

Laws, Regulations and Rules passed thereunder.

JAMMU AND KASHMIR STATE WATER RESOURCES REGULATORY AUTHORITY

NOTIFICATION

NO: 07 /JKSWRRA/2013, JAMMU

Dated: 22nd April 2013

In exercise of the powers conferred by section 198(g) read with sub-section (1) of section 105 of the Jammu & Kashmir Water Resources (Regulation & Management) Act, 2010 (Act No. XXI of 2010), and all other enabling provisions in this behalf, the J&K State Water Resources Regulatory Authority hereby makes the following regulations, namely:-

Chapter-I

1. Short title, commencement and interpretation –

- (i) These Regulations may be called the J&K State Water Resources Regulatory Authority (The safety measures to be adopted by a licensee for protecting public and ensuring safety) Regulation, 2013.
- (ii) These Regulations shall be applicable to all Licensees in their respective licensed areas.
- (iii) These Regulations extend to the whole of the State of Jammu & Kashmir.
- (iv) These shall come into force on the date of their publication in the Govt. Gazette

2. Definitions - In these Regulations, unless the context otherwise requires -

- a. “Act” means the Jammu and Kashmir Water Resources (Regulation and Management) Act, 2010.
- b. “Authority” means the J&K State Water Resources Regulatory Authority established under section 139 of the Act.
- c. “Assistant Executive Engineer” means an Assistant Executive Engineer in-charge of the concerned wing of Public Health Engineering (PHE), Irrigation and Flood Control Department exercising control over a sub-division of an irrigation, flood control, hydraulic work or groundwater; “chairperson” means the Chairperson of the Forum

- d. “dam” means works that include a barrier, whether permanent or temporary, which has the potential of impounding, diverting or controlling water for multipurpose projects or schemes like generation of electricity, irrigation or any other use;
- e. “drinking water” means water for consumption or use by human population for drinking or other domestic purposes, which shall include-
 - (i) consumption or use of water for cooking, bathing, washing, cleansing and other day-to-day activities; and
 - (ii) water meant for consumption by the livestock;
- f. “electricity” means electrical energy generated by way of usage of water from any water source flowing within the territory of the State;
- g. “embankment” means and includes every bank, dam, wall and dyke made or used for retaining water upon any land, every sluice, spur, groyne, training wall or other work annexed to, or portion thereof made or erected for the protection of any such embankment, or of any land, from erosion or over flow by, or of, any water source, tide or wave and also all buildings and roads, intended for purpose of inspection and supervision of such embankments;
- h. “Executive Engineer” means the Executive Engineer of the concerned wing of PHE, Irrigation and Flood Control Department exercising control over a division of Public Health Engineer, irrigation, flood control, hydraulic work or groundwater;
- i. “flood embankment” means any embankment constructed or maintained by the Government in connection with any system of irrigation or reclamation works for the protection of lands and other infrastructure from inundation or which may be declared by the Government to be maintained in connection with any such system, and includes all groynes, spurs, dams and other protective works connected with such embankment;
- j. “flood water” means water overflowing or erupting or that has overflowed or erupted from a water source onto, or over, land or built up area which is not submerged when such water source flows between, or is contained within its bed and banks;
- k. “Government” means the Government of the State of Jammu and Kashmir;
- l. “hydraulic works” include-
 - (i) all reservoirs, tanks, dams, weirs, canals, barrages, channels, domestic or commercial water supply works, pipes, ponds, spring ponds, spring channels, aqueducts, sluices, gates, outlets, washouts, pumping installations, flood embankments or other flood protection works

- constructed, maintained or controlled by the Government for the usage or storage of water;
- (ii) all works, embankments, structures, control structures including outlets, supply and escape channels connected with such reservoirs, tanks, dams, weirs, canals, barrages, channels, domestic or commercial water supply works, pipes, ponds, spring ponds, spring channels, aqueducts, sluices, gates, outlets, washouts, pumping installations, and all roads constructed for facilitating the construction or maintenance of such reservoirs, tanks, dams, weirs, canals, barrages, channels, domestic or commercial water supply works, pipes, ponds, spring ponds, spring channels, aqueducts, sluices and pumping installations;
 - (iii) all drainage works, flood embankments, other flood protection works, wells, water courses and field channels;
 - (iv) all lands held by the Government for the purpose of such reservoirs, tanks, dams, weirs, canals, barrages, channels, domestic water supply works, pipes, ponds, spring ponds, spring channels, aqueducts, sluices, pumping installations and all buildings, machinery, fences, gates and other erections upon such lands;
 - (v) zamindari khuls; and
 - (vi) all lands, roads, cross drainages, catch water drains, pillars, boundary pillars, reference pillars, buildings, machinery, fences, gates, other erections, trees, crops, plantations or other produce occupied by and belonging to Government for the purposes of irrigation works;
- m. “licensee” means a person or a group of persons, firm, corporation, company, society, board, local body, government department or any other authority authorised under section 97 of the Act to avail the facility of usage of water from any source, or extraction of bed material with location thereof, within the State;
- n. “licensing authority” means-
- (i) in relation to unit for the purpose of generation of electricity the Government; and
 - (ii) in relation to units other than for purpose of generation of electricity the-
 - (a) Chief Engineer concerned Incharge PHE in respect of drinking water supply and groundwater; and
 - (b) Chief Engineer concerned In charge Irrigation & Flood Control in respect of irrigation, flood control and embankment schemes.
- o. “water” means natural resource flowing in any river, stream, tributary, canal, nallah or any other natural course of water or situated upon the surface of

any land like lake, pond, lagoon, swamp, spring or ground water but does not include fish;

- (2) Words or expressions occurring in these Regulations and not defined herein but defined in the Act or in the Conduct of Business Regulations 2013 shall bear the same meaning as in the Act or in the J&K Water Resources Regulatory Authority (Conduct of Business) Regulations, 2013.

CHAPTER – 2

SAFETY MEASURES TO BE ADOPTED BY A LICENSEE FOR PROTECTING PUBLIC AND ENSURING SAFETY

3. These Regulations specify the measures to be adopted besides other measures as required by a licensee which are necessary for:-
- (a) protecting the public, including the person(s) engaged in the usage of water for the purposes of generation of power, running of water in irrigation and water supply units, hydraulic works, exploration of ground water and construction activities on such units for purposes of the usage of water;
 - (b) eliminating or reducing the risk of personal injury to any person or damage to property of any person during the currency of licence;
 - (c) ensuring the safety of the life and property of the inhabitants of the area under the operation of the scheme, water source, hydraulic work and protection thereof against any damage or danger caused or likely to be caused by the uncontrolled release of water or hazardous water caused by the collapse or failure of any unit, dam, barrage or hydraulic works.
4. Safety measures to be adopted by licensees having a unit requiring the usage of water for the purpose of generation of electricity:
- (i) the site of dam has to be reasonably away from a thickly populated area.

- (ii) the entry to Dam/Power House/Outfall area should be restricted with the entire area properly fenced. Adequate lighting arrangement must be put in place.
- (iii) the periphery of the reservoir should be kept under constant vigil. An adequate number of boats with manpower must be available at site for immediate rescue measures in any emergency. Approaches to the reservoir must be completely plugged for ensuring safety of the people and cattle.
- (iv) dam break analysis for extreme failure should be conducted. Simulation of the discharge downstream of dam in such an event must be carried out to know the habitation / property getting affected. Emergency response system has to be in place for such an eventuality.
- (v) all anti erosion works, bunds or other mechanisms should be in place and in good conditions on both the upstream and downstream side.
- (vi) measures as recommended by various agencies while granting clearance to the project from environmental angle, aquatic angle, and ecological angle have to be in place and in good condition.
- (vii) install and operate automatic warning system with hooters or sirens so as to warn the people regarding operation for ejection of silt from the dam; and in the event of a sudden/additional release of water from the unit on operation of the unit after shutdown of the plant.
- (viii) undertake to deploy regular guards for giving advance warning to the people living in the adjoining villages so that they evacuate the area during emergent situations.

- (ix) has the periodical inspection of the unit conducted by the licensing authority or any other office or expert empowered in this behalf to check the adequacy and efficacy of safety measures.
- (x) perform any activity recommended by the licensing authority or officer/ expert empowered in this behalf.
- (xi) replace, renew, substitute, alter, repair, clean, or examine the plant, equipment, and machinery, and carry out other works as required for safety of the unit.

5. Safety measures to be adopted/ensured by licensees having a unit requiring the usage of water for the purpose of Irrigation of Land:-

- (i) ensure that every person whose water storage tank or reservoir or any other device for storing water is situated in the vicinity of any irrigation work maintains such tank, reservoir or device in a safe and efficient condition.
- (ii) if a tank reservoir or device is not in a fit condition or is likely to endanger any irrigation work in its vicinity, he/she shall make the owner or occupier to bring such a tank reservoir or device to a safe and fit condition within a reasonable time. The licensee can approach the Assistant Executive Engineer of the area concerned who can serve a notice to the owner / occupier to get the same executed.

If the owner fails to carry out such works within the time specified by the Assistance Executive Engineer, the works shall be got executed and thereafter costs recovered from the owner/ occupier on account of such repairs.

- (iii) ensure that no encroachments are made on Irrigation hydraulic works. In case of any encroachments, the licensee may intimate the Assistant Executive Engineer of the area concerned, who by order shall require such a person to remove such an interference or encroachment within a specified time. If the person so ordered does not remove such an interference or encroachment, the Assistant Executive Engineer may remove such an encroachment /interference at the expense of defaulter and even seek assistance of Police for removal of such an interference or encroachment.

- (iv) ensure that no explosives are used within such distances as prescribed in this regard.
- (v) ensure that no person other than an Assistant Executive Engineer or an officer duly empowered lets out water from a river, stream, nallah, canal or channel by cutting the bund, constructing a sluice / outlet or any other similar contrivance.
- (vi) ensure that no person extracts water for any purpose by the installation of a pump set or any other electrical or mechanical device, except with the prior permission of the Executive Engineer of the area concerned.
- (vii) ensure that no person deposits any material or waste in or near any channel or any other work feeding any Irrigation work.
- (viii) ensure that no person pollutes or discharges any sewage or industrial effluent in the water of any Irrigation work which may deteriorate the quality of water or give rise to the growth of any weeds in or cause an injury to such an Irrigation work.
- (ix) ensure that no vehicular traffic is allowed on embankments except with the permission of the prescribed authority.
- (x) the prescribed authority shall establish flood gauges at different places in a water source particularly at locations, where there are habitations, indicating thereon danger marks, in bold and legible print to make the public aware of the danger mark;
- (xi) the prescribed authority shall also establish flood control rooms with warning systems in all such areas which are prone to floods and combat any emergent situation arising during the high floods in any water source.
- (xii) the prescribed authority shall ensure that no extraction of material of any kind is carried out from any water source without identification of the site of extraction by an officer specifically empowered in this behalf by the prescribed authority. The officer shall, before identifying the site of extraction, satisfy himself that such an extraction of material does not in any way change the course of water source and no water supply or irrigation scheme is adversely affected. The officer shall also ensure that the bed material so extracted is removed on a daily basis by the licensee so as to maintain regular or normal flow.
- (xiii) whenever it appears to the Government that it is necessary to take measures for the purpose of protecting life and property from the danger caused by floods or threatened to be caused by floods in any area or locality, it may by order require all owners and occupiers of

land in such an area or locality to carry out such measures and for such periods as may be specified in the said order.

6. Safety measures to be adopted/ensured by licensees having a unit requiring the usage of water for the purpose of drinking water:-

- (a) ensure that no building, wall, fence or any other structure is erected, re-erected or constructed on or over any water works without the written permission of the prescribed authority.
- (b) ensure that no person removes, alters, injures, damages or in any way interferes with the demarcated water works.
- (c) ensure that within the area aforesaid, no manufacturing, trading, and agricultural activities or any other act is carried out, whereby injury may arise to any such water works or whereby the supply of water to such works may be fouled, polluted or rendered less wholesome.
- (d) ensure that no works are carried out, which may cause to percolate or drain into or upon any water works any material, whereby the water therein may in any way be fouled, polluted or its quality or flow altered.
- (e) ensure that entry of any animal into such water works is not permitted.
- (f) ensure that no person throws or puts any unwanted thing or material into or upon water in such works;
- (g) ensure that no person bathes or washes clothes in such water works;
- (h) ensure that no person does any other act which the Government may, by notification, specify not to be carried out.
- (i) ensure to maintain quality standards in supply of water as per IS: 10500.
- (j) undertake specific treatment processes as required to restore the quality of water within standard parameters where such parameters are not as per standards.
- (k) undertake repairs and maintenance of all civil works, electrical/mechanical components to avoid any corrosion, leakages, seepages or adulteration of drinking water during the course of transmission.
- (l) conduct tests as per procedure to ensure water supply as per standards.
- (m) ensure proper jointing in the pipes to check infiltration/ seepage.

- (n) prevent the deposition of any material or waste or discharge of industrial effluent into the free flow or pressure conduits utilized for transmission of drinking water.
- (o) protect the water bodies, treatment plants , storage reservoirs, inlet and outlet conduits from contamination with any harmful ingredients.

7. Safety measures to be adopted/ensured by licensees having a unit requiring the usage of water for the purpose of Ground water:

The departments/ licensees shall be required to:-

- (a) explore the ground water only to the extent as permitted by the prescribed authority.
- (b) explore it only with such devices as are permitted, are non hazardous and do not cause any injury to the person operating such devices.
- (c) erect barbed wire fencing or any other suitable barrier around the well during execution of work.
- (d) construct a concrete platform measuring 0.5x0.5x0.6 metre (0.3metre below ground level and 0.3 metre above ground level) around the well casing.
- (e) cap the well assembly by welding steel plates or with nuts and bolts.
- (f) on completion of work, such a person or agency shall fill up the mud pits or channels and restore the ground condition to the position as existed before commencement of drilling operation or sinking of the well.
- (g) in respect of an abandoned well, he/she shall fill up the abandoned well with clay, sand, boulders, pebbles or such other material from the bottom of such a well to the ground level and obtain a certificate from the Executive Engineer concerned that such an abandoned well has been properly filled up and capped.

8. Periodical inspections: - For the purpose of ensuing that safety measures are in place, the licensing authority shall issue a notice in writing to a licensee, requiring him to:-

- (a) have a periodic inspection of the water usage unit carried out by an expert, to the satisfaction of the licensing authority and in accordance with the procedure and at such intervals, as the licensing authority may specify.

- (b) cause to be carried out by an expert having experience in the design and construction of such units or works a review of the design, construction and operating procedures of the water usage unit and furnish a report of the same to the licensing authority;
- (c) carry out such repairs or take such measures as specified in the notice to ensure the safety of the unit and the protection of life and property that is likely to be endangered by an uncontrolled release of water or hazardous waste likely to be generated by the collapse or failure of the unit.

The licensing authority shall forward a copy of notice to the authority for information and record.

9. In case of non-compliance of the Regulations of the Authority, the Authority may take suitable action as per the provisions of the Act, Rules and Regulations or the Authority may take any other action as deemed proper.
10. Savings of inherent powers of the Authority.- Nothing in these provisions shall bar the Authority from adopting a procedure which is at variance with any of the provisions of these Regulations, if the Authority, in view of the special circumstances of the matter or class of matters and for reasons to be recorded in writing, deems it necessary or expedient to depart from the procedure prescribed in the Regulations.
11. General power to amend.- The Authority may, at any time and on such terms as it may think fit, amend any provision of the Regulations for the purpose of meeting the objective with which these Regulations have been framed.
12. Power to remove difficulties.-If any difficulty arises in giving effect to any of the provisions of these Regulations, the Authority may, by a general or special order, do anything not being inconsistent with the provisions of the Act, which appears to it to be necessary or expedient for the purpose of removing the difficulties.

By order of the Authority

**Sd/-
Secretary**

RECOMMENDED GUIDELINES FOR PHYSICAL AND CHEMICAL PARAMETERS

| S.No | Characteristics | *Acceptable | **Cause for Rejection |
|--|---|-----------------|---|
| 1. | Turbidity (NTU) | 1 | 10 |
| 2. | Colour (Units on Platinum Cobalt scale) | 5 | 25 |
| 3. | Taste and Odour | Unobjectionable | Objectionable |
| 4. | Power House | 7.0 to 8.5 | >6.5 or >9.2 |
| 5. | Total dissolved solids (mg/l) | 500 | 2000 |
| 6. | Total hardness (as CaCO ₃)(mg/l) | 200 | 600 |
| 7. | Chlorides (as Cl) (mg/l) | 200 | 1000 |
| 8. | Sulphates (as SO ₄)(mg/l) | 200 | 400 |
| 9. | Fluorides (as F) (mg/l) | 1.0 | 1.5 |
| 10. | Nitrates (as NO ₃)(mg/l) | 45 | 45 |
| 11. | Calcium (as Ca) (mg/l) | 75 | 200 |
| 12. | Magnesium (as Mg) (mg/l) | <30 | 150 |
| If there are 250 (mg/l) of sulphates, Mg content can be increased to a maximum of 125 (mg/l) with the reduction of sulphates at the rate of 1 unit per every 2.5 units of sulphates. | | | |
| 13. | Iron (as Fe) (mg/l) | 0.1 | 1.0 |
| 14. | Manganese (as Mn) (mg/l) | 0.05 | 0.5 |
| 15. | Copper (as Cu) (mg/l) | 0.05 | 1.5 |
| 16. | Aluminium (as Al) (mg/l) | 0.03 | 0.2 |
| 17. | Alkalinity (mg/l) | 200 | 600 |
| 18. | Residual Chlorine (mg/l) | 0.2 | >1.0 |
| 19. | Zinc (as Zn) (mg/l) | 5.0 | 15.0 |
| 20. | Phenolic compounds (as Phenol) (mg/l) | 0.001 | 0.002 |
| 21. | Anionic detergents (mg/l) (as MBAS) | 0.2 | 1.0 |
| 22. | Mineral Oil (mg/l) | 0.01 | 0.03 |
| TOXIC MATERIALS | | | |
| 23. | Arsenic (as As) (mg/l) | 0.01 | 0.05 |
| 24. | Cadmium (as As) (mg/l) | 0.01 | 0.01 |
| 25. | Chromium (as hexavalent Cr) (mg/l) | 0.05 | 0.05 |
| 26. | Cyanides (as CN) (mg/l) | 0.05 | 0.05 |
| 27. | Lead (as Pb) (mg/l) | 0.05 | 0.05 |
| 28. | Selenium (as Se) (mg/l) | 0.01 | 0.01 |
| 29. | Mercury (total as Hg) (mg/l) | 0.001 | 0.001 |
| 30. | Polynuclear aromatic hydrocarbons (PAH) (ug/l) | 0.2 | 0.2 |
| 31. | Pesticides (total, mg/l) | Absent | Refer to WHO guidelines for drinking water quality Vol 1.-- - 1993 |
| RADIO ACTIVITY | | | |
| 32. | Gross Alpha activity (Bq/l) | 0.1 | 0.1 |
| 33. | Gross Beta activity (Bq/l) | 1.0 | 1.0 |

Notes:

- The figures indicated under the column 'Acceptable' are the limits upto which water is generally acceptable to the consumers.
- Figures in excess of those mentioned under 'Acceptable' render the water not acceptable, but still may be tolerated in the absence of an alternative and better source but upto the limits indicated under column "Cause for Rejection" above which the sources will have to be rejected.