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5th April 2011

Information for the Queensland Flood Inquiry

The attached information shows that the IQQM computer model is a "daily time-step" model.

As a consequence, the volumes of the pre-development flows for the three floods of February 1893 and the flood of 1974 should be available from this independent source which has the force of Law. It is under DERM control.

- Water Resource (Moreton) Plan 2007 which requires the pre-development flows for the calculation of the "Simulation Period" on which the Mean Annual Flow (MAF) is based. The IQQM computer model is defined on page 91 of that Act. Its definition includes "simulate daily stream flows".

  The "Simulation Period" is also defined as 01/07/1889 to 30/06/2000 on page 93 of that Act. It includes all flows for that period including the three floods of February 1893 and the flood of 1974.

  The Ecology requires 66% of that MAF. The construction of the Act rests on the accuracy of the pre-development flows calculated by the IQQM computer model. Once the calculation of the Mean Annual Flow is made, it remains in place without change until that Act is changed, if ever.

- The Technical Advisory Panel (TAP) "Environmental Implications of Scenarios" "Moreton and Gold Coast *WRPs"* page 127 which defines the IQQM computer model as a "daily time-step".

- Pre development flows as calculated by the IQQM computer model.

Schedule 15 (continued)

IQQM computer program means the department's Integrated Quantity and Quality Modelling computer program, and associated statistical analysis and reporting programs, that simulate daily stream flows, flow management, storages, releases, instream infrastructure, water diversions, water demands and other hydrologic events in the plan area.

irrigation purposes means any of the following purposes—

(a) aquaculture;

(b) dairying;

(c) irrigation;

(d) piggery;

(e) stock or domestic purposes;

(f) water harvesting.

low flow regime, for a watercourse, means the minimum flows that provide a continuous flow through the watercourse.

management area—

(a) for part 6, division 2, see section 63; or

(b) for part 6, division 3, see section 66; or

(c) for part 6, division 4, see section 76.

mean annual flow, for a node, means the total volume of flow, at the node, in the simulation period divided by the number of years in the simulation period.

medium priority group means the water allocations in a water supply scheme that are stated to be medium priority group in the water allocations register.

monthly supplemented water sharing index, for water allocations in a water supply scheme, means the percentage of months in the simulation period in which the allocations are fully supplied.

intrabasin transfer	diversion of water from one subcatchment into another within the same river catchment (cf. interbasin transfer)
IQQM (Integrated Quantity Quality Model)	a daily timestep hydrology model used to compare flow regimes under different water resource management scenarios
lacustrine	pertaining to lakes
large woody material	instream timber deposit that provides habitat and may influence local hydraulic conditions
lentic	still water
life history	the sequence of events from the birth to the death of an organism, including hatching of eggs, or germination of spores or seeds, development to sexual maturity, reproduction and death
lotic	running water
macroinvertebrate	an animal without a backbone that is easily seen by the naked eye. In aquatic ecosystems, this generally refers to insect larvae, shrimps, snails and worms
macroalgae	large multicellular algae (e.g. seaweed, kelp)
macrophyte	large rooted or floating plant identifiable with the naked eye (as opposed to microphytes or microscopic plants)
meiofauna	microscopic animals living in and on the sediment
mesic	pertaining to moist conditions (for example, as in the case of plant species)
non-vascular plant	a plant not possessing a vascular system, for example, algae (c.f. vascular plant)
nutrients	substances that plants need for growth (for example, phosphorus, nitrogen)
obligate	restricted to certain conditions, for example, an obligate stream dweller must have running water to survive
ontogenetic	relating to the origin and development of individual organisms
penaeid prawns	the group of large prawn species that is most important in commercial fisheries

Schedule 15 (continued)

SEQ regional plan see the *Integrated Planning Act 1997*, section 2.5A.10.

simulated mean annual diversion, for a water allocation or group of water allocations, means the total volume of water simulated to have been taken under the allocation or group, if the allocation or group were in existence for the whole of the simulation period, divided by the number of years in the simulation period.

simulation period means the period from 1 July 1889 to 30 June 2000.

started, for an existing water bore or existing overland flow works, means—

(a) construction of the bore or works had physically begun or, if construction had not physically begun, a contract had been entered into to begin construction; and

(b) an independently verifiable construction program existed for progressive construction towards completion of the bore or works; and

(c) detailed design plans existed showing, among other things, the extent of the bore or works; and

(d) if a permit under the *Local Government Act 1993*, section 940, was required for the bore or works—the permit had been issued; and

(e) if a development permit was required for the bore or works—the permit had been given.

subcatchment area see section 6.

SunWater means the entity continued in existence under the *Government Owned Corporations Regulation 2004*, section 34.

supplemented groundwater means groundwater that is recharged by water supplied under an interim resource operations licence, resource operations licence or other authority to operate water infrastructure.

supplemented groundwater area, for groundwater unit 1 in an implementation area, means the part of the groundwater unit

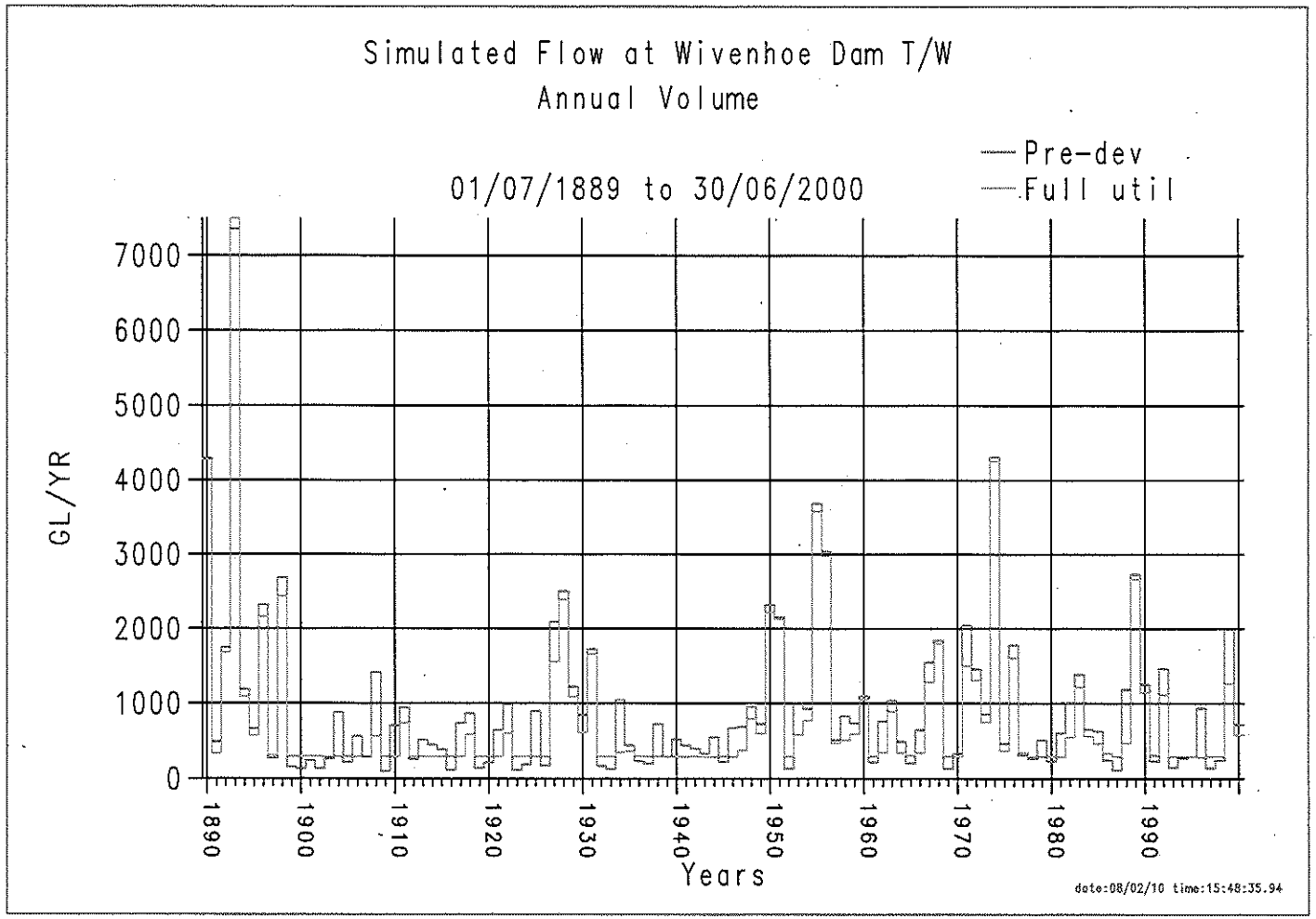

Figure 1: Annual flow volume simulated at Wivenhoe Dam TW for pre-development and full utilisation of existing entitlements scenario