7.24	27.79	+0.59	6.61	0.00	1.50	+0.72	0.00	9.14	34.22	
	4	9.14	34.22	+0.71	6.32	1.05	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	4.08	3.66	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	2.62	0.92	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	1.38	0.00	1.50	-0.70	0.00	10.37	36.77	
	8	10.37	36.77	-0.84	0.72	0.00	1.50	-0.78	0.00	9.22	34.37	
	9	9.22	34.37	-0.82	0.16	0.00	1.50	-0.73	0.00	7.83	31.47	
	10	7.83	31.47	-0.79	0.00	0.00	1.50	-0.75	0.00	7.32	28.44	
	11	7.32	28.44	-0.71	0.00	0.00	1.50	-0.68	0.00	6.99	25.55	
	12	6.99	25.55	-0.61	0.00	0.00	1.50	-0.59	0.00	6.65	22.85	
14	1	6.65	22.85	-0.24	0.73	0.00	1.50	-0.23	0.00	6.45	21.61	
	2	6.45	21.61	+0.14	7.59	0.00	1.50	+0.16	0.00	7.27	27.99	
	3	7.27	27.99	+0.60	30.77	19.16	1.50	+0.93	0.00	11.74	39.63	
	4	11.74	39.63	+0.91	36.29	36.63	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	8.74	8.32	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	3.57	1.87	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	1.82	0.00	1.50	-0.71	0.00	10.57	37.19	
	8	10.57	37.19	-0.86	0.76	0.00	1.50	-0.79	0.00	9.43	34.80	
	9	9.43	34.80	-0.84	0.18	0.00	1.50	-0.75	0.00	8.03	31.89	
	10	8.03	31.89	-0.81	0.00	0.00	1.50	-0.75	0.00	7.36	28.83	
	11	7.36	28.83	-0.71	0.00	0.00	1.50	-0.69	0.00	7.04	25.93	
	12	7.04	25.93	-0.62	0.00	0.00	1.50	-0.60	0.00	6.71	23.22	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUDUNBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volume em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
15	1	6.71	23.22	-0.24	0.48	0.00	1.50	-0.23	0.00	6.47	21.73	
	2	6.47	21.73	+0.14	1.60	0.00	1.50	+0.14	0.00	6.53	22.11	
	3	6.53	22.11	+0.54	3.45	0.00	1.50	+0.56	0.00	6.95	25.16	
	4	6.95	25.16	+0.54	19.28	4.78	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	4.33	3.91	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	2.76	1.06	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	1.39	0.00	1.50	-0.70	0.00	10.37	36.78	
	8	10.37	36.78	-0.84	0.52	0.00	1.50	-0.77	0.00	9.13	34.19	
	9	9.13	34.19	-0.82	0.05	0.00	1.50	-0.72	0.00	7.70	31.20	
	10	7.70	31.20	-0.78	0.00	0.00	1.50	-0.74	0.00	7.29	28.18	
	11	7.29	28.18	-0.70	0.00	0.00	1.50	-0.68	0.00	6.97	25.30	
	12	6.97	25.30	-0.61	0.00	0.00	1.50	-0.59	0.00	6.61	22.60	
16	1	6.61	22.60	-0.23	1.07	0.00	1.50	-0.23	0.00	6.47	21.70	
	2	6.47	21.70	+0.14	1.31	0.00	1.50	+0.14	0.00	6.48	21.79	
	3	6.48	21.79	+0.53	4.22	0.00	1.50	+0.57	0.00	7.00	25.61	
	4	7.00	25.61	+0.54	10.21	0.00	1.50	+0.73	0.00	9.81	35.60	
	5	9.81	35.60	+0.17	3.36	0.00	1.50	+0.19	0.00	10.87	37.82	
	6	10.87	37.82	-0.38	1.96	0.00	1.50	-0.38	0.00	10.73	37.52	
	7	10.73	37.52	-0.70	0.84	0.00	1.50	-0.65	0.00	9.76	35.50	
	8	9.76	35.50	-0.79	0.22	0.00	1.50	-0.71	0.00	8.43	32.72	
	9	8.43	32.72	-0.75	0.00	0.00	1.50	-0.67	0.00	7.47	29.79	
	10	7.47	29.79	-0.75	0.00	0.00	1.50	-0.73	0.00	7.13	26.81	
	11	7.13	26.81	-0.69	0.00	0.00	1.50	-0.67	0.00	6.82	23.96	
	12	6.82	23.96	-0.60	0.00	0.00	1.50	-0.57	0.00	6.40	21.29	
17	1	6.40	21.29	-0.23	1.62	0.00	1.50	-0.23	0.00	6.35	20.96	
	2	6.35	20.96	+0.14	13.32	0.00	1.50	+0.18	0.00	8.61	33.10	
	3	8.61	33.10	+0.71	26.89	20.49	1.50	+0.93	0.00	11.74	39.63	
	4	11.74	39.63	+0.91	28.70	29.04	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	4.69	4.27	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	2.59	0.89	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	1.29	0.00	1.50	-0.69	0.00	10.33	36.68	
	8	10.33	36.68	-0.84	0.47	0.00	1.50	-0.76	0.00	9.06	34.05	
	9	9.06	34.05	-0.81	0.02	0.00	1.50	-0.71	0.00	7.62	31.05	
	10	7.62	31.05	-0.77	0.00	0.00	1.50	-0.74	0.00	7.27	28.03	
	11	7.27	28.03	-0.70	0.00	0.00	1.50	-0.68	0.00	6.95	25.15	
	12	6.95	25.15	-0.61	0.84	0.00	1.50	-0.60	0.00	6.72	23.29	
18	1	6.72	23.29	-0.24	1.27	0.00	1.50	-0.24	0.00	6.61	22.59	
	2	6.61	22.59	+0.14	5.66	0.00	1.50	+0.15	0.00	7.16	27.04	
	3	7.16	27.04	+0.59	52.14	39.57	1.50	+0.93	0.00	11.74	39.63	
	4	11.74	39.63	+0.91	12.43	12.77	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	4.49	4.07	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	3.73	2.03	1.50	-0.40	0.00	11.11	38.30	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUDUMBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	11.11	38.30	-0.72	1.99	0.00	1.50	-0.71	0.00	10.65	37.36	
	8	10.65	37.36	-0.86	0.94	0.00	1.50	-0.81	0.00	9.58	35.13	
	9	9.58	35.13	-0.86	0.28	0.00	1.50	-0.77	0.00	8.22	32.28	
	10	8.22	32.28	-0.83	0.00	0.00	1.50	-0.76	0.00	7.40	29.20	
	11	7.40	29.20	-0.71	0.00	0.00	1.50	-0.69	0.00	7.08	26.29	
	12	7.08	26.29	-0.62	0.00	0.00	1.50	-0.60	0.00	6.76	23.57	
19	1	6.76	23.57	-0.24	1.52	0.00	1.50	-0.24	0.00	6.69	23.12	
	2	6.69	23.12	+0.14	9.16	0.00	1.50	+0.16	0.00	7.64	31.08	
	3	7.64	31.08	+0.63	12.20	3.71	1.50	+0.93	0.00	11.74	39.63	
	4	11.74	39.63	+0.91	7.83	8.17	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	3.86	3.44	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	2.31	0.61	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	1.09	0.00	1.50	-0.69	0.00	10.23	36.49	
	8	10.23	36.49	-0.83	0.36	0.00	1.50	-0.75	0.00	8.93	33.76	
	9	8.93	33.76	-0.80	0.00	0.00	1.50	-0.70	0.00	7.57	30.77	
	10	7.57	30.77	-0.76	0.00	0.00	1.50	-0.74	0.00	7.24	27.76	
	11	7.24	27.76	-0.70	0.00	0.00	1.50	-0.68	0.00	6.92	24.89	
	12	6.92	24.89	-0.61	0.00	0.00	1.50	-0.58	0.00	6.55	22.20	
20	1	6.55	22.20	-0.23	0.50	0.00	1.50	-0.23	0.00	6.31	20.74	
	2	6.31	20.74	+0.14	1.53	0.00	1.50	+0.14	0.00	6.36	21.05	
	3	6.36	21.05	+0.52	2.89	0.00	1.50	+0.55	0.00	6.75	23.50	
	4	6.75	23.50	+0.52	2.00	0.00	1.50	+0.53	0.00	6.94	25.06	
	5	6.94	25.06	+0.12	0.89	0.00	1.50	+0.12	0.00	6.90	24.69	
	6	6.90	24.69	-0.24	0.78	0.00	1.50	-0.24	0.00	6.75	23.49	
	7	6.75	23.49	-0.44	0.52	0.00	1.50	-0.42	0.00	6.46	21.65	
	8	6.46	21.65	-0.52	0.04	0.00	1.50	-0.50	0.00	6.06	19.17	
	9	6.06	19.17	-0.54	0.00	0.00	1.50	-0.51	0.00	5.60	16.62	
	10	5.60	16.62	-0.57	0.00	0.00	1.50	-0.52	0.00	5.00	14.03	
	11	5.00	14.03	-0.48	0.00	0.00	1.50	-0.44	0.00	4.50	11.61	
	12	4.50	11.61	-0.39	0.00	0.00	1.50	-0.37	0.00	4.19	9.34	
21	1	4.19	9.34	-0.15	1.91	0.00	1.50	-0.15	0.00	4.20	9.46	
	2	4.20	9.46	+0.09	5.86	0.00	1.50	+0.11	0.00	5.00	14.01	
	3	5.00	14.01	+0.41	6.13	0.00	1.50	+0.50	0.00	6.13	19.55	
	4	6.13	19.55	+0.47	24.16	3.98	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	4.54	4.12	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	2.40	0.70	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	1.19	0.00	1.50	-0.69	0.00	10.28	36.58	
	8	10.28	36.58	-0.83	0.41	0.00	1.50	-0.76	0.00	8.99	33.90	
	9	8.99	33.90	-0.80	0.02	0.00	1.50	-0.71	0.00	7.59	30.91	
	10	7.59	30.91	-0.77	0.00	0.00	1.50	-0.74	0.00	7.26	27.90	
	11	7.26	27.90	-0.70	0.00	0.00	1.50	-0.68	0.00	6.94	25.03	
	12	6.94	25.03	-0.61	0.00	0.00	1.50	-0.58	0.00	6.57	22.34	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUDUNBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
22	1	6.57	22.34	-0.23	0.56	0.00	1.50	-0.23	0.00	6.35	20.94	
	2	6.35	20.94	+0.14	6.37	0.00	1.50	+0.15	0.00	7.05	26.09	
	3	7.05	26.09	+0.58	29.14	15.61	1.50	+0.93	0.00	11.74	39.63	
	4	11.74	39.63	+0.91	34.82	35.16	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	10.59	10.17	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	3.83	2.13	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	1.86	0.00	1.50	-0.71	0.00	10.59	37.23	
	8	10.59	37.23	-0.86	0.78	0.00	1.50	-0.80	0.00	9.45	34.86	
	9	9.45	34.86	-0.85	0.31	0.00	1.50	-0.76	0.00	8.11	32.06	
	10	8.11	32.06	-0.82	0.00	0.00	1.50	-0.75	0.00	7.38	28.99	
	11	7.38	28.99	-0.71	0.00	0.00	1.50	-0.69	0.00	7.05	26.09	
	12	7.05	26.09	-0.62	0.85	0.00	1.50	-0.60	0.00	6.85	24.22	
23	1	6.85	24.22	-0.24	2.73	0.00	1.50	-0.25	0.00	6.93	24.96	
	2	6.93	24.96	+0.15	4.10	0.00	1.50	+0.16	0.00	7.25	27.86	
	3	7.25	27.86	+0.59	10.38	0.00	1.50	+0.87	0.00	11.06	38.21	
	4	11.06	38.21	+0.86	77.09	75.96	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	19.97	19.55	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	5.22	3.52	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	2.68	0.06	1.50	-0.73	0.00	10.94	37.97	
	8	10.94	37.97	-0.89	1.23	0.00	1.50	-0.84	0.00	9.98	35.97	
	9	9.98	35.97	-0.89	0.44	0.00	1.50	-0.81	0.00	8.66	33.20	
	10	8.66	33.20	-0.87	0.00	0.00	1.50	-0.77	0.00	7.50	30.06	
	11	7.50	30.06	-0.72	0.00	0.00	1.50	-0.70	0.00	7.17	27.14	
	12	7.17	27.14	-0.63	0.00	0.00	1.50	-0.61	0.00	6.87	24.41	
24	1	6.87	24.41	-0.24	0.06	0.00	1.50	-0.24	0.00	6.59	22.49	
	2	6.59	22.49	+0.14	2.72	0.00	1.50	+0.15	0.00	6.82	24.00	
	3	6.82	24.00	+0.56	2.28	0.00	1.50	+0.57	0.00	7.03	25.91	
	4	7.03	25.91	+0.55	2.81	0.00	1.50	+0.56	0.00	7.30	28.32	
	5	7.30	28.32	+0.13	2.40	0.00	1.50	+0.13	0.00	7.43	29.48	
	6	7.43	29.48	-0.26	1.14	0.00	1.50	-0.26	0.00	7.33	28.60	
	7	7.33	28.60	-0.48	0.43	0.00	1.50	-0.47	0.00	7.11	26.59	
	8	7.11	26.59	-0.58	0.00	0.00	1.50	-0.56	0.00	6.82	23.96	
	9	6.82	23.96	-0.61	0.00	0.00	1.50	-0.58	0.00	6.40	21.27	
	10	6.40	21.27	-0.65	0.00	0.00	1.50	-0.61	0.00	5.96	18.51	
	11	5.96	18.51	-0.58	0.00	0.00	1.50	-0.54	0.00	5.43	15.90	
	12	5.43	15.90	-0.48	0.00	0.00	1.50	-0.44	0.00	4.87	13.49	
25	1	4.87	13.49	-0.17	0.00	0.00	1.50	-0.16	0.00	4.51	11.65	
	2	4.51	11.65	+0.10	2.18	0.00	1.50	+0.10	0.00	4.65	12.53	
	3	4.65	12.53	+0.38	2.37	0.00	1.50	+0.41	0.00	5.04	14.19	
	4	5.04	14.19	+0.39	3.85	0.00	1.50	+0.44	0.00	5.77	17.37	
	5	5.77	17.37	+0.10	3.59	0.00	1.50	+0.11	0.00	6.14	19.66	
	6	6.14	19.66	-0.22	2.45	0.00	1.50	-0.22	0.00	6.23	20.18	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUDUMBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	6.23	20.18	-0.40	1.29	0.00	1.50	-0.40	0.00	6.06	19.17	
	8	6.06	19.17	-0.49	0.47	0.00	1.50	-0.47	0.00	5.72	17.17	
	9	5.72	17.17	-0.51	0.02	0.00	1.50	-0.47	0.00	5.16	14.71	
	10	5.16	14.71	-0.52	0.00	0.00	1.50	-0.47	0.00	4.59	12.22	
	11	4.59	12.22	-0.44	0.00	0.00	1.50	-0.42	0.00	4.26	9.86	
	12	4.26	9.86	-0.37	0.00	0.00	1.50	-0.35	0.00	3.82	7.63	
26	1	3.82	7.63	-0.14	0.69	0.00	1.50	-0.12	0.00	3.29	6.57	
	2	3.29	6.57	+0.07	0.36	0.00	1.50	+0.06	0.00	2.78	5.56	
	3	2.78	5.56	+0.23	13.95	0.00	1.50	+0.49	0.00	5.99	18.72	
	4	5.99	18.72	+0.46	5.90	0.00	1.50	+0.52	0.00	6.83	24.11	
	5	6.83	24.11	+0.12	3.71	0.00	1.50	+0.12	0.00	7.11	26.57	
	6	7.11	26.57	-0.25	2.15	0.00	1.50	-0.25	0.00	7.12	26.72	
	7	7.12	26.72	-0.46	1.07	0.00	1.50	-0.46	0.00	6.97	25.37	
	8	6.97	25.37	-0.56	0.53	0.00	1.50	-0.55	0.00	6.72	23.28	
	9	6.72	23.28	-0.60	0.05	0.00	1.50	-0.57	0.00	6.30	20.66	
	10	6.30	20.66	-0.64	0.00	0.00	1.50	-0.60	0.00	5.87	17.92	
	11	5.87	17.92	-0.57	0.00	0.00	1.50	-0.52	0.00	5.30	15.33	
	12	5.30	15.33	-0.46	0.00	0.00	1.50	-0.42	0.00	4.75	12.94	
27	1	4.75	12.94	-0.17	0.00	0.00	1.50	-0.16	0.00	4.43	11.12	
	2	4.43	11.12	+0.10	1.82	0.00	1.50	+0.10	0.00	4.51	11.63	
	3	4.51	11.63	+0.37	9.11	0.00	1.50	+0.50	0.00	6.21	20.11	
	4	6.21	20.11	+0.48	4.72	0.00	1.50	+0.53	0.00	6.86	24.34	
	5	6.86	24.34	+0.12	3.55	0.00	1.50	+0.12	0.00	7.11	26.63	
	6	7.11	26.63	-0.25	1.90	0.00	1.50	-0.25	0.00	7.10	26.53	
	7	7.10	26.53	-0.46	1.22	0.00	1.50	-0.46	0.00	6.97	25.34	
	8	6.97	25.34	-0.56	0.43	0.00	1.50	-0.55	0.00	6.70	23.15	
	9	6.70	23.15	-0.60	0.19	0.00	1.50	-0.57	0.00	6.30	20.67	
	10	6.30	20.67	-0.64	0.01	0.00	1.50	-0.60	0.00	5.87	17.94	
	11	5.87	17.94	-0.57	0.00	0.00	1.50	-0.52	0.00	5.30	15.35	
	12	5.30	15.35	-0.46	0.00	0.00	1.50	-0.42	0.00	4.75	12.96	
28	1	4.75	12.96	-0.17	2.56	0.00	1.50	-0.18	0.00	4.92	13.68	
	2	4.92	13.68	+0.11	3.54	0.00	1.50	+0.12	0.00	5.44	15.94	
	3	5.44	15.94	+0.45	7.94	0.00	1.50	+0.54	0.00	6.73	23.37	
	4	6.73	23.37	+0.52	10.70	0.00	1.50	+0.67	0.00	8.92	33.76	
	5	8.92	33.76	+0.16	4.54	0.00	1.50	+0.18	0.00	10.55	37.14	
	6	10.55	37.14	-0.37	2.60	0.00	1.50	-0.38	0.00	10.71	37.49	
	7	10.71	37.49	-0.70	1.52	0.00	1.50	-0.68	0.00	10.07	36.14	
	8	10.07	36.14	-0.82	0.65	0.00	1.50	-0.75	0.00	8.91	33.72	
	9	8.91	33.72	-0.80	0.11	0.00	1.50	-0.70	0.00	7.58	30.83	
	10	7.58	30.83	-0.77	0.00	0.00	1.50	-0.74	0.00	7.25	27.82	
	11	7.25	27.82	-0.70	0.00	0.00	1.50	-0.68	0.00	6.93	24.95	
	12	6.93	24.95	-0.61	0.00	0.00	1.50	-0.58	0.00	6.56	22.26	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUDUMBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
29	1	6.56	22.26	-0.23	0.00	0.00	1.50	-0.22	0.00	6.25	20.31	
	2	6.25	20.31	+0.13	0.44	0.00	1.50	+0.13	0.00	6.12	19.51	
	3	6.12	19.51	+0.50	3.21	0.00	1.50	+0.53	0.00	6.55	22.25	
	4	6.55	22.25	+0.51	3.36	0.00	1.50	+0.53	0.00	6.95	25.16	
	5	6.95	25.16	+0.12	1.88	0.00	1.50	+0.12	0.00	7.02	25.78	
	6	7.02	25.78	-0.25	1.37	0.00	1.50	-0.24	0.00	6.95	25.16	
	7	6.95	25.16	-0.45	0.62	0.00	1.50	-0.44	0.00	6.73	23.39	
	8	6.73	23.39	-0.55	0.10	0.00	1.50	-0.52	0.00	6.34	20.92	
	9	6.34	20.92	-0.57	0.00	0.00	1.50	-0.54	0.00	5.93	18.31	
	10	5.93	18.31	-0.60	0.00	0.00	1.50	-0.56	0.00	5.38	15.66	
	11	5.38	15.66	-0.52	0.00	0.00	1.50	-0.47	0.00	4.80	13.17	
	12	4.80	13.17	-0.42	0.00	0.00	1.50	-0.39	0.00	4.40	10.86	
30	1	4.40	10.86	-0.16	1.00	0.00	1.50	-0.15	0.00	4.29	10.05	
	2	4.29	10.05	+0.09	1.57	0.00	1.50	+0.09	0.00	4.32	10.30	
	3	4.32	10.30	+0.35	3.93	0.00	1.50	+0.39	0.00	4.87	13.48	
	4	4.87	13.48	+0.38	3.21	0.00	1.50	+0.41	0.00	5.45	15.98	
	5	5.45	15.98	+0.10	1.53	0.00	1.50	+0.10	0.00	5.50	16.20	
	6	5.50	16.20	-0.19	0.60	0.00	1.50	-0.18	0.00	5.21	14.93	
	7	5.21	14.93	-0.34	0.09	0.00	1.50	-0.31	0.00	4.73	12.87	
	8	4.73	12.87	-0.38	0.00	0.00	1.50	-0.36	0.00	4.37	10.63	
	9	4.37	10.63	-0.39	0.00	0.00	1.50	-0.37	0.00	4.05	8.37	
	10	4.05	8.37	-0.41	0.00	0.00	1.50	-0.33	0.00	3.07	6.13	
	11	3.07	6.13	-0.30	0.00	0.00	1.50	-0.23	0.00	2.34	4.11	
	12	2.34	4.11	-0.20	0.23	0.00	1.50	-0.19	0.00	2.14	2.44	
31	1	2.14	2.44	-0.08	0.78	0.00	1.50	-0.05	0.00	1.35	1.59	
	2	1.35	1.59	+0.03	0.78	0.00	1.50	+0.02	0.00	0.75	0.92	
	3	0.75	0.92	+0.06	1.71	0.00	1.50	+0.08	0.00	1.05	1.27	
	4	1.05	1.27	+0.08	3.09	0.00	1.50	+0.17	0.00	2.25	3.12	
	5	2.25	3.12	+0.04	2.59	0.00	1.50	+0.04	0.00	2.36	4.29	
	6	2.36	4.29	-0.08	1.18	0.00	1.50	-0.08	0.00	2.31	3.80	
	7	2.31	3.80	-0.15	0.67	0.00	1.50	-0.14	0.00	2.22	2.68	
	8	2.22	2.68	-0.18	0.13	0.00	1.50	-0.07	0.00	0.85	1.05	
	9	0.85	1.05	-0.08	0.00	0.00	0.48	-0.04	1.02	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	1.50	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	1.50	0.44	0.45	*
	12	0.44	0.45	-0.04	1.21	0.00	1.13	-0.04	0.37	0.44	0.46	*
32	1	0.44	0.46	-0.02	1.32	0.00	1.26	-0.02	0.24	0.46	0.48	*
	2	0.46	0.48	+0.01	1.98	0.00	1.50	+0.02	0.00	0.79	0.99	
	3	0.79	0.99	+0.07	12.16	0.00	1.50	+0.37	0.00	4.57	12.09	
	4	4.57	12.09	+0.35	7.63	0.00	1.50	+0.46	0.00	6.04	19.03	
	5	6.04	19.03	+0.11	4.14	0.00	1.50	+0.11	0.00	6.50	21.89	
	6	6.50	21.89	-0.23	2.21	0.00	1.50	-0.23	0.00	6.54	22.14	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUDUNBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	6.54	22.14	-0.42	0.98	0.00	1.50	-0.42	0.00	6.32	20.78	
	8	6.32	20.78	-0.51	0.30	0.00	1.50	-0.49	0.00	5.97	18.58	
	9	5.97	18.58	-0.53	0.00	0.00	1.50	-0.50	0.00	5.46	16.05	
	10	5.46	16.05	-0.55	0.00	0.00	1.50	-0.50	0.00	4.88	13.49	
	11	4.88	13.49	-0.47	0.00	0.00	1.50	-0.43	0.00	4.43	11.09	
	12	4.43	11.09	-0.39	0.57	0.00	1.50	-0.37	0.00	4.20	9.40	
33	1	4.20	9.40	-0.15	2.60	0.00	1.50	-0.15	0.00	4.31	10.20	
	2	4.31	10.20	+0.09	17.29	0.00	1.50	+0.15	0.00	7.07	26.23	
	3	7.07	26.23	+0.58	20.31	6.92	1.50	+0.93	0.00	11.74	39.63	
	4	11.74	39.63	+0.91	13.14	13.48	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	5.88	5.46	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	3.16	1.46	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	1.50	0.00	1.50	-0.70	0.00	10.42	36.88	
	8	10.42	36.88	-0.84	0.58	0.00	1.50	-0.78	0.00	9.20	34.34	
	9	9.20	34.34	-0.82	0.08	0.00	1.50	-0.73	0.00	7.78	31.37	
	10	7.78	31.37	-0.79	0.00	0.00	1.50	-0.75	0.00	7.30	28.34	
	11	7.30	28.34	-0.70	0.00	0.00	1.50	-0.68	0.00	6.98	25.45	
	12	6.98	25.45	-0.61	0.00	0.00	1.50	-0.59	0.00	6.63	22.75	
34	1	6.63	22.75	-0.24	1.59	0.00	1.50	-0.23	0.00	6.57	22.37	
	2	6.57	22.37	+0.14	2.45	0.00	1.50	+0.15	0.00	6.77	23.61	
	3	6.77	23.61	+0.56	3.22	0.00	1.50	+0.58	0.00	7.10	26.46	
	4	7.10	26.46	+0.55	5.67	0.00	1.50	+0.60	0.00	7.97	31.78	
	5	7.97	31.78	+0.14	2.97	0.00	1.50	+0.15	0.00	8.82	33.54	
	6	8.82	33.54	-0.31	1.62	0.00	1.50	-0.31	0.00	8.58	33.05	
	7	8.58	33.05	-0.56	0.65	0.00	1.50	-0.51	0.00	7.66	31.12	
	8	7.66	31.12	-0.62	0.12	0.00	1.50	-0.60	0.00	7.33	28.53	
	9	7.33	28.53	-0.66	0.00	0.00	1.50	-0.63	0.00	7.02	25.74	
	10	7.02	25.74	-0.71	0.00	0.00	1.50	-0.68	0.00	6.65	22.84	
	11	6.65	22.84	-0.64	0.00	0.00	1.50	-0.61	0.00	6.21	20.09	
	12	6.21	20.09	-0.54	0.00	0.00	1.50	-0.52	0.00	5.81	17.54	
35	1	5.81	17.54	-0.21	0.00	0.00	1.50	-0.19	0.00	5.37	15.64	
	2	5.37	15.64	+0.12	3.36	0.00	1.50	+0.13	0.00	5.84	17.74	
	3	5.84	17.74	+0.48	7.89	0.00	1.50	+0.56	0.00	6.95	25.17	
	4	6.95	25.17	+0.54	6.45	0.00	1.50	+0.59	0.00	7.72	31.25	
	5	7.72	31.25	+0.14	4.41	0.00	1.50	+0.16	0.00	9.26	34.45	
	6	9.26	34.45	-0.32	2.88	0.00	1.50	-0.34	0.00	9.60	35.17	
	7	9.60	35.17	-0.62	1.57	0.00	1.50	-0.61	0.00	9.04	34.01	
	8	9.04	34.01	-0.73	0.62	0.00	1.50	-0.67	0.00	7.95	31.72	
	9	7.95	31.72	-0.71	0.10	0.00	1.50	-0.67	0.00	7.37	28.95	
	10	7.37	28.95	-0.74	0.00	0.00	1.50	-0.72	0.00	7.04	25.98	
	11	7.04	25.98	-0.68	1.37	0.00	1.50	-0.67	0.00	6.88	24.50	
	12	6.88	24.50	-0.60	0.51	0.00	1.50	-0.58	0.00	6.57	22.33	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)

RESERVATORIO - TUCUDUNBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
36	1	6.57	22.33	-0.23	0.75	0.00	1.50	-0.23	0.00	6.37	21.12	
	2	6.37	21.12	+0.14	2.29	0.00	1.50	+0.14	0.00	6.54	22.18	
	3	6.54	22.18	+0.54	28.88	11.40	1.50	+0.93	0.00	11.74	39.63	
	4	11.74	39.63	+0.91	4.83	5.17	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	3.79	3.37	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	2.17	0.47	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	0.95	0.00	1.50	-0.68	0.00	10.17	36.35	
	8	10.17	36.35	-0.82	0.28	0.00	1.50	-0.74	0.00	8.83	33.56	
	9	8.83	33.56	-0.79	0.00	0.00	1.50	-0.69	0.00	7.55	30.58	
	10	7.55	30.58	-0.76	0.00	0.00	1.50	-0.74	0.00	7.22	27.58	
	11	7.22	27.58	-0.70	0.00	0.00	1.50	-0.67	0.00	6.90	24.71	
	12	6.90	24.71	-0.60	0.00	0.00	1.50	-0.58	0.00	6.52	22.03	
37	1	6.52	22.03	-0.23	0.13	0.00	1.50	-0.22	0.00	6.23	20.20	
	2	6.23	20.20	+0.13	2.16	0.00	1.50	+0.14	0.00	6.38	21.13	
	3	6.38	21.13	+0.52	4.41	0.00	1.50	+0.56	0.00	6.95	25.13	
	4	6.95	25.13	+0.54	4.14	0.00	1.50	+0.57	0.00	7.36	28.88	
	5	7.36	28.88	+0.13	5.76	0.00	1.50	+0.15	0.00	8.76	33.42	
	6	8.76	33.42	-0.31	2.84	0.00	1.50	-0.32	0.00	9.10	34.13	
	7	9.10	34.13	-0.59	1.32	0.00	1.50	-0.57	0.00	8.46	32.79	
	8	8.46	32.79	-0.69	0.49	0.00	1.50	-0.62	0.00	7.54	30.47	
	9	7.54	30.47	-0.67	0.03	0.00	1.50	-0.65	0.00	7.23	27.67	
	10	7.23	27.67	-0.73	0.00	0.00	1.50	-0.71	0.00	6.90	24.74	
	11	6.90	24.74	-0.67	0.00	0.00	1.50	-0.64	0.00	6.50	21.94	
	12	6.50	21.94	-0.57	0.00	0.00	1.50	-0.54	0.00	6.09	19.33	
38	1	6.09	19.33	-0.22	0.75	0.00	1.50	-0.21	0.00	5.90	18.15	
	2	5.90	18.15	+0.13	1.26	0.00	1.50	+0.13	0.00	5.91	18.16	
	3	5.91	18.16	+0.48	20.04	0.00	1.50	+0.87	0.00	10.99	38.05	
	4	10.99	38.05	+0.85	20.94	19.65	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	4.33	3.91	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	2.34	0.64	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	1.41	0.00	1.50	-0.70	0.00	10.38	36.80	
	8	10.38	36.80	-0.84	0.54	0.00	1.50	-0.77	0.00	9.15	34.22	
	9	9.15	34.22	-0.82	0.05	0.00	1.50	-0.72	0.00	7.71	31.23	
	10	7.71	31.23	-0.78	0.00	0.00	1.50	-0.74	0.00	7.29	28.21	
	11	7.29	28.21	-0.70	0.00	0.00	1.50	-0.68	0.00	6.97	25.33	
	12	6.97	25.33	-0.61	0.00	0.00	1.50	-0.59	0.00	6.61	22.63	
39	1	6.61	22.63	-0.23	0.00	0.00	1.50	-0.23	0.00	6.30	20.67	
	2	6.30	20.67	+0.14	0.00	0.00	1.50	+0.13	0.00	6.11	19.44	
	3	6.11	19.44	+0.50	0.81	0.00	1.50	+0.50	0.00	6.16	19.75	
	4	6.16	19.75	+0.48	1.87	0.00	1.50	+0.49	0.00	6.37	21.08	
	5	6.37	21.08	+0.11	1.88	0.00	1.50	+0.11	0.00	6.46	21.69	
	6	6.46	21.69	-0.23	0.96	0.00	1.50	-0.22	0.00	6.31	20.70	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUDUMBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	6.31	20.70	-0.41	0.29	0.00	1.50	-0.39	0.00	5.99	18.68	
	8	5.99	18.68	-0.49	0.00	0.00	1.50	-0.45	0.00	5.51	16.24	
	9	5.51	16.24	-0.49	0.00	0.00	1.50	-0.45	0.00	4.95	13.80	
	10	4.95	13.80	-0.50	0.00	0.00	1.50	-0.46	0.00	4.47	11.34	
	11	4.47	11.34	-0.43	0.00	0.00	1.50	-0.40	0.00	4.14	9.01	
	12	4.14	9.01	-0.36	0.11	0.00	1.50	-0.32	0.00	3.47	6.94	
40	1	3.47	6.94	-0.12	0.88	0.00	1.50	-0.11	0.00	3.04	6.08	
	2	3.04	6.08	+0.07	1.63	0.00	1.50	+0.07	0.00	3.17	6.35	
	3	3.17	6.35	+0.26	5.82	0.00	1.50	+0.36	0.00	4.46	11.29	
	4	4.46	11.29	+0.35	5.11	0.00	1.50	+0.41	0.00	5.37	15.65	
	5	5.37	15.65	+0.09	3.75	0.00	1.50	+0.10	0.00	5.90	18.10	
	6	5.90	18.10	-0.21	1.96	0.00	1.50	-0.21	0.00	5.90	18.15	
	7	5.90	18.15	-0.38	0.84	0.00	1.50	-0.37	0.00	5.62	16.73	
	8	5.62	16.73	-0.46	0.22	0.00	1.50	-0.42	0.00	5.12	14.57	
	9	5.12	14.57	-0.46	0.00	0.00	1.50	-0.42	0.00	4.59	12.20	
	10	4.59	12.20	-0.46	0.00	0.00	1.50	-0.44	0.00	4.25	9.80	
	11	4.25	9.80	-0.41	0.00	0.00	1.50	-0.38	0.00	3.75	7.51	
	12	3.75	7.51	-0.33	0.14	0.00	1.50	-0.25	0.00	2.78	5.56	
41	1	2.78	5.56	-0.10	0.57	0.00	1.50	-0.08	0.00	2.37	4.45	
	2	2.37	4.45	+0.05	1.98	0.00	1.50	+0.05	0.00	2.52	5.03	
	3	2.52	5.03	+0.21	2.97	0.00	1.50	+0.28	0.00	3.49	6.99	
	4	3.49	6.99	+0.27	4.56	0.00	1.50	+0.34	0.00	4.37	10.65	
	5	4.37	10.65	+0.08	2.93	0.00	1.50	+0.08	0.00	4.59	12.24	
	6	4.59	12.24	-0.16	1.74	0.00	1.50	-0.16	0.00	4.58	12.16	
	7	4.58	12.16	-0.30	0.72	0.00	1.50	-0.29	0.00	4.39	10.79	
	8	4.39	10.79	-0.36	0.15	0.00	1.50	-0.34	0.00	4.10	8.75	
	9	4.10	8.75	-0.37	0.00	0.00	1.50	-0.31	0.00	3.29	6.57	
	10	3.29	6.57	-0.33	0.00	0.00	1.50	-0.24	0.00	2.37	4.50	
	11	2.37	4.50	-0.23	0.00	0.00	1.50	-0.21	0.00	2.20	2.56	
	12	2.20	2.56	-0.19	0.00	0.00	1.50	-0.06	0.00	0.67	0.80	
42	1	0.67	0.80	-0.02	0.00	0.00	0.28	-0.02	1.22	0.46	0.48	*
	2	0.46	0.48	+0.01	1.73	0.00	1.50	+0.01	0.00	0.62	0.74	
	3	0.62	0.74	+0.05	3.10	0.00	1.50	+0.17	0.00	2.21	2.56	
	4	2.21	2.56	+0.17	3.36	0.00	1.50	+0.18	0.00	2.40	4.77	
	5	2.40	4.77	+0.04	1.96	0.00	1.50	+0.05	0.00	2.66	5.32	
	6	2.66	5.32	-0.09	1.52	0.00	1.50	-0.09	0.00	2.58	5.16	
	7	2.58	5.16	-0.17	0.59	0.00	1.50	-0.15	0.00	2.32	3.93	
	8	2.32	3.93	-0.19	0.09	0.00	1.50	-0.17	0.00	1.89	2.16	
	9	1.89	2.16	-0.17	0.00	0.00	1.50	-0.04	0.00	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	1.50	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	1.50	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	1.50	0.44	0.46	*

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUDUNBA

VOLUME MAXIMO= 40.20 VOLUMF MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
43	1	0.44	0.46	-0.02	1.36	0.00	1.30	-0.02	0.20	0.46	0.48	*
	2	0.46	0.48	+0.01	2.56	0.00	1.50	+0.03	0.00	1.34	1.58	
	3	1.34	1.58	+0.11	2.89	0.00	1.50	+0.18	0.00	2.27	3.27	
	4	2.27	3.27	+0.18	7.71	0.00	1.50	+0.33	0.00	4.28	9.98	
	5	4.28	9.98	+0.07	3.92	0.00	1.50	+0.08	0.00	4.66	12.56	
	6	4.66	12.56	-0.16	2.09	0.00	1.50	-0.17	0.00	4.72	12.82	
	7	4.72	12.82	-0.31	1.05	0.00	1.50	-0.30	0.00	4.53	11.76	
	8	4.53	11.76	-0.37	0.34	0.00	1.50	-0.35	0.00	4.26	9.89	
	9	4.26	9.89	-0.38	0.00	0.00	1.50	-0.36	0.00	3.82	7.65	
	10	3.82	7.65	-0.39	0.00	0.00	1.50	-0.29	0.00	2.74	5.47	
	11	2.74	5.47	-0.26	0.00	0.00	1.50	-0.22	0.00	2.29	3.48	
	12	2.29	3.48	-0.20	0.00	0.00	1.50	-0.13	0.00	1.41	1.65	
44	1	1.41	1.65	-0.05	0.00	0.00	1.10	-0.02	0.40	0.46	0.48	*
	2	0.46	0.48	+0.01	3.43	0.00	1.50	+0.05	0.00	2.17	2.47	
	3	2.17	2.47	+0.18	11.81	0.00	1.50	+0.39	0.00	4.84	13.35	
	4	4.84	13.35	+0.38	9.08	0.00	1.50	+0.50	0.00	6.48	21.80	
	5	6.48	21.80	+0.11	3.33	0.00	1.50	+0.12	0.00	6.81	23.86	
	6	6.81	23.86	-0.24	1.99	0.00	1.50	-0.24	0.00	6.81	23.87	
	7	6.81	23.87	-0.44	0.94	0.00	1.50	-0.43	0.00	6.58	22.44	
	8	6.58	22.44	-0.53	0.28	0.00	1.50	-0.51	0.00	6.22	20.17	
	9	6.22	20.17	-0.56	0.00	0.00	1.50	-0.53	0.00	5.81	17.59	
	10	5.81	17.59	-0.59	0.00	0.00	1.50	-0.54	0.00	5.21	14.96	
	11	5.21	14.96	-0.50	0.00	0.00	1.50	-0.46	0.00	4.65	12.50	
	12	4.65	12.50	-0.41	0.00	0.00	1.50	-0.38	0.00	4.31	10.21	
45	1	4.31	10.21	-0.15	1.42	0.00	1.50	-0.15	0.00	4.26	9.83	
	2	4.26	9.83	+0.09	1.82	0.00	1.50	+0.09	0.00	4.33	10.33	
	3	4.33	10.33	+0.35	7.47	0.00	1.50	+0.46	0.00	5.71	17.12	
	4	5.71	17.12	+0.44	14.81	0.00	1.50	+0.59	0.00	7.82	31.46	
	5	7.82	31.46	+0.14	5.56	0.00	1.50	+0.17	0.00	9.92	35.83	
	6	9.92	35.83	-0.35	2.93	0.00	1.50	-0.37	0.00	10.26	36.54	
	7	10.26	36.54	-0.67	1.44	0.00	1.50	-0.64	0.00	9.60	35.17	
	8	9.60	35.17	-0.78	0.55	0.00	1.50	-0.71	0.00	8.43	32.73	
	9	8.43	32.73	-0.75	0.06	0.00	1.50	-0.68	0.00	7.47	29.86	
	10	7.47	29.86	-0.75	0.00	0.00	1.50	-0.73	0.00	7.14	26.88	
	11	7.14	26.88	-0.69	0.00	0.00	1.50	-0.67	0.00	6.82	24.02	
	12	6.82	24.02	-0.60	0.00	0.00	1.50	-0.57	0.00	6.41	21.36	
46	1	6.41	21.36	-0.23	0.00	0.00	1.50	-0.22	0.00	6.10	19.41	
	2	6.10	19.41	+0.13	0.00	0.00	1.50	+0.13	0.00	5.91	18.17	
	3	5.91	18.17	+0.48	0.00	0.00	1.50	+0.47	0.00	5.82	17.62	
	4	5.82	17.62	+0.45	0.61	0.00	1.50	+0.44	0.00	5.82	17.63	
	5	5.82	17.63	+0.10	0.19	0.00	1.50	+0.10	0.00	5.57	16.52	
	6	5.57	16.52	-0.20	0.00	0.00	1.50	-0.18	0.00	5.14	14.64	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUDUMBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	5.14	14.64	-0.33	0.00	0.00	1.50	-0.31	0.00	4.65	12.50	
	8	4.65	12.50	-0.38	0.00	0.00	1.50	-0.35	0.00	4.32	10.27	
	9	4.32	10.27	-0.39	0.00	0.00	1.50	-0.36	0.00	4.00	8.02	
	10	4.00	8.02	-0.40	0.00	0.00	1.50	-0.31	0.00	2.90	5.81	
	11	2.90	5.81	-0.28	0.00	0.00	1.50	-0.23	0.00	2.31	3.80	
	12	2.31	3.80	-0.20	0.00	0.00	1.50	-0.16	0.00	1.68	1.94	
47	1	1.68	1.94	-0.06	0.64	0.00	1.50	-0.03	0.00	0.79	0.99	
	2	0.79	0.99	+0.02	1.94	0.00	1.50	+0.03	0.00	1.24	1.47	
	3	1.24	1.47	+0.10	18.93	0.00	1.50	+0.50	0.00	6.12	19.50	
	4	6.12	19.50	+0.47	3.92	0.00	1.50	+0.51	0.00	6.66	22.91	
	5	6.66	22.91	+0.12	3.03	0.00	1.50	+0.12	0.00	6.90	24.67	
	6	6.90	24.67	-0.24	1.81	0.00	1.50	-0.24	0.00	6.88	24.50	
	7	6.88	24.50	-0.45	0.75	0.00	1.50	-0.44	0.00	6.65	22.87	
	8	6.65	22.87	-0.54	0.30	0.00	1.50	-0.52	0.00	6.29	20.61	
	9	6.29	20.61	-0.56	0.00	0.00	1.50	-0.53	0.00	5.88	18.01	
	10	5.88	18.01	-0.59	0.00	0.00	1.50	-0.55	0.00	5.31	15.37	
	11	5.31	15.37	-0.51	0.00	0.00	1.50	-0.47	0.00	4.74	12.89	
	12	4.74	12.89	-0.41	0.00	0.00	1.50	-0.39	0.00	4.36	10.59	
48	1	4.36	10.59	-0.15	0.00	0.00	1.50	-0.15	0.00	4.11	8.79	
	2	4.11	8.79	+0.09	0.10	0.00	1.50	+0.08	0.00	3.78	7.56	
	3	3.78	7.56	+0.31	9.55	0.00	1.50	+0.45	0.00	5.54	16.36	
	4	5.54	16.36	+0.43	5.39	0.00	1.50	+0.49	0.00	6.38	21.17	
	5	6.38	21.17	+0.11	2.50	0.00	1.50	+0.11	0.00	6.58	22.40	
	6	6.58	22.40	-0.23	1.59	0.00	1.50	-0.23	0.00	6.52	22.03	
	7	6.52	22.03	-0.42	1.06	0.00	1.50	-0.41	0.00	6.32	20.75	
	8	6.32	20.75	-0.51	0.34	0.00	1.50	-0.49	0.00	5.97	18.59	
	9	5.97	18.59	-0.53	0.00	0.00	1.50	-0.50	0.00	5.47	16.05	
	10	5.47	16.05	-0.55	0.00	0.00	1.50	-0.50	0.00	4.88	13.50	
	11	4.88	13.50	-0.47	0.00	0.00	1.50	-0.43	0.00	4.43	11.09	
	12	4.43	11.09	-0.39	0.52	0.00	1.50	-0.37	0.00	4.19	9.35	
49	1	4.19	9.35	-0.15	0.71	0.00	1.50	-0.14	0.00	4.04	8.27	
	2	4.04	8.27	+0.09	14.78	0.00	1.50	+0.14	0.00	6.48	21.78	
	3	6.48	21.78	+0.53	44.08	26.19	1.50	+0.93	0.00	11.74	39.63	
	4	11.74	39.63	+0.91	5.54	5.88	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	8.54	8.12	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	2.77	1.07	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	1.28	0.00	1.50	-0.69	0.00	10.32	36.67	
	8	10.32	36.67	-0.84	0.46	0.00	1.50	-0.76	0.00	9.05	34.03	
	9	9.05	34.03	-0.81	0.01	0.00	1.50	-0.71	0.00	7.61	31.02	
	10	7.61	31.02	-0.77	0.00	0.00	1.50	-0.74	0.00	7.27	28.01	
	11	7.27	28.01	-0.70	0.00	0.00	1.50	-0.68	0.00	6.95	25.13	
	12	6.95	25.13	-0.61	0.00	0.00	1.50	-0.58	0.00	6.58	22.44	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUDUNBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
50	1	6.58	22.44	-0.23	0.67	0.00	1.50	-0.23	0.00	6.38	21.15	
	2	6.38	21.15	+0.14	3.43	0.00	1.50	+0.14	0.00	6.73	23.36	
	3	6.73	23.36	+0.55	112.85	96.56	1.50	+0.93	0.00	11.74	39.63	
	4	11.74	39.63	+0.91	50.38	50.72	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	5.65	5.23	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	2.87	1.17	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	1.62	0.00	1.50	-0.70	0.00	10.48	37.00	
	8	10.48	37.00	-0.85	0.65	0.00	1.50	-0.78	0.00	9.29	34.52	
	9	9.29	34.52	-0.83	0.12	0.00	1.50	-0.74	0.00	7.87	31.57	
	10	7.87	31.57	-0.80	0.00	0.00	1.50	-0.75	0.00	7.33	28.53	
	11	7.33	28.53	-0.71	0.00	0.00	1.50	-0.68	0.00	7.00	25.64	
	12	7.00	25.64	-0.61	1.70	0.00	1.50	-0.61	0.00	6.89	24.61	
51	1	6.89	24.61	-0.24	2.56	0.00	1.50	-0.25	0.00	6.95	25.18	
	2	6.95	25.18	+0.15	2.68	0.00	1.50	+0.15	0.00	7.12	26.66	
	3	7.12	26.66	+0.58	86.26	73.31	1.50	+0.93	0.00	11.74	39.63	
	4	11.74	39.63	+0.91	87.40	87.74	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	6.55	6.13	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	3.22	1.52	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	2.00	0.00	1.50	-0.71	0.00	10.66	37.37	
	8	10.66	37.37	-0.86	1.27	0.00	1.50	-0.82	0.00	9.74	35.45	
	9	9.74	35.45	-0.87	0.46	0.00	1.50	-0.79	0.00	8.44	32.75	
	10	8.44	32.75	-0.85	0.01	0.00	1.50	-0.76	0.00	7.45	29.65	
	11	7.45	29.65	-0.72	0.00	0.00	1.50	-0.70	0.00	7.13	26.74	
	12	7.13	26.74	-0.62	1.67	0.00	1.50	-0.62	0.00	7.01	25.66	
52	1	7.01	25.66	-0.25	7.86	0.00	1.50	-0.28	0.00	7.84	31.49	
	2	7.84	31.49	+0.17	54.45	45.91	1.50	+0.24	0.00	11.41	38.94	
	3	11.41	38.94	+0.94	65.00	64.68	1.50	+0.93	0.00	11.74	39.63	
	4	11.74	39.63	+0.91	131.97	132.31	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	52.05	51.63	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	4.85	3.15	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	3.27	0.65	1.50	-0.73	0.00	10.94	37.97	
	8	10.94	37.97	-0.89	1.56	0.00	1.50	-0.85	0.00	10.14	36.29	
	9	10.14	36.29	-0.91	0.61	0.00	1.50	-0.83	0.00	8.88	33.66	
	10	8.88	33.66	-0.90	0.10	0.00	1.50	-0.79	0.00	7.55	30.58	
	11	7.55	30.58	-0.73	0.00	0.00	1.50	-0.70	0.00	7.23	27.64	
	12	7.23	27.64	-0.63	0.00	0.00	1.50	-0.61	0.00	6.92	24.90	
53	1	6.92	24.90	-0.25	1.56	0.00	1.50	-0.24	0.00	6.87	24.47	
	2	6.87	24.47	+0.15	1.77	0.00	1.50	+0.15	0.00	6.94	25.03	
	3	6.94	25.03	+0.57	14.06	0.00	1.50	+0.91	0.00	11.47	39.07	
	4	11.47	39.07	+0.89	146.98	146.74	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	21.83	21.41	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	5.50	3.80	1.50	-0.40	0.00	11.11	38.30	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUDUNBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	11.11	38.30	-0.72	2.78	0.16	1.50	-0.73	0.00	10.94	37.97	
	8	10.94	37.97	-0.89	1.29	0.00	1.50	-0.84	0.00	10.01	36.03	
	9	10.01	36.03	-0.90	0.47	0.00	1.50	-0.81	0.00	8.70	33.29	
	10	8.70	33.29	-0.88	0.02	0.00	1.50	-0.77	0.00	7.51	30.16	
	11	7.51	30.16	-0.72	0.00	0.00	1.50	-0.70	0.00	7.18	27.24	
	12	7.18	27.24	-0.63	0.00	0.00	1.50	-0.61	0.00	6.88	24.50	
54	1	6.88	24.50	-0.24	0.00	0.00	1.50	-0.24	0.00	6.60	22.52	
	2	6.60	22.52	+0.14	2.62	0.00	1.50	+0.15	0.00	6.81	23.93	
	3	6.81	23.93	+0.56	3.77	0.00	1.50	+0.58	0.00	7.19	27.34	
	4	7.19	27.34	+0.56	3.72	0.00	1.50	+0.58	0.00	7.57	30.70	
	5	7.57	30.70	+0.13	7.12	0.00	1.50	+0.18	0.00	10.30	36.63	
	6	10.30	36.63	-0.36	3.79	0.00	1.50	-0.39	0.00	11.04	38.17	
	7	11.04	38.17	-0.72	2.57	0.00	1.50	-0.73	0.00	10.86	37.79	
	8	10.86	37.79	-0.88	1.17	0.00	1.50	-0.83	0.00	9.88	35.75	
	9	9.88	35.75	-0.88	0.41	0.00	1.50	-0.80	0.00	8.55	32.98	
	10	8.55	32.98	-0.86	0.00	0.00	1.50	-0.76	0.00	7.47	29.85	
	11	7.47	29.85	-0.72	0.00	0.00	1.50	-0.70	0.00	7.15	26.93	
	12	7.15	26.93	-0.63	0.00	0.00	1.50	-0.60	0.00	6.84	24.20	
55	1	6.84	24.20	-0.24	2.00	0.00	1.50	-0.24	0.00	6.85	24.21	
	2	6.85	24.21	+0.15	26.77	10.93	1.50	+0.24	0.00	11.41	38.94	
	3	11.41	38.94	+0.94	83.93	83.61	1.50	+0.93	0.00	11.74	39.63	
	4	11.74	39.63	+0.91	88.07	88.41	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	46.52	46.10	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	4.39	2.69	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	2.17	0.00	1.50	-0.72	0.00	10.74	37.53	
	8	10.74	37.53	-0.87	0.95	0.00	1.50	-0.81	0.00	9.66	35.30	
	9	9.66	35.30	-0.86	0.28	0.00	1.50	-0.78	0.00	8.29	32.44	
	10	8.29	32.44	-0.84	0.00	0.00	1.50	-0.76	0.00	7.42	29.34	
	11	7.42	29.34	-0.72	0.00	0.00	1.50	-0.69	0.00	7.09	26.44	
	12	7.09	26.44	-0.62	0.00	0.00	1.50	-0.60	0.00	6.79	23.72	
56	1	6.79	23.72	-0.24	1.43	0.00	1.50	-0.24	0.00	6.70	23.17	
	2	6.70	23.17	+0.14	3.12	0.00	1.50	+0.15	0.00	6.94	25.08	
	3	6.94	25.08	+0.57	25.77	11.22	1.50	+0.93	0.00	11.74	39.63	
	4	11.74	39.63	+0.91	125.92	126.26	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	91.45	91.03	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	4.80	3.10	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	2.40	0.00	1.50	-0.73	0.00	10.84	37.76	
	8	10.84	37.76	-0.88	1.08	0.00	1.50	-0.83	0.00	9.82	35.63	
	9	9.82	35.63	-0.88	0.35	0.00	1.50	-0.79	0.00	8.47	32.81	
	10	8.47	32.81	-0.86	0.00	0.00	1.50	-0.76	0.00	7.45	29.69	
	11	7.45	29.69	-0.72	0.00	0.00	1.50	-0.70	0.00	7.13	26.78	
	12	7.13	26.78	-0.62	0.00	0.00	1.50	-0.60	0.00	6.83	24.05	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUDUNBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
57	1	6.83	24.05	-0.24	0.88	0.00	1.50	-0.24	0.00	6.66	22.95	
	2	6.66	22.95	+0.14	2.66	0.00	1.50	+0.15	0.00	6.87	24.40	
	3	6.87	24.40	+0.56	3.73	0.00	1.50	+0.59	0.00	7.24	27.78	
	4	7.24	27.78	+0.56	6.07	0.00	1.50	+0.66	0.00	8.83	33.57	
	5	8.83	33.57	+0.15	3.51	0.00	1.50	+0.17	0.00	9.96	35.91	
	6	9.96	35.91	-0.35	1.69	0.00	1.50	-0.35	0.00	9.71	35.41	
	7	9.71	35.41	-0.63	1.31	0.00	1.50	-0.61	0.00	9.03	33.98	
	8	9.03	33.98	-0.73	0.48	0.00	1.50	-0.66	0.00	7.87	31.56	
	9	7.87	31.56	-0.70	0.02	0.00	1.50	-0.66	0.00	7.35	28.72	
	10	7.35	28.72	-0.74	0.00	0.00	1.50	-0.72	0.00	7.02	25.76	
	11	7.02	25.76	-0.68	0.00	0.00	1.50	-0.65	0.00	6.66	22.93	
	12	6.66	22.93	-0.58	0.00	0.00	1.50	-0.55	0.00	6.24	20.29	
58	1	6.24	20.29	-0.22	0.00	0.00	1.50	-0.21	0.00	5.94	18.36	
	2	5.94	18.36	+0.13	0.61	0.00	1.50	+0.13	0.00	5.83	17.72	
	3	5.83	17.72	+0.48	2.32	0.00	1.50	+0.50	0.00	6.12	19.51	
	4	6.12	19.51	+0.47	2.37	0.00	1.50	+0.49	0.00	6.41	21.35	
	5	6.41	21.35	+0.11	1.41	0.00	1.50	+0.11	0.00	6.43	21.48	
	6	6.43	21.48	-0.23	0.54	0.00	1.50	-0.22	0.00	6.21	20.08	
	7	6.21	20.08	-0.40	0.39	0.00	1.50	-0.39	0.00	5.91	18.18	
	8	5.91	18.18	-0.48	0.00	0.00	1.50	-0.45	0.00	5.40	15.75	
	9	5.40	15.75	-0.48	0.00	0.00	1.50	-0.44	0.00	4.84	13.33	
	10	4.84	13.33	-0.49	0.00	0.00	1.50	-0.45	0.00	4.40	10.89	
	11	4.40	10.89	-0.42	0.00	0.00	1.50	-0.40	0.00	4.08	8.56	
	12	4.08	8.56	-0.36	0.00	0.00	1.50	-0.29	0.00	3.21	6.41	
59	1	3.21	6.41	-0.11	0.00	0.00	1.50	-0.09	0.00	2.39	4.71	
	2	2.39	4.71	+0.05	1.33	0.00	1.50	+0.05	0.00	2.39	4.65	
	3	2.39	4.65	+0.20	4.18	0.00	1.50	+0.31	0.00	3.92	7.83	
	4	3.92	7.83	+0.30	3.51	0.00	1.50	+0.33	0.00	4.35	10.48	
	5	4.35	10.48	+0.08	3.86	0.00	1.50	+0.08	0.00	4.76	13.00	
	6	4.76	13.00	-0.17	2.49	0.00	1.50	-0.17	0.00	4.91	13.65	
	7	4.91	13.65	-0.32	1.57	0.00	1.50	-0.32	0.00	4.78	13.08	
	8	4.78	13.08	-0.39	0.62	0.00	1.50	-0.37	0.00	4.48	11.45	
	9	4.48	11.45	-0.40	0.10	0.00	1.50	-0.38	0.00	4.18	9.27	
	10	4.18	9.27	-0.42	0.00	0.00	1.50	-0.37	0.00	3.49	6.98	
	11	3.49	6.98	-0.34	0.00	0.00	1.50	-0.25	0.00	2.45	4.89	
	12	2.45	4.89	-0.21	0.00	0.00	1.50	-0.20	0.00	2.24	2.98	
60	1	2.24	2.98	-0.08	0.00	0.00	1.50	-0.04	0.00	1.13	1.36	
	2	1.13	1.36	+0.02	0.27	0.00	1.15	+0.01	0.35	0.47	0.51	*
	3	0.47	0.51	+0.04	1.71	0.00	1.50	+0.05	0.00	0.67	0.81	
	4	0.67	0.81	+0.05	3.51	0.00	1.50	+0.17	0.00	2.25	3.05	
	5	2.25	3.05	+0.04	3.98	0.00	1.50	+0.05	0.00	2.81	5.61	
	6	2.81	5.61	-0.10	2.16	0.00	1.50	-0.11	0.00	3.03	6.07	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUDUNBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	3.03	6.07	-0.20	0.95	0.00	1.50	-0.17	0.00	2.57	5.15	
	8	2.57	5.15	-0.21	0.96	0.00	1.50	-0.19	0.00	2.35	4.21	
	9	2.35	4.21	-0.21	0.29	0.00	1.50	-0.20	0.00	2.21	2.59	
	10	2.21	2.59	-0.22	0.00	0.00	1.50	-0.07	0.00	0.66	0.79	
	11	0.66	0.79	-0.06	0.00	0.00	0.23	-0.05	1.27	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	1.50	0.44	0.46	*
61	1	0.44	0.46	-0.02	2.31	0.00	1.50	-0.04	0.00	1.00	1.22	
	2	1.00	1.22	+0.02	3.57	0.00	1.50	+0.05	0.00	2.27	3.36	
	3	2.27	3.36	+0.19	31.47	0.00	1.50	+0.72	0.00	9.15	34.24	
	4	9.15	34.24	+0.71	31.79	26.54	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	6.45	6.03	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	3.99	2.29	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	2.16	0.00	1.50	-0.72	0.00	10.73	37.52	
	8	10.73	37.52	-0.87	1.06	0.00	1.50	-0.82	0.00	9.71	35.40	
	9	9.71	35.40	-0.87	0.34	0.00	1.50	-0.78	0.00	8.36	32.58	
	10	8.36	32.58	-0.84	0.00	0.00	1.50	-0.76	0.00	7.43	29.48	
	11	7.43	29.48	-0.72	0.00	0.00	1.50	-0.69	0.00	7.11	26.57	
	12	7.11	26.57	-0.62	0.00	0.00	1.50	-0.60	0.00	6.81	23.85	
62	1	6.81	23.85	-0.24	3.05	0.00	1.50	-0.25	0.00	6.92	24.91	
	2	6.92	24.91	+0.15	7.11	0.00	1.50	+0.16	0.00	7.58	30.83	
	3	7.58	30.83	+0.62	65.30	56.55	1.50	+0.93	0.00	11.74	39.63	
	4	11.74	39.63	+0.91	159.71	160.05	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	54.79	54.37	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	7.46	5.76	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	3.59	0.97	1.50	-0.73	0.00	10.94	37.97	
	8	10.94	37.97	-0.89	1.73	0.00	1.50	-0.86	0.00	10.22	36.45	
	9	10.22	36.45	-0.91	1.01	0.00	1.50	-0.85	0.00	9.13	34.19	
	10	9.13	34.19	-0.92	0.31	0.00	1.50	-0.82	0.00	7.72	31.26	
	11	7.72	31.26	-0.75	0.00	0.00	1.50	-0.71	0.00	7.30	28.30	
	12	7.30	28.30	-0.64	0.00	0.00	1.50	-0.62	0.00	6.99	25.54	
63	1	6.99	25.54	-0.25	0.00	0.00	1.50	-0.24	0.00	6.76	23.55	
	2	6.76	23.55	+0.15	31.58	15.08	1.50	+0.24	0.00	11.41	38.94	
	3	11.41	38.94	+0.94	26.30	25.98	1.50	+0.93	0.00	11.74	39.63	
	4	11.74	39.63	+0.91	71.09	71.43	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	68.93	68.51	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	5.21	3.51	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	3.64	1.02	1.50	-0.73	0.00	10.94	37.97	
	8	10.94	37.97	-0.89	1.76	0.00	1.50	-0.86	0.00	10.23	36.48	
	9	10.23	36.48	-0.92	0.73	0.00	1.50	-0.84	0.00	9.02	33.95	
	10	9.02	33.95	-0.91	0.16	0.00	1.50	-0.80	0.00	7.59	30.90	
	11	7.59	30.90	-0.73	0.00	0.00	1.50	-0.71	0.00	7.26	27.96	
	12	7.26	27.96	-0.64	0.00	0.00	1.50	-0.61	0.00	6.96	25.21	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUDUNBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
64	1	6.96	25.21	-0.25	0.00	0.00	1.50	-0.24	0.00	6.71	23.22	
	2	6.71	23.22	+0.14	2.19	0.00	1.50	+0.15	0.00	6.84	24.20	
	3	6.84	24.20	+0.56	4.85	0.00	1.50	+0.60	0.00	7.35	28.71	
	4	7.35	28.71	+0.57	8.13	0.00	1.50	+0.77	0.00	10.33	36.68	
	5	10.33	36.68	+0.18	2.94	0.00	1.50	+0.19	0.00	11.20	38.49	
	6	11.20	38.49	-0.39	1.40	0.00	1.50	-0.38	0.00	10.78	37.62	
	7	10.78	37.62	-0.70	0.74	0.00	1.50	-0.65	0.00	9.76	35.50	
	8	9.76	35.50	-0.79	0.16	0.00	1.50	-0.71	0.00	8.40	32.67	
	9	8.40	32.67	-0.75	0.00	0.00	1.50	-0.67	0.00	7.46	29.74	
	10	7.46	29.74	-0.75	0.00	0.00	1.50	-0.73	0.00	7.13	26.76	
	11	7.13	26.76	-0.69	0.00	0.00	1.50	-0.66	0.00	6.81	23.90	
	12	6.81	23.90	-0.60	0.00	0.00	1.50	-0.57	0.00	6.39	21.24	
65	1	6.39	21.24	-0.23	0.90	0.00	1.50	-0.22	0.00	6.23	20.19	
	2	6.23	20.19	+0.13	5.72	0.00	1.50	+0.15	0.00	6.90	24.69	
	3	6.90	24.69	+0.57	3.38	0.00	1.50	+0.59	0.00	7.24	27.73	
	4	7.24	27.73	+0.56	12.50	0.59	1.50	+0.88	0.00	11.72	39.58	
	5	11.72	39.58	+0.21	6.81	6.39	1.50	+0.20	0.00	11.39	38.90	
	6	11.39	38.90	-0.40	3.54	1.84	1.50	-0.40	0.00	11.11	38.30	
	7	11.11	38.30	-0.72	1.98	0.00	1.50	-0.71	0.00	10.65	37.35	
	8	10.65	37.35	-0.86	0.85	0.00	1.50	-0.80	0.00	9.54	35.03	
	9	9.54	35.03	-0.85	0.23	0.00	1.50	-0.76	0.00	8.15	32.15	
	10	8.15	32.15	-0.82	0.00	0.00	1.50	-0.75	0.00	7.39	29.07	
	11	7.39	29.07	-0.71	0.00	0.00	1.50	-0.69	0.00	7.06	26.17	
	12	7.06	26.17	-0.62	0.00	0.00	1.50	-0.60	0.00	6.74	23.45	
66	1	6.74	23.45	-0.24	1.02	0.00	1.50	-0.24	0.00	6.59	22.50	
	2	6.59	22.50	+0.14	2.27	0.00	1.50	+0.14	0.00	6.76	23.55	
	3	6.76	23.55	+0.55	3.06	0.00	1.50	+0.57	0.00	7.07	26.24	
	4	7.07	26.24	+0.55	5.06	0.00	1.50	+0.58	0.00	7.59	30.93	
	5	7.59	30.93	+0.13	4.06	0.00	1.50	+0.16	0.00	8.94	33.78	
	6	8.94	33.78	-0.31	2.63	0.00	1.50	-0.33	0.00	9.17	34.27	
	7	9.17	34.27	-0.60	1.21	0.00	1.50	-0.57	0.00	8.47	32.82	
	8	8.47	32.82	-0.69	0.42	0.00	1.50	-0.62	0.00	7.54	30.43	
	9	7.54	30.43	-0.67	0.00	0.00	1.50	-0.65	0.00	7.22	27.61	
	10	7.22	27.61	-0.73	0.00	0.00	1.50	-0.70	0.00	6.90	24.67	
	11	6.90	24.67	-0.67	0.00	0.00	1.50	-0.64	0.00	6.49	21.87	
	12	6.49	21.87	-0.57	0.00	0.00	1.50	-0.54	0.00	6.08	19.26	
67	1	6.08	19.26	-0.22	0.05	0.00	1.50	-0.21	0.00	5.77	17.39	
	2	5.77	17.39	+0.12	1.46	0.00	1.50	+0.12	0.00	5.82	17.62	
	3	5.82	17.62	+0.48	2.38	0.00	1.50	+0.49	0.00	6.11	19.47	
	4	6.11	19.47	+0.47	3.65	0.00	1.50	+0.51	0.00	6.61	22.60	
	5	6.61	22.60	+0.12	2.63	0.00	1.50	+0.12	0.00	6.82	23.97	
	6	6.82	23.97	-0.24	1.88	0.00	1.50	-0.24	0.00	6.81	23.87	

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SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUDUNBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	6.81	23.87	-0.44	0.79	0.00	1.50	-0.43	0.00	6.56	22.29	
	8	6.56	22.29	-0.53	0.20	0.00	1.50	-0.51	0.00	6.19	19.95	
	9	6.19	19.95	-0.55	0.00	0.00	1.50	-0.52	0.00	5.77	17.37	
	10	5.77	17.37	-0.58	0.00	0.00	1.50	-0.53	0.00	5.17	14.75	
	11	5.17	14.75	-0.50	0.00	0.00	1.50	-0.45	0.00	4.60	12.30	
	12	4.60	12.30	-0.40	0.00	0.00	1.50	-0.38	0.00	4.28	10.02	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
1	1	6.21	20.10	-0.22	0.00	0.00	2.00	-0.21	0.00	5.83	17.67	
	2	5.83	17.67	+0.13	1.37	0.00	2.00	+0.12	0.00	5.75	17.29	
	3	5.75	17.29	+0.47	14.38	0.00	2.00	+0.62	0.00	7.57	30.76	
	4	7.57	30.76	+0.59	20.80	11.94	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	21.79	20.85	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	4.46	2.26	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	2.81	0.00	2.00	-0.71	0.00	10.58	37.21	
	8	10.58	37.21	-0.86	1.31	0.00	2.00	-0.80	0.00	9.45	34.86	
	9	9.45	34.86	-0.85	0.48	0.00	2.00	-0.74	0.00	7.96	31.75	
	10	7.96	31.75	-0.80	0.02	0.00	2.00	-0.74	0.00	7.29	28.22	
	11	7.29	28.22	-0.70	0.00	0.00	2.00	-0.67	0.00	6.92	24.85	
	12	6.92	24.85	-0.61	0.00	0.00	2.00	-0.57	0.00	6.46	21.67	
2	1	6.46	21.67	-0.23	2.82	0.00	2.00	-0.23	0.00	6.52	22.02	
	2	6.52	22.02	+0.14	2.97	0.00	2.00	+0.14	0.00	6.72	23.28	
	3	6.72	23.28	+0.55	2.99	0.00	2.00	+0.57	0.00	6.97	25.30	
	4	6.97	25.30	+0.54	6.37	0.00	2.00	+0.58	0.00	7.58	30.79	
	5	7.58	30.79	+0.13	3.11	0.00	2.00	+0.14	0.00	8.16	32.17	
	6	8.16	32.17	-0.29	1.97	0.00	2.00	-0.28	0.00	7.88	31.58	
	7	7.88	31.58	-0.51	0.91	0.00	2.00	-0.49	0.00	7.43	29.49	
	8	7.43	29.49	-0.60	0.45	0.00	2.00	-0.58	0.00	7.13	26.75	
	9	7.13	26.75	-0.64	0.05	0.00	2.00	-0.61	0.00	6.76	23.55	
	10	6.76	23.55	-0.68	0.00	0.00	2.00	-0.64	0.00	6.23	20.23	
	11	6.23	20.23	-0.60	0.00	0.00	2.00	-0.56	0.00	5.70	17.07	
	12	5.70	17.07	-0.50	0.00	0.00	2.00	-0.45	0.00	5.02	14.12	
3	1	5.02	14.12	-0.13	0.00	0.00	2.00	-0.16	0.00	4.53	11.78	
	2	4.53	11.78	+0.10	0.00	0.00	2.00	+0.09	0.00	4.27	9.97	
	3	4.27	9.97	+0.35	1.34	0.00	2.00	+0.35	0.00	4.28	10.01	
	4	4.28	10.01	[illegible]	1.80	0.00	2.00	+0.33	0.00	4.34	10.47	
	5	4.34	10.47	[illegible]	1.05	0.00	2.00	+0.07	0.00	4.23	9.67	
	6	4.23	9.67	[illegible]	0.48	0.00	2.00	-0.14	0.00	3.93	7.86	
	7	3.93	7.86	-0.26	0.02	0.00	2.00	-0.18	0.00	2.72	5.44	
	8	2.72	5.44	-0.22	0.00	0.00	2.00	-0.18	0.00	2.25	3.04	
	9	2.25	3.04	-0.20	0.00	0.00	2.00	-0.06	0.00	0.65	0.78	
	10	0.65	0.78	-0.07	0.00	0.00	0.21	-0.05	1.79	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	2.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.15	0.00	0.07	-0.04	1.93	0.44	0.46	*
4	1	0.44	0.46	-0.02	1.32	0.00	1.26	-0.02	0.74	0.46	0.48	*
	2	0.46	0.48	+0.01	4.89	0.00	2.00	+0.05	0.00	2.28	3.43	
	3	2.28	3.43	+0.19	32.96	0.00	2.00	+0.76	0.00	9.68	35.34	
	4	9.68	35.34	+0.75	14.72	10.61	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	4.01	3.07	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	2.36	0.10	2.00	-0.39	0.00	10.87	37.81	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	M.R.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	10.87	37.81	-0.71	1.03	0.00	2.00	-0.65	0.00	9.75	35.48	
	8	9.75	35.48	-0.79	0.32	0.00	2.00	-0.69	0.00	8.23	32.32	
	9	8.23	32.32	-0.74	0.00	0.00	2.00	-0.67	0.00	7.37	28.92	
	10	7.37	28.92	-0.74	0.00	0.00	2.00	-0.71	0.00	6.98	25.46	
	11	6.98	25.46	-0.67	0.00	0.00	2.00	-0.64	0.00	6.54	22.14	
	12	6.54	22.14	-0.57	0.08	0.00	2.00	-0.54	0.00	6.06	19.11	
5	1	6.06	19.11	-0.21	12.41	0.00	2.00	-0.26	0.00	7.38	29.05	
	2	7.38	29.05	+0.16	48.29	37.29	2.00	+0.24	0.00	11.17	38.44	
	3	11.17	38.44	+0.92	102.98	102.13	2.00	+0.91	0.00	11.49	39.11	
	4	11.49	39.11	+0.89	84.37	84.17	2.00	+0.85	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	141.99	141.05	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	5.93	3.73	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	3.02	0.00	2.00	-0.72	0.00	10.68	37.41	
	8	10.68	37.41	-0.86	1.42	0.00	2.00	-0.81	0.00	9.60	35.16	
	9	9.60	35.16	-0.86	0.74	0.00	2.00	-0.77	0.00	8.21	32.27	
	10	8.21	32.27	-0.83	0.49	0.00	2.00	-0.76	0.00	7.40	29.18	
	11	7.40	29.18	-0.71	0.25	0.00	2.00	-0.69	0.00	7.05	26.02	
	12	7.05	26.02	-0.52	0.73	0.00	2.00	-0.69	0.00	6.76	23.54	
6	1	6.76	23.54	-0.24	2.45	0.00	2.00	-0.24	0.00	6.75	23.51	
	2	6.75	23.51	+0.15	2.63	0.00	2.00	+0.15	0.00	6.88	24.48	
	3	6.88	24.48	+0.56	64.65	49.49	2.00	+0.91	0.00	11.49	39.11	
	4	11.49	39.11	+0.89	5.46	5.26	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	10.40	9.46	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	11.28	9.66	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	3.34	0.25	2.00	-0.72	0.00	10.71	37.48	
	8	10.71	37.48	-0.87	1.60	0.00	2.00	-0.82	0.00	9.71	35.40	
	9	9.71	35.40	-0.87	1.28	0.00	2.00	-0.80	0.00	8.56	33.01	
	10	8.56	33.01	-0.86	0.46	0.00	2.00	-0.76	0.00	7.47	29.84	
	11	7.47	29.84	-0.72	0.01	0.00	2.00	-0.69	0.00	7.09	26.43	
	12	7.09	26.43	-0.62	0.77	0.00	2.00	-0.60	0.00	6.82	23.98	
7	1	6.82	23.98	-0.24	0.87	0.00	2.00	-0.23	0.00	6.57	22.37	
	2	6.57	22.37	+0.14	1.18	0.00	2.00	+0.14	0.00	6.49	21.84	
	3	6.49	21.84	+0.53	0.74	0.00	2.00	+0.52	0.00	6.46	21.63	
	4	6.46	21.63	+0.50	0.44	0.00	2.00	+0.49	0.00	6.36	21.06	
	5	6.36	21.06	+0.11	0.85	0.00	2.00	+0.11	0.00	6.22	20.13	
	6	6.22	20.13	-0.22	0.28	0.00	2.00	-0.21	0.00	5.88	17.98	
	7	5.88	17.98	-0.38	0.00	0.00	2.00	-0.35	0.00	5.28	15.25	
	8	5.28	15.25	-0.43	0.00	0.00	2.00	-0.38	0.00	4.63	12.44	
	9	4.63	12.44	-0.41	0.00	0.00	2.00	-0.38	0.00	4.23	9.64	
	10	4.23	9.64	-0.43	0.00	0.00	2.00	-0.36	0.00	3.43	6.85	
	11	3.43	6.85	-0.33	0.00	0.00	2.00	-0.23	0.00	2.36	4.29	
	12	2.36	4.29	-0.21	0.00	0.00	2.00	-0.16	0.00	1.67	1.73	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
8	1	1.67	1.93	-0.06	0.00	0.00	1.37	-0.02	0.63	0.46	0.48	*
	2	0.46	0.48	+0.01	0.63	0.00	0.62	+0.01	1.38	0.47	0.51	*
	3	0.47	0.51	+0.04	75.45	35.80	2.00	+0.91	0.00	11.49	39.11	
	4	11.49	39.11	+0.89	22.57	22.37	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	5.51	4.57	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	3.14	0.94	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	1.73	0.00	2.00	-0.68	0.00	10.08	36.16	
	8	10.08	36.16	-0.82	1.42	0.00	2.00	-0.76	0.00	9.04	34.00	
	9	9.04	34.00	-0.81	0.54	0.00	2.00	-0.71	0.00	7.61	31.02	
	10	7.61	31.02	-0.77	0.06	0.00	2.00	-0.74	0.00	7.22	27.58	
	11	7.22	27.58	-0.70	0.00	0.00	2.00	-0.67	0.00	6.85	24.21	
	12	6.85	24.21	-0.60	0.40	0.00	2.00	-0.57	0.00	6.43	21.44	
9	1	6.43	21.44	-0.23	0.33	0.00	2.00	-0.22	0.00	6.09	19.33	
	2	6.09	19.33	+0.13	2.03	0.00	2.00	+0.13	0.00	6.14	19.62	
	3	6.14	19.62	+0.50	9.82	0.00	2.00	+0.60	0.00	7.33	28.54	
	4	7.33	28.54	+0.57	14.01	2.91	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	51.10	50.16	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	4.48	2.28	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	2.44	0.00	2.00	-0.70	0.00	10.41	36.85	
	8	10.41	36.85	-0.84	1.10	0.00	2.00	-0.78	0.00	9.20	34.33	
	9	9.20	34.33	-0.82	0.41	0.00	2.00	-0.72	0.00	7.69	31.20	
	10	7.69	31.20	-0.78	0.00	0.00	2.00	-0.74	0.00	7.23	27.68	
	11	7.23	27.68	-0.70	0.00	0.00	2.00	-0.67	0.00	6.86	24.31	
	12	6.86	24.31	-0.60	0.00	0.00	2.00	-0.57	0.00	6.38	21.15	
10	1	6.38	21.15	-0.23	0.00	0.00	2.00	-0.21	0.00	5.99	18.71	
	2	5.99	18.71	+0.13	0.14	0.00	2.00	+0.12	0.00	5.71	17.10	
	3	5.71	17.10	+0.47	1.17	0.00	2.00	+0.46	0.00	5.73	17.20	
	4	5.73	17.20	+0.44	8.06	0.00	2.00	+0.53	0.00	6.85	24.23	
	5	6.85	24.23	+0.12	3.79	0.00	2.00	+0.12	0.00	7.07	26.26	
	6	7.07	26.26	-0.25	2.33	0.00	2.00	-0.25	0.00	7.06	26.10	
	7	7.06	26.10	-0.46	1.41	0.00	2.00	-0.45	0.00	6.89	24.60	
	8	6.89	24.60	-0.56	0.57	0.00	2.00	-0.54	0.00	6.53	22.07	
	9	6.53	22.07	-0.58	0.07	0.00	2.00	-0.55	0.00	6.04	19.01	
	10	6.04	19.01	-0.61	0.00	0.00	2.00	-0.56	0.00	5.42	15.84	
	11	5.42	15.84	-0.52	0.51	0.00	2.00	-0.48	0.00	4.84	13.35	
	12	4.84	13.35	-0.42	0.04	0.00	2.00	-0.39	0.00	4.36	10.58	
11	1	4.36	10.58	-0.15	1.20	0.00	2.00	-0.15	0.00	4.21	9.48	
	2	4.21	9.48	+0.09	14.62	0.00	2.00	+0.14	0.00	6.57	22.33	
	3	6.57	22.33	+0.54	7.37	0.00	2.00	+0.60	0.00	7.36	28.83	
	4	7.36	28.83	+0.57	21.60	10.80	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	5.11	4.17	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	3.13	0.93	2.00	-0.39	0.00	10.87	37.81	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	10.87	37.81	-0.71	1.70	0.00	2.00	-0.68	0.00	10.06	36.13	
	8	10.06	36.13	-0.82	0.69	0.00	2.00	-0.73	0.00	8.69	33.27	
	9	8.69	33.27	-0.78	0.14	0.00	2.00	-0.68	0.00	7.48	29.96	
	10	7.48	29.96	-0.76	0.00	0.00	2.00	-0.72	0.00	7.10	26.48	
	11	7.10	26.48	-0.68	0.00	0.00	2.00	-0.66	0.00	6.69	23.14	
	12	6.69	23.14	-0.59	0.00	0.00	2.00	-0.55	0.00	6.20	20.00	
12	1	6.20	20.00	-0.22	2.22	0.00	2.00	-0.22	0.00	6.16	19.78	
	2	6.16	19.78	+0.13	5.22	0.00	2.00	+0.14	0.00	6.72	23.28	
	3	6.72	23.28	+0.55	38.80	22.43	2.00	+0.91	0.00	11.49	39.11	
	4	11.49	39.11	+0.89	52.74	52.54	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	21.83	20.89	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	8.21	6.01	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	3.15	0.06	2.00	-0.72	0.00	10.71	37.48	
	8	10.71	37.48	-0.87	1.49	0.00	2.00	-0.81	0.00	9.66	35.29	
	9	9.66	35.29	-0.86	0.58	0.00	2.00	-0.77	0.00	8.19	32.24	
	10	8.19	32.24	-0.83	0.08	0.00	2.00	-0.75	0.00	7.35	28.74	
	11	7.35	28.74	-0.71	0.00	0.00	2.00	-0.68	0.00	6.97	25.35	
	12	6.97	25.35	-0.61	0.00	0.00	2.00	-0.58	0.00	6.54	22.16	
13	1	6.54	22.16	-0.23	2.49	0.00	2.00	-0.23	0.00	6.54	22.19	
	2	6.54	22.19	+0.14	3.69	0.00	2.00	+0.15	0.00	6.84	24.16	
	3	6.84	24.16	+0.56	6.61	0.00	2.00	+0.61	0.00	7.48	29.94	
	4	7.48	29.94	+0.55	6.32	0.00	2.00	+0.73	0.00	9.80	35.57	
	5	9.80	35.57	+0.17	4.08	0.00	2.00	+0.19	0.00	10.97	38.01	
	6	10.97	38.01	-0.38	2.62	0.05	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	1.38	0.00	2.00	-0.67	0.00	9.91	35.82	
	8	9.91	35.82	-0.80	0.72	0.00	2.00	-0.72	0.00	8.57	33.02	
	9	8.57	33.02	-0.77	0.16	0.00	2.00	-0.67	0.00	7.46	29.74	
	10	7.46	29.74	-0.75	0.00	0.00	2.00	-0.72	0.00	7.07	26.26	
	11	7.07	26.26	-0.68	0.00	0.00	2.00	-0.65	0.00	6.66	22.92	
	12	6.66	22.92	-0.58	0.00	0.00	2.00	-0.55	0.00	6.16	19.79	
14	1	6.16	19.79	-0.22	0.73	0.00	2.00	-0.21	0.00	5.89	18.09	
	2	5.89	18.09	+0.13	7.59	0.00	2.00	+0.15	0.00	6.82	23.96	
	3	6.82	23.96	+0.56	30.77	15.09	2.00	+0.91	0.00	11.49	39.11	
	4	11.49	39.11	+0.89	36.29	36.09	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	8.74	7.80	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	3.57	1.37	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	1.82	0.00	2.00	-0.68	0.00	10.12	36.25	
	8	10.12	36.25	-0.82	0.76	0.00	2.00	-0.74	0.00	8.78	33.45	
	9	8.78	33.45	-0.79	0.18	0.00	2.00	-0.68	0.00	7.51	30.16	
	10	7.51	30.16	-0.76	0.00	0.00	2.00	-0.73	0.00	7.12	26.68	
	11	7.12	26.68	-0.69	0.00	0.00	2.00	-0.66	0.00	6.73	23.33	
	12	6.73	23.33	-0.59	0.00	0.00	2.00	-0.55	0.00	6.23	20.19	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
15	1	6.23	20.19	-0.22	0.48	0.00	2.00	-0.21	0.00	5.92	18.24	
	2	5.92	18.24	+0.13	1.60	0.00	2.00	+0.13	0.00	5.89	18.09	
	3	5.89	18.09	+0.48	3.45	0.00	2.00	+0.51	0.00	6.28	20.54	
	4	6.28	20.54	+0.49	19.28	0.10	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	4.33	3.39	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	2.76	0.56	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	1.39	0.00	2.00	-0.67	0.00	9.92	35.83	
	8	9.92	35.83	-0.80	0.52	0.00	2.00	-0.71	0.00	8.48	32.83	
	9	8.48	32.83	-0.76	0.05	0.00	2.00	-0.67	0.00	7.43	29.45	
	10	7.43	29.45	-0.75	0.00	0.00	2.00	-0.72	0.00	7.04	25.98	
	11	7.04	25.98	-0.68	0.00	0.00	2.00	-0.65	0.00	6.62	22.65	
	12	6.62	22.65	-0.58	0.00	0.00	2.00	-0.54	0.00	6.12	19.53	
16	1	6.12	19.53	-0.22	1.07	0.00	2.00	-0.21	0.00	5.91	18.17	
	2	5.91	18.17	+0.13	1.31	0.00	2.00	+0.13	0.00	5.84	17.74	
	3	5.84	17.74	+0.46	4.22	0.00	2.00	+0.51	0.00	6.35	20.95	
	4	6.35	20.95	+0.49	10.21	0.00	2.00	+0.58	0.00	7.51	30.23	
	5	7.51	30.23	+0.13	3.36	0.00	2.00	+0.14	0.00	8.01	31.86	
	6	8.01	31.86	-0.28	[illegible]	0.00	2.00	-0.28	0.00	7.73	31.26	
	7	7.73	31.26	-0.50	0.84	0.00	2.00	-0.48	0.00	7.39	29.12	
	8	7.39	29.12	-0.60	0.22	0.00	2.00	-0.58	0.00	[illegible]	[illegible]	
	9	7.06	26.16	-0.63	0.00	0.00	2.00	-0.60	0.00	6.66	[illegible]	
	10	6.66	22.92	-0.67	0.00	0.00	2.00	-0.63	0.00	6.14	[illegible]	
	11	6.14	19.62	-0.59	0.00	0.00	2.00	-0.55	0.00	5.56	[illegible]	
	12	5.56	16.48	-0.49	0.00	0.00	2.00	-0.44	0.00	[illegible]	13.56	
17	1	4.89	13.56	-0.17	1.62	0.00	2.00	-0.17	0.00	4.72	12.83	
	2	4.72	12.83	+0.16	[illegible]	0.00	2.00	+0.15	0.00	6.87	[illegible]	
	3	6.87	24.40	+0.56	26.89	11.66	2.00	+0.91	0.00	11.49	39.11	
	4	11.49	39.11	+0.89	28.70	28.50	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	4.69	3.75	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	2.59	0.39	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	1.29	0.00	2.00	-0.66	0.00	9.87	35.73	
	8	9.87	35.73	-0.80	0.47	0.00	2.00	-0.71	0.00	8.41	32.70	
	9	8.41	32.70	-0.75	0.02	0.00	2.00	-0.67	0.00	7.41	29.29	
	10	7.41	29.29	-0.75	0.00	0.00	2.00	-0.72	0.00	7.03	25.83	
	11	7.03	25.83	-0.68	0.00	0.00	2.00	-0.65	0.00	6.59	22.50	
	12	6.59	22.50	-0.58	0.84	0.00	2.00	-0.55	0.00	6.23	20.21	
18	1	6.23	20.21	-0.22	1.27	0.00	2.00	-0.22	0.00	6.05	19.05	
	2	6.05	19.05	+0.13	5.66	0.00	2.00	+0.14	0.00	6.67	22.98	
	3	6.67	22.98	+0.55	52.14	35.47	2.00	+0.91	0.00	11.49	[illegible]	
	4	11.49	39.11	+0.89	12.43	12.23	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	4.49	3.55	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	3.73	1.53	2.00	-0.39	0.00	10.87	[illegible]	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	10.87	37.81	-0.71	1.99	0.00	2.00	-0.68	0.00	10.20	36.41	
	8	10.20	36.41	-0.83	0.94	0.00	2.00	-0.75	0.00	8.93	33.77	
	9	8.93	33.77	-0.80	0.28	0.00	2.00	-0.69	0.00	7.55	30.56	
	10	7.55	30.56	-0.76	0.00	0.00	2.00	-0.73	0.00	7.16	27.07	
	11	7.16	27.07	-0.69	0.00	0.00	2.00	-0.66	0.00	6.79	23.72	
	12	6.79	23.72	-0.59	0.00	0.00	2.00	-0.56	0.00	6.29	20.56	
19	1	6.29	20.56	-0.22	1.52	0.00	2.00	-0.22	0.00	6.14	19.64	
	2	6.14	19.64	+0.13	9.16	0.00	2.00	+0.15	0.00	7.17	27.09	
	3	7.17	27.09	+0.59	12.20	0.00	2.00	+0.89	0.00	11.33	38.77	
	4	11.33	38.77	+0.88	7.83	7.28	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	3.86	2.92	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	2.31	0.11	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	1.09	0.00	2.00	-0.66	0.00	9.78	35.54	
	8	9.78	35.54	-0.79	0.36	0.00	2.00	-0.70	0.00	8.28	32.41	
	9	8.28	32.41	-0.74	0.00	0.00	2.00	-0.67	0.00	7.38	29.00	
	10	7.38	29.00	-0.75	0.00	0.00	2.00	-0.71	0.00	6.99	25.54	
	11	6.99	25.54	-0.67	0.00	0.00	2.00	-0.64	0.00	6.55	22.23	
	12	6.55	22.23	-0.57	0.00	0.00	2.00	-0.54	0.00	6.06	19.12	
20	1	6.06	19.12	-0.22	0.50	0.00	2.00	-0.21	0.00	5.73	17.20	
	2	5.73	17.20	+0.12	1.53	0.00	2.00	+0.12	0.00	5.68	16.97	
	3	5.68	16.97	+0.47	2.89	0.00	2.00	+0.49	0.00	6.01	18.81	
	4	6.01	18.81	+0.47	2.00	0.00	2.00	+0.47	0.00	6.16	19.75	
	5	6.16	19.75	+0.11	0.89	0.00	2.00	+0.10	0.00	6.01	18.85	
	6	6.01	18.85	-0.21	0.78	0.00	2.00	-0.20	0.00	5.74	17.22	
	7	5.74	17.22	-0.37	0.52	0.00	2.00	-0.34	0.00	5.23	15.02	
	8	5.23	15.02	-0.42	0.04	0.00	2.00	-0.38	0.00	4.59	12.26	
	9	4.59	12.26	-0.41	0.00	0.00	2.00	-0.38	0.00	4.20	9.47	
	10	4.20	9.47	-0.42	0.00	0.00	2.00	-0.36	0.00	3.34	6.69	
	11	3.34	6.69	-0.32	0.00	0.00	2.00	-0.23	0.00	2.34	4.14	
	12	2.34	4.14	-0.20	0.00	0.00	2.00	-0.15	0.00	1.53	1.78	
21	1	1.53	1.78	-0.05	1.91	0.00	2.00	-0.05	0.00	1.35	1.59	
	2	1.35	1.59	+0.03	5.86	0.00	2.00	+0.06	0.00	2.77	5.54	
	3	2.77	5.54	+0.23	6.13	0.00	2.00	+0.35	0.00	4.31	10.25	
	4	4.31	10.25	+0.33	24.16	0.00	2.00	+0.65	0.00	8.75	33.39	
	5	8.75	33.39	+0.15	4.54	0.00	2.00	+0.18	0.00	10.13	36.26	
	6	10.13	36.26	-0.35	2.40	0.00	2.00	-0.36	0.00	9.98	35.95	
	7	9.98	35.95	-0.65	1.19	0.00	2.00	-0.60	0.00	8.99	33.89	
	8	8.99	33.89	-0.73	0.41	0.00	2.00	-0.64	0.00	7.59	30.94	
	9	7.59	30.94	-0.68	0.02	0.00	2.00	-0.65	0.00	7.22	27.62	
	10	7.22	27.62	-0.73	0.00	0.00	2.00	-0.70	0.00	6.84	24.19	
	11	6.84	24.19	-0.66	0.00	0.00	2.00	-0.62	0.00	6.34	20.91	
	12	6.34	20.91	-0.55	0.00	0.00	2.00	-0.52	0.00	5.85	17.84	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

OLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
22	1	5.85	17.84	-0.21	0.56	0.00	2.00	-0.20	0.00	5.45	15.99	
	2	5.45	15.99	+0.12	6.37	0.00	2.00	+0.13	0.00	6.29	20.62	
	3	6.29	20.62	+0.52	29.14	10.07	2.00	+0.91	0.00	11.49	39.11	
	4	11.49	39.11	+0.89	34.82	34.62	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	10.59	9.65	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	3.83	1.63	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	1.86	0.00	2.00	-0.68	0.00	10.14	36.29	
	8	10.14	36.29	-0.82	0.78	0.00	2.00	-0.74	0.00	8.80	33.50	
	9	8.80	33.50	-0.79	0.31	0.00	2.00	-0.68	0.00	7.53	30.34	
	10	7.53	30.34	-0.76	0.00	0.00	2.00	-0.73	0.00	7.14	26.85	
	11	7.14	26.85	-0.69	0.00	0.00	2.00	-0.66	0.00	6.75	23.51	
	12	6.75	23.51	-0.59	0.85	0.00	2.00	-0.57	0.00	6.39	21.20	
23	1	6.39	21.20	-0.23	2.73	0.00	2.00	-0.23	0.00	6.43	21.47	
	2	6.43	21.47	+0.14	4.10	0.00	2.00	+0.15	0.00	6.81	23.86	
	3	6.81	23.86	+0.56	10.38	0.00	2.00	+0.69	0.00	8.79	33.49	
	4	8.79	33.49	+0.68	77.09	71.06	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	19.97	17.03	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	5.22	3.02	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	2.68	0.00	2.00	-0.71	0.00	10.52	37.08	
	8	10.52	37.08	-0.85	1.23	0.00	2.00	-0.79	0.00	9.36	34.67	
	9	9.36	34.67	-0.84	0.44	0.00	2.00	-0.73	0.00	7.86	31.54	
	10	7.86	31.54	-0.79	0.00	0.00	2.00	-0.74	0.00	7.27	28.00	
	11	7.27	28.00	-0.70	0.00	0.00	2.00	-0.67	0.00	6.89	24.63	
	12	6.89	24.63	-0.60	0.00	0.00	2.00	-0.57	0.00	6.43	21.45	
24	1	6.43	21.45	-0.23	0.06	0.00	2.00	-0.22	0.00	6.05	19.07	
	2	6.05	19.07	+0.13	2.72	0.00	2.00	+0.13	0.00	6.21	20.05	
	3	6.21	20.05	+0.51	2.28	0.00	2.00	+0.52	0.00	6.41	21.36	
	4	6.41	21.36	+0.50	2.81	0.00	2.00	+0.51	0.00	6.70	23.18	
	5	6.70	23.18	+0.12	2.40	0.00	2.00	+0.12	0.00	6.80	23.82	
	6	6.80	23.82	-0.24	1.14	0.00	2.00	-0.23	0.00	6.59	22.49	
	7	6.59	22.49	-0.43	0.43	0.00	2.00	-0.41	0.00	6.21	20.08	
	8	6.21	20.08	-0.50	0.00	0.00	2.00	-0.47	0.00	5.71	17.11	
	9	5.71	17.11	-0.51	0.00	0.00	2.00	-0.46	0.00	5.02	14.14	
	10	5.02	14.14	-0.51	0.00	0.00	2.00	-0.46	0.00	4.44	11.17	
	11	4.44	11.17	-0.43	0.00	0.00	2.00	-0.40	0.00	4.05	8.35	
	12	4.05	8.35	-0.35	0.00	0.00	2.00	-0.26	0.00	2.87	5.73	
25	1	2.87	5.73	-0.10	0.00	0.00	2.00	[illegible]	0.00	2.29	3.55	
	2	2.29	3.55	+0.05	2.18	0.00	2.00	+0.05	0.00	2.32	3.83	
	3	2.32	3.83	+0.19	2.37	0.00	2.00	+0.19	0.00	2.38	4.58	
	4	2.38	4.58	+0.18	3.85	0.00	2.00	+0.26	0.00	3.44	6.87	
	5	3.44	6.87	+0.06	3.59	0.00	2.00	+0.07	0.00	4.08	8.59	
	6	4.08	8.59	-0.14	2.45	0.00	2.00	-0.14	0.00	4.11	8.76	

000061

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	4.11	8.76	-0.27	1.29	0.00	2.00	-0.25	0.00	3.76	7.53	
	8	3.76	7.53	-0.30	0.47	0.00	2.00	-0.23	0.00	2.73	5.46	
	9	2.73	5.46	-0.24	0.02	0.00	2.00	-0.20	0.00	2.25	3.04	
	10	2.25	3.04	-0.23	0.00	0.00	2.00	-0.07	0.00	0.63	0.74	
	11	0.63	0.74	-0.06	0.00	0.00	0.18	-0.05	1.82	0.44	0.45 *	
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	2.00	0.44	0.46 *	
26	1	0.44	0.46	-0.02	0.69	0.00	0.63	-0.02	1.37	0.46	0.48 *	
	2	0.46	0.48	+0.01	0.36	0.00	0.35	+0.01	1.65	0.47	0.51 *	
	3	0.47	0.51	+0.04	13.95	0.00	2.00	+0.38	0.00	4.73	12.88	
	4	4.73	12.88	+0.37	5.90	0.00	2.00	+0.44	0.00	5.81	17.59	
	5	5.81	17.59	+0.10	3.71	0.00	2.00	+0.11	0.00	6.12	19.51	
	6	6.12	19.51	-0.21	2.15	0.00	2.00	-0.21	0.00	6.07	19.23	
	7	6.07	19.23	-0.39	1.07	0.00	2.00	-0.38	0.00	5.80	17.52	
	8	5.80	17.52	-0.47	0.53	0.00	2.00	-0.43	0.00	5.26	15.15	
	9	5.26	15.15	-0.47	0.05	0.00	2.00	-0.42	0.00	4.60	12.31	
	10	4.60	12.31	-0.46	0.00	0.00	2.00	-0.43	0.00	4.20	9.41	
	11	4.20	9.41	-0.41	0.00	0.00	2.00	-0.34	0.00	3.34	6.67	
	12	3.34	6.67	-0.29	0.00	0.00	2.00	-0.21	0.00	2.35	4.17	
27	1	2.35	4.17	-0.08	0.00	0.00	2.00	-0.06	0.00	1.76	2.02	
	2	1.76	2.02	+0.04	1.82	0.00	2.00	+0.03	0.00	1.66	1.92	
	3	1.66	1.92	+0.14	9.11	0.00	2.00	+0.34	0.00	4.21	9.50	
	4	4.21	9.50	+0.33	4.72	0.00	2.00	+0.36	0.00	4.74	12.91	
	5	4.74	12.91	+0.08	3.55	0.00	2.00	+0.09	0.00	5.14	14.63	
	6	5.14	14.63	-0.18	1.90	0.00	2.00	-0.18	0.00	5.03	14.18	
	7	5.03	14.18	-0.33	1.22	0.00	2.00	-0.31	0.00	4.71	12.76	
	8	4.71	12.76	-0.38	0.43	0.00	2.00	-0.36	0.00	4.34	10.45	
	9	4.34	10.45	-0.39	0.19	0.00	2.00	-0.36	0.00	3.95	7.89	
	10	3.95	7.89	-0.40	0.01	0.00	2.00	-0.28	0.00	2.61	5.23	
	11	2.61	5.23	-0.25	0.00	0.00	2.00	-0.22	0.00	2.22	2.76	
	12	2.22	2.76	-0.19	0.00	0.00	2.00	-0.04	0.00	0.48	0.52	
28	1	0.48	0.52	-0.02	2.56	0.00	2.00	-0.03	0.00	0.83	1.03	
	2	0.83	1.03	+0.02	3.54	0.00	2.00	+0.05	0.00	2.21	2.64	
	3	2.21	2.64	+0.18	7.94	0.00	2.00	+0.34	0.00	4.15	9.09	
	4	4.15	9.09	+0.32	10.70	0.00	2.00	+0.46	0.00	5.97	18.57	
	5	5.97	18.57	+0.10	4.54	0.00	2.00	+0.11	0.00	6.41	21.33	
	6	6.41	21.33	-0.22	2.60	0.00	2.00	-0.23	0.00	6.43	21.48	
	7	6.43	21.48	-0.42	1.52	0.00	2.00	-0.41	0.00	6.22	20.17	
	8	6.22	20.17	-0.50	0.65	0.00	2.00	-0.48	0.00	5.85	17.84	
	9	5.85	17.84	-0.52	0.11	0.00	2.00	-0.48	0.00	5.21	14.95	
	10	5.21	14.95	-0.53	0.00	0.00	2.00	-0.47	0.00	4.55	11.95	
	11	4.55	11.95	-0.44	0.00	0.00	2.00	-0.41	0.00	4.15	9.11	
	12	4.15	9.11	-0.36	0.00	0.00	2.00	-0.30	0.00	3.72	6.45	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
29	1	3.22	6.45	-0.11	0.00	0.00	2.00	-0.08	0.00	2.35	4.25	
	2	2.35	4.25	+0.05	0.44	0.00	2.00	+0.05	0.00	2.23	2.79	
	3	2.23	2.79	+0.18	3.21	0.00	2.00	+0.19	0.00	2.36	4.37	
	4	2.36	4.37	+0.18	3.36	0.00	2.00	+0.23	0.00	3.07	6.15	
	5	3.07	6.15	+0.05	1.88	0.00	2.00	+0.05	0.00	3.07	6.13	
	6	3.07	6.13	-0.11	1.37	0.00	2.00	-0.09	0.00	2.65	5.30	
	7	2.65	5.30	-0.17	0.62	0.00	2.00	-0.15	0.00	2.30	3.60	
	8	2.30	3.60	-0.19	0.10	0.00	2.00	-0.10	0.00	1.18	1.41	
	9	1.18	1.41	-0.11	0.00	0.00	0.80	-0.04	1.20	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	2.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	2.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	2.00	0.44	0.46	*
30	1	0.44	0.46	-0.02	1.00	0.00	0.94	-0.02	1.06	0.46	0.48	*
	2	0.46	0.48	+0.01	1.57	0.00	1.56	+0.01	0.44	0.47	0.51	*
	3	0.47	0.51	+0.04	3.93	0.00	2.00	+0.18	0.00	2.21	2.66	
	4	2.21	2.66	+0.17	3.21	0.00	2.00	+0.18	0.00	2.35	4.22	
	5	2.35	4.22	+0.04	1.53	0.00	2.00	+0.04	0.00	2.32	3.83	
	6	2.32	3.83	-0.08	0.60	0.00	2.00	-0.07	0.00	1.99	2.28	
	7	1.99	2.28	-0.13	0.79	0.00	1.74	-0.03	0.26	0.45	0.47	*
	8	0.45	0.47	-0.04	0.00	0.00	0.00	-0.04	2.00	0.44	0.46	*
	9	0.44	0.46	-0.04	0.00	0.00	0.00	-0.04	2.00	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	2.00	0.44	0.45	
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	2.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.23	0.00	0.15	-0.04	1.85	0.44	0.46	*
31	1	0.44	0.46	-0.02	0.78	0.00	0.72	-0.02	1.28	0.46	0.49	*
	2	0.46	0.48	+0.01	0.78	0.00	0.77	+0.01	1.23	0.47	0.51	*
	3	0.47	0.51	+0.04	1.71	0.00	1.76	+0.04	0.24	0.49	0.54	*
	4	0.49	0.54	+0.04	3.09	0.00	2.00	+0.11	0.00	1.52	1.78	
	5	1.52	1.78	+0.03	2.59	0.00	2.00	+0.04	0.00	2.13	2.43	
	6	2.13	2.43	-0.07	1.18	0.00	2.00	-0.05	0.00	1.26	1.49	
	7	1.26	1.49	-0.08	0.67	0.00	1.58	-0.03	0.42	0.45	0.47	*
	8	0.45	0.47	-0.04	0.13	0.00	0.06	-0.04	1.94	0.44	0.46	*
	9	0.44	0.46	-0.04	0.00	0.00	0.00	-0.04	2.00	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	2.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	2.00	0.44	0.45	*
	12	0.44	0.45	-0.04	1.21	0.00	1.13	-0.04	0.87	0.44	0.46	*
32	1	0.44	0.46	-0.02	1.32	0.00	1.26	-0.02	0.74	0.46	0.49	*
	2	0.46	0.48	+0.01	1.98	0.00	1.97	+0.01	0.03	0.47	0.51	*
	3	0.47	0.51	+0.04	13.16	0.00	2.00	+0.36	[illegible]	4.43	[illegible]	
	4	4.4[illegible]	11.07	+0.34	7.63	0.00	2.00	+0.44	[illegible]	[illegible]	[illegible]	
	5	[illegible]	17.48	+0.10	4.14	0.00	2.00	+0.11	[illegible]	6.17	[illegible]	
	6	6.17	19.83	-0.22	2.21	[illegible]	2.00	-0.22	[illegible]	6.13	[illegible]	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	6.13	19.61	-0.40	0.98	0.00	2.00	-0.38	0.00	5.85	17.81	
	8	5.85	17.81	-0.47	0.30	0.00	2.00	-0.43	0.00	5.27	15.20	
	9	5.27	15.20	-0.47	0.00	0.00	2.00	-0.42	0.00	4.60	12.31	
	10	4.60	12.31	-0.46	0.00	0.00	2.00	-0.43	0.00	4.20	9.41	
	11	4.20	9.41	-0.41	0.00	0.00	2.00	-0.34	0.00	3.33	6.67	
	12	3.33	6.67	-0.29	0.57	0.00	2.00	-0.22	0.00	2.39	4.73	
33	1	2.39	4.73	-0.08	2.60	0.00	2.00	-0.09	0.00	2.58	5.15	
	2	2.58	5.15	+0.06	17.29	0.00	2.00	+0.13	0.00	6.30	20.63	
	3	6.30	20.63	+0.52	20.31	1.26	2.00	+0.91	0.00	11.49	39.11	
	4	11.49	39.11	+0.89	13.14	12.94	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	5.88	4.94	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	3.16	0.96	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	1.50	0.00	2.00	-0.67	0.00	9.97	35.94	
	8	9.97	35.94	-0.81	0.58	0.00	2.00	-0.72	0.00	8.55	32.99	
	9	8.55	32.99	-0.77	0.08	0.00	2.00	-0.67	0.00	7.45	29.63	
	10	7.45	29.63	-0.75	0.00	0.00	2.00	-0.72	0.00	7.06	26.16	
	11	7.06	26.16	-0.68	0.00	0.00	2.00	-0.65	0.00	6.65	22.82	
	12	6.65	22.82	-0.56	0.00	0.00	2.00	-0.55	0.00	6.15	19.7	
34	1	6.15	19.70	-0.22	1.59	0.00	2.00	-0.21	0.00	6.01	18.85	
	2	6.01	18.85	+0.13	2.45	0.00	2.00	+0.13	0.00	6.13	19.56	
	3	6.13	19.56	+0.50	3.22	0.00	2.00	+0.52	0.00	6.48	21.81	
	4	6.48	21.81	+0.50	5.67	0.00	2.00	+0.55	0.00	7.10	26.53	
	5	7.10	26.53	+0.12	2.97	0.00	2.00	+0.13	0.00	7.24	27.75	
	6	7.24	27.75	-0.25	1.62	0.00	2.00	-0.25	0.00	7.14	26.87	
	7	7.14	26.87	-0.46	0.65	0.00	2.00	-0.45	0.00	6.89	24.60	
	8	6.89	24.60	-0.56	0.12	0.00	2.00	-0.53	0.00	6.46	21.63	
	9	6.46	21.63	-0.58	0.00	0.00	2.00	-0.54	0.00	5.96	18.51	
	10	5.96	18.51	-0.60	0.01	0.00	2.00	-0.55	0.00	5.71	15.34	
	11	5.31	15.36	-0.51	0.00	0.00	2.00	-0.46	0.00	4.67	12.40	
	12	4.67	12.40	-0.40	0.00	0.00	2.00	-0.37	0.00	4.23	9.62	
35	1	4.23	9.62	-0.15	0.00	0.00	2.00	-0.13	0.00	3.67	7.33	
	2	3.67	7.33	+0.08	3.36	0.00	2.00	+0.09	0.00	4.12	8.86	
	3	4.12	8.86	+0.34	7.89	0.00	2.00	+0.43	0.00	5.34	15.52	
	4	5.34	15.52	+0.41	6.45	0.00	2.00	+0.48	0.00	6.33	20.87	
	5	6.33	20.87	+0.11	4.41	0.00	2.00	+0.12	0.00	6.75	23.51	
	6	6.75	23.51	-0.24	2.88	0.00	2.00	-0.24	0.00	6.81	23.91	
	7	6.81	23.91	-0.44	1.57	0.00	2.00	-0.43	0.00	6.61	22.60	
	8	6.61	22.60	-0.54	0.62	0.00	2.00	-0.51	0.00	6.23	20.18	
	9	6.23	20.18	-0.56	0.10	0.00	2.00	-0.52	0.00	5.73	17.20	
	10	5.73	17.20	-0.58	0.00	0.00	2.00	-0.52	0.00	5.02	14.10	
	11	5.02	14.10	-0.48	1.37	0.00	2.00	-0.46	0.00	4.65	12.53	
	12	4.65	12.53	-0.41	[illegible]	0.00	2.00	-0.36	0.00	4.31	[illegible]	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
36	1	4.31	10.25	-0.15	0.75	0.00	2.00	-0.15	0.00	4.10	8.70	
	2	4.10	8.70	+0.09	2.29	0.00	2.00	+0.09	0.00	4.16	9.17	
	3	4.16	9.17	+0.34	28.88	0.00	2.00	+0.54	0.00	10.59	37.22	
	4	10.59	37.22	+0.82	4.83	2.67	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	3.79	2.85	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	2.17	0.00	2.00	-0.39	0.00	10.86	37.79	
	7	10.86	37.79	-0.71	0.95	0.00	2.00	-0.65	0.00	9.70	35.38	
	8	9.70	35.38	-0.79	0.28	0.00	2.00	-0.69	0.00	8.17	32.19	
	9	8.17	32.19	-0.73	0.00	0.00	2.00	-0.66	0.00	7.35	28.79	
	10	7.35	28.79	-0.74	0.00	0.00	2.00	-0.71	0.00	6.97	25.33	
	11	6.97	25.33	-0.67	0.00	0.00	2.00	-0.64	0.00	6.52	22.02	
	12	6.52	22.02	-0.57	0.00	0.00	2.00	-0.53	0.00	6.03	18.92	
37	1	6.03	18.92	-0.21	0.13	0.00	2.00	-0.20	0.00	5.60	16.63	
	2	5.60	16.63	+0.12	2.16	0.00	2.00	+0.12	0.00	5.69	17.04	
	3	5.69	17.04	+0.47	4.41	0.00	2.00	+0.51	0.00	6.26	20.42	
	4	6.26	20.42	+0.49	4.14	0.00	2.00	+0.52	0.00	6.76	23.56	
	5	6.76	23.56	+0.12	5.76	0.00	2.00	+0.13	0.00	7.22	27.57	
	6	7.22	27.57	-0.25	2.84	0.00	2.00	-0.25	0.00	7.26	27.90	
	7	7.26	27.90	-0.47	1.32	0.00	2.00	-0.46	0.00	7.08	26.29	
	8	7.08	26.29	-0.57	0.49	0.00	2.00	-0.55	0.00	6.78	23.65	
	9	6.78	23.65	-0.61	0.03	0.00	2.00	-0.57	0.00	6.28	20.50	
	10	6.28	20.50	-0.63	0.00	0.00	2.00	-0.59	0.00	5.75	17.28	
	11	5.75	17.28	-0.55	0.00	0.00	2.00	-0.50	0.00	5.04	14.22	
	12	5.04	14.22	-0.44	0.00	0.00	2.00	-0.40	0.00	4.47	11.39	
38	1	4.47	11.39	-0.16	0.75	0.00	2.00	-0.15	0.00	4.25	9.83	
	2	4.25	9.83	+0.09	1.26	0.00	2.00	+0.09	0.00	4.18	9.27	
	3	4.18	9.27	+0.34	20.04	0.00	2.00	+0.59	0.00	7.29	28.24	
	4	7.29	28.24	+0.57	20.94	9.55	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	4.33	3.39	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	2.34	0.14	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	1.41	0.00	2.00	-0.67	0.00	9.93	35.85	
	8	9.93	35.85	-0.80	0.54	0.00	2.00	-0.72	0.00	8.50	32.87	
	9	8.50	32.87	-0.76	0.05	0.00	2.00	-0.67	0.00	7.43	29.49	
	10	7.43	29.49	-0.75	0.00	0.00	2.00	-0.72	0.00	7.05	26.02	
	11	7.05	26.02	-0.68	0.00	0.00	2.00	-0.65	0.00	6.62	22.69	
	12	6.62	22.69	-0.58	0.00	0.00	2.00	-0.54	0.00	6.13	19.56	
39	1	6.13	19.56	-0.22	0.00	0.00	2.00	-0.20	0.00	5.72	17.14	
	2	5.72	17.14	+0.12	0.00	0.00	2.00	+0.11	0.00	5.31	15.38	
	3	5.31	15.38	+0.44	0.81	0.00	2.00	+0.42	0.00	5.23	15.05	
	4	5.23	15.05	+0.41	1.87	0.00	2.00	+0.41	0.00	5.39	15.73	
	5	5.39	15.73	+0.09	1.88	0.00	2.00	+0.09	0.00	5.41	15.80	
	6	5.41	15.80	-0.19	0.96	0.00	2.00	-0.18	0.00	5.08	14.39	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	5.08	14.39	-0.33	0.29	0.00	2.00	-0.30	0.00	4.57	12.05	
	8	4.57	12.05	-0.37	0.00	0.00	2.00	-0.34	0.00	4.19	9.34	
	9	4.19	9.34	-0.37	0.00	0.00	2.00	-0.31	0.00	3.33	6.65	
	10	3.33	6.65	-0.34	0.00	0.00	2.00	-0.24	0.00	2.34	4.08	
	11	2.34	4.08	-0.23	0.00	0.00	2.00	-0.15	0.00	1.45	1.70	
	12	1.45	1.70	-0.13	0.11	0.00	1.18	-0.04	0.82	0.44	0.46	*
40	1	0.44	0.46	-0.02	0.88	0.00	0.82	-0.02	1.18	0.46	0.48	*
	2	0.46	0.48	+0.01	1.63	0.00	1.62	+0.01	0.38	0.47	0.51	*
	3	0.47	0.51	+0.04	5.82	0.00	2.00	+0.19	0.00	2.38	4.56	
	4	2.38	4.56	+0.18	5.11	0.00	2.00	+0.30	0.00	4.02	8.16	
	5	4.02	8.16	+0.07	3.75	0.00	2.00	+0.07	0.00	4.29	10.06	
	6	4.29	10.06	-0.15	1.96	0.00	2.00	-0.15	0.00	4.24	9.72	
	7	4.24	9.72	-0.28	0.84	0.00	2.00	-0.26	0.00	4.00	8.02	
	8	4.00	8.02	-0.32	0.22	0.00	2.00	-0.24	0.00	2.84	5.68	
	9	2.84	5.68	-0.25	0.00	0.00	2.00	-0.20	0.00	2.26	3.22	
	10	2.26	3.22	-0.23	0.00	0.00	2.00	[illegible]	0.00	0.74	0.91	
	11	0.74	0.91	-0.07	0.00	0.00	0.34	-0.05	1.66	0.44	0.45	*
	12	0.44	0.45	-0.04	0.14	0.00	0.06	-0.04	[illegible]	[illegible]	[illegible]	*
41	1	0.44	0.46	-0.02	0.57	0.00	0.51	-0.02	1.49	0.46	0.48	*
	2	0.46	0.48	+0.01	1.98	0.00	1.97	+0.01	0.03	0.47	0.51	*
	3	0.47	0.51	+0.04	2.97	0.00	2.00	+0.11	0.00	1.38	1.62	
	4	1.38	1.67	+0.11	4.56	0.00	2.00	+0.15	0.00	2.37	4.47	
	5	2.37	4.47	+0.04	2.93	0.00	2.00	+0.05	0.00	2.75	5.49	
	6	2.75	5.49	-0.10	1.74	0.00	2.00	-0.05	0.00	2.52	5.05	
	7	2.52	5.05	-0.16	0.72	0.00	2.00	-0.15	0.00	2.28	3.45	
	8	2.28	3.45	-0.13	0.15	0.00	2.00	-0.10	0.00	1.10	1.32	
	9	1.10	1.32	-0.10	0.00	0.00	0.72	-0.04	1.28	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	2.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	2.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	2.00	0.44	0.46	*
42	1	0.44	0.46	-0.02	0.00	0.00	0.00	-0.02	2.00	0.46	0.48	*
	2	0.46	0.48	+0.01	1.73	0.00	1.72	+0.01	0.28	0.47	0.51	*
	3	0.47	0.51	+0.04	3.10	0.00	2.00	+0.12	0.00	1.51	1.76	
	4	1.51	1.76	+0.12	3.36	0.00	2.00	+0.18	0.00	2.28	3.42	
	5	2.28	3.42	+0.04	1.96	0.00	2.00	+0.04	0.00	2.28	3.46	
	6	2.28	3.46	-0.08	1.52	0.00	2.00	-0.08	0.00	2.23	2.82	
	7	2.23	2.82	-0.14	0.59	0.00	2.00	-0.07	0.00	0.98	1.20	
	8	0.98	1.20	-0.08	0.09	0.00	0.71	-0.04	1.29	0.44	0.46	*
	9	0.44	0.46	-0.04	0.00	0.00	0.00	-0.04	2.00	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	2.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	2.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	2.00	0.44	0.46	*

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
43	1	0.44	0.46	-0.02	1.36	0.00	1.30	-0.02	0.70	0.46	0.48 *	
	2	0.46	0.48	+0.01	2.56	0.00	2.00	+0.02	0.00	0.87	1.07	
	3	0.87	1.07	+0.07	2.89	0.00	2.00	+0.14	0.00	1.90	2.18	
	4	1.90	2.18	+0.15	7.71	0.00	2.00	+0.31	0.00	4.05	8.34	
	5	4.05	8.34	+0.07	3.92	0.00	2.00	+0.05	0.00	4.34	10.41	
	6	4.34	10.41	-0.15	2.09	0.00	2.00	-0.15	0.00	4.31	10.20	
	7	4.31	10.20	-0.28	1.05	0.00	2.00	-0.27	0.00	4.10	8.70	
	8	4.10	8.70	-0.33	0.34	0.00	2.00	-0.27	0.00	3.22	6.44	
	9	3.22	6.44	-0.29	0.00	0.00	2.00	-0.21	0.00	2.33	3.94	
	10	2.33	3.94	-0.23	0.00	0.00	2.00	-0.15	0.00	1.32	1.56	
	11	1.32	1.56	-0.13	0.00	0.00	0.93	-0.05	1.07	0.44	0.45 *	
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	2.00	0.44	0.46 *	
44	1	0.44	0.46	-0.02	0.00	0.00	0.00	-0.02	2.00	0.46	0.48 *	
	2	0.46	0.48	+0.01	3.43	0.00	2.00	+0.04	0.00	1.70	1.96	
	3	1.70	1.96	+0.14	11.81	0.00	2.00	+0.37	0.00	4.60	12.28	
	4	4.60	12.28	+0.36	9.08	0.00	2.00	+0.48	0.00	6.23	20.19	
	5	6.23	20.19	+0.11	3.33	0.00	2.00	+0.11	0.00	6.47	21.75	
	6	6.47	21.75	-0.23	1.99	0.00	2.00	-0.23	0.00	6.40	21.28	
	7	6.40	21.28	-0.42	0.94	0.00	2.00	-0.40	0.00	6.10	19.41	
	8	6.10	19.41	-0.49	0.28	0.00	2.00	-0.46	0.00	5.62	16.73	
	9	5.62	16.73	-0.50	0.00	0.00	2.00	-0.45	0.00	4.94	13.77	
	10	4.94	13.77	-0.50	0.00	0.00	2.00	-0.45	0.00	4.39	10.82	
	11	4.39	10.82	-0.42	0.00	0.00	2.00	-0.39	0.00	4.00	8.01	
	12	4.00	8.01	-0.35	0.00	0.00	2.00	-0.25	0.00	2.71	5.41	
45	1	2.71	5.41	-0.10	1.42	0.00	2.00	-0.09	0.00	2.39	4.65	
	2	2.39	4.65	+0.05	1.82	0.00	2.00	+0.05	0.00	2.38	4.57	
	3	2.38	4.57	+0.20	7.47	0.00	2.00	+0.35	0.00	4.36	10.59	
	4	4.36	10.59	+0.34	14.81	0.00	2.00	+0.53	0.00	6.85	24.27	
	5	6.85	24.27	+0.12	5.56	0.00	2.00	+0.13	0.00	7.27	28.07	
	6	7.27	28.07	-0.25	2.93	0.00	2.00	-0.26	0.00	7.32	28.49	
	7	7.32	28.49	-0.49	1.44	0.00	2.00	-0.47	0.00	7.15	26.99	
	8	7.15	26.99	-0.58	0.55	0.00	2.00	-0.56	0.00	6.87	24.40	
	9	6.87	24.40	-0.61	0.06	0.00	2.00	-0.53	0.00	6.40	21.26	
	10	6.40	21.26	-0.65	0.00	0.00	2.00	-0.60	0.00	5.88	18.01	
	11	5.88	18.01	-0.57	0.00	0.00	2.00	-0.51	0.00	5.21	14.93	
	12	5.21	14.93	-0.46	0.00	0.00	2.00	-0.41	0.00	4.57	12.07	
46	1	4.57	12.07	-0.16	0.00	0.00	2.00	-0.15	0.00	4.24	9.75	
	2	4.24	9.75	+0.09	0.00	0.00	2.00	+0.08	0.00	3.97	7.93	
	3	3.97	7.93	+0.33	0.00	0.00	2.00	+0.26	0.00	3.26	6.51	
	4	3.26	6.51	+0.25	0.61	0.00	2.00	+0.21	0.00	2.79	5.58	
	5	2.79	5.58	+0.05	0.19	0.00	2.00	+0.04	0.00	2.37	3.86	
	6	2.37	3.86	-0.08	0.00	0.00	2.00	-0.05	0.00	1.48	1.73	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	1.48	1.73	-0.10	0.00	0.00	1.13	-0.03	0.87	0.45	0.47	*
	8	0.45	0.47	-0.04	0.00	0.00	0.00	-0.04	2.00	0.44	0.46	*
	9	0.44	0.46	-0.04	0.00	0.00	0.00	-0.04	2.00	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	2.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	2.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	2.00	0.44	0.46	*
47	1	0.44	0.46	-0.02	0.64	0.00	0.58	-0.07	1.42	0.46	0.48	*
	2	0.46	0.48	+0.01	1.94	0.00	1.93	+0.01	0.07	0.47	0.51	*
	3	0.47	0.51	+0.04	18.93	0.00	2.00	+0.48	0.00	5.87	17.95	
	4	5.87	17.95	+0.46	3.92	0.00	2.00	+0.48	0.00	6.33	20.81	
	5	6.33	20.81	+0.11	3.03	0.00	2.00	+0.11	0.00	6.53	22.07	
	6	6.53	22.07	-0.23	1.81	0.00	2.00	-0.23	0.00	6.42	21.42	
	7	6.42	21.42	-0.42	0.75	0.00	2.00	-0.40	0.00	6.09	19.36	
	8	6.09	19.36	-0.49	0.30	0.00	2.00	-0.46	0.00	5.62	16.70	
	9	5.62	16.70	-0.50	0.00	0.00	2.00	-0.45	0.00	4.93	13.75	
	10	4.93	13.75	-0.50	0.00	0.00	2.00	-0.45	0.00	4.39	10.80	
	11	4.39	10.80	-0.42	0.00	0.00	2.00	-0.39	0.00	3.99	7.98	
	12	3.99	7.98	-0.35	0.00	0.00	2.00	-0.25	0.00	2.69	5.39	
48	1	2.69	5.39	-0.10	0.00	0.00	2.00	-0.08	0.00	2.26	3.21	
	2	2.26	3.21	+0.05	0.10	0.00	2.00	+0.02	0.00	1.16	1.38	
	3	1.16	1.38	+0.09	9.55	0.00	2.00	+0.34	0.00	4.19	9.37	
	4	4.19	9.37	+0.32	5.39	0.00	2.00	+0.37	0.00	4.87	13.45	
	5	4.87	13.45	+0.09	2.50	0.00	2.00	+0.09	0.00	5.02	14.13	
	6	5.02	14.13	-0.18	1.59	0.00	2.00	-0.17	0.00	4.85	13.37	
	7	4.85	13.37	-0.32	1.06	0.00	2.00	-0.30	0.00	4.53	11.82	
	8	4.53	11.82	-0.37	0.34	0.00	2.00	-0.34	0.00	4.20	9.45	
	9	4.20	9.45	-0.38	0.00	0.00	2.00	-0.32	0.00	3.38	6.75	
	10	3.38	6.75	-0.34	0.00	0.00	2.00	-0.24	0.00	2.35	4.17	
	11	2.35	4.17	-0.23	0.00	0.00	2.00	-0.16	0.00	1.53	1.78	
	12	1.53	1.78	-0.13	0.52	0.00	1.67	-0.04	0.33	0.44	0.46	*
49	1	0.44	0.46	-0.02	0.71	0.00	0.65	-0.02	1.35	0.46	0.48	*
	2	0.46	0.48	+0.01	14.78	0.00	2.00	+0.10	0.00	4.85	13.38	
	3	4.85	13.38	+0.40	44.08	17.65	2.00	+0.91	0.00	11.49	39.11	
	4	11.49	39.11	+0.89	5.54	5.34	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	8.54	7.60	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	2.77	0.57	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	1.28	0.00	2.00	-0.66	0.00	9.87	35.72	
	8	9.87	35.72	-0.80	0.46	0.00	2.00	-0.71	0.00	8.40	32.68	
	9	8.40	32.68	-0.75	0.01	0.00	2.00	-0.67	0.00	7.41	29.26	
	10	7.41	29.26	-0.75	0.00	0.00	2.00	-0.72	0.00	7.02	25.80	
	11	7.02	25.80	-0.68	0.00	0.00	2.00	-0.65	0.00	6.59	22.40	
	12	6.59	22.48	-0.58	0.00	0.00	2.00	-0.54	0.00	6.10	19.36	

000068

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
50	1	6.10	19.36	-0.22	0.67	0.00	2.00	-0.21	0.00	5.82	17.60	
	2	5.82	17.60	+0.13	3.43	0.00	2.00	+0.13	0.00	6.08	19.29	
	3	6.08	19.29	+0.50	112.85	92.44	2.00	+0.91	0.00	11.49	39.11	
	4	11.49	39.11	+0.89	50.38	50.18	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	5.65	4.71	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	2.87	0.67	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	1.62	0.00	2.00	-0.67	0.00	10.03	36.05	
	8	10.03	36.05	-0.81	0.65	0.00	2.00	-0.73	0.00	8.64	33.16	
	9	8.64	33.16	-0.77	0.12	0.00	2.00	-0.68	0.00	7.47	29.84	
	10	7.47	29.84	-0.75	0.00	0.00	2.00	-0.72	0.00	7.08	26.36	
	11	7.08	26.36	-0.68	0.00	0.00	2.00	-0.65	0.00	6.68	23.02	
	12	6.68	23.02	-0.58	1.70	0.00	2.00	-0.57	0.00	6.44	21.56	
51	1	6.44	21.56	-0.23	2.56	0.00	2.00	-0.23	0.00	6.46	21.66	
	2	6.46	21.66	+0.14	2.68	0.00	2.00	+0.14	0.00	6.61	22.62	
	3	6.61	22.62	+0.54	86.26	69.23	2.00	+0.91	0.00	11.49	39.11	
	4	11.49	39.11	+0.89	87.40	87.20	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	6.55	5.61	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	3.22	1.02	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	2.00	0.00	2.00	-0.68	0.00	10.20	36.42	
	8	10.20	36.42	-0.83	1.27	0.00	2.00	-0.77	0.00	9.09	34.10	
	9	9.09	34.10	-0.81	0.46	0.00	2.00	-0.71	0.00	7.62	31.03	
	10	7.62	31.03	-0.77	0.01	0.00	2.00	-0.74	0.00	7.22	27.54	
	11	7.22	27.54	-0.70	0.00	0.00	2.00	-0.67	0.00	6.84	24.17	
	12	6.84	24.17	-0.60	1.67	0.00	2.00	-0.59	0.00	6.62	22.66	
52	1	6.62	22.66	-0.23	7.86	0.00	2.00	-0.26	0.00	7.27	28.02	
	2	7.27	28.02	+0.16	54.45	42.43	2.00	+0.24	0.00	11.17	38.44	
	3	11.17	38.44	+0.92	65.60	64.15	2.00	+0.91	0.00	11.49	39.11	
	4	11.49	39.11	+0.89	131.97	131.77	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.70	52.05	51.11	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	4.85	2.65	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	3.27	0.18	2.00	-0.72	0.00	10.71	37.48	
	8	10.71	37.48	-0.87	1.56	0.00	2.00	-0.82	0.00	9.69	35.36	
	9	9.69	35.36	-0.87	0.61	0.00	2.00	-0.77	0.00	8.24	32.33	
	10	8.24	32.33	-0.83	0.10	0.00	2.00	-0.75	0.00	7.36	28.85	
	11	7.36	28.85	-0.71	0.00	0.00	2.00	-0.68	0.00	6.98	25.45	
	12	6.98	25.45	-0.61	0.00	0.00	2.00	-0.58	0.00	6.56	22.26	
53	1	6.56	22.26	-0.23	1.58	0.00	2.00	-0.23	0.00	6.41	21.36	
	2	6.41	21.36	+0.14	1.77	0.00	2.00	+0.14	0.00	6.42	21.40	
	3	6.42	21.40	+0.53	14.06	0.00	2.00	+0.74	0.00	9.39	34.73	
	4	9.39	34.73	+0.73	146.98	142.24	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	21.83	20.89	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	5.50	3.30	2.00	-0.39	0.00	10.87	37.81	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	10.87	37.81	-0.71	2.78	0.00	2.00	-0.71	0.00	10.57	37.18	
	8	10.57	37.18	-0.86	1.29	0.00	2.00	-0.79	0.00	9.43	34.82	
	9	9.43	34.82	-0.84	0.47	0.00	2.00	-0.74	0.00	7.94	31.70	
	10	7.94	31.70	-0.80	0.02	0.00	2.00	-0.74	0.00	7.29	28.17	
	11	7.29	28.17	-0.70	0.00	0.00	2.00	-0.67	0.00	6.91	24.80	
	12	6.91	24.80	-0.60	0.00	0.00	2.00	-0.57	0.00	6.45	21.62	
54	1	6.45	21.62	-0.23	0.00	0.00	2.00	-0.22	0.00	6.07	19.17	
	2	6.07	19.17	+0.13	2.62	0.00	2.00	+0.13	0.00	6.21	20.06	
	3	6.21	20.06	+0.51	3.77	0.00	2.00	+0.54	0.00	6.65	22.88	
	4	6.65	22.88	+0.52	3.72	0.00	2.00	+0.54	0.00	7.01	25.65	
	5	7.01	25.65	+0.12	7.12	0.00	2.00	+0.13	0.00	7.61	31.02	
	6	7.61	31.02	-0.27	3.79	0.00	2.00	-0.29	0.00	8.20	32.26	
	7	8.20	32.26	-0.53	2.57	0.00	2.00	-0.53	0.00	7.96	31.76	
	8	7.96	31.76	-0.65	1.17	0.00	2.00	-0.61	0.00	7.45	29.67	
	9	7.45	29.67	-0.67	0.41	0.00	2.00	-0.64	0.00	7.13	26.77	
	10	7.13	26.77	-0.72	0.00	0.00	2.00	-0.69	0.00	6.73	23.36	
	11	6.73	23.36	-0.65	0.00	0.00	2.00	-0.61	0.00	6.21	20.10	
	12	6.21	20.10	-0.54	0.00	0.00	2.00	-0.51	0.00	5.70	17.05	
55	1	5.70	17.05	-0.20	2.00	0.00	2.00	-0.20	0.00	5.60	16.65	
	2	5.60	16.65	+0.12	26.77	3.34	2.00	+0.24	0.00	11.17	38.44	
	3	11.17	38.44	+0.92	83.93	83.08	2.00	+0.91	0.00	11.49	39.11	
	4	11.49	39.11	+0.89	88.07	87.87	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	46.52	45.58	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	4.39	2.19	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	2.17	0.00	2.00	-0.69	0.00	10.28	36.59	
	8	10.28	36.59	-0.83	0.95	0.00	2.00	-0.76	0.00	9.01	33.94	
	9	9.01	33.94	-0.81	0.28	0.00	2.00	-0.70	0.00	7.57	30.72	
	10	7.57	30.72	-0.76	0.00	0.00	2.00	-0.73	0.00	7.18	27.22	
	11	7.18	27.22	-0.69	0.00	0.00	2.00	-0.66	0.00	6.81	23.86	
	12	6.81	23.86	-0.60	0.00	0.00	2.00	-0.55	0.00	6.31	20.71	
56	1	6.31	20.71	-0.22	1.43	0.00	2.00	-0.22	0.00	6.15	19.70	
	2	6.15	19.70	+0.13	3.12	0.00	2.00	+0.14	0.00	6.37	21.08	
	3	6.37	21.08	+0.52	25.77	7.13	2.00	+0.91	0.00	11.49	39.11	
	4	11.49	39.11	+0.89	125.92	125.72	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	91.45	90.51	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	4.80	2.40	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	2.40	0.00	2.00	-0.70	0.00	10.39	36.81	
	8	10.39	36.81	-0.84	1.08	0.00	2.00	-0.77	0.00	9.17	34.29	
	9	9.17	34.28	-0.82	0.35	0.00	2.00	-0.71	0.00	7.64	31.09	
	10	7.64	31.09	-0.77	0.00	0.00	2.00	-0.74	0.00	7.22	27.58	
	11	7.22	27.58	-0.70	0.00	0.00	2.00	-0.67	0.00	6.85	24.22	
	12	6.85	24.22	-0.60	0.00	0.00	2.00	-0.56	0.00	6.35	21.05	

000070

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
57	1	6.36	21.05	-0.23	0.88	0.00	2.00	-0.22	0.00	6.12	19.49	
	2	6.12	19.49	+0.13	2.66	0.00	2.00	+0.13	0.00	6.26	20.41	
	3	6.26	20.41	+0.51	3.73	0.00	2.00	+0.54	0.00	6.70	23.20	
	4	6.70	23.20	+0.52	6.07	0.00	2.00	+0.56	0.00	7.31	28.35	
	5	7.31	28.35	+0.13	3.51	0.00	2.00	+0.13	0.00	7.50	30.12	
	6	7.50	30.12	-0.26	1.69	0.00	2.00	-0.26	0.00	7.41	29.29	
	7	7.41	29.29	-0.48	1.31	0.00	2.00	-0.47	0.00	7.23	27.64	
	8	7.23	27.64	-0.59	0.48	0.00	2.00	-0.57	0.00	6.93	24.97	
	9	6.93	24.97	-0.62	0.02	0.00	2.00	-0.59	0.00	6.48	21.78	
	10	6.48	21.78	-0.65	0.00	0.00	2.00	-0.61	0.00	5.96	18.51	
	11	5.96	18.51	-0.58	0.00	0.00	2.00	-0.52	0.00	5.32	15.41	
	12	5.32	15.41	-0.47	0.00	0.00	2.00	-0.42	0.00	4.65	12.53	
58	1	4.65	12.53	-0.17	0.00	0.00	2.00	-0.15	0.00	4.31	10.21	
	2	4.31	10.21	+0.09	0.61	0.00	2.00	+0.09	0.00	4.14	9.01	
	3	4.14	9.01	+0.34	2.32	0.00	2.00	+0.35	0.00	4.28	10.01	
	4	4.28	10.01	+0.33	2.37	0.00	2.00	+0.34	0.00	4.43	11.05	
	5	4.43	11.05	+0.08	1.41	0.00	2.00	+0.08	0.00	4.37	10.62	
	6	4.37	10.62	-0.15	0.54	0.00	2.00	-0.14	0.00	4.12	8.86	
	7	4.12	8.86	-0.27	0.39	0.00	2.00	-0.23	0.00	3.38	6.76	
	8	3.38	6.76	-0.27	0.00	0.00	2.00	-0.19	0.00	2.36	4.29	
	9	2.36	4.29	-0.21	0.00	0.00	2.00	-0.15	0.00	1.66	1.92	
	10	1.66	1.92	-0.17	0.00	0.00	1.25	-0.05	0.75	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	2.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	2.00	0.44	0.46	*
59	1	0.44	0.46	-0.02	0.00	0.00	0.00	-0.02	2.00	0.46	0.48	*
	2	0.46	0.48	+0.01	1.33	0.00	1.32	+0.01	0.68	0.47	0.51	*
	3	0.47	0.51	+0.04	4.16	0.00	2.00	+0.18	0.00	2.24	2.91	
	4	2.24	2.91	+0.17	3.51	0.00	2.00	+0.18	0.00	2.40	4.78	
	5	2.40	4.78	+0.04	3.66	0.00	2.00	+0.06	0.00	3.37	6.74	
	6	3.37	6.74	-0.12	2.49	0.00	2.00	-0.12	0.00	3.49	6.99	
	7	3.49	6.99	-0.23	1.57	0.00	2.00	-0.21	0.00	3.06	6.12	
	8	3.06	6.12	-0.25	0.62	0.00	2.00	-0.19	0.00	2.36	4.30	
	9	2.36	4.30	-0.21	0.10	0.00	2.00	-0.17	0.00	1.75	2.02	
	10	1.75	2.02	-0.18	0.00	0.00	1.34	-0.05	0.66	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	2.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	2.00	0.44	0.46	*
60	1	0.44	0.46	-0.02	0.00	0.00	0.00	-0.02	2.00	0.46	0.48	*
	2	0.46	0.48	+0.01	0.27	0.00	0.26	+0.01	1.74	0.47	0.51	*
	3	0.47	0.51	+0.04	1.71	0.00	1.76	+0.04	0.24	0.49	0.54	*
	4	0.49	0.54	+0.04	3.51	0.00	2.00	+0.14	0.00	1.95	2.23	
	5	1.95	2.23	+0.03	3.98	0.00	2.00	+0.04	0.00	2.35	4.28	
	6	2.35	4.28	-0.08	2.16	0.00	2.00	-0.08	0.00	2.35	4.28	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuação)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	2.35	4.28	-0.15	0.95	0.00	2.00	-0.15	0.00	2.24	2.93	
	8	2.24	2.93	-0.18	0.96	0.00	2.00	-0.12	0.00	1.35	1.59	
	9	1.35	1.59	-0.12	0.29	0.00	1.26	-0.04	0.74	0.44	0.46 *	
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	2.00	0.44	0.45 *	
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	2.00	0.44	0.45 *	
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	2.00	0.44	0.46 *	
61	1	0.44	0.46	-0.02	2.31	0.00	2.00	-0.02	0.00	0.62	0.73	
	2	0.62	0.73	+0.01	3.57	0.00	2.00	+0.04	0.00	2.07	2.36	
	3	2.07	2.36	+0.17	31.47	0.00	2.00	+0.66	0.00	8.40	32.66	
	4	8.40	32.66	+0.65	31.79	24.90	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	6.45	5.51	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	3.99	1.79	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	2.16	0.00	2.00	-0.69	0.00	10.28	36.58	
	8	10.28	36.58	-0.83	1.06	0.00	2.00	-0.76	0.00	9.06	34.04	
	9	9.06	34.04	-0.81	0.34	0.00	2.00	-0.70	0.00	7.59	30.87	
	10	7.59	30.87	-0.77	0.00	0.00	2.00	-0.74	0.00	7.20	27.36	
	11	7.20	27.36	-0.69	0.00	0.00	2.00	-0.67	0.00	6.82	24.00	
	12	6.82	24.00	-0.60	0.00	0.00	2.00	-0.56	0.00	6.33	20.85	
62	1	6.33	20.85	-0.22	3.05	0.00	2.00	-0.23	0.00	6.43	21.44	
	2	6.43	21.44	+0.14	7.11	0.00	2.00	+0.15	0.00	7.14	26.84	
	3	7.14	26.84	+0.59	65.30	57.53	2.00	+0.91	0.00	11.49	39.11	
	4	11.49	39.11	+0.89	159.71	159.51	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	54.79	53.85	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	7.46	5.26	2.00	-0.37	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	3.59	0.50	2.00	-0.72	0.00	10.71	37.48	
	8	10.71	37.48	-0.87	1.73	0.00	2.00	-0.82	0.00	9.77	35.52	
	9	9.77	35.52	-0.87	1.01	0.00	2.00	-0.79	0.00	8.49	32.86	
	10	8.49	32.86	-0.86	0.31	0.00	2.00	-0.76	0.00	7.44	29.55	
	11	7.44	29.55	-0.72	0.00	0.00	2.00	-0.69	0.00	7.06	26.15	
	12	7.06	26.15	-0.62	0.00	0.00	2.00	-0.59	0.00	6.66	22.94	
63	1	6.66	22.94	-0.24	0.00	0.00	2.00	-0.22	0.00	6.27	20.48	
	2	6.27	20.48	+0.13	31.58	11.99	2.00	+0.24	0.00	11.17	38.44	
	3	11.17	38.44	+0.92	26.30	25.45	2.00	+0.91	0.00	11.49	39.11	
	4	11.49	39.11	+0.87	71.09	70.89	2.00	+0.86	0.00	11.47	39.06	
	5	11.47	39.06	+0.20	68.93	67.99	2.00	+0.19	0.00	11.15	38.39	
	6	11.15	38.39	-0.39	5.21	3.01	2.00	-0.39	0.00	10.87	37.81	
	7	10.87	37.81	-0.71	3.64	0.55	2.00	-0.72	0.00	10.71	37.43	
	8	10.71	37.43	-0.87	1.76	0.00	2.00	-0.82	0.00	9.78	35.55	
	9	9.78	35.55	-0.88	0.73	0.00	2.00	-0.78	0.00	8.38	32.62	
	10	8.38	32.62	-0.85	0.16	0.00	2.00	-0.76	0.00	7.40	29.18	
	11	7.40	29.18	-0.71	0.00	0.00	2.00	-0.68	0.00	7.02	25.78	
	12	7.02	25.78	-0.61	0.00	0.00	2.00	-0.59	0.00	6.61	22.58	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
64	1	6.61	22.58	-0.23	0.00	0.00	2.00	-0.22	0.00	6.22	20.12	
	2	6.22	20.12	+0.13	2.19	0.00	2.00	+0.13	0.00	6.29	20.58	
	3	6.29	20.58	+0.52	4.85	0.00	2.00	+0.56	0.00	6.88	24.51	
	4	6.88	24.51	+0.53	8.13	0.00	2.00	+0.60	0.00	7.97	31.76	
	5	7.97	31.76	+0.14	2.94	0.00	2.00	+0.15	0.00	8.56	32.99	
	6	8.56	32.99	-0.30	1.40	0.00	2.00	-0.28	0.00	7.99	31.81	
	7	7.99	31.81	-0.52	0.74	0.00	2.00	-0.49	0.00	7.44	29.54	
	8	7.44	29.54	-0.60	0.16	0.00	2.00	-0.58	0.00	7.10	26.52	
	9	7.10	26.52	-0.64	0.00	0.00	2.00	-0.61	0.00	6.72	23.27	
	10	6.72	23.27	-0.68	0.00	0.00	2.00	-0.64	0.00	6.19	19.96	
	11	6.19	19.96	-0.60	0.00	0.00	2.00	-0.56	0.00	5.64	16.81	
	12	5.64	16.81	-0.49	0.00	0.00	2.00	-0.44	0.00	4.96	13.87	
65	1	4.96	13.87	-0.18	0.90	0.00	2.00	-0.17	0.00	4.63	12.43	
	2	4.63	12.43	+0.10	5.72	0.00	2.00	+0.12	0.00	5.54	16.37	
	3	5.54	16.37	+0.45	3.38	0.00	2.00	+0.48	0.00	5.99	18.68	
	4	5.99	18.68	+0.46	12.50	0.00	2.00	+0.58	0.00	7.51	30.23	
	5	7.51	30.23	+0.13	6.81	0.00	2.00	+0.17	0.00	9.68	35.34	
	6	9.68	35.34	-0.34	3.54	0.00	2.00	-0.36	0.00	10.09	36.18	
	7	10.09	36.18	-0.64	1.93	0.00	2.00	-0.63	0.00	9.46	34.87	
	8	9.46	34.87	-0.77	0.85	0.00	2.00	-0.69	0.00	8.20	32.26	
	9	8.20	32.26	-0.73	0.23	0.00	2.00	-0.67	0.00	7.39	29.09	
	10	7.39	29.09	-0.75	0.00	0.00	2.00	-0.72	0.00	7.00	25.63	
	11	7.00	25.63	-0.68	0.00	0.00	2.00	-0.64	0.00	6.56	22.31	
	12	6.56	22.31	-0.57	0.00	0.00	2.00	-0.54	0.00	6.07	19.19	
66	1	6.07	19.19	-0.22	1.02	0.00	2.00	-0.21	0.00	5.85	17.79	
	2	5.85	17.79	+0.13	2.27	0.00	2.00	+0.13	0.00	5.93	18.31	
	3	5.93	18.31	+0.49	3.06	0.00	2.00	+0.51	0.00	6.25	20.37	
	4	6.25	20.37	+0.48	5.06	0.00	2.00	+0.53	0.00	6.87	24.44	
	5	6.87	24.44	+0.12	4.06	0.00	2.00	+0.12	0.00	7.13	26.74	
	6	7.13	26.74	-0.25	2.63	0.00	2.00	-0.25	0.00	7.14	26.87	
	7	7.14	26.87	-0.46	1.21	0.00	2.00	-0.46	0.00	6.95	25.16	
	8	6.95	25.16	-0.56	0.42	0.00	2.00	-0.54	0.00	6.59	22.48	
	9	6.59	22.48	-0.59	0.00	0.00	2.00	-0.55	0.00	6.09	19.34	
	10	6.09	19.34	-0.62	0.00	0.00	2.00	-0.57	0.00	5.49	16.15	
	11	5.49	16.15	-0.53	0.00	0.00	2.00	-0.47	0.00	4.80	13.15	
	12	4.80	13.15	-0.42	0.00	0.00	2.00	-0.33	0.00	4.33	10.35	
67	1	4.33	10.35	-0.15	0.05	0.00	2.00	-0.14	0.00	4.01	8.10	
	2	4.01	8.10	+0.09	1.48	0.00	2.00	+0.06	0.00	3.87	7.75	
	3	3.87	7.75	+0.32	2.38	0.00	2.00	+0.33	0.00	4.11	8.78	
	4	4.11	8.78	+0.32	3.65	0.00	2.00	+0.34	0.00	4.43	11.09	
	5	4.43	11.09	+0.08	2.63	0.00	2.00	+0.06	0.00	4.54	11.88	
	6	4.54	11.88	-0.16	1.88	0.00	2.00	-0.16	0.00	4.48	11.44	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	4.48	11.44	-0.29	0.79	0.00	2.00	-0.28	0.00	4.23	9.66	
	8	4.23	9.66	-0.34	0.20	0.00	2.00	-0.30	0.00	3.61	7.21	
	9	3.61	7.21	-0.32	0.00	0.00	2.00	-0.22	0.00	2.39	4.67	
	10	2.39	4.67	-0.24	0.00	0.00	2.00	-0.22	0.00	1.93	2.21	
	11	1.93	2.21	-0.19	0.00	0.00	1.53	-0.05	0.47	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	2.00	0.44	0.46	*

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
1	1	6.21	20.10	-0.22	0.00	0.00	3.00	-0.20	0.00	5.61	16.68	
	2	5.61	16.68	+0.12	1.37	0.00	3.00	+0.11	0.00	5.29	15.28	
	3	5.29	15.28	+0.43	14.38	0.00	3.00	+0.59	0.00	7.23	27.68	
	4	7.23	27.68	+0.56	20.80	8.84	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	21.79	19.80	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	4.46	1.27	3.00	-0.37	0.00	10.40	36.83	
	7	10.40	36.83	-0.68	2.81	0.00	3.00	-0.65	0.00	9.67	35.32	
	8	9.67	35.32	-0.78	1.31	0.00	3.00	-0.69	0.00	8.15	32.15	
	9	8.15	32.15	-0.73	0.48	0.00	3.00	-0.66	0.00	7.29	28.25	
	10	7.29	28.25	-0.74	0.02	0.00	3.00	-0.69	0.00	6.80	23.83	
	11	6.80	23.83	-0.66	0.00	0.00	3.00	-0.60	0.00	6.13	19.58	
	12	6.13	19.58	-0.54	0.00	0.00	3.00	-0.48	0.00	5.35	15.56	
2	1	5.35	15.56	-0.19	2.82	0.00	3.00	-0.19	0.00	5.22	15.01	
	2	5.22	15.01	+0.11	2.97	0.00	3.00	+0.11	0.00	5.27	15.20	
	3	5.27	15.20	+0.43	2.90	0.00	3.00	+0.44	0.00	5.45	15.97	
	4	5.45	15.97	+0.42	6.37	0.00	3.00	+0.48	0.00	6.23	20.24	
	5	6.23	20.24	+0.11	3.11	0.00	3.00	+0.11	0.00	6.29	20.57	
	6	6.29	20.57	-0.22	1.97	0.00	3.00	-0.21	0.00	6.05	19.11	
	7	6.05	19.11	-0.39	0.91	0.00	3.00	-0.36	0.00	5.51	16.26	
	8	5.51	16.26	-0.45	0.45	0.00	3.00	-0.39	0.00	4.73	12.87	
	9	4.73	12.87	-0.42	0.05	0.00	3.00	-0.38	0.00	4.16	9.12	
	10	4.16	9.12	-0.42	0.00	0.00	3.00	-0.29	0.00	2.71	5.41	
	11	2.71	5.41	-0.26	0.00	0.00	3.00	-0.18	0.00	1.71	1.97	
	12	1.71	1.97	-0.15	0.00	0.00	1.32	-0.04	1.68	0.44	0.46	*
3	1	0.44	0.46	-0.02	0.00	0.00	0.00	-0.02	3.00	0.46	0.48	*
	2	0.46	0.48	+0.01	0.00	0.00	0.00	+0.01	3.00	0.47	0.51	*
	3	0.47	0.51	+0.04	1.34	0.00	1.39	+0.04	1.61	0.49	0.54	*
	4	0.49	0.54	+0.04	1.80	0.00	1.88	+0.04	1.12	0.49	0.54	*
	5	0.49	0.54	+0.01	1.05	0.00	1.09	+0.01	1.91	0.47	0.51	*
	6	0.47	0.51	-0.02	0.48	0.00	0.47	-0.02	2.53	0.46	0.48	*
	7	0.46	0.48	-0.03	0.02	0.00	0.00	-0.03	3.00	0.45	0.47	*
	8	0.45	0.47	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
	9	0.44	0.46	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.15	0.00	0.07	-0.04	2.93	0.44	0.46	*
4	1	0.44	0.46	-0.02	1.32	0.00	1.26	-0.02	1.74	0.46	0.48	*
	2	0.46	0.48	+0.01	4.89	0.00	3.00	+0.04	0.00	2.13	2.43	
	3	2.13	2.43	+0.17	32.96	0.00	3.00	+0.68	0.00	8.68	33.25	
	4	8.68	33.25	+0.67	14.72	8.44	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	4.01	2.02	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	2.30	0.00	3.00	-0.36	0.00	9.98	35.96	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	9.98	35.96	-0.65	1.03	0.00	3.00	-0.57	0.00	8.45	32.77	
	8	8.45	32.77	-0.68	0.32	0.00	3.00	-0.60	0.00	7.36	28.81	
	9	7.36	28.81	-0.66	0.00	0.00	3.00	-0.62	0.00	6.88	24.52	
	10	6.88	24.52	-0.69	0.00	0.00	3.00	-0.64	0.00	6.23	20.19	
	11	6.23	20.19	-0.60	0.00	0.00	3.00	-0.54	0.00	5.47	16.05	
	12	5.47	16.05	-0.48	0.08	0.00	3.00	-0.41	0.00	4.59	12.24	
5	1	4.59	12.24	-0.16	12.41	0.00	3.00	-0.23	0.00	6.40	21.26	
	2	6.40	21.26	+0.14	48.29	29.49	3.00	+0.23	0.00	10.69	37.43	
	3	10.69	37.43	+0.88	102.98	101.08	3.00	+0.87	0.00	10.99	38.07	
	4	10.99	38.07	+0.85	84.37	83.09	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	141.99	140.00	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	5.93	2.74	3.00	-0.37	0.00	10.40	36.83	
	7	10.40	36.83	-0.68	3.02	0.00	3.00	-0.66	0.00	9.77	35.52	
	8	9.77	35.52	-0.79	1.42	0.00	3.00	-0.70	0.00	8.30	32.45	
	9	8.30	32.45	-0.74	0.74	0.00	3.00	-0.66	0.00	7.35	28.78	
	10	7.35	28.78	-0.74	0.49	0.00	3.00	-0.71	0.00	6.91	24.82	
	11	6.91	24.82	-0.67	0.25	0.00	3.00	-0.62	0.00	6.32	20.79	
	12	6.32	20.79	-0.55	0.73	0.00	3.00	-0.51	0.00	5.79	17.45	
6	1	5.79	17.45	-0.21	2.45	0.00	3.00	-0.20	0.00	5.57	16.49	
	2	5.57	16.49	+0.12	2.68	0.00	3.00	+0.12	0.00	5.55	16.41	
	3	5.55	16.41	+0.46	64.65	41.32	3.00	+0.87	0.00	10.99	38.07	
	4	10.99	38.07	+0.85	5.46	4.18	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	10.40	8.41	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	11.28	8.09	3.00	-0.37	0.00	10.40	36.83	
	7	10.40	36.83	-0.68	3.34	0.00	3.00	-0.67	0.00	9.92	35.83	
	8	9.92	35.83	-0.80	1.60	0.00	3.00	-0.72	0.00	8.52	32.91	
	9	8.52	32.91	-0.76	1.28	0.00	3.00	-0.67	0.00	7.46	29.75	
	10	7.46	29.75	-0.75	0.46	0.00	3.00	-0.72	0.00	7.02	25.74	
	11	7.02	25.74	-0.68	0.01	0.00	3.00	-0.63	0.00	6.43	21.44	
	12	6.43	21.44	-0.56	0.77	0.00	3.00	-0.52	0.00	5.90	18.13	
7	1	5.90	18.13	-0.21	0.87	0.00	3.00	-0.19	0.00	5.36	15.60	
	2	5.36	15.60	+0.12	1.18	0.00	3.00	+0.11	0.00	4.99	14.00	
	3	4.99	14.00	+0.41	0.74	0.00	3.00	+0.38	0.00	4.65	12.52	
	4	4.65	12.52	+0.36	0.44	0.00	3.00	+0.34	0.00	4.37	10.66	
	5	4.37	10.66	+0.08	0.85	0.00	3.00	+0.07	0.00	4.09	8.66	
	6	4.09	8.66	-0.14	0.28	0.00	3.00	-0.10	0.00	2.85	5.69	
	7	2.85	5.69	-0.19	0.00	0.00	3.00	-0.14	0.00	2.07	2.36	
	8	2.07	2.36	-0.17	0.00	0.00	1.70	-0.04	1.30	0.44	0.46	*
	9	0.44	0.46	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
8	1	0.44	0.46	-0.02	0.00	0.00	0.00	-0.02	3.00	0.46	0.48	*
	2	0.46	0.48	+0.01	0.63	0.00	0.62	+0.01	2.38	0.47	0.51	*
	3	0.47	0.51	+0.04	75.45	35.80	3.00	+0.87	0.00	10.99	38.07	
	4	10.99	38.07	+0,85	22.57	21.29	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	5.51	3.52	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	3.14	0.00	3.00	-0.37	0.00	10.38	36.78	
	7	10.38	36.78	-0.67	1.73	0.00	3.00	-0.61	0.00	9.15	34.22	
	8	9.15	34.22	-0.74	1.42	0.00	3.00	-0.65	0.00	7.72	31.25	
	9	7.72	31.25	-0.69	0.54	0.00	3.00	-0.65	0.00	7.21	27.45	
	10	7.21	27.45	-0.73	0.06	0.00	3.00	-0.69	0.00	6.69	23.10	
	11	6.69	23.10	-0.65	0.00	0.00	3.00	-0.59	0.00	6.02	18.86	
	12	6.02	18.86	-0.53	0.40	0.00	3.00	-0.47	0.00	5.28	15.26	
9	1	5.28	15.26	-0.19	0.33	0.00	3.00	-0.16	0.00	4.59	12.24	
	2	4.59	12.24	+0.10	2.03	0.00	3.00	+0.10	0.00	4.48	11.47	
	3	4.48	11.47	+0.37	9.82	0.00	3.00	+0.49	0.00	6.06	19.14	
	4	6.06	19.14	+0.47	14.01	0.00	3.00	+0.59	0.00	7.70	31.21	
	5	7.70	31.21	+0.13	51.10	42.24	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	4.48	1.29	3.00	-0.37	0.00	10.40	36.83	
	7	10.40	36.83	-0.68	2.44	0.00	3.00	-0.64	0.00	9.50	34.96	
	8	9.50	34.96	-0.77	1.10	0.00	3.00	-0.67	0.00	7.90	31.62	
	9	7.90	31.62	-0.71	0.41	0.00	3.00	-0.65	0.00	7.23	27.67	
	10	7.23	27.67	-0.73	0.00	0.00	3.00	-0.69	0.00	6.71	23.25	
	11	6.71	23.25	-0.65	0.00	0.00	3.00	-0.59	0.00	6.04	19.01	
	12	6.04	19.01	-0.53	0.00	0.00	3.00	-0.47	0.00	5.23	15.02	
10	1	5.23	15.02	-0.19	0.00	0.00	3.00	-0.16	0.00	4.51	11.67	
	2	4.51	11.67	+0.10	0.14	0.00	3.00	+0.09	0.00	4.14	9.00	
	3	4.14	9.00	+0.34	1.17	0.00	3.00	+0.31	0.00	3.91	7.81	
	4	3.91	7.81	+0.30	8.06	0.00	3.00	+0.37	0.00	4.89	13.55	
	5	4.89	13.55	+0.09	3.79	0.00	3.00	+0.09	0.00	5.11	14.51	
	6	5.11	14.51	-0.18	2.33	0.00	3.00	-0.17	0.00	4.88	13.49	
	7	4.88	13.49	-0.32	1.41	0.00	3.00	-0.29	0.00	4.46	11.29	
	8	4.46	11.29	-0.36	0.57	0.00	3.00	-0.33	0.00	4.02	8.17	
	9	4.02	8.17	-0.36	0.07	0.00	3.00	-0.22	0.00	2.39	4.66	
	10	2.39	4.66	-0.24	0.00	0.00	3.00	-0.12	0.00	1.08	1.30	
	11	1.08	1.30	-0.10	0.51	0.00	1.21	-0.05	1.79	0.44	0.45	*
	12	0.44	0.45	-0.04	0.04	0.00	0.00	-0.04	3.00	0.44	0.46	*
11	1	0.44	0.46	-0.02	1.20	0.00	1.14	-0.02	1.86	0.46	0.48	*
	2	0.46	0.48	+0.01	14.62	0.00	3.00	+0.10	0.00	4.59	12.21	
	3	4.59	12.21	+0.38	7.37	0.00	3.00	+0.47	0.00	5.78	17.42	
	4	5.78	17.42	+0.45	21.60	0.00	3.00	+0.79	0.00	10.61	37.26	
	5	10.61	37.26	+0.19	5.11	2.36	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	3.13	0.00	3.00	-0.37	0.00	10.37	36.77	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	10.37	36.77	-0.67	1.70	0.00	3.00	-0.61	0.00	9.13	34.19	
	8	9.13	34.19	-0.74	0.69	0.00	3.00	-0.62	0.00	7.55	30.52	
	9	7.55	30.52	-0.68	0.14	0.00	3.00	-0.64	0.00	7.08	26.34	
	10	7.08	26.34	-0.72	0.00	0.00	3.00	-0.67	0.00	6.51	21.96	
	11	6.51	21.96	-0.63	0.00	0.00	3.00	-0.57	0.00	5.84	17.76	
	12	5.84	17.76	-0.51	0.00	0.00	3.00	-0.44	0.00	4.95	13.80	
12	1	4.95	13.80	-0.18	2.22	0.00	3.00	-0.17	0.00	4.69	12.68	
	2	4.69	12.68	+0.10	5.22	0.00	3.00	+0.11	0.00	5.25	15.11	
	3	5.25	15.11	+0.43	38.80	14.14	3.00	+0.87	0.00	10.99	38.07	
	4	10.99	38.07	+0.85	52.74	51.46	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	21.83	19.84	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	8.21	5.02	3.00	-0.37	0.00	10.40	36.83	
	7	10.40	36.83	-0.68	3.15	0.00	3.00	-0.66	0.00	9.83	35.64	
	8	9.83	35.64	-0.80	1.49.	0.00	3.00	-0.71	0.00	8.38	32.63	
	9	8.38	32.63	-0.75	0.58	0.00	3.00	-0.66	0.00	7.36	28.80	
	10	7.36	28.80	-0.74	0.08	0.00	3.00	-0.70	0.00	6.87	24.43	
	11	6.87	24.43	-0.66	0.00	0.00	3.00	-0.61	0.00	6.22	20.16	
	12	6.22	20.16	-0.54	0.00	0.00	3.00	-0.49	0.00	5.48	16.13	
13	1	5.48	16.13	-0.19	2.49	0.00	3.00	-0.19	0.00	5.28	15.23	
	2	5.28	15.23	+0.11	3.69	0.00	3.00	+0.12	0.00	5.49	16.15	
	3	5.49	16.15	+0.45	6.61	0.00	3.00	+0.51	0.00	6.31	20.72	
	4	6.31	20.72	+0.49	6.32	0.00	3.00	+0.53	0.00	6.94	25.07	
	5	6.94	25.07	+0.12	4.08	0.00	3.00	+0.12	0.00	7.09	26.39	
	6	7.09	26.39	-0.25	2.62	0.00	3.00	-0.25	0.00	6.99	25.52	
	7	6.99	25.52	-0.45	1.38	0.00	3.00	-0.44	0.00	6.67	23.00	
	8	6.67	23.00	-0.54	0.72	0.00	3.00	-0.50	0.00	6.15	19.68	
	9	6.15	19.68	-0.55	0.16	0.00	3.00	-0.49	0.00	5.41	15.80	
	10	5.41	15.80	-0.55	0.00	0.00	3.00	-0.46	0.00	4.53	11.79	
	11	4.53	11.79	-0.44	0.00	0.00	3.00	-0.39	0.00	3.98	7.96	
	12	3.98	7.96	-0.35	0.00	0.00	3.00	-0.21	0.00	2.37	4.40	
14	1	2.37	4.40	-0.08	0.73	0.00	3.00	-0.06	0.00	1.72	1.98	
	2	1.72	1.98	+0.04	7.59	0.00	3.00	+0.07	0.00	3.34	6.68	
	3	3.34	6.68	+0.27	30.77	0.00	3.00	+0.77	0.00	9.76	35.50	
	4	9.76	35.50	+0.76	36.29	32.34	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	8.74	6.75	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	3.57	0.35	3.00	-0.37	0.00	10.40	36.83	
	7	10.40	36.83	-0.68	1.82	0.00	3.00	-0.62	0.00	9.21	34.36	
	8	9.21	34.36	-0.75	0.76	0.00	3.00	-0.63	0.00	7.57	30.74	
	9	7.57	30.74	-0.68	0.18	0.00	3.00	-0.64	0.00	7.11	26.60	
	10	7.11	26.60	-0.72	0.00	0.00	3.00	-0.67	0.00	6.55	22.21	
	11	6.55	22.21	-0.63	0.00	0.00	3.00	-0.58	0.00	5.88	18.00	
	12	5.88	18.00	-0.51	0.00	0.00	3.00	-0.45	0.00	5.00	14.04	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
15	1	5.00	14.04	-0.18	0.48	0.00	3.00	-0.16	0.00	4.44	11.18	
	2	4.44	11.18	+0.10	1.60	0.00	3.00	+0.09	0.00	4.28	9.97	
	3	4.28	9.97	+0.35	3.45	0.00	3.00	+0.36	0.00	4.44	11.13	
	4	4.44	11.13	+0.34	19.28	0.00	3.00	+0.56	0.00	7.30	28.32	
	5	7.30	28.32	+0.13	4.33	0.00	3.00	+0.13	0.00	7.48	29.90	
	6	7.48	29.90	-0.26	2.76	0.00	3.00	-0.26	0.00	7.39	29.14	
	7	7.39	29.14	-0.48	1.39	0.00	3.00	-0.47	0.00	7.11	26.59	
	8	7.11	26.59	-0.58	0.52	0.00	3.00	-0.55	0.00	6.67	22.98	
	9	6.67	22.98	-0.60	0.05	0.00	3.00	-0.55	0.00	6.02	18.89	
	10	6.02	18.89	-0.61	0.00	0.00	3.00	-0.53	0.00	5.16	14.75	
	11	5.16	14.75	-0.50	0.00	0.00	3.00	-0.43	0.00	4.39	10.82	
	12	4.39	10.82	-0.38	0.00	0.00	3.00	-0.33	0.00	3.56	7.11	
16	1	3.56	7.11	-0.13	1.07	0.00	3.00	-0.09	0.00	2.48	4.96	
	2	2.48	4.96	+0.05	1.31	0.00	3.00	+0.05	0.00	2.28	3.38	
	3	2.28	3.38	+0.19	4.22	0.00	3.00	+0.20	0.00	2.49	4.98	
	4	2.49	4.98	+0.19	10.21	0.00	3.00	+0.36	0.00	4.70	12.74	
	5	4.70	12.74	+0.08	3.36	0.00	3.00	+0.08	0.00	4.82	13.27	
	6	4.82	13.27	-0.17	1.96	0.00	3.00	-0.16	0.00	4.54	11.90	
	7	4.54	11.90	-0.30	0.84	0.00	3.00	-0.27	0.00	4.16	9.17	
	8	4.16	9.17	-0.34	0.22	0.00	3.00	-0.25	0.00	2.90	5.81	
	9	2.90	5.81	-0.26	0.00	0.00	3.00	-0.20	0.00	2.06	2.35	
	10	2.06	2.35	-0.21	0.00	0.00	1.64	-0.05	1.36	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
17	1	0.44	0.46	-0.02	1.62	0.00	1.56	-0.02	1.44	0.46	0.48	*
	2	0.46	0.48	+0.01	13.32	0.00	3.00	+0.09	0.00	4.41	10.91	
	3	4.41	10.91	+0.36	26.89	0.00	3.00	+0.79	0.00	9.97	35.95	
	4	9.97	35.95	+0.77	28.70	25.22	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	4.69	2.70	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	2.59	0.00	3.00	-0.36	0.00	10.12	36.24	
	7	10.12	36.24	-0.66	1.29	0.00	3.00	-0.58	0.00	8.70	33.29	
	8	8.70	33.29	-0.70	0.47	0.00	3.00	-0.61	0.00	7.43	29.45	
	9	7.43	29.45	-0.66	0.02	0.00	3.00	-0.63	0.00	6.95	25.18	
	10	6.95	25.18	-0.70	0.00	0.00	3.00	-0.65	0.00	6.33	20.82	
	11	6.33	20.82	-0.61	0.00	0.00	3.00	-0.55	0.00	5.61	16.66	
	12	5.61	16.66	-0.49	0.84	0.00	3.00	-0.44	0.00	4.89	13.57	
18	1	4.89	13.57	-0.17	1.27	0.00	3.00	-0.16	0.00	4.49	11.51	
	2	4.49	11.51	+0.10	5.66	0.00	3.00	+0.11	0.00	5.08	14.37	
	3	5.08	14.37	+0.42	52.14	26.73	3.00	+0.87	0.00	10.99	38.07	
	4	10.99	38.07	+0.85	12.43	11.15	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	4.49	2.50	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	3.73	0.54	3.00	-0.37	0.00	10.40	36.83	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	10.40	36.83	-0.68	1.99	0.00	3.00	-0.62	0.00	9.29	34.52	
	8	9.29	34.52	-0.75	0.94	0.00	3.00	-0.64	0.00	7.63	31.07	
	9	7.63	31.07	-0.68	0.28	0.00	3.00	-0.65	0.00	7.16	27.02	
	10	7.16	27.02	-0.72	0.00	0.00	3.00	-0.68	0.00	6.61	22.61	
	11	6.61	22.61	-0.64	0.00	0.00	3.00	-0.58	0.00	5.94	18.39	
	12	5.94	18.39	-0.52	0.00	0.00	3.00	-0.45	0.00	5.09	14.42	
19	1	5.09	14.42	-0.18	1.52	0.00	3.00	-0.17	0.00	4.67	12.59	
	2	4.67	12.59	+0.10	9.16	0.00	3.00	+0.13	0.00	6.04	18.98	
	3	6.04	18.98	+0.49	12.20	0.00	3.00	+0.60	0.00	7.41	29.28	
	4	7.41	29.28	+0.57	7.83	0.00	3.00	+0.73	0.00	9.72	35.41	
	5	9.72	35.41	+0.17	3.86	0.00	3.00	+0.18	0.00	10.30	36.62	
	6	10.30	36.62	-0.36	2.31	0.00	3.00	-0.34	0.00	9.63	35.22	
	7	9.63	35.22	-0.63	1.09	0.00	3.00	-0.55	0.00	8.15	32.14	
	8	8.15	32.14	-0.66	0.36	0.00	3.00	-0.60	0.00	7.29	28.24	
	9	7.29	28.24	-0.65	0.00	0.00	3.00	-0.62	0.00	6.82	23.98	
	10	6.82	23.98	-0.69	0.00	0.00	3.00	-0.63	0.00	6.14	19.66	
	11	6.14	19.66	-0.59	0.00	0.00	3.00	-0.53	0.00	5.35	15.54	
	12	5.35	15.54	-0.47	0.00	0.00	3.00	-0.40	0.00	4.51	11.67	
20	1	4.51	11.67	-0.16	0.50	0.00	3.00	-0.15	0.00	4.12	8.86	
	2	4.12	8.86	+0.09	1.53	0.00	3.00	+0.08	0.00	3.78	7.56	
	3	3.78	7.56	+0.31	2.89	0.00	3.00	+0.32	0.00	4.01	8.08	
	4	4.01	8.08	+0.31	2.00	0.00	3.00	+0.29	0.00	3.84	7.68	
	5	3.84	7.68	+0.07	0.89	0.00	3.00	+0.05	0.00	2.84	5.68	
	6	2.84	5.68	-0.10	0.78	0.00	3.00	-0.08	0.00	2.27	3.28	
	7	2.27	3.28	-0.15	0.52	0.00	3.00	-0.04	0.00	0.55	0.62	
	8	0.55	0.62	-0.04	0.04	0.00	0.11	-0.04	2.89	0.44	0.46	*
	9	0.44	0.46	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
21	1	0.44	0.46	-0.02	1.91	0.00	1.85	-0.02	1.15	0.46	0.48	*
	2	0.46	0.48	+0.01	5.86	0.00	3.00	+0.05	0.00	2.28	3.40	
	3	2.28	3.40	+0.19	6.13	0.00	3.00	+0.28	0.00	3.50	6.99	
	4	3.50	6.99	+0.27	24.16	0.00	3.00	+0.57	0.00	7.38	28.99	
	5	7.38	28.99	+0.13	4.54	0.00	3.00	+0.13	0.00	7.58	30.79	
	6	7.58	30.79	-0.27	2.40	0.00	3.00	-0.26	0.00	7.45	29.67	
	7	7.45	29.67	-0.48	1.19	0.00	3.00	-0.47	0.00	7.14	26.90	
	8	7.14	26.90	-0.58	0.41	0.00	3.00	-0.55	0.00	6.70	23.19	
	9	6.70	23.19	-0.60	0.02	0.00	3.00	-0.55	0.00	6.05	19.06	
	10	6.05	19.06	-0.61	0.00	0.00	3.00	-0.54	0.00	5.20	14.91	
	11	5.20	14.91	-0.50	0.00	0.00	3.00	-0.43	0.00	4.42	10.97	
	12	4.42	10.97	-0.39	0.00	0.00	3.00	-0.33	0.00	3.63	7.26	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

OLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
22	1	3.63	7.26	-0.13	0.56	0.00	3.00	-0.08	0.00	2.38	4.60	
	2	2.38	4.60	+0.05	6.37	0.00	3.00	+0.09	0.00	4.02	8.11	
	3	4.02	8.11	+0.33	29.14	0.00	3.00	+0.76	0.00	9.68	35.34	
	4	9.68	35.34	+0.75	34.82	30.71	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	10.59	8.60	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	3.83	0.64	3.00	-0.37	0.00	10.40	36.83	
	7	10.40	36.83	-0.68	1.86	0.00	3.00	-0.62	0.00	9.23	34.39	
	8	9.23	34.39	-0.75	0.78	0.00	3.00	-0.63	0.00	7.58	30.79	
	9	7.58	30.79	-0.68	0.31	0.00	3.00	-0.64	0.00	7.13	26.78	
	10	7.13	26.78	-0.72	0.00	0.00	3.00	-0.67	0.00	6.58	22.39	
	11	6.58	22.39	-0.63	0.00	0.00	3.00	-0.58	0.00	5.91	18.17	
	12	5.91	18.17	-0.52	0.85	0.00	3.00	-0.47	0.00	5.23	15.04	
23	1	5.23	15.04	-0.19	2.73	0.00	3.00	-0.18	0.00	5.08	14.40	
	2	5.08	14.40	+0.11	4.10	0.00	3.00	+0.12	0.00	5.39	15.73	
	3	5.39	15.73	+0.44	10.38	0.00	3.00	+0.55	0.00	6.83	24.10	
	4	6.83	24.10	+0.53	77.09	61.52	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	19.97	17.98	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	5.22	2.03	3.00	-0.37	0.00	10.40	36.83	
	7	10.40	36.83	-0.68	2.68	0.00	3.00	-0.64	0.00	9.61	35.19	
	8	9.61	35.19	-0.78	1.23	0.00	3.00	-0.68	0.00	8.06	31.96	
	9	8.06	31.96	-0.72	0.44	0.00	3.00	-0.66	0.00	7.27	28.02	
	10	7.27	28.02	-0.73	0.00	0.00	3.00	-0.69	0.00	6.77	23.60	
	11	6.77	23.60	-0.65	0.00	0.00	3.00	-0.60	0.00	6.09	19.35	
	12	6.09	19.35	-0.53	0.00	0.00	3.00	-0.47	0.00	5.30	15.34	
24	1	5.30	15.34	-0.19	0.06	0.00	3.00	-0.16	0.00	4.56	12.05	
	2	4.56	12.05	+0.10	2.72	0.00	3.00	+0.10	0.00	4.55	11.96	
	3	4.55	11.96	+0.37	2.28	0.00	3.00	+0.37	0.00	4.56	11.99	
	4	4.56	11.99	+0.35	2.81	0.00	3.00	+0.35	0.00	4.65	12.50	
	5	4.65	12.50	+0.08	2.40	0.00	3.00	+0.08	0.00	4.57	12.07	
	6	4.57	12.07	-0.16	1.14	0.00	3.00	-0.15	0.00	4.26	9.90	
	7	4.26	9.90	-0.28	0.43	0.00	3.00	-0.23	0.00	3.41	6.82	
	8	3.41	6.82	-0.28	0.00	0.00	3.00	-0.19	0.00	2.27	3.36	
	9	2.27	3.36	-0.20	0.00	0.00	2.65	-0.04	0.35	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
25	1	0.44	0.46	-0.02	0.00	0.00	0.00	-0.02	3.00	0.46	0.48	*
	2	0.46	0.48	+0.01	2.18	0.00	2.17	+0.01	0.83	0.47	0.51	*
	3	0.47	0.51	+0.04	2.37	0.00	2.42	+0.04	0.58	0.49	0.54	*
	4	0.49	0.54	+0.04	3.85	0.00	3.00	+0.09	0.00	1.28	1.52	
	5	1.28	1.52	+0.02	3.59	0.00	3.00	+0.03	0.00	1.89	2.16	
	6	1.89	2.16	-0.07	2.45	0.00	3.00	-0.05	0.00	1.27	1.50	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	1.27	1.50	-0.08	1.29	0.00	2.21	-0.03	0.79	0.45	0.47	*
	8	0.45	0.47	-0.04	0.47	0.00	0.40	-0.04	2.60	0.44	0.46	*
	9	0.44	0.46	-0.04	0.02	0.00	0.00	-0.04	3.00	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
26	1	0.44	0.46	-0.02	0.69	0.00	0.63	-0.02	2.37	0.46	0.48	*
	2	0.46	0.48	+0.01	0.36	0.00	0.35	+0.01	2.65	0.47	0.51	*
	3	0.47	0.51	+0.04	13.95	0.00	3.00	+0.37	0.00	4.54	11.87	
	4	4.54	11.87	+0.35	5.90	0.00	3.00	+0.41	0.00	5.34	15.53	
	5	5.34	15.53	+0.09	3.71	0.00	3.00	+0.10	0.00	5.55	16.43	
	6	5.55	16.43	-0.19	2.15	0.00	3.00	-0.19	0.00	5.27	15.20	
	7	5.27	15.20	-0.34	1.07	0.00	3.00	-0.31	0.00	4.67	12.61	
	8	4.67	12.61	-0.38	0.53	0.00	3.00	-0.34	0.00	4.20	9.42	
	9	4.20	9.42	-0.38	0.05	0.00	3.00	-0.27	0.00	2.91	5.82	
	10	2.91	5.82	-0.29	0.00	0.00	3.00	-0.22	0.00	2.02	2.31	
	11	2.02	2.31	-0.19	0.00	0.00	1.61	-0.05	1.39	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
27	1	0.44	0.46	-0.02	0.00	0.00	0.00	-0.02	3.00	0.46	0.48	*
	2	0.46	0.48	+0.01	1.82	0.00	1.81	+0.01	1.19	0.47	0.51	*
	3	0.47	0.51	+0.04	9.11	0.00	3.00	+0.27	0.00	3.47	6.93	
	4	3.47	6.93	+0.27	4.72	0.00	3.00	+0.32	0.00	4.17	9.24	
	5	4.17	9.24	+0.07	3.55	0.00	3.00	+0.07	0.00	4.27	9.94	
	6	4.27	9.94	-0.15	1.90	0.00	3.00	-0.14	0.00	4.08	8.55	
	7	4.08	8.55	-0.26	1.22	0.00	3.00	-0.21	0.00	3.14	6.29	
	8	3.14	6.29	-0.25	0.43	0.00	3.00	-0.18	0.00	2.27	3.28	
	9	2.27	3.28	-0.20	0.19	0.00	2.77	-0.04	0.23	0.44	0.46	*
	10	0.44	0.46	-0.04	0.01	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
28	1	0.44	0.46	-0.02	2.56	0.00	2.50	-0.02	0.50	0.46	0.48	*
	2	0.46	0.48	+0.01	3.54	0.00	3.00	+0.02	0.00	0.85	1.05	
	3	0.85	1.05	+0.07	7.94	0.00	3.00	+0.25	0.00	3.15	6.31	
	4	3.15	6.31	+0.24	10.70	0.00	3.00	+0.39	0.00	5.14	14.65	
	5	5.14	14.65	+0.09	4.54	0.00	3.00	+0.10	0.00	5.54	16.37	
	6	5.54	16.37	-0.19	2.60	0.00	3.00	-0.19	0.00	5.36	15.59	
	7	5.36	15.59	-0.35	1.52	0.00	3.00	-0.32	0.00	4.86	13.44	
	8	4.86	13.44	-0.39	0.65	0.00	3.00	-0.35	0.00	4.33	10.34	
	9	4.33	10.34	-0.39	0.11	0.00	3.00	-0.32	0.00	3.37	6.75	
	10	3.37	6.75	-0.34	0.00	0.00	3.00	-0.23	0.00	2.26	3.18	
	11	2.26	3.18	-0.22	0.00	0.00	2.46	-0.05	0.54	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
29	1	0.44	0.46	-0.02	0.00	0.00	0.00	-0.02	3.00	0.46	0.48	*
	2	0.46	0.48	+0.01	0.44	0.00	0.43	+0.01	2.57	0.47	0.51	*
	3	0.47	0.51	+0.04	3.21	0.00	3.00	+0.05	0.00	0.67	0.81	
	4	0.67	0.81	+0.05	3.36	0.00	3.00	+0.08	0.00	1.08	1.30	
	5	1.08	1.30	+0.02	1.88	0.00	2.70	+0.01	0.30	0.47	0.51	*
	6	0.47	0.51	-0.02	1.37	0.00	1.36	-0.02	1.64	0.46	0.48	*
	7	0.46	0.48	-0.03	0.62	0.00	0.57	-0.03	2.43	0.45	0.47	*
	8	0.45	0.47	-0.04	0.10	0.00	0.03	-0.04	2.97	0.44	0.46	*
	9	0.44	0.46	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
30	1	0.44	0.46	-0.02	1.00	0.00	0.94	-0.02	2.06	0.46	0.48	*
	2	0.46	0.48	+0.01	1.57	0.00	1.56	+0.01	1.44	0.47	0.51	*
	3	0.47	0.51	+0.04	3.93	0.00	3.00	+0.10	0.00	1.34	1.58	
	4	1.34	1.58	+0.10	3.21	0.00	3.00	+0.13	0.00	1.75	2.02	
	5	1.75	2.02	+0.03	1.53	0.00	3.00	+0.01	0.00	0.53	0.59	
	6	0.53	0.59	-0.02	0.60	0.00	0.67	-0.02	2.33	0.46	0.48	*
	7	0.46	0.48	-0.03	0.09	0.00	0.04	-0.03	2.96	0.45	0.47	*
	8	0.45	0.47	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
	9	0.44	0.46	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.23	0.00	0.15	-0.04	2.85	0.44	0.46	*
31	1	0.44	0.46	-0.02	0.78	0.00	0.72	-0.02	2.28	0.46	0.48	*
	2	0.46	0.48	+0.01	0.78	0.00	0.77	+0.01	2.23	0.47	0.51	*
	3	0.47	0.51	+0.04	1.71	0.00	1.76	+0.04	1.24	0.49	0.54	*
	4	0.49	0.54	+0.04	3.09	0.00	3.00	+0.04	0.00	0.61	0.71	
	5	0.61	0.71	+0.01	2.59	0.00	2.81	+0.01	0.19	0.47	0.51	*
	6	0.47	0.51	-0.02	1.18	0.00	1.17	-0.02	1.83	0.46	0.48	*
	7	0.46	0.48	-0.03	0.67	0.00	0.62	-0.03	2.38	0.45	0.47	*
	8	0.45	0.47	-0.04	0.13	0.00	0.06	-0.04	2.94	0.44	0.46	*
	9	0.44	0.46	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	1.21	0.00	1.13	-0.04	1.87	0.44	0.46	*
32	1	0.44	0.46	-0.02	1.32	0.00	1.26	-0.02	1.74	0.46	0.48	*
	2	0.46	0.48	+0.01	1.98	0.00	1.97	+0.01	1.03	0.47	0.51	*
	3	0.47	0.51	+0.04	12.16	0.00	3.00	+0.35	0.00	4.29	10.06	
	4	4.29	10.06	+0.33	7.63	0.00	3.00	+0.41	0.00	5.32	15.42	
	5	5.32	15.42	+0.09	4.14	0.00	3.00	+0.10	0.00	5.63	16.75	
	6	5.63	16.75	-0.20	2.21	0.00	3.00	-0.19	0.00	5.36	15.58	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	5.36	15.58	-0.35	0.98	0.00	3.00	-0.31	0.00	4.74	12.90	
	8	4.74	12.90	-0.38	0.30	0.00	3.00	-0.34	0.00	4.21	9.47	
	9	4.21	9.47	-0.38	0.00	0.00	3.00	-0.27	0.00	2.91	5.82	
	10	2.91	5.82	-0.29	0.00	0.00	3.00	-0.22	0.00	2.02	2.30	
	11	2.02	2.30	-0.19	0.00	0.00	1.61	-0.05	1.39	0.44	0.45	*
	12	0.44	0.45	-0.04	0.57	0.00	0.49	-0.04	2.51	0.44	0.46	*
33	1	0.44	0.46	-0.02	2.60	0.00	2.54	-0.02	0.46	0.46	0.48	*
	2	0.46	0.48	+0.01	17.29	0.00	3.00	+0.11	0.00	5.20	14.89	
	3	5.20	14.89	+0.43	20.31	0.00	3.00	+0.69	0.00	8.71	33.32	
	4	8.71	33.32	+0.68	13.14	6.93	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	5.88	3.89	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	3.16	0.00	3.00	-0.37	0.00	10.39	36.80	
	7	10.39	36.80	-0.68	1.50	0.00	3.00	-0.61	0.00	9.05	34.02	
	8	9.05	34.02	-0.73	0.58	0.00	3.00	-0.61	0.00	7.52	30.25	
	9	7.52	30.25	-0.67	0.08	0.00	3.00	-0.64	0.00	7.05	26.02	
	10	7.05	26.02	-0.71	0.00	0.00	3.00	-0.66	0.00	6.46	21.65	
	11	6.46	21.65	-0.62	0.00	0.00	3.00	-0.57	0.00	5.79	17.46	
	12	5.79	17.46	-0.51	0.00	0.00	3.00	-0.44	0.00	4.88	13.51	
34	1	4.88	13.51	-0.17	1.59	0.00	3.00	-0.16	0.00	4.53	11.77	
	2	4.53	11.77	+0.10	2.45	0.00	3.00	+0.10	0.00	4.48	11.41	
	3	4.48	11.41	+0.37	3.22	0.00	3.00	+0.37	0.00	4.62	12.37	
	4	4.62	12.37	+0.36	5.67	0.00	3.00	+0.41	0.00	5.41	15.81	
	5	5.41	15.81	+0.09	2.97	0.00	3.00	+0.09	0.00	5.45	15.97	
	6	5.45	15.97	-0.19	1.62	0.00	3.00	-0.18	0.00	5.04	14.22	
	7	5.04	14.22	-0.33	0.65	0.00	3.00	-0.29	0.00	4.45	11.25	
	8	4.45	11.25	-0.36	0.12	0.00	3.00	-0.32	0.00	3.84	7.69	
	9	3.84	7.69	-0.34	0.00	0.00	3.00	-0.21	0.00	2.34	4.13	
	10	2.34	4.13	-0.24	0.00	0.00	3.00	-0.07	0.00	0.68	0.82	
	11	0.68	0.82	-0.07	0.00	0.00	0.26	-0.05	2.74	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
35	1	0.44	0.46	-0.02	0.00	0.00	0.00	-0.02	3.00	0.46	0.48	*
	2	0.46	0.48	+0.01	3.36	0.00	3.00	+0.02	0.00	0.71	0.87	
	3	0.71	0.87	+0.06	7.89	0.00	3.00	+0.24	0.00	3.03	6.06	
	4	3.03	6.06	+0.23	6.45	0.00	3.00	+0.33	0.00	4.29	10.07	
	5	4.29	10.07	+0.08	4.41	0.00	3.00	+0.08	0.00	4.51	11.63	
	6	4.51	11.63	-0.16	2.88	0.00	3.00	-0.16	0.00	4.45	11.20	
	7	4.45	11.20	-0.29	1.57	0.00	3.00	-0.27	0.00	4.17	9.21	
	8	4.17	9.21	-0.34	0.62	0.00	3.00	-0.26	0.00	3.11	6.23	
	9	3.11	6.23	-0.28	0.10	0.00	3.00	-0.20	0.00	2.23	2.85	
	10	2.23	2.85	-0.23	0.00	0.00	2.12	-0.05	0.88	0.44	0.45	*
	11	0.44	0.45	-0.04	1.37	0.00	1.28	-0.05	1.72	0.44	0.45	*
	12	0.44	0.45	-0.04	0.51	0.00	0.43	-0.04	2.57	0.44	0.46	*

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
36	1	0.44	0.46	-0.02	0.75	0.00	0.69	-0.02	2.31	0.46	0.48	*
	2	0.46	0.48	+0.01	2.29	0.00	2.28	+0.01	0.72	0.47	0.51	*
	3	0.47	0.51	+0.04	28.88	0.00	3.00	+0.58	0.00	7.16	27.01	
	4	7.16	27.01	+0.55	4.83	0.00	3.00	+0.58	0.00	7.49	29.97	
	5	7.49	29.97	+0.13	3.79	0.00	3.00	+0.13	0.00	7.61	31.02	
	6	7.61	31.02	-0.27	2.17	0.00	3.00	-0.26	0.00	7.45	29.67	
	7	7.45	29.67	-0.48	0.95	0.00	3.00	-0.47	0.00	7.12	26.67	
	8	7.12	26.67	-0.58	0.28	0.00	3.00	-0.55	0.00	6.65	22.82	
	9	6.65	22.82	-0.59	0.00	0.00	3.00	-0.54	0.00	5.99	18.69	
	10	5.99	18.69	-0.60	0.00	0.00	3.00	-0.53	0.00	5.12	14.55	
	11	5.12	14.55	-0.49	0.00	0.00	3.00	-0.43	0.00	4.37	10.63	
	12	4.37	10.63	-0.38	0.00	0.00	3.00	-0.32	0.00	3.47	6.93	
37	1	3.47	6.93	-0.12	0.13	0.00	3.00	-0.08	0.00	2.32	3.85	
	2	2.32	3.85	+0.05	2.16	0.00	3.00	+0.05	0.00	2.25	3.11	
	3	2.25	3.11	+0.18	4.41	0.00	3.00	+0.20	0.00	2.45	4.90	
	4	2.45	4.90	+0.19	4.14	0.00	3.00	+0.24	0.00	3.24	6.48	
	5	3.24	6.48	+0.06	5.76	0.00	3.00	+0.07	0.00	4.19	9.37	
	6	4.19	9.37	-0.15	2.84	0.00	3.00	-0.15	0.00	4.13	8.91	
	7	4.13	8.91	-0.27	1.32	0.00	3.00	-0.23	0.00	3.37	6.74	
	8	3.37	6.74	-0.27	0.49	0.00	3.00	-0.19	0.00	2.31	3.77	
	9	2.31	3.77	-0.21	0.03	0.00	3.00	-0.05	0.00	0.50	0.54	
	10	0.50	0.54	-0.05	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
38	1	0.44	0.46	-0.02	0.75	0.00	0.69	-0.02	2.31	0.46	0.48	*
	2	0.46	0.48	+0.01	1.26	0.00	1.25	+0.01	1.75	0.47	0.51	*
	3	0.47	0.51	+0.04	20.04	0.00	3.00	+0.48	0.00	5.89	18.07	
	4	5.89	18.07	+0.46	20.94	0.00	3.00	+0.79	0.00	10.60	37.25	
	5	10.60	37.25	+0.1[illegible]	4.33	1.57	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	2.34	0.00	3.00	-0.36	0.00	10.00	36.00	
	7	10.00	36.00	-0.65	1.41	0.00	3.00	-0.58	0.00	8.64	33.18	
	8	8.64	33.18	-0.70	0.54	0.00	3.00	-0.61	0.00	7.42	29.41	
	9	7.42	29.41	-0.66	0.05	0.00	3.00	-0.63	0.00	6.95	25.17	
	10	6.95	25.17	-0.70	0.00	0.00	3.00	-0.65	0.00	6.33	20.81	
	11	6.33	20.81	-0.61	0.00	0.00	3.00	-0.55	0.00	5.60	16.65	
	12	5.60	16.65	-0.49	0.00	0.00	3.00	-0.42	0.00	4.70	12.74	
39	1	4.70	12.74	-0.17	0.00	0.00	3.00	-0.15	0.00	4.20	9.42	
	2	4.20	9.42	+0.09	0.00	0.00	3.00	+0.07	0.00	3.29	6.58	
	3	3.29	6.58	+0.27	0.81	0.00	3.00	+0.20	0.00	2.43	4.86	
	4	2.43	4.86	+0.19	1.87	0.00	3.00	+0.18	0.00	2.34	4.10	
	5	2.34	4.10	+0.04	1.88	0.00	3.00	+0.04	0.00	2.25	3.06	
	6	2.25	3.06	-0.08	0.96	0.00	3.00	-0.03	0.00	0.74	0.91	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	0.74	0.91	-0.05	0.29	0.00	0.66	-0.03	2.34	0.45	0.47	*
	8	0.45	0.47	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
	9	0.44	0.46	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.11	0.00	0.03	-0.04	2.97	0.44	0.46	*
40	1	0.44	0.46	-0.02	0.88	0.00	0.82	-0.02	2.18	0.46	0.48	*
	2	0.46	0.48	+0.01	1.63	0.00	1.62	+0.01	1.38	0.47	0.51	*
	3	0.47	0.51	+0.04	5.82	0.00	3.00	+0.19	0.00	2.29	3.56	
	4	2.29	3.56	+0.18	5.11	0.00	3.00	+0.23	0.00	3.03	6.07	
	5	3.03	6.07	+0.05	3.75	0.00	3.00	+0.06	0.00	3.47	6.93	
	6	3.47	6.93	-0.12	1.96	0.00	3.00	-0.10	0.00	2.84	5.67	
	7	2.84	5.67	-0.18	0.84	0.00	3.00	-0.15	0.00	2.26	3.18	
	8	2.26	3.18	-0.18	0.22	0.00	2.72	-0.04	0.28	0.44	0.46	*
	9	0.44	0.46	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.14	0.00	0.06	-0.04	2.94	0.44	0.46	*
41	1	0.44	0.46	-0.02	0.57	0.00	0.51	-0.02	2.49	0.46	0.48	*
	2	0.46	0.48	+0.01	1.98	0.00	1.97	+0.01	1.03	0.47	0.51	*
	3	0.47	0.51	+0.04	2.97	0.00	3.00	+0.04	0.00	0.51	0.56	
	4	0.51	0.56	+0.04	4.56	0.00	3.00	+0.15	0.00	2.02	2.30	
	5	2.02	2.30	+0.04	2.93	0.00	3.00	+0.03	0.00	2.02	2.30	
	6	2.02	2.30	-0.07	1.74	0.00	3.00	-0.03	0.00	0.76	0.95	
	7	0.76	0.95	-0.05	0.72	0.00	1.12	-0.03	1.88	0.45	0.47	*
	8	0.45	0.47	-0.04	0.15	0.00	0.08	-0.04	2.92	0.44	0.46	*
	9	0.44	0.46	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
42	1	0.44	0.46	-0.02	0.00	0.00	0.00	-0.02	3.00	0.46	0.48	*
	2	0.46	0.48	+0.01	1.73	0.00	1.72	+0.01	1.28	0.47	0.51	*
	3	0.47	0.51	+0.04	3.10	0.00	3.00	+0.05	0.00	0.60	0.70	
	4	0.60	0.70	+0.05	3.36	0.00	3.00	+0.07	0.00	0.96	1.17	
	5	0.96	1.17	+0.02	1.96	0.00	2.65	+0.01	0.35	0.47	0.51	*
	6	0.47	0.51	-0.02	1.52	0.00	1.51	-0.02	1.49	0.46	0.48	*
	7	0.46	0.48	-0.03	0.59	0.00	0.54	-0.03	2.46	0.45	0.47	*
	8	0.45	0.47	-0.04	0.09	0.00	0.02	-0.04	2.98	0.44	0.46	*
	9	0.44	0.46	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
43	1	0.44	0.46	-0.02	1.36	0.00	1.30	-0.02	1.70	0.46	0.48	*
	2	0.46	0.48	+0.01	2.56	0.00	2.55	+0.01	0.45	0.47	0.51	*
	3	0.47	0.51	+0.04	2.89	0.00	2.94	+0.04	0.06	0.49	0.54	*
	4	0.49	0.54	+0.04	7.71	0.00	3.00	+0.20	0.00	2.75	5.49	
	5	2.75	5.49	+0.05	3.92	0.00	3.00	+0.06	0.00	3.26	6.52	
	6	3.26	6.52	-0.11	2.09	0.00	3.00	-0.10	0.00	2.70	5.40	
	7	2.70	5.40	-0.18	1.05	0.00	3.00	-0.15	0.00	2.25	3.12	
	8	2.25	3.12	-0.18	0.34	0.00	2.78	-0.04	0.22	0.44	0.46	*
	9	0.44	0.46	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
44	1	0.44	0.46	-0.02	0.00	0.00	0.00	-0.02	3.00	0.46	0.48	*
	2	0.46	0.48	+0.01	3.43	0.00	3.00	+0.02	0.00	0.76	0.94	
	3	0.76	0.94	+0.06	11.81	0.00	3.00	+0.35	0.00	4.30	10.16	
	4	4.30	10.16	+0.33	9.08	0.00	3.00	+0.43	0.00	5.69	17.01	
	5	5.69	17.01	+0.10	3.33	0.00	3.00	+0.10	0.00	5.81	17.54	
	6	5.81	17.54	-0.20	1.99	0.00	3.00	-0.19	0.00	5.48	16.13	
	7	5.48	16.13	-0.36	0.94	0.00	3.00	-0.32	0.00	4.85	13.39	
	8	4.85	13.39	-0.39	0.28	0.00	3.00	-0.35	0.00	4.27	9.93	
	9	4.27	9.93	-0.38	0.00	0.00	3.00	-0.29	0.00	3.13	6.26	
	10	3.13	6.26	-0.32	0.00	0.00	3.00	-0.23	0.00	2.22	2.71	
	11	2.22	2.71	-0.21	0.00	0.00	2.00	-0.05	1.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
45	1	0.44	0.46	-0.02	1.42	0.00	1.36	-0.02	1.64	0.46	0.48	*
	2	0.46	0.48	+0.01	1.82	0.00	1.81	+0.01	1.19	0.47	0.51	*
	3	0.47	0.51	+0.04	7.47	0.00	3.00	+0.21	0.00	2.61	5.22	
	4	2.61	5.22	+0.20	14.81	0.00	3.00	+0.44	0.00	5.83	17.68	
	5	5.83	17.68	+0.10	5.56	0.00	3.00	+0.11	0.00	6.27	20.45	
	6	6.27	20.45	-0.22	2.93	0.00	3.00	-0.22	0.00	6.19	19.95	
	7	6.19	19.95	-0.40	1.44	0.00	3.00	-0.38	0.00	5.82	17.60	
	8	5.82	17.60	-0.47	0.55	0.00	3.00	-0.42	0.00	5.05	14.26	
	9	5.05	14.26	-0.45	0.06	0.00	3.00	-0.39	0.00	4.35	10.48	
	10	4.35	10.48	-0.44	0.00	0.00	3.00	-0.36	0.00	3.34	6.68	
	11	3.34	6.68	-0.32	0.00	0.00	3.00	-0.22	0.00	2.26	3.14	
	12	2.26	3.14	-0.20	0.00	0.00	2.44	-0.04	0.56	0.44	0.46	*
46	1	0.44	0.46	-0.02	0.00	0.00	0.00	-0.02	3.00	0.46	0.48	*
	2	0.46	0.48	+0.01	0.00	0.00	0.00	+0.01	3.00	0.47	0.51	*
	3	0.47	0.51	+0.04	0.00	0.00	0.05	+0.04	2.95	0.49	0.54	*
	4	0.49	0.54	+0.04	0.61	0.00	0.69	+0.04	2.31	0.49	0.54	*
	5	0.49	0.54	+0.01	0.19	0.00	0.23	+0.01	2.77	0.47	0.51	*
	6	0.47	0.51	-0.02	0.00	0.00	0.00	-0.02	3.00	0.46	0.48	*

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	0.46	0.48	-0.03	0.00	0.00	0.00	-0.03	3.00	0.45	0.47	*
	8	0.45	0.47	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
	9	0.44	0.46	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
47	1	0.44	0.46	-0.02	0.64	0.00	0.58	-0.02	2.42	0.46	0.48	*
	2	0.46	0.48	+0.01	1.94	0.00	1.93	+0.01	1.07	0.47	0.51	*
	3	0.47	0.51	+0.04	18.93	0.00	3.00	+0.46	0.00	5.67	16.94	
	4	5.67	16.94	+0.44	3.92	0.00	3.00	+0.46	0.00	6.00	18.75	
	5	6.00	18.75	+0.10	3.03	0.00	3.00	+0.11	0.00	6.04	18.99	
	6	6.04	18.99	-0.21	1.81	0.00	3.00	-0.20	0.00	5.77	17.39	
	7	5.77	17.39	-0.38	0.75	0.00	3.00	-0.34	0.00	5.09	14.43	
	8	5.09	14.43	-0.41	0.30	0.00	3.00	-0.36	0.00	4.41	10.95	
	9	4.41	10.95	-0.39	0.00	0.00	3.00	-0.34	0.00	3.61	7.22	
	10	3.61	7.22	-0.36	0.00	0.00	3.00	-0.23	0.00	2.30	3.62	
	11	2.30	3.62	-0.22	0.00	0.00	2.90	-0.05	0.10	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
48	1	0.44	0.46	-0.02	0.00	0.00	0.00	-0.02	3.00	0.46	0.48	*
	2	0.46	0.48	+0.01	0.10	0.00	0.09	+0.01	2.91	0.47	0.51	*
	3	0.47	0.51	+0.04	9.55	0.00	3.00	+0.29	0.00	3.69	7.39	
	4	3.69	7.39	+0.29	5.39	0.00	3.00	+0.33	0.00	4.33	10.40	
	5	4.33	10.40	+0.08	2.50	0.00	3.00	+0.07	0.00	4.29	10.05	
	6	4.29	10.05	-0.15	1.59	0.00	3.00	-0.14	0.00	4.05	8.35	
	7	4.05	8.35	-0.26	1.06	0.00	3.00	-0.20	0.00	2.97	5.94	
	8	2.97	5.94	-0.24	0.34	0.00	3.00	-0.18	0.00	2.23	2.86	
	9	2.23	2.86	-0.20	0.00	0.00	2.16	-0.04	0.84	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.52	0.00	0.44	-0.04	2.56	0.44	0.46	*
49	1	0.44	0.46	-0.02	0.71	0.00	0.65	-0.02	2.35	0.46	0.48	*
	2	0.46	0.48	+0.01	14.78	0.00	3.00	+0.10	0.00	4.62	12.37	
	3	4.62	12.37	+0.38	44.08	16.63	3.00	+0.87	0.00	10.99	38.07	
	4	10.99	38.07	+0.85	5.54	4.26	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	8.54	6.55	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	2.77	0.00	3.00	-0.36	0.00	10.20	36.42	
	7	10.20	36.42	-0.66	1.28	0.00	3.00	-0.59	0.00	8.77	33.45	
	8	8.77	33.45	-0.71	0.46	0.00	3.00	-0.61	0.00	7.44	29.59	
	9	7.44	29.59	-0.67	0.01	0.00	3.00	-0.63	0.00	6.97	25.30	
	10	6.97	25.30	-0.70	0.00	0.00	3.00	-0.65	0.00	6.35	20.95	
	11	6.35	20.95	-0.61	0.00	0.00	3.00	-0.56	0.00	5.63	16.78	
	12	5.63	16.78	-0.49	0.00	0.00	3.00	-0.42	0.00	4.73	12.86	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
50	1	4.73	12.86	-0.17	0.67	0.00	3.00	-0.15	0.00	4.31	10.21	
	2	4.31	10.21	+0.09	3.43	0.00	3.00	+0.09	0.00	4.39	10.83	
	3	4.39	10.83	+0.36	112.85	83.84	3.00	+0.87	0.00	10.99	38.07	
	4	10.99	38.07	+0.85	50.38	49.10	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	5.65	3.66	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	2.87	0.00	3.00	-0.36	0.00	10.25	36.52	
	7	10.25	36.52	-0.67	1.62	0.00	3.00	-0.60	0.00	8.98	33.87	
	8	8.98	33.87	-0.73	0.65	0.00	3.00	-0.61	0.00	7.51	30.18	
	9	7.51	30.18	-0.67	0.12	0.00	3.00	-0.64	0.00	7.04	25.99	
	10	7.04	25.99	-0.71	0.00	0.00	3.00	-0.66	0.00	6.45	21.62	
	11	6.45	21.62	-0.62	0.00	0.00	3.00	-0.57	0.00	5.78	17.43	
	12	5.78	17.43	-0.51	1.70	0.00	3.00	-0.47	0.00	5.26	15.15	
51	1	5.26	15.15	-0.19	2.56	0.00	3.00	-0.18	0.00	5.07	14.34	
	2	5.07	14.34	+0.11	2.68	0.00	3.00	+0.11	0.00	5.05	14.24	
	3	5.05	14.24	+0.41	86.26	60.71	3.00	+0.87	0.00	10.99	38.07	
	4	10.99	38.07	+0.85	87.40	86.12	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	6.55	4.56	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	3.22	0.03	3.00	-0.37	0.00	10.40	36.83	
	7	10.40	36.83	-0.68	2.00	0.00	3.00	-0.62	0.00	9.29	34.53	
	8	9.29	34.53	-0.75	1.27	0.00	3.00	-0.66	0.00	7.79	31.39	
	9	7.79	31.39	-0.70	0.46	0.00	3.00	-0.65	0.00	7.21	27.50	
	10	7.21	27.50	-0.73	0.01	0.00	3.00	-0.69	0.00	6.69	23.10	
	11	6.69	23.10	-0.65	0.00	0.00	3.00	-0.59	0.00	6.02	18.86	
	12	6.02	18.86	-0.53	1.67	0.00	3.00	-0.50	0.00	5.57	16.51	
52	1	5.57	16.51	-0.20	7.86	0.00	3.00	-0.23	0.00	6.35	20.94	
	2	6.35	20.94	+0.14	54.45	35.33	3.00	+0.23	0.00	10.69	37.43	
	3	10.69	37.43	+0.88	65.00	63.10	3.00	+0.87	0.00	10.99	38.07	
	4	10.99	38.07	+0.85	131.97	130.69	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	52.05	50.06	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	4.85	1.66	3.00	-0.37	0.00	10.40	36.83	
	7	10.40	36.83	-0.68	3.27	0.00	3.00	-0.66	0.00	9.89	35.76	
	8	9.89	35.76	-0.80	1.56	0.00	3.00	-0.71	0.00	8.47	32.81	
	9	8.47	32.81	-0.76	0.61	0.00	3.00	-0.67	0.00	7.38	28.99	
	10	7.38	28.99	-0.75	0.10	0.00	3.00	-0.70	0.00	6.89	24.64	
	11	6.89	24.64	-0.67	0.00	0.00	3.00	-0.61	0.00	6.25	20.36	
	12	6.25	20.36	-0.55	0.00	0.00	3.00	-0.49	0.00	5.53	16.32	
53	1	5.53	16.32	-0.20	1.56	0.00	3.00	-0.18	0.00	5.11	14.50	
	2	5.11	14.50	+0.11	1.77	0.00	3.00	+0.10	0.00	4.87	13.49	
	3	4.87	13.49	+0.40	14.06	0.00	3.00	+0.57	0.00	6.99	25.52	
	4	6.99	25.52	+0.54	146.98	132.84	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	21.83	19.84	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	5.50	2.31	3.00	-0.37	0.00	10.40	36.83	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	10.40	36.83	-0.68	2.78	0.00	3.00	-0.65	0.00	9.66	35.29	
	8	9.66	35.29	-0.78	1.29	0.00	3.00	-0.69	0.00	8.13	32.11	
	9	8.13	32.11	-0.73	0.47	0.00	3.00	-0.66	0.00	7.29	28.19	
	10	7.29	28.19	-0.74	0.02	0.00	3.00	-0.69	0.00	6.80	23.78	
	11	6.80	23.78	-0.66	0.00	0.00	3.00	-0.60	0.00	6.12	19.53	
	12	6.12	19.53	-0.54	0.00	0.00	3.00	-0.48	0.00	5.34	15.51	
54	1	5.34	15.51	-0.19	0.00	0.00	3.00	-0.16	0.00	4.58	12.16	
	2	4.58	12.16	+0.10	2.62	0.00	3.00	+0.10	0.00	4.55	11.98	
	3	4.55	11.98	+0.37	3.77	0.00	3.00	+0.39	0.00	4.88	13.51	
	4	4.88	13.51	+0.38	3.72	0.00	3.00	+0.40	0.00	5.22	15.01	
	5	5.22	15.01	+0.09	7.12	0.00	3.00	+0.11	0.00	6.09	19.33	
	6	6.09	19.33	-0.21	3.79	0.00	3.00	-0.22	0.00	6.15	19.69	
	7	6.15	19.69	-0.40	2.57	0.00	3.00	-0.39	0.00	5.95	18.47	
	8	5.95	18.47	-0.48	1.17	0.00	3.00	-0.44	0.00	5.39	15.71	
	9	5.39	15.71	-0.48	0.41	0.00	3.00	-0.42	0.00	4.59	12.22	
	10	4.59	12.22	-0.46	0.00	0.00	3.00	-0.41	0.00	4.05	8.34	
	11	4.05	8.34	-0.39	0.00	0.00	3.00	-0.24	0.00	2.39	4.71	
	12	2.39	4.71	-0.21	0.00	0.00	3.00	-0.11	0.00	1.16	1.39	
55	1	1.16	1.39	-0.04	2.00	0.00	2.85	-0.02	0.15	0.46	0.48	*
	2	0.46	0.48	+0.01	26.77	0.00	3.00	+0.15	0.00	6.87	24.41	
	3	6.87	24.41	+0.56	83.93	68.70	3.00	+0.87	0.00	10.99	38.07	
	4	10.99	38.07	+0.85	88.07	86.79	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	46.52	44.53	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	4.39	1.20	3.00	-0.37	0.00	10.40	36.83	
	7	10.40	36.83	-0.68	2.17	0.00	3.00	-0.63	0.00	9.37	34.70	
	8	9.37	34.70	-0.76	0.95	0.00	3.00	-0.65	0.00	7.71	31.24	
	9	7.71	31.24	-0.69	0.28	0.00	3.00	-0.65	0.00	7.18	27.18	
	10	7.18	27.18	-0.72	0.00	0.00	3.00	-0.68	0.00	6.64	22.77	
	11	6.64	22.77	-0.64	0.00	0.00	3.00	-0.58	0.00	5.97	18.55	
	12	5.97	18.55	-0.52	0.00	0.00	3.00	-0.46	0.00	5.12	14.57	
56	1	5.12	14.57	-0.18	1.43	0.00	3.00	-0.17	0.00	4.68	12.65	
	2	4.68	12.65	+0.10	3.12	0.00	3.00	+0.10	0.00	4.75	12.97	
	3	4.75	12.97	+0.39	25.77	0.00	3.00	+0.83	0.00	10.46	36.95	
	4	10.46	36.95	+0.81	125.92	123.48	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	91.45	89.46	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	4.80	1.61	3.00	-0.37	0.00	10.40	36.83	
	7	10.40	36.83	-0.68	2.40	0.00	3.00	-0.64	0.00	9.48	34.92	
	8	9.48	34.92	-0.77	1.08	0.00	3.00	-0.66	0.00	7.87	31.57	
	9	7.87	31.57	-0.70	0.35	0.00	3.00	-0.65	0.00	7.22	27.56	
	10	7.22	27.56	-0.73	0.00	0.00	3.00	-0.69	0.00	6.70	23.14	
	11	6.70	23.14	-0.65	0.00	0.00	3.00	-0.59	0.00	6.02	18.91	
	12	6.02	18.91	-0.53	0.00	0.00	3.00	-0.46	0.00	5.20	14.92	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
57	1	5.20	14.92	-0.18	0.88	0.00	3.00	-0.17	0.00	4.63	12.44	
	2	4.63	12.44	+0.10	2.66	0.00	3.00	+0.10	0.00	4.60	12.30	
	3	4.60	12.30	+0.38	3.73	0.00	3.00	+0.40	0.00	4.95	13.81	
	4	4.95	13.81	+0.38	6.07	0.00	3.00	+0.45	0.00	5.83	17.71	
	5	5.83	17.71	+0.10	3.51	0.00	3.00	+0.10	0.00	5.95	18.42	
	6	5.95	18.42	-0.21	1.69	0.00	3.00	-0.20	0.00	5.62	16.71	
	7	5.62	16.71	-0.37	1.31	0.00	3.00	-0.33	0.00	5.07	14.32	
	8	5.07	14.32	-0.41	0.48	0.00	3.00	-0.36	0.00	4.42	11.02	
	9	4.42	11.02	-0.40	0.02	0.00	3.00	-0.34	0.00	3.65	7.31	
	10	3.65	7.31	-0.37	0.00	0.00	3.00	-0.23	0.00	2.30	3.70	
	11	2.30	3.70	-0.22	0.00	0.00	2.98	-0.05	0.02	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
58	1	0.44	0.46	-0.02	0.00	0.00	0.00	-0.02	3.00	0.46	0.48	*
	2	0.46	0.48	+0.01	0.61	0.00	0.60	+0.01	2.40	0.47	0.51	*
	3	0.47	0.51	+0.04	2.32	0.00	2.37	+0.04	0.63	0.49	0.54	*
	4	0.49	0.54	+0.04	2.37	0.00	2.45	+0.04	0.55	0.49	0.54	*
	5	0.49	0.54	+0.01	1.41	0.00	1.45	+0.01	1.55	0.47	0.51	*
	6	0.47	0.51	-0.02	0.54	0.00	0.53	-0.02	2.47	0.46	0.48	*
	7	0.46	0.48	-0.03	0.39	0.00	0.34	-0.03	2.66	0.45	0.47	*
	8	0.45	0.47	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
	9	0.44	0.46	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
59	1	0.44	0.46	-0.02	0.00	0.00	0.00	-0.02	3.00	0.46	0.48	*
	2	0.46	0.48	+0.01	1.33	0.00	1.32	+0.01	1.68	0.47	0.51	*
	3	0.47	0.51	+0.04	4.18	0.00	3.00	+0.12	0.00	1.59	1.85	
	4	1.59	1.85	+0.12	3.51	0.00	3.00	+0.17	0.00	2.21	2.65	
	5	2.21	2.65	+0.04	3.86	0.00	3.00	+0.04	0.00	2.29	3.59	
	6	2.29	3.59	-0.08	2.49	0.00	3.00	-0.08	0.00	2.24	2.92	
	7	2.24	2.92	-0.15	1.57	0.00	3.00	-0.07	0.00	1.06	1.27	
	8	1.06	1.27	-0.09	0.62	0.00	1.31	-0.04	1.69	0.44	0.46	*
	9	0.44	0.46	-0.04	0.10	0.00	0.02	-0.04	2.98	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
60	1	0.44	0.46	-0.02	0.00	0.00	0.00	-0.02	3.00	0.46	0.48	*
	2	0.46	0.48	+0.01	0.27	0.00	0.26	+0.01	2.74	0.47	0.51	*
	3	0.47	0.51	+0.04	1.71	0.00	1.76	+0.04	1.24	0.49	0.54	*
	4	0.49	0.54	+0.04	3.51	0.00	3.00	+0.07	0.00	0.94	1.15	
	5	0.94	1.15	+0.02	3.98	0.00	3.00	+0.03	0.00	1.91	2.18	
	6	1.91	2.18	-0.07	2.16	0.00	3.00	-0.04	0.00	1.02	1.24	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	1.02	1.24	-0.07	0.95	0.00	1.62	-0.03	1.38	0.45	0.47	*
	8	0.45	0.47	-0.04	0.96	0.00	0.89	-0.04	2.11	0.44	0.46	*
	9	0.44	0.46	-0.04	0.29	0.00	0.21	-0.04	2.79	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
61	1	0.44	0.46	-0.02	2.31	0.00	2.25	-0.02	0.75	0.46	0.48	*
	2	0.46	0.48	+0.01	3.57	0.00	3.00	+0.02	0.00	0.88	1.08	
	3	0.88	1.08	+0.07	31.47	0.00	3.00	+0.61	0.00	7.51	30.23	
	4	7.51	30.23	+0.58	31.79	22.41	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	6.45	4.46	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	3.99	0.80	3.00	-0.37	0.00	10.40	36.83	
	7	10.40	36.83	-0.68	2.16	0.00	3.00	-0.63	0.00	9.37	34.69	
	8	9.37	34.69	-0.76	1.06	0.00	3.00	-0.65	0.00	7.76	31.33	
	9	7.76	31.33	-0.69	0.34	0.00	3.00	-0.65	0.00	7.19	27.33	
	10	7.19	27.33	-0.73	0.00	0.00	3.00	-0.68	0.00	6.66	22.92	
	11	6.66	22.92	-0.64	0.00	0.00	3.00	-0.59	0.00	5.99	18.69	
	12	5.99	18.69	-0.52	0.00	0.00	3.00	-0.46	0.00	5.15	14.70	
62	1	5.15	14.70	-0.18	3.05	0.00	3.00	-0.18	0.00	5.08	14.39	
	2	5.08	14.39	+0.11	7.11	0.00	3.00	+0.13	0.00	6.00	18.74	
	3	6.00	18.74	+0.49	65.30	44.33	3.00	+0.87	0.00	10.99	38.07	
	4	10.99	38.07	+0.85	159.71	158.43	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	54.79	52.80	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	7.46	4.27	3.00	-0.37	0.00	10.40	36.83	
	7	10.40	36.83	-0.68	3.59	0.00	3.00	-0.67	0.00	10.03	36.07	
	8	10.03	36.07	-0.81	1.73	0.00	3.00	-0.73	0.00	8.68	33.26	
	9	8.68	33.26	-0.78	1.01	0.00	3.00	-0.68	0.00	7.47	29.81	
	10	7.47	29.81	-0.75	0.31	0.00	3.00	-0.72	0.00	7.01	25.65	
	11	7.01	25.65	-0.68	0.00	0.00	3.00	-0.63	0.00	6.41	21.35	
	12	6.41	21.35	-0.56	0.00	0.00	3.00	-0.51	0.00	5.75	17.28	
63	1	5.75	17.28	-0.20	0.00	0.00	3.00	-0.18	0.00	4.97	13.90	
	2	4.97	13.90	+0.11	31.58	5.38	3.00	+0.23	0.00	10.69	37.43	
	3	10.69	37.43	+0.88	26.30	24.40	3.00	+0.87	0.00	10.99	38.07	
	4	10.99	38.07	+0.85	71.09	69.81	3.00	+0.82	0.00	10.97	38.02	
	5	10.97	38.02	+0.19	68.93	66.94	3.00	+0.19	0.00	10.66	37.39	
	6	10.66	37.39	-0.37	5.21	2.02	3.00	-0.37	0.00	10.40	36.83	
	7	10.40	36.83	-0.68	3.64	0.00	3.00	-0.67	0.00	10.06	36.12	
	8	10.06	36.12	-0.81	1.76	0.00	3.00	-0.73	0.00	8.72	33.33	
	9	8.72	33.33	-0.78	0.73	0.00	3.00	-0.67	0.00	7.45	29.61	
	10	7.45	29.61	-0.75	0.16	0.00	3.00	-0.71	0.00	6.97	25.30	
	11	6.97	25.30	-0.67	0.00	0.00	3.00	-0.62	0.00	6.36	21.01	
	12	6.36	21.01	-0.56	0.00	0.00	3.00	-0.51	0.00	5.67	16.94	

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
64	1	5.67	16.94	-0.20	0.00	0.00	3.00	-0.18	0.00	4.89	13.57	
	2	4.89	13.57	+0.11	2.19	0.00	3.00	+0.10	0.00	4.75	12.97	
	3	4.75	12.97	+0.39	4.85	0.00	3.00	+0.43	0.00	5.37	15.64	
	4	5.37	15.64	+0.42	8.13	0.00	3.00	+0.49	0.00	6.46	21.68	
	5	6.46	21.68	+0.11	2.94	0.00	3.00	+0.11	0.00	6.49	21.84	
	6	6.49	21.84	-0.23	1.40	0.00	3.00	-0.22	0.00	6.17	19.80	
	7	6.17	19.80	-0.40	0.74	0.00	3.00	-0.37	0.00	5.63	16.77	
	8	5.63	16.77	-0.46	0.16	0.00	3.00	-0.39	0.00	4.78	13.08	
	9	4.78	13.08	-0.43	0.00	0.00	3.00	-0.38	0.00	4.18	9.27	
	10	4.18	9.27	-0.42	0.00	0.00	3.00	-0.30	0.00	2.78	5.55	
	11	2.78	5.55	-0.27	0.00	0.00	3.00	-0.19	0.00	1.82	2.09	
	12	1.82	2.09	-0.16	0.00	0.00	1.43	-0.04	1.57	0.44	0.46	*
65	1	0.44	0.46	-0.02	0.90	0.00	0.84	-0.02	2.16	0.46	0.48	*
	2	0.46	0.48	+0.01	5.72	0.00	3.00	+0.05	0.00	2.27	3.26	
	3	2.27	3.26	+0.19	3.38	0.00	3.00	+0.19	0.00	2.33	4.02	
	4	2.33	4.02	+0.18	12.50	0.00	3.00	+0.38	0.00	5.01	14.08	
	5	5.01	14.08	+0.09	6.81	0.00	3.00	+0.10	0.00	5.89	18.08	
	6	5.89	18.08	-0.21	3.54	0.00	3.00	-0.21	0.00	5.91	18.21	
	7	5.91	18.21	-0.38	1.98	0.00	3.00	-0.37	0.00	5.55	16.44	
	8	5.55	16.44	-0.45	0.85	0.00	3.00	-0.40	0.00	4.86	13.43	
	9	4.86	13.43	-0.44	0.23	0.00	3.00	-0.39	0.00	4.26	9.84	
	10	4.26	9.84	-0.43	0.00	0.00	3.00	-0.32	0.00	3.04	6.09	
	11	3.04	6.09	-0.29	0.00	0.00	3.00	-0.21	0.00	2.21	2.58	
	12	2.21	2.58	-0.19	0.00	0.00	1.89	-0.04	1.11	0.44	0.46	*
66	1	0.44	0.46	-0.02	1.02	0.00	0.96	-0.02	2.04	0.46	0.48	*
	2	0.46	0.48	+0.01	2.27	0.00	2.26	+0.01	0.74	0.47	0.51	*
	3	0.47	0.51	+0.04	3.06	0.00	3.00	+0.04	0.00	0.57	0.65	
	4	0.57	0.65	+0.04	5.06	0.00	3.00	+0.17	0.00	2.24	2.93	
	5	2.24	2.93	+0.04	4.06	0.00	3.00	+0.04	0.00	2.34	4.07	
	6	2.34	4.07	-0.08	2.63	0.00	3.00	-0.08	0.00	2.29	3.54	
	7	2.29	3.54	-0.15	1.21	0.00	3.00	-0.09	0.00	1.28	1.51	
	8	1.28	1.51	-0.10	0.42	0.00	1.33	-0.04	1.67	0.44	0.46	*
	9	0.44	0.46	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
67	1	0.44	0.46	-0.02	0.05	0.00	0.00	-0.02	3.00	0.46	0.48	*
	2	0.46	0.48	+0.01	1.48	0.00	1.47	+0.01	1.53	0.47	0.51	*
	3	0.47	0.51	+0.04	2.38	0.00	2.43	+0.04	0.57	0.49	0.54	*
	4	0.49	0.54	+0.04	3.65	0.00	3.00	+0.08	0.00	1.08	1.30	
	5	1.08	1.30	+0.02	2.63	0.00	3.00	+0.01	0.00	0.78	0.97	
	6	0.78	0.97	-0.03	1.88	0.00	2.32	-0.02	0.68	0.46	0.48	*

SIMULACAO DE OPERACAO DE RESERVATORIO(S)
RESERVATORIO - TUCUNDUBA

VOLUME MAXIMO= 40.20 VOLUME MINIMO= 0.50

Volumes em Hm3 (continuacao)

ANO	PER.	AREA INICIAL	VOLUME INICIAL	(P-E)S/2 INICIAL	VOLUME AFLUENTE	VOLUME SANGRADO	VOLUME RETIR.	(P-E)S/2 FINAL	SALDO DEMANDA	AREA FINAL	VOLUME FINAL	FAL.
	7	0.46	0.48	-0.03	0.79	0.00	0.74	-0.03	2.26	0.45	0.47	*
	8	0.45	0.47	-0.04	0.20	0.00	0.13	-0.04	2.87	0.44	0.46	*
	9	0.44	0.46	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*
	10	0.44	0.46	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	11	0.44	0.45	-0.04	0.00	0.00	0.00	-0.05	3.00	0.44	0.45	*
	12	0.44	0.45	-0.04	0.00	0.00	0.00	-0.04	3.00	0.44	0.46	*