

Rainwater Harvesting scenarios

Scenarios for use with Position Statement: [Reference]

Published: [Date]

Is a licence required now that the current exemptions from abstraction licence control have been removed under the Water Act 2003. If so, how many and what type?

Background and principles

This guidance applies to all applications for irrigation that utilise rainwater harvesting to collect water into irrigation reservoirs. It is to be used in conjunction with our Regulatory Position Statement – Rainwater Harvesting and help deciding the numbers and types of licences that are required for the licensing of all forms of irrigation that utilise rainwater harvesting.

The Agency does not intend to licence or otherwise draw into regulation wholly harvested rainwater that has not entered an inland water or underground strata (groundwater). As a working expedient we take this to mean water collected from roofs and other above ground surfaces and collected via a system of above ground pipes and/or tanks or that are isolated from connection to inland waters or groundwater.

The scale and complexity of rainwater harvesting systems can vary greatly in scope and size from small ponds to large reservoirs which are also regulated under the Reservoirs Act.

A strict interpretation of the legislation could result in some small scale low risk scenarios being licensed for little environmental or water resource management benefit. We have therefore developed a Regulatory Position Statement (RPS) covering our regulatory approach to rainwater harvesting which needs to be read in conjunction with the scenarios detailed below.

Storage Reservoirs

Where a reservoir is filled solely by harvested rainwater such that the overflow water consists solely of harvested rainwater, then we will not pursue an abstraction licence application for the amounts subsequently abstracted for irrigation from the reservoir.

Where a reservoir is filled solely by water abstracted from another source of supply under the control of a full abstraction licence, we will not pursue an abstraction licence application for the amounts subsequently abstracted for irrigation.

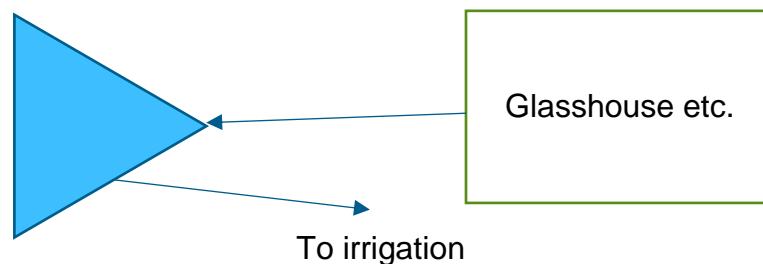
This presumes that the reservoir wouldn't overflow except in extremely rare circumstances because the input is controlled under an abstraction licence(s) for filling the reservoir and their output for irrigation cannot exceed that amount. (This can include any incidental rainfall but not harvested rainwater).

The regulatory position statement (RPS) shall not apply where harvested rainwater is combined with one or more inputs from any watercourse, land drainage, underground strata, gravity intakes and licensed water abstracted from another source(s) of supply into a reservoir storage system which is capable of discharging to other inland waters.

In these cases a licence will be required for the total amount abstracted from the reservoir in addition to any licences required for any abstraction into the reservoir.

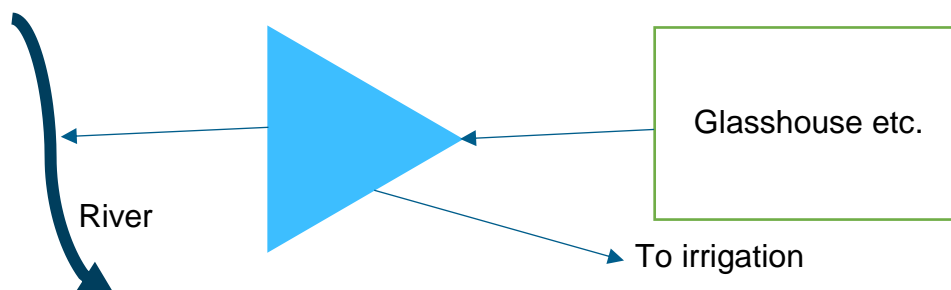
RAINWATER HARVESTING AND IRRIGATION RESERVOIR - SCENARIOS FOR IRRIGATION

1. Solely above ground rainwater harvesting to discrete lined reservoir – no discharge to inland waters



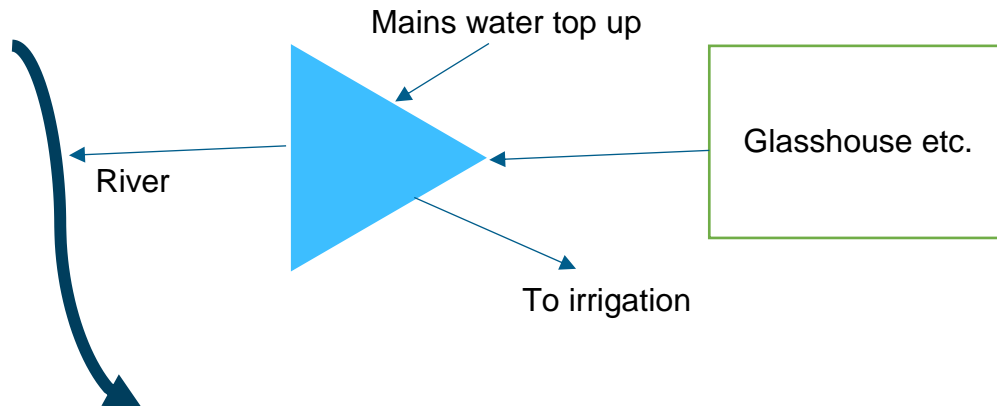
Reservoir is not a source of supply – discrete water. No licence required from reservoir (Paragraph 1 and 6 of RPS applies).

2. Solely above ground rainwater harvesting to lined reservoir with engineered discharge or overflow to inland waters



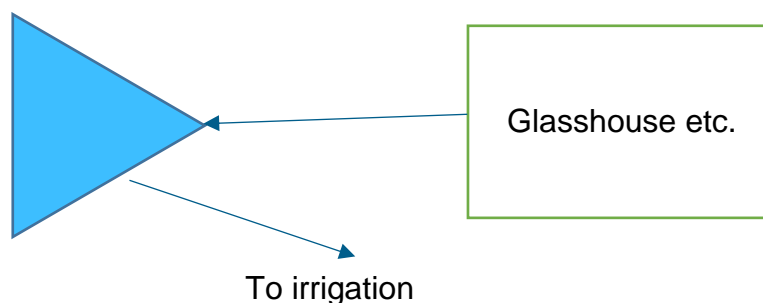
Reservoir is a source of supply (but subject to paragraph 2(i) of the RPS). No licence from reservoir required if RPS complied with. This is conditional on there being no other inputs or transfer into the reservoir.

3. Rainwater harvesting to lined reservoir with engineered discharge or overflow to inland waters and mains water top up.



Reservoir is a source of supply (but subject to paragraph 2(i) of the RPS). No licence from reservoir required if RPS complied with. This is conditional on there being no other inputs or transfer into the reservoir from another source of supply.

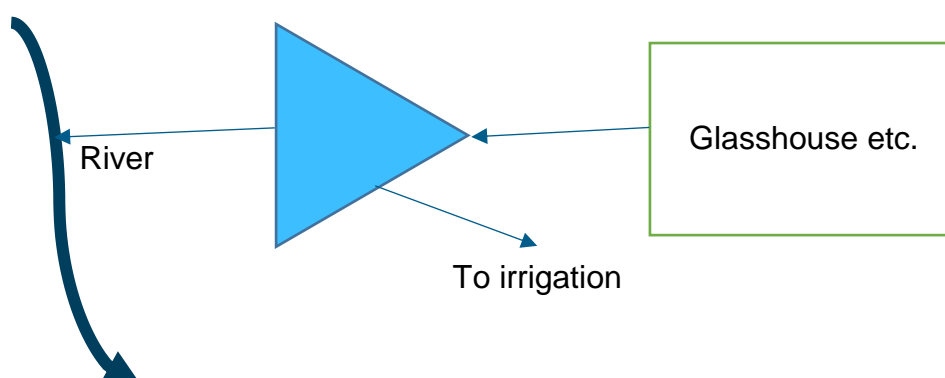
4. Rainwater harvesting to discrete unlined reservoir – no discharge to inland waters



Licensing position will depend on whether the reservoir is wholly or mainly filled with water entering the reservoir from the underground strata (Water Resources Act s221(3)).

- If wholly or mainly groundwater then reservoir is a source of supply and 1 x full licence required from reservoir for irrigation. (Paragraph 4 of RPS applies)
 - If wholly/ mainly harvested rainwater / surface run-off – then scenario 1 above applies. (Paragraph 1 and 6 of RPS applies).
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5. Rainwater harvesting to unlined reservoir with engineered discharge or overflow to inland waters



Reservoir is a source of supply.

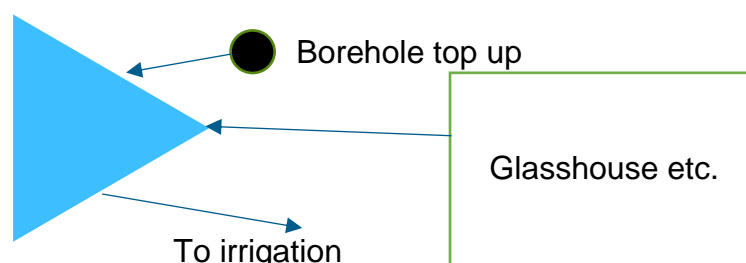
Licensing position will depend on whether the reservoir is wholly or mainly filled with water entering the reservoir from the underground strata (Water Resources Act s221(3)) or wholly or mainly harvested rainwater.

If wholly or mainly groundwater then 1 x full licence required from reservoir for irrigation (source of supply = underground strata). (Paragraph 4 of RPS applies).

If mainly harvested rainwater with a lesser component of groundwater, then 1 x full licence required from the reservoir for irrigation (source of supply = Inland water). The reservoir is a source of supply with more than 1 input. (Paragraph 3 of RPS applies).

If wholly harvested rainwater and no groundwater – then scenario 2 above applies. Reservoir is a source of supply (but subject to paragraph 2(i) of the RPS), no licence from reservoir required if RPS complied with. This is conditional on there being no other inputs or transfer into the reservoir.

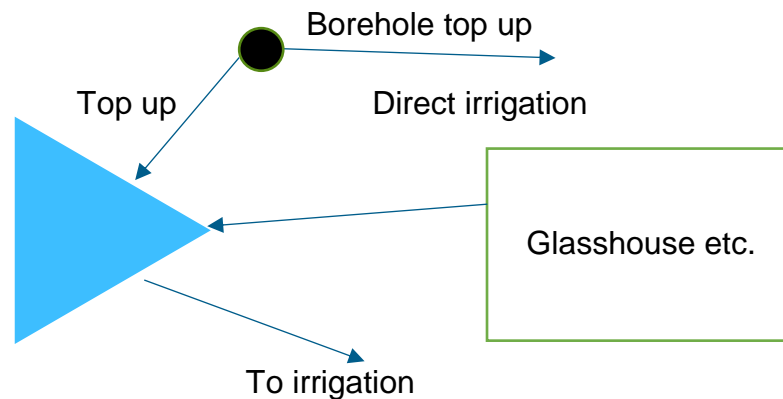
6. Rainwater harvesting to discrete lined reservoir and borehole top up >20m³/d– no discharge to inland waters



Reservoir is not a source of supply – discrete water.

1 x full licence required for borehole top up to reservoir. No licence required from reservoir. (Paragraph 6 of RPS applies).

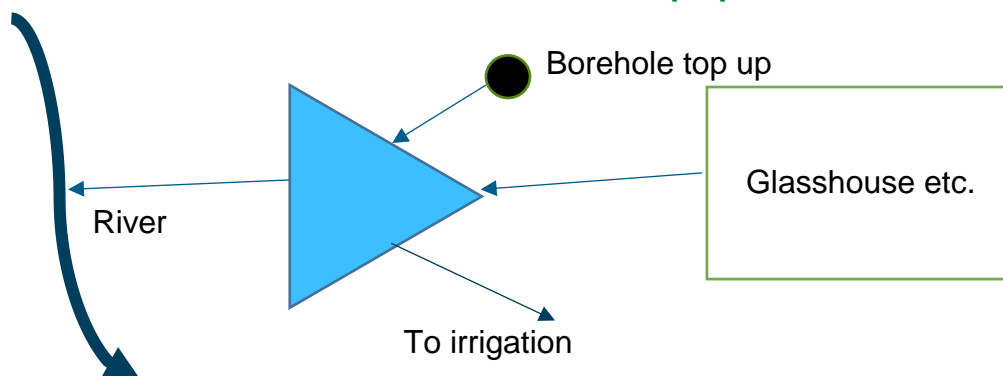
7. Rainwater harvesting to discrete lined reservoir and borehole top up >20m³/d and direct abstraction from borehole– no discharge to inland waters



Reservoir is not a source of supply – discrete water.

1 x full licence required for borehole top up to reservoir and direct irrigation – 2 purposes. No licence required from reservoir. (Paragraph 6 of RPS applies).

8. Rainwater harvesting to lined reservoir with engineered discharge or overflow to inland waters and borehole top up >20m³/d



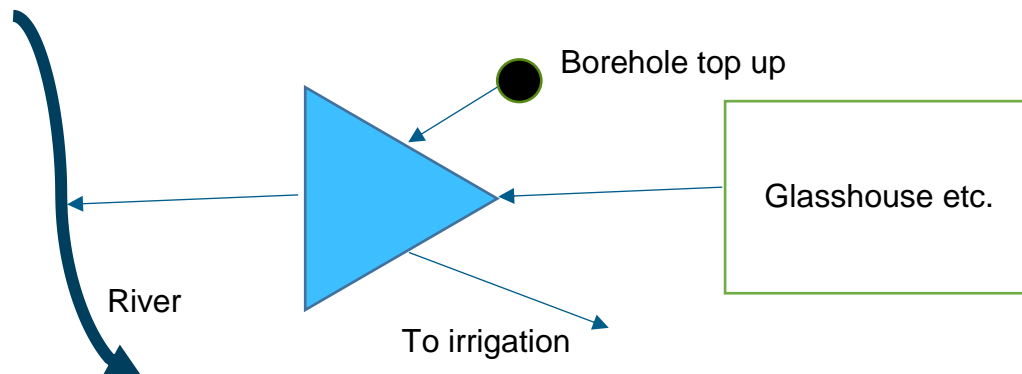
Reservoir is a source of supply and borehole is a source of supply. 2 applications required. (Paragraph 3 of RPS applies).

1 x full licence for borehole to reservoir (purpose of use will be transfer for the purpose of subsequent re-abstraction for irrigation) and 1 x full licence for irrigation from reservoir.

The licence from the reservoir will have higher quantity as this will also include a component of rainwater harvesting. Need to consider metering/aggregation/charging (volumes on both full licences).

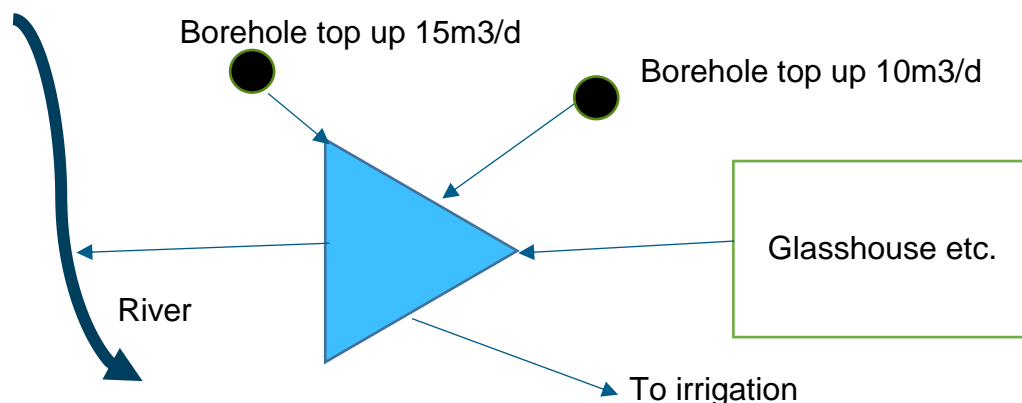
The main purpose of the borehole is to top up the reservoir for subsequent re-abstraction, so a full licence is appropriate for the borehole abstraction.

9. Rainwater harvesting to lined reservoir with engineered discharge or overflow to inland waters and borehole top up <20m³/d



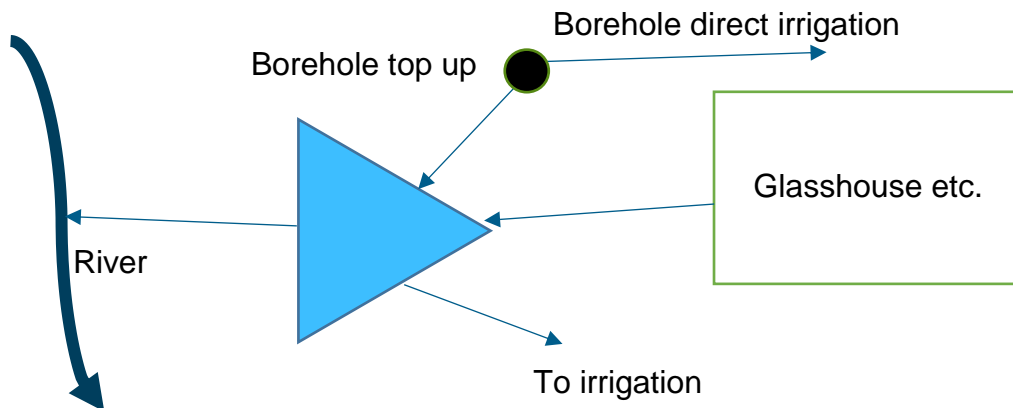
Reservoir is a source of supply and borehole is a source of supply. 1 application from reservoir required (if abstraction exceeds 20m³/d). (Paragraph 3 of RPS applies).
No licence required for borehole to reservoir as below the 20m³/d threshold.

10. Rainwater harvesting to lined reservoir with engineered discharge or overflow to inland waters and borehole top up >20m³/d in aggregate



Reservoir is a source of supply and boreholes are a source of supply. 2 applications required. (Paragraph 3 of RPS applies).
1 x full licence for boreholes to reservoir as in-aggregate they exceed to 20m³/d licensing threshold if from the same source of supply. Purpose of use will be transfer for the purpose of subsequent re-abstraction for irrigation.
1 x full licence required for the boreholes
1 x full licence for irrigation from reservoir.

11. Rainwater harvesting to lined reservoir and borehole top up >20m³/d and direct abstraction with engineered discharge or overflow to inland waters



Reservoir is a source of supply and borehole is a source of supply. 2 applications required. (Paragraph 3 of RPS applies).

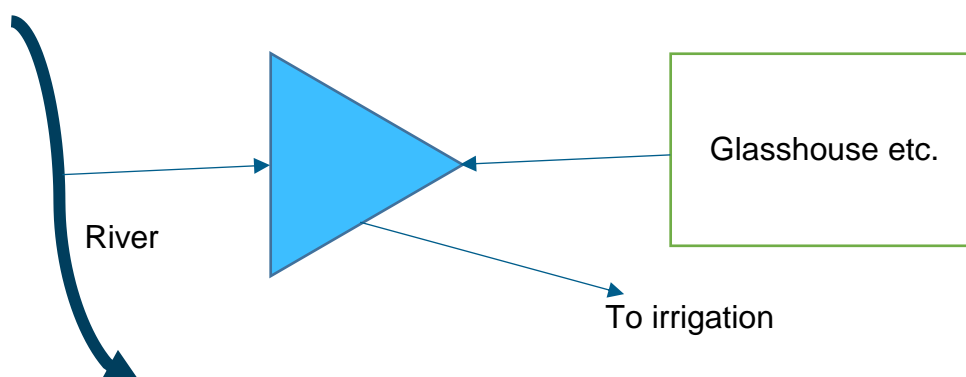
1 x full licence required for borehole with 2 purposes: transfer for the purpose of subsequent re-abstraction for irrigation and direct irrigation.

1 x full licence from reservoir for irrigation.

Water meter(s) would be required to measure the borehole abstraction for 2 purposes.

There will be a need to consider metering/aggregation/charging (volumes on both full licences). The licence from the reservoir will have higher quantity as this will also include a component of rainwater harvesting.

12. Rainwater harvesting to discrete lined reservoir with no discharge and inland water top up.

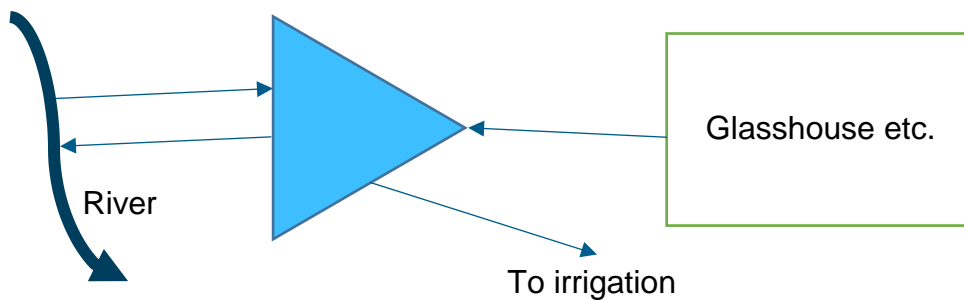


River (inland water) is a source of supply. Reservoir is not a source of supply.

1 x Full licence required from river to reservoir for subsequent irrigation.

No licence required from reservoir. (Paragraph 6 of RPS applies).

13. Rainwater harvesting to lined reservoir with engineered discharge or overflow and inland water top up >20m³/d.



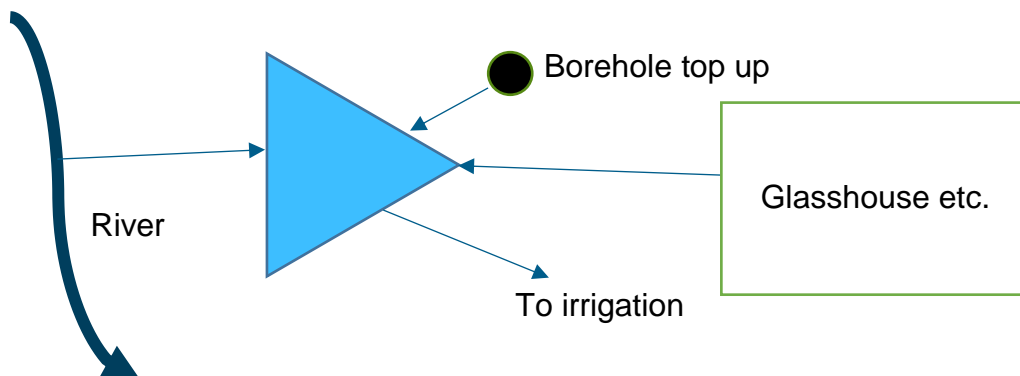
Reservoir is a source of supply and river is a source of supply. 2 applications required. (Paragraph 3 of RPS applies).

1 x full licence for river for reservoir top up (purpose of use will be transfer for the purpose of subsequent re-abstraction for irrigation) and 1 x full licence for irrigation from reservoir.

There will be a need to consider metering/aggregation/charging (volumes on both full licences). The licence from the reservoir will have higher quantity as this will also include a component of rainwater harvesting.

The main purpose of the river abstraction is to top up the reservoir for subsequent re-abstraction, so a full licence is appropriate for the river abstraction.

14. Rainwater harvesting to lined reservoir with no discharge, with inland water and borehole top up >20m³/d each.



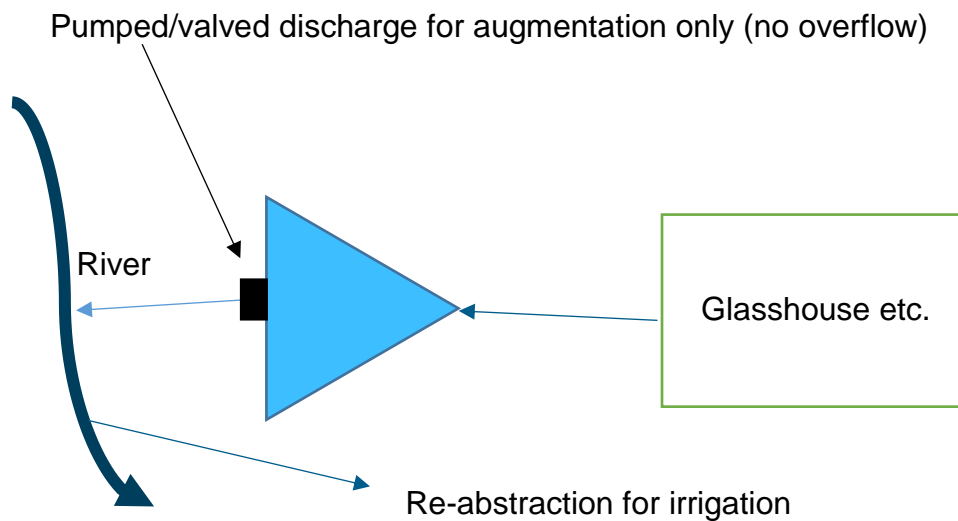
River (inland water) is a source of supply. Borehole is a source of supply, reservoir is not a source of supply. 2 applications required. (Paragraph 6 of RPS applies).

1 x Full licence required from river to reservoir top up for irrigation

1 x Full licence from borehole to reservoir top up for irrigation

(Purpose of use will be transfer for the purpose of subsequent re-abstraction for irrigation)

15. Solely rainwater harvesting to lined reservoir used for river augmentation for re-abstraction

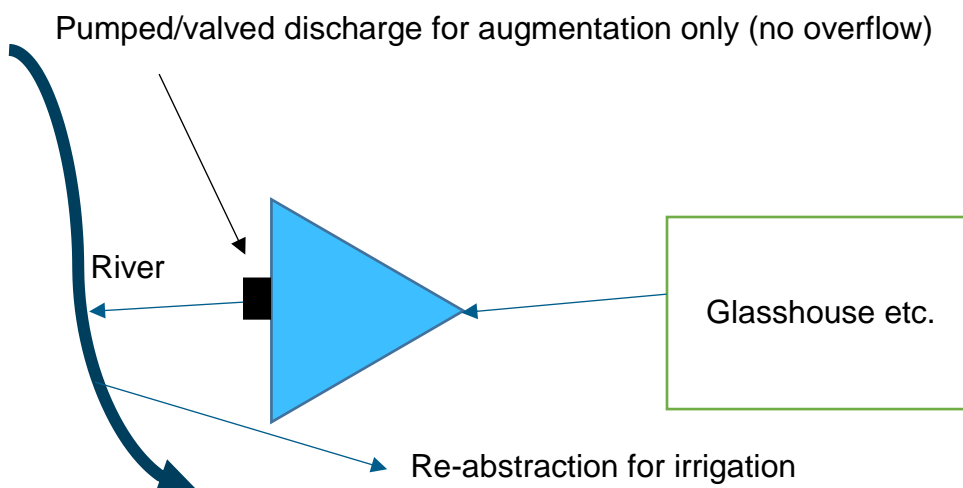


Reservoir is not a source of supply.

1 x Full licence required from river for irrigation (may include conditions dependent on a discharge being made from the reservoir).

No licence required from reservoir. (Paragraph 1 and 6 of RPS applies).

16. Rainwater harvesting to unlined reservoir used for river augmentation for re-abstraction



Licensing position will depend on whether the reservoir is wholly or mainly filled with water entering the reservoir from the underground strata (Water Resources Act 1991 s.221(3)). If mainly rainfall/ run-off then it is a discrete water.

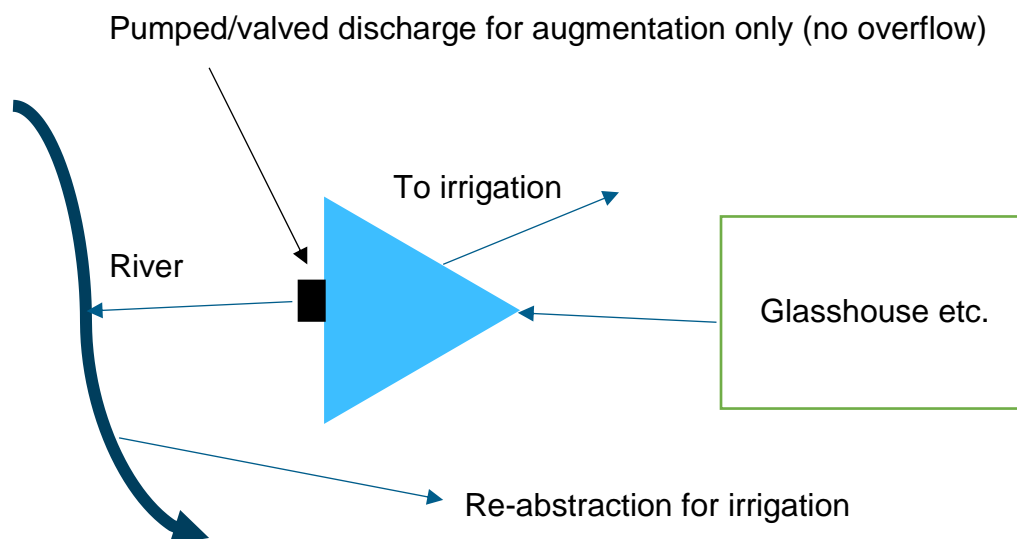
If reservoir wholly/mainly harvested rainfall / surface run-off then scenario 1 above applies – discrete water. (Paragraph 6 of RPS applies). 1 x full licence required for irrigation from river (may include conditions dependent on a discharge being made from the reservoir).

If wholly or mainly groundwater then paragraph 4 of RPS applies so 2 licences required.

1 x full licence from reservoir (source of supply = underground strata) to river for transfer for the purpose of subsequent re-abstraction for irrigation. 1 full licence from river for irrigation.

There will be a need to consider metering/aggregation/charging (volumes on both full licences).

17. Rainwater harvesting to unlined reservoir used for direct abstraction and also river augmentation for re-abstraction



Licensing position will depend on whether the reservoir is wholly or mainly filled with water entering the reservoir from the underground strata (Water Resources Act s221(3)). If mainly rainfall/ run-off then it is a discrete water.

If reservoir wholly/mainly harvested rainfall / surface run-off – then scenario 1 above applies – discrete water. (Paragraph 6 of RPS applies). 1 x full licence required for irrigation from river.

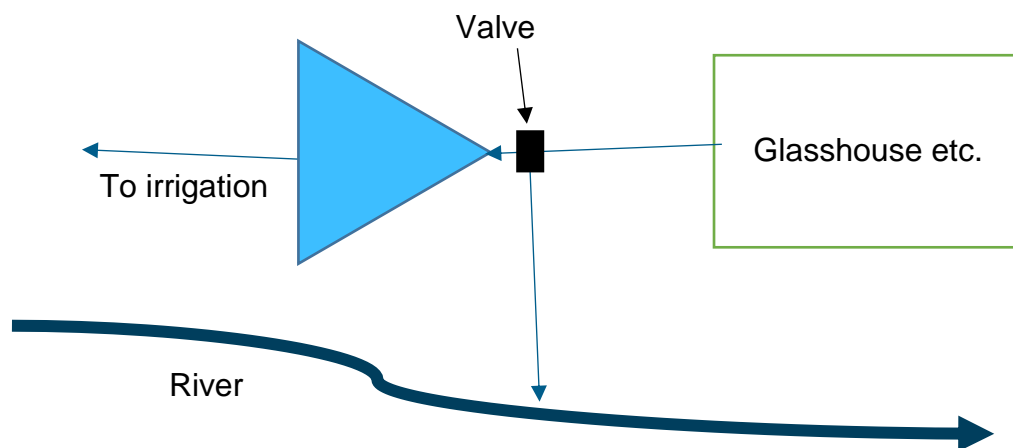
If wholly or mainly groundwater then paragraph 4 of RPS applies so 2 licences required.

1 x full licence required to cover abstraction from reservoir (source of supply = underground strata) for two purposes: transfer to the river for the purpose of subsequent re-abstraction for irrigation and direct abstraction from the reservoir.

This can only be a full licence as the definition of transfer is not met. 1 full licence from river for irrigation.

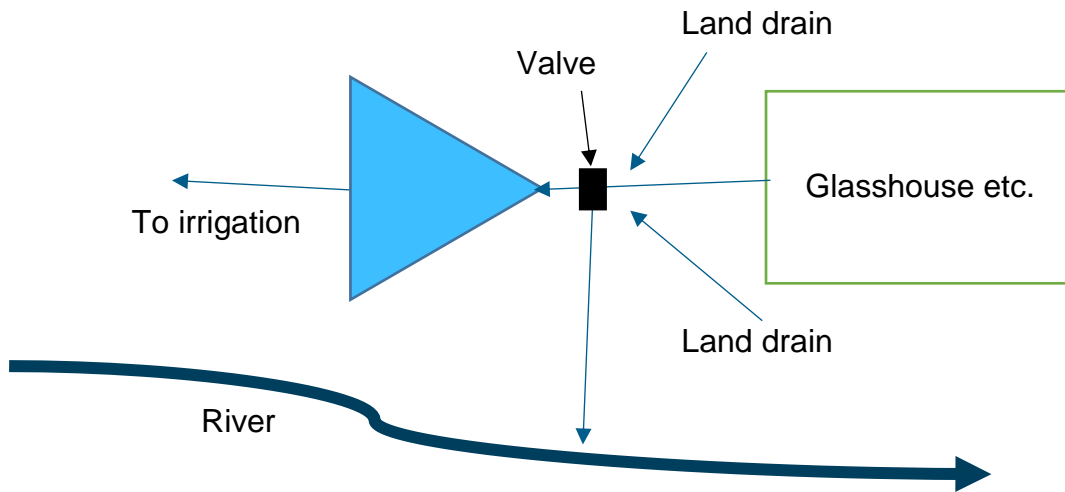
There will be a need to consider metering/aggregation/charging (volumes on both full licences).

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- 18. Solely above ground rainwater harvesting from above ground surfaces to discrete lined reservoir – no discharge to inland waters. Valve can divert water into reservoir or into river.**



Reservoir is not a source of supply – discrete water. No licence required for irrigation from reservoir if RPS complied with. (Paragraph 1 and 6 of RPS applies).

19. Below ground land drain harvesting to discrete lined reservoir – no discharge to inland waters. Valve can divert water into reservoir or into river.



Reservoir is not a source of supply – discrete water. No licence required for irrigation from reservoir. (Paragraph 6 of RPS applies).

Below ground /land drains. An abstraction takes place from the land drain which is considered to be a source of supply for licensing purposes

1 x full licence required for filling of reservoir – same as off-line storage situation.

Definitions – Section 221 Water Resources Act 1991

“**abstraction**”, in relation to water contained in any source of supply, means the doing of anything whereby any of that water is removed from that source of supply, whether temporarily or permanently, including anything whereby the water is so removed for the purpose of being transferred to another source of supply; and “abstract” shall be construed accordingly;

“**discrete waters**” means inland waters so far as they comprise—

- a lake, pond or reservoir which does not discharge to any other inland waters; or
- (b) one of a group of two or more lakes, ponds or reservoirs (whether near to or distant from each other) and of watercourses or mains connecting them, where none of the inland waters in the group discharges to any inland waters outside the group;

“**source of supply**” means—

- (a) any inland waters except which are discrete waters; or
- (b) any underground strata in which water is or at any time may be contained;

“inland waters” means the whole or any part of—

- (a) any river, stream or other watercourse (within the meaning of Chapter II of Part II of this Act), whether natural or artificial and whether tidal or not;
- (b) any lake or pond, whether natural or artificial, or any reservoir or dock, in so far as the lake, pond, reservoir or dock does not fall within paragraph (a) of this definition; and
- (c) so much of any channel, creek, bay, estuary or arm of the sea as does not fall within paragraph (a) or (b) of this definition;

March 2019