

# **Micro Hydro Generation and Water Usage**

## **General Information Fact Sheet**

- **Existing Farm Dam Outflow Pipe Work**

The usage of a dam outflow pipe located at the foot of an existing or new dam structure is allowed without the need to obtain or hold a water licence in compliance with the following guidelines.

The Water Management Act 1999 must be followed regarding access to water.

In particular sections 48. Rights to Take Water, 49. Hydro Electric generation, 52. Taking not to effect owner or occupier.

1. **Alternative ability to release environmental flow must be retained if flow into the turbine is isolated.**
2. **All flow must be returned to the original water course after exiting the turbine**
3. **Outflow pipe work and turbine assembly are to be under 20 meters in length from the base of the dam.**
4. **No requirement for installation of fish ladders if the existing dam structure has no requirement for same**
5. **Penstock pipe work may be required to have the facility to fit a flow meter for DPIWE.**  
“If a flow meter is required by DPIPWE this will need to be installed at the proponents expense and will need to meet DPIPWE standards.”
6. **Proposed turbine sites are to have preliminary specifications forwarded to Dept Primary industries, Parks, Water & Environment for assessment.**
7. **It may be beneficial to the developer to apply for and hold a Non Consumptive Water Licence for the flow required to operate the turbine if this flow is greater than the allocated environmental flow. This licence will guarantee the flow entitlement can not be depleted by users upstream.**

- **Existing Farm Dam Spillway Usage**

The usage of an intake and penstock over a dam spillway is allowed, if the existing outflow pipe is not suitable to be used for a turbine, in compliance with the following guidelines.

1. **The intake and penstock must not degrade the integrity or reduce the designed spillway capacity in any way**
2. **The penstock must be engineered and certified by an appropriate engineer**
3. **The penstock must be installed in compliance with all engineering specifications**
4. **All guidelines as listed in Dam Outflow pipe work section to be adhered to.**

- **Run Of River Micro Hydro Systems**

Run of river systems have no requirements for the holding of a water licence if all water used for generating power is returned in full to the original water course after usage.

The Water Management Act 1999 must be followed regarding access to water. In particular sections 48. Rights to Take Water, 49. Hydro Electric generation, 52. Taking not to effect owner or occupier.

1. **Proposed sites must be submitted to to Dept Primary industries, Parks, Water & Environment for assessment.**  
Information that must be supplied for assessment is , Proponents Name and contact details, Installer or suppliers Name and contact details, GPS position of the proposed intake site , GPS position of the proposed turbine site, waterway name if available, water volume requirements of the turbine, proposed intake structure or device, size and length of penstock, and site photos
2. **If the proposed site is within an existing certified water catchment area with regulated environmental flow a site minimum flow requirement assessment will need to be conducted by a qualified hydrologist and submitted with the information in section one.**
3. **Sites outside the areas in section two may need to be assessed at the discretion of DPIPWE.**
4. **Turbines with the ability to take all of the water in low flow times must be designed to allow for environmental flow to be priority at all times. This may be achieved by the correct design of the water intake device.**
5. **Catchment ponds , weirs, or in stream structures will require a permit and appropriate engineering to be obtained.**
6. **Low head turbine units that require an in stream diversion or flume to direct water to the turbine head must not deprive the existing water course of all the potential flow. Environmental flow must be retained as with high head units even for short distances over a natural rock bar or waterfall. This flume may require a permit, this will be at the discretion of DPIPWE.**
7. **Accessing water from crown land is acceptable providing this is in accordance with the Water Management Act and all items above. This water must be discharged on the proponent's property for power generation and returned to the original water course in full. This option may need more stringent assessment and guidelines at the discretion of DPIPWE.**