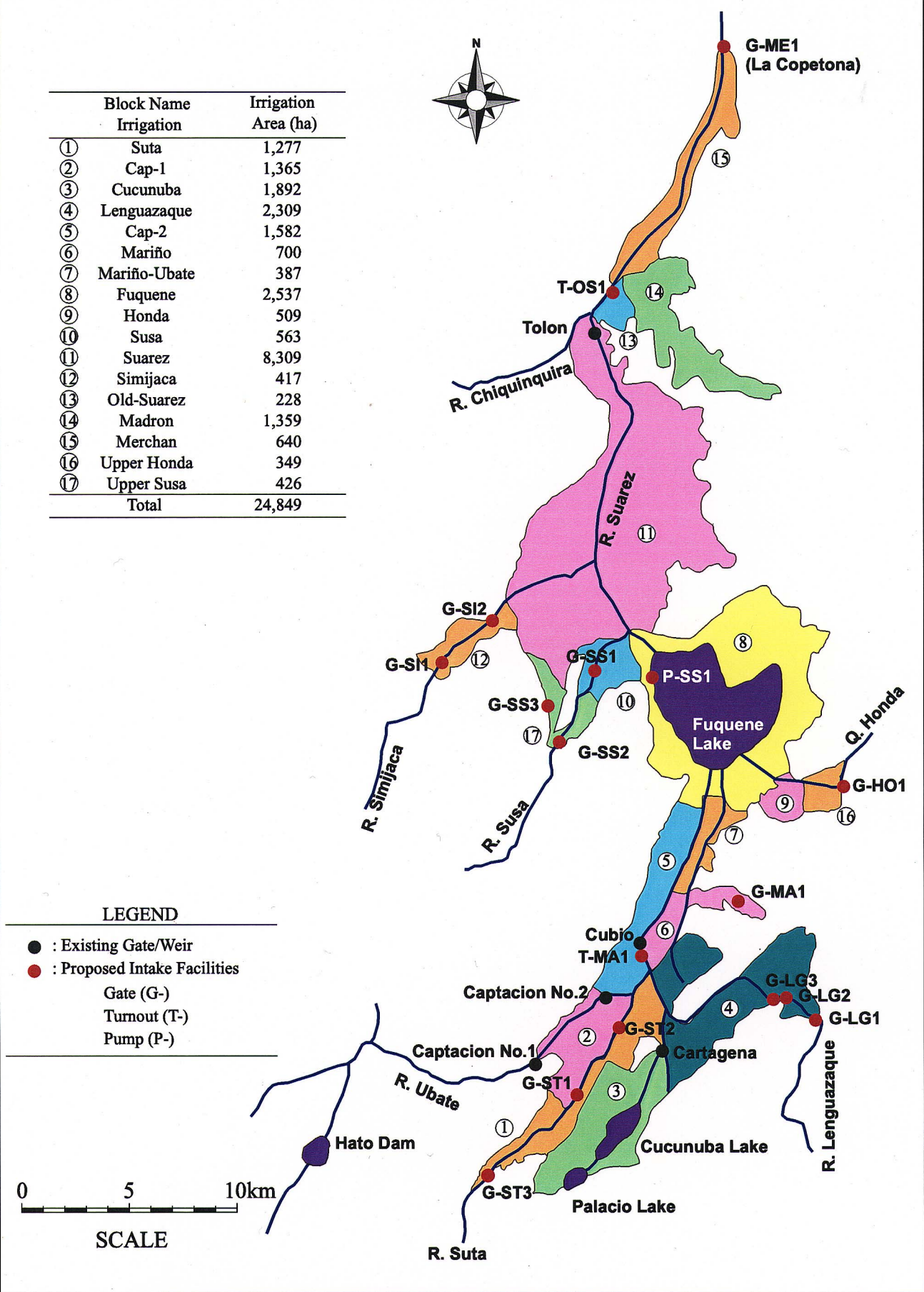


| Block Name     | Irrigation Area (ha) |
|----------------|----------------------|
| ① Suta         | 1,277                |
| ② Cap-1        | 1,365                |
| ③ Cucunuba     | 1,892                |
| ④ Lenguazaque  | 2,309                |
| ⑤ Cap-2        | 1,582                |
| ⑥ Mariño       | 700                  |
| ⑦ Mariño-Ubate | 387                  |
| ⑧ Fuquene      | 2,537                |
| ⑨ Honda        | 509                  |
| ⑩ Susa         | 563                  |
| ⑪ Suarez       | 8,309                |
| ⑫ Simijaca     | 417                  |
| ⑬ Old-Suarez   | 228                  |
| ⑭ Madron       | 1,359                |
| ⑮ Merchan      | 640                  |
| ⑯ Upper Honda  | 349                  |
| ⑰ Upper Susa   | 426                  |
| <b>Total</b>   | <b>24,849</b>        |



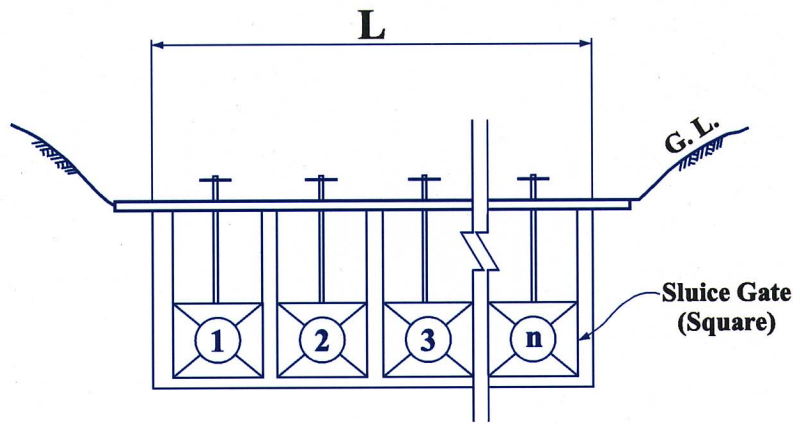
**LEGEND**

- : Existing Gate/Weir
- : Proposed Intake Facilities
- Gate (G-)
- Turnout (T-)
- Pump (P-)

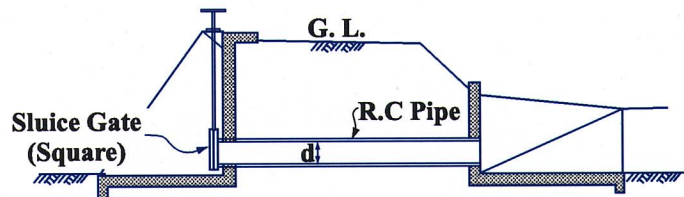
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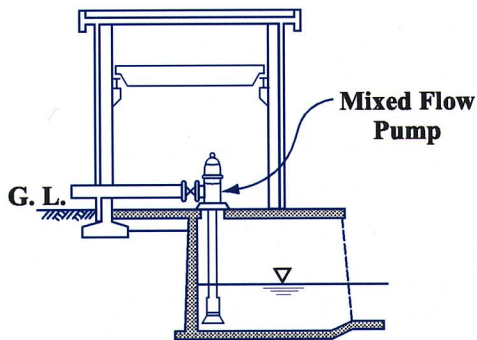
Fig. C.4.1 Location of Proposed Intake Facilities



**GATE (with BYPASS)**



**TURNOUT**



**PUMP**

**TYPICAL STRUCTURE OF INTAKE FACILITY  
(NO SCALE)**

| Irrigation Block       | Outline of Intake Facility                                                  |
|------------------------|-----------------------------------------------------------------------------|
| Suta. Present          | : G-ST1 (L = 12 m, n = 4), G-ST2 (L = 12 m, n = 4)                          |
| Suta. Extension        | : G-ST3 (L = 12 m, n = 4)                                                   |
| Lenguazaque. Extension | : G-LG1 (L = 20 m, n = 6), G-LG2 (L = 20 m, n = 6), G-LG3 (L = 24 m, n = 8) |
| Mari-o.Present         | : G-MA1 (L = 10 m, n = 3), T-MA1 (d = 30")                                  |
| Honda. Extension       | : G-HO1 (L = 20 m, n = 6)                                                   |
| Susa. Present          | : G-SS1 (L = 10 m, n = 3), P-SS1 (Q = 15m <sup>3</sup> /min.)               |
| Susa. Extension        | : G-SS2 (L = 10 m, n = 3), G-SS3 (L = 10 m, n = 3)                          |
| Simijaca. Extension    | : G-SI1 (L = 12 m, n = 4), G-SI2 (L = 12 m, n = 4)                          |
| Old-Suarez. Present    | : T-OS1 (d = 18")                                                           |
| Merchan. Extension     | : G-ME1 (L = 30 m, n = 8)                                                   |

Note) G:- Gate, T:- Turnout, P:- Pump

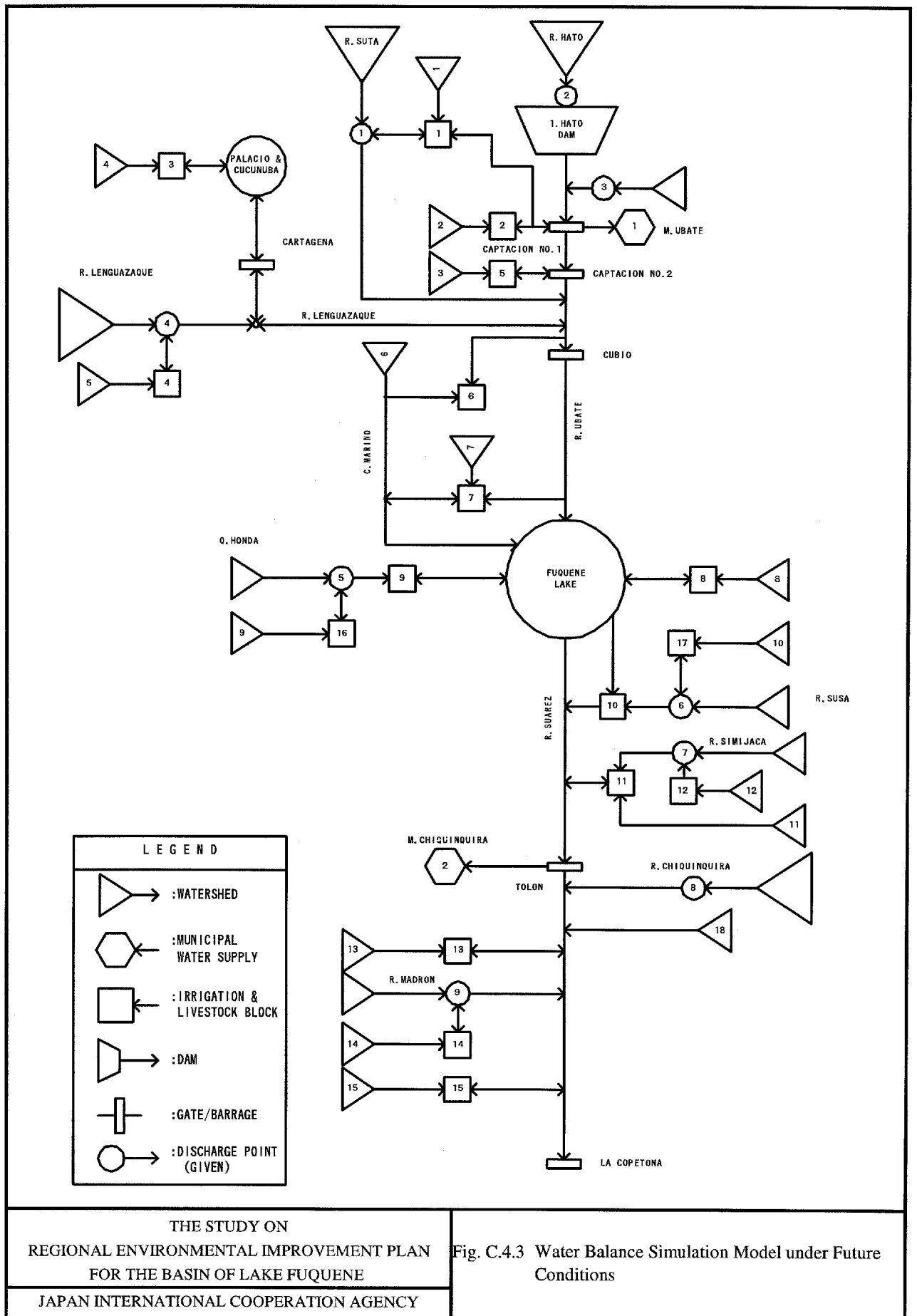
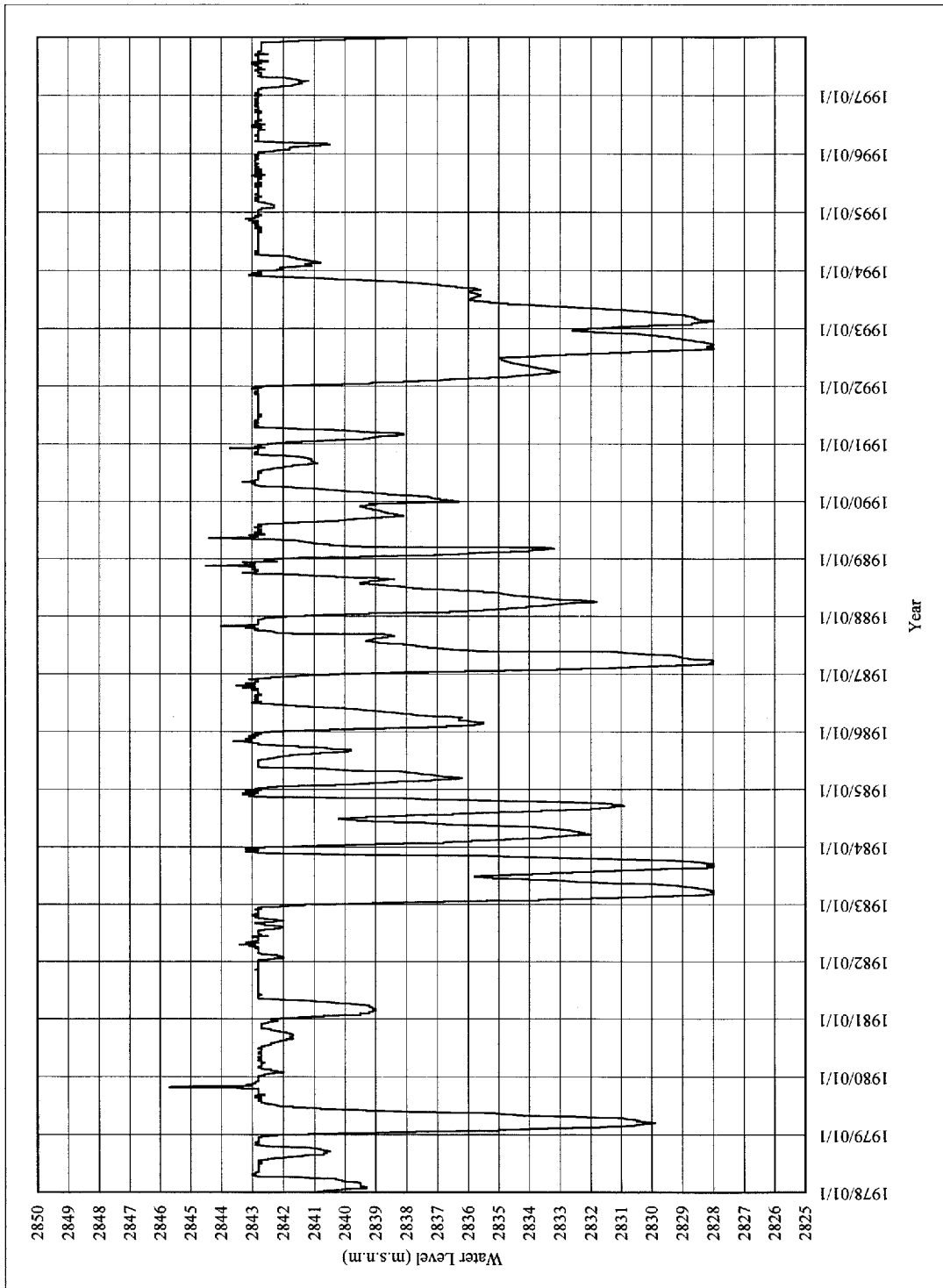
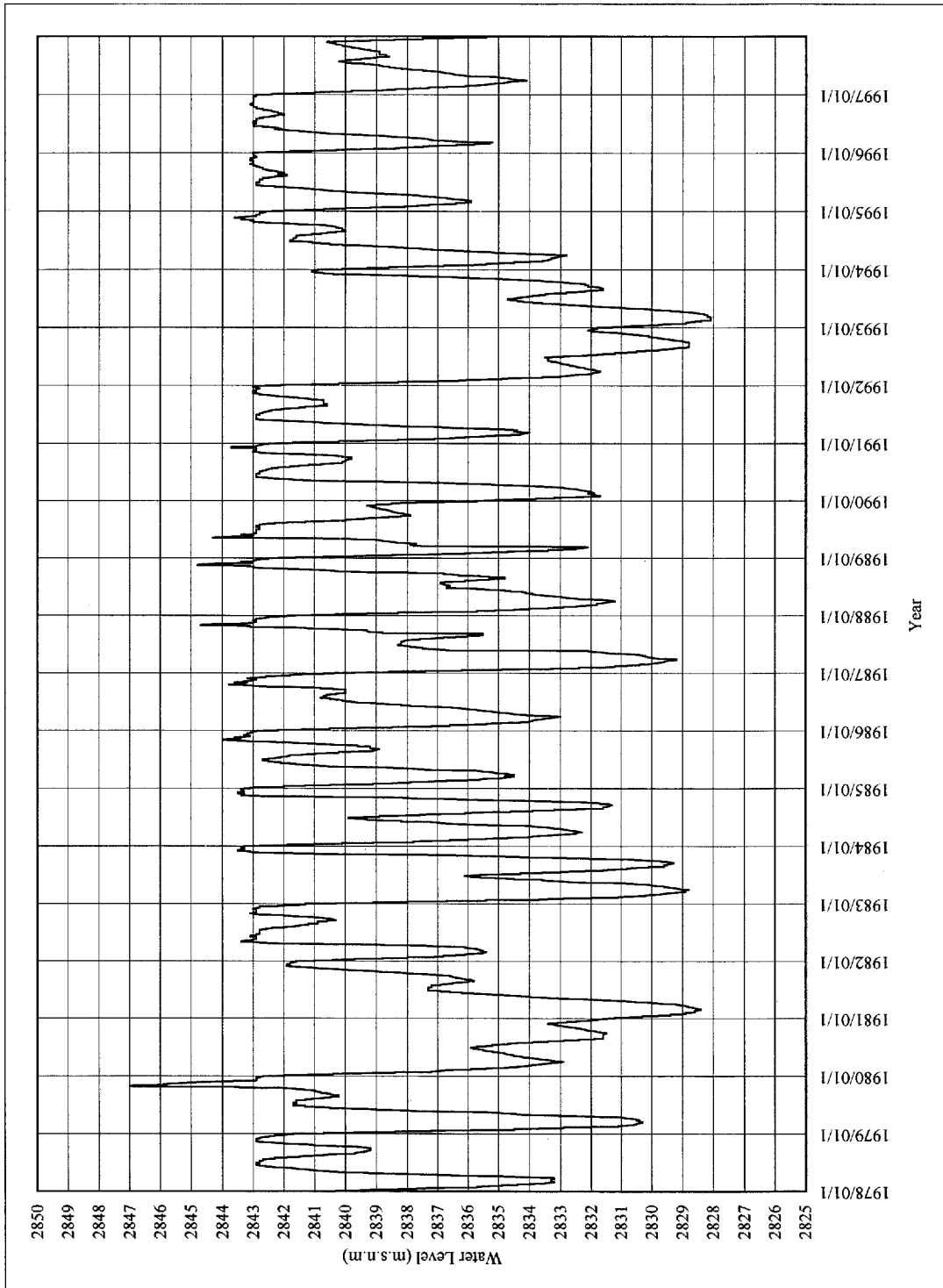


Fig. C.4.3 Water Balance Simulation Model under Future Conditions



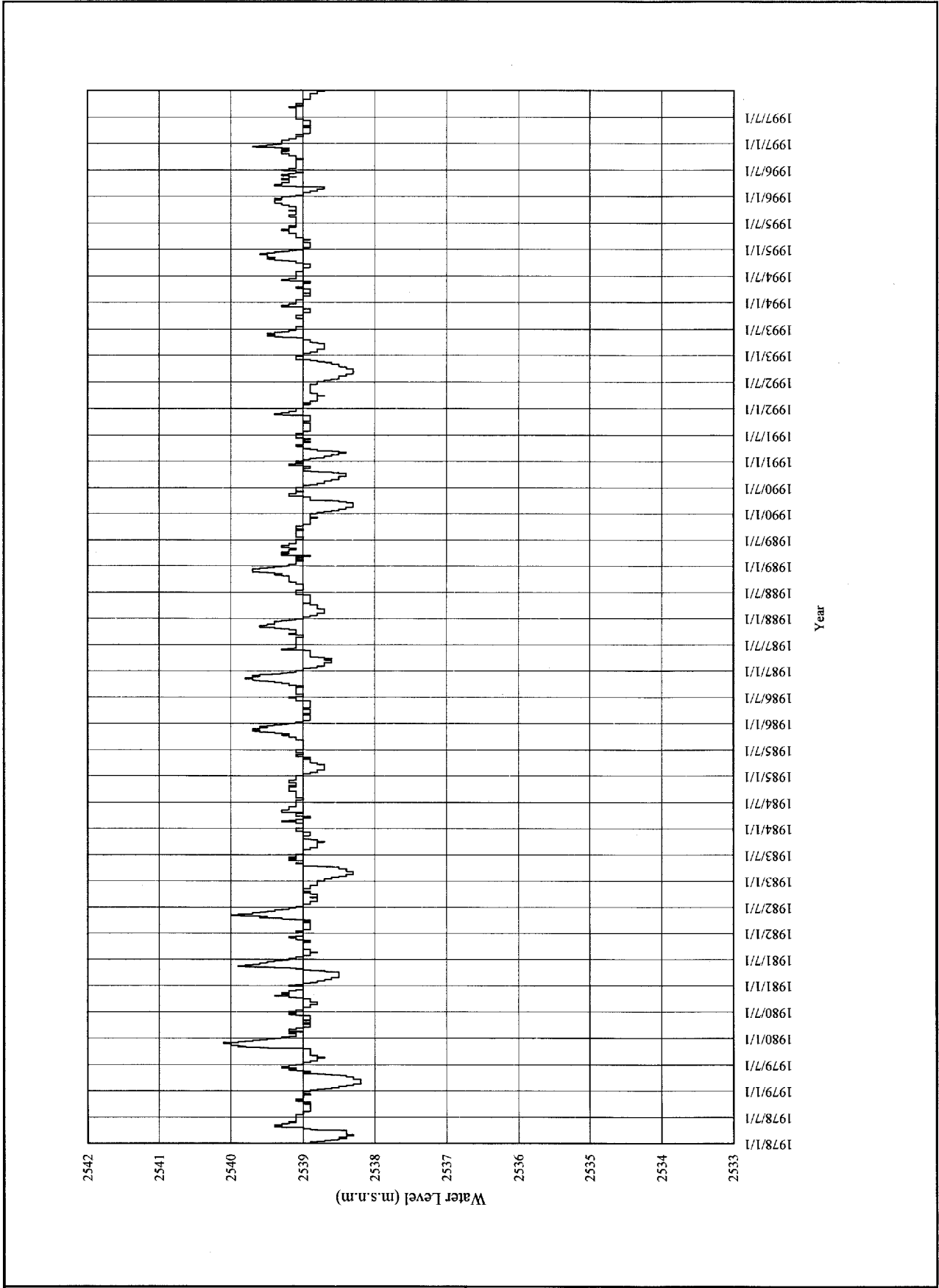
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Fig. C.4.4 Hato Dam Water Level under Future Conditions



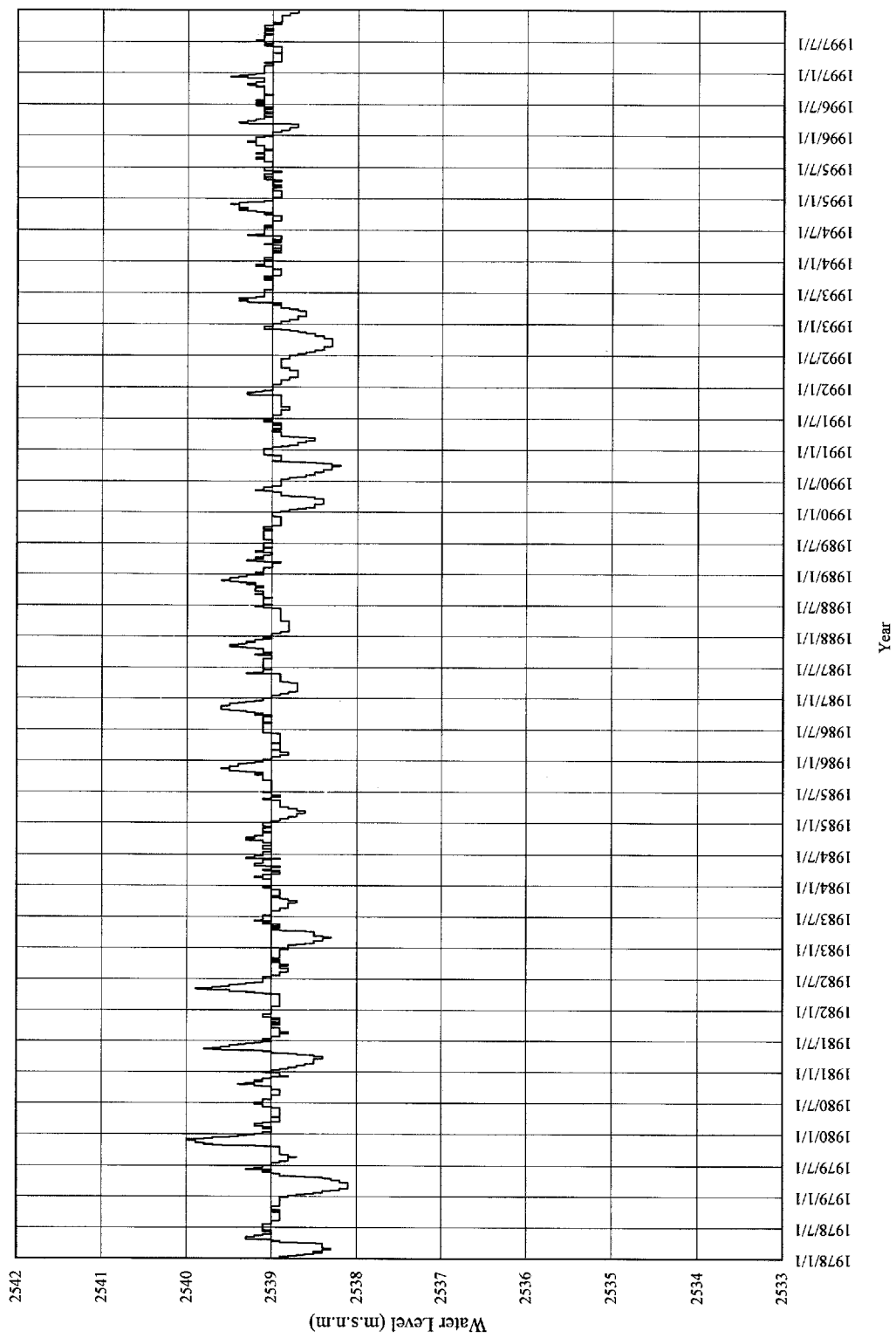
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Fig. C.4.5 Simulated Water Level of Hato Dam with Optimum Operation Rule (Future Conditions)



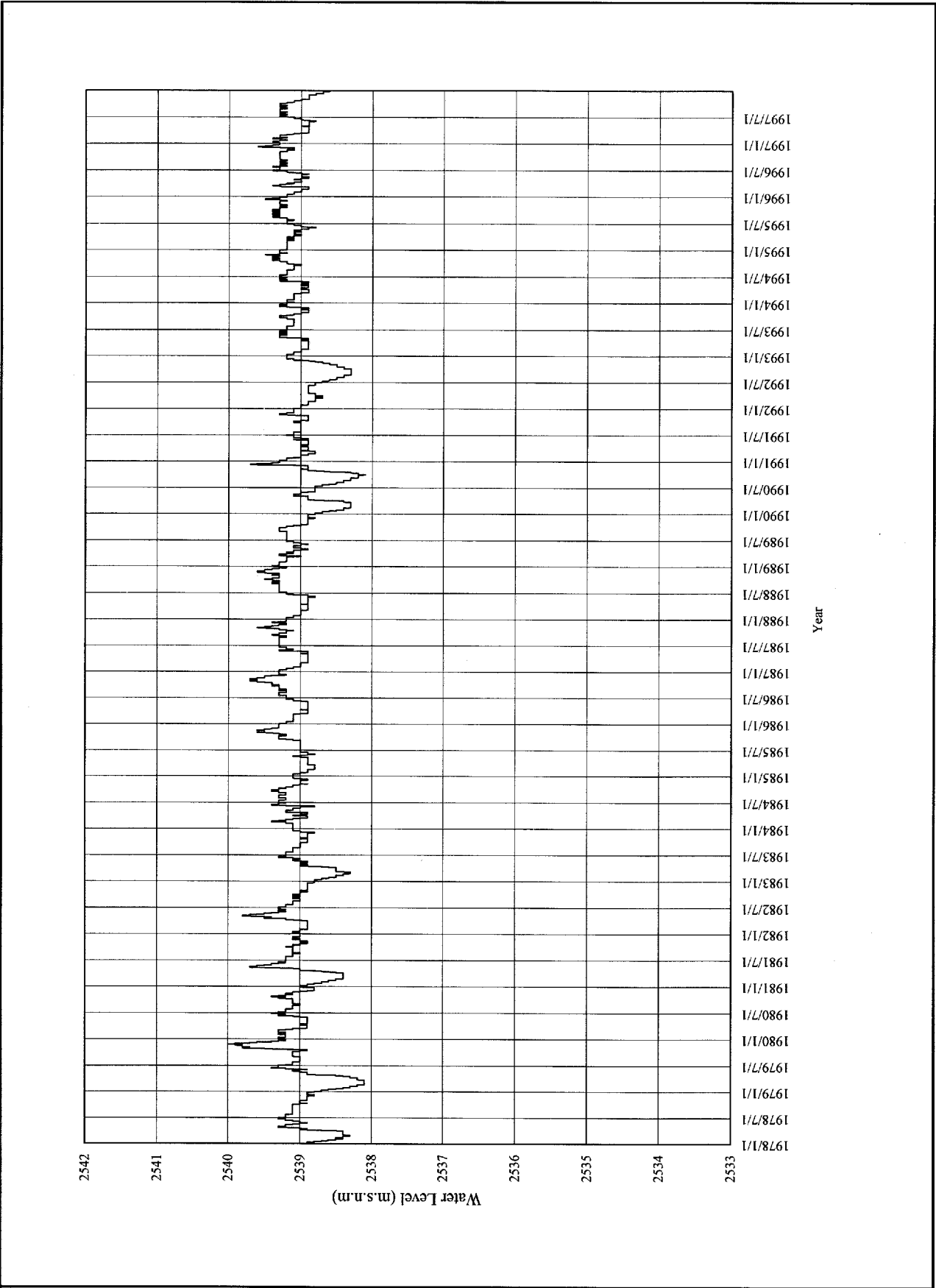
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Fig. C.4.6 Simulated Water Level of Fuquene Lake  
 (Future Conditions: Case-1)



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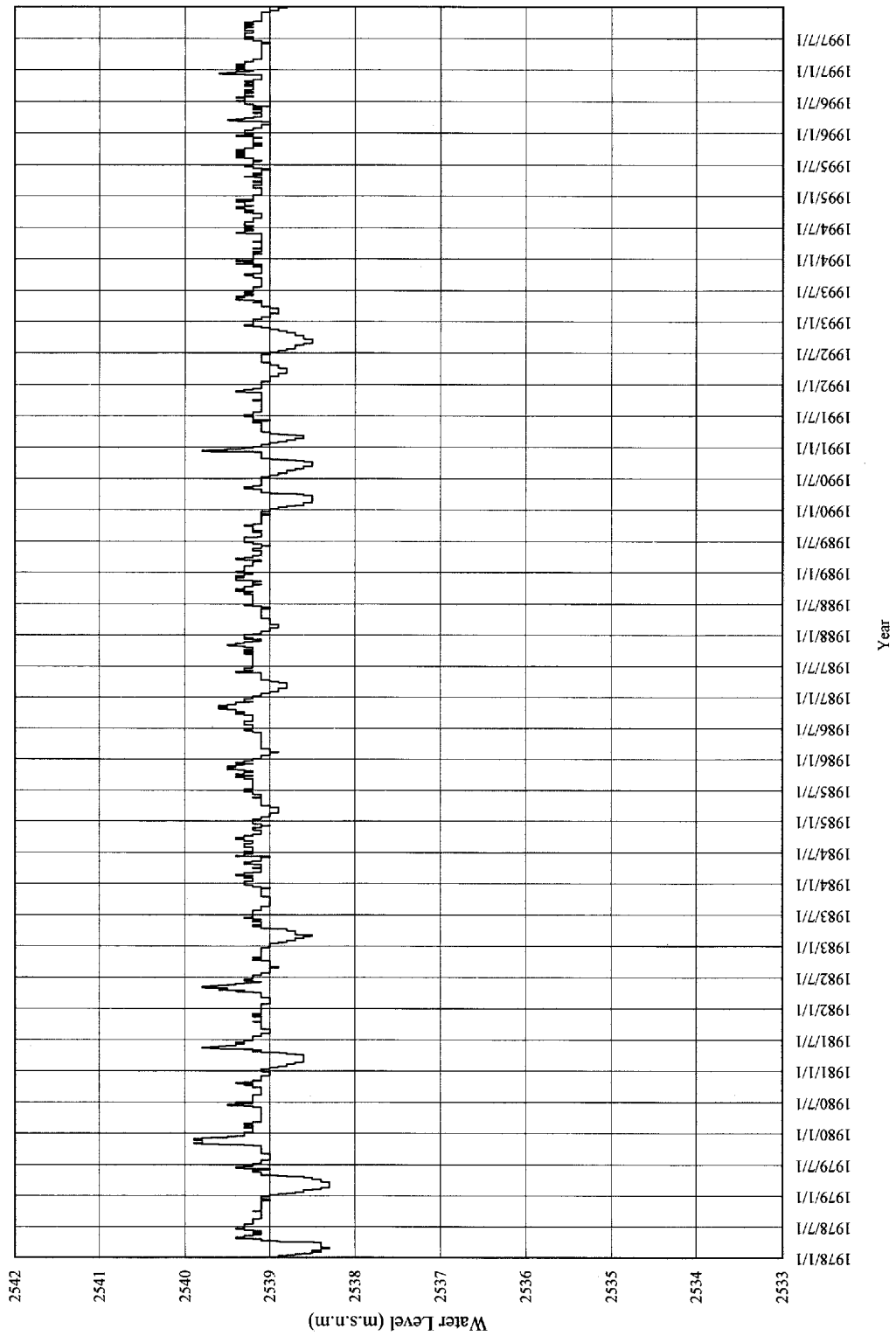
Fig. C.4.7 Simulated Water Level of Fuquene Lake  
 (Future Conditions: Case-2)



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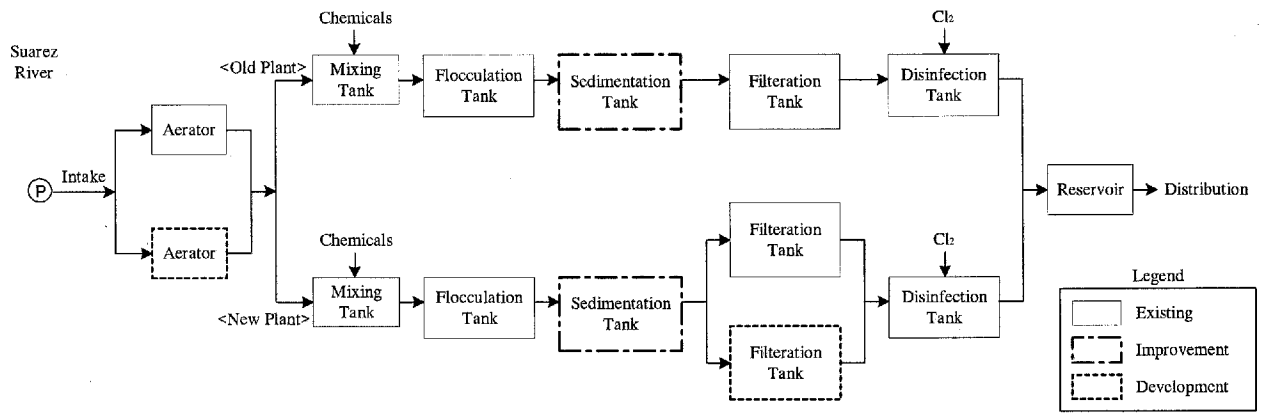
Fig. C.4.8 Simulated Water Level of Fuquene Lake  
 (Future Conditions: Case-3)



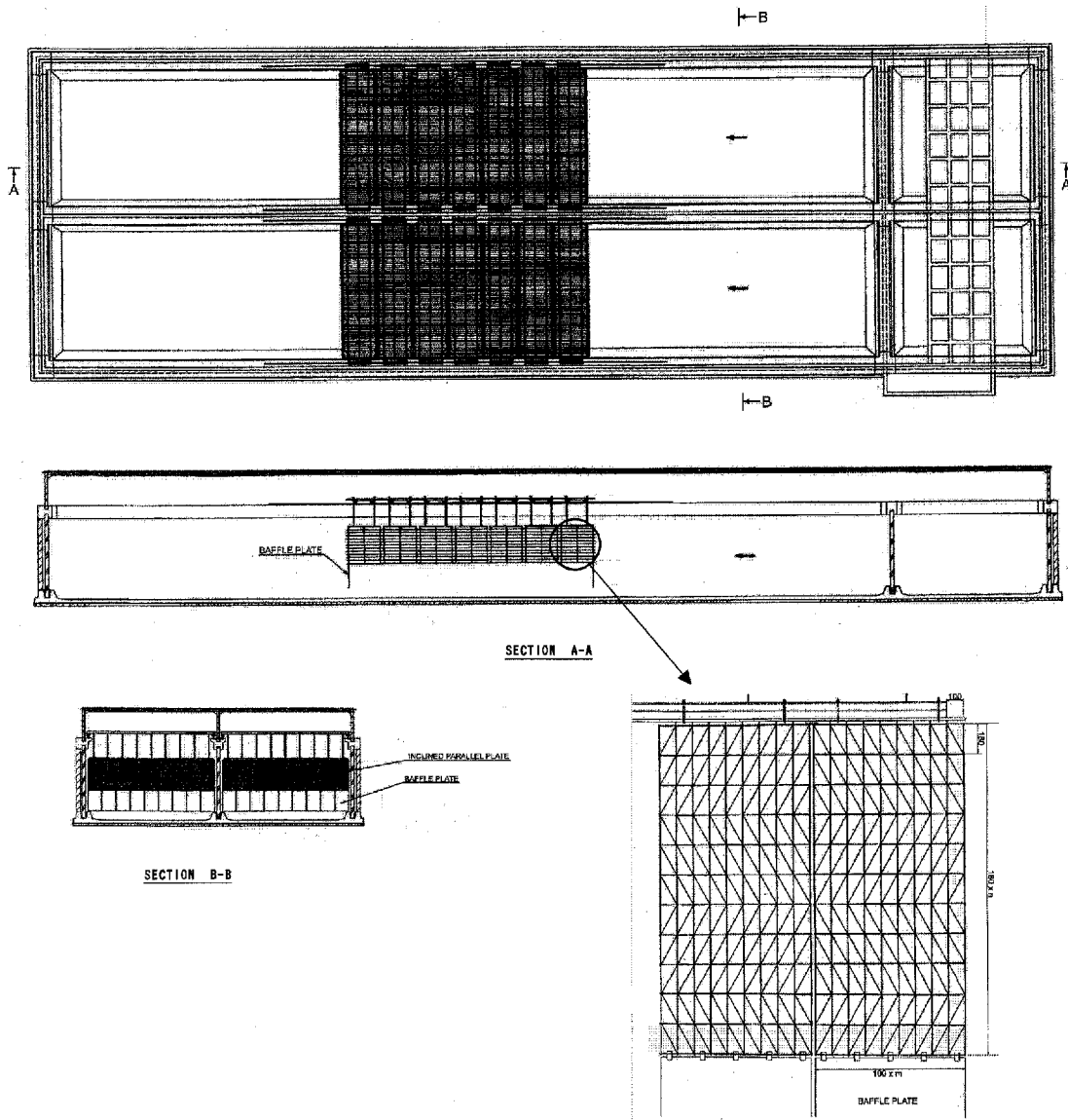


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Fig. C.4.9 Simulated Water Level of Fuquene Lake  
 (Future Conditions: Case-4)



Flow Chart



Improvement of Sedimentation Tank

EL ESTUDIO SOBRE  
PLAN DE MEJORAMIENTO AMBIENTAL REGIONAL  
PARA LA CUENCA DE LA LAGUNA DE FUQUENE

Fig. C.6.1 Purification Plant in Chiquinquirá

AGENCIA DE COOPERACION INTERNACIONAL DEL JAPON (JICA)