[DOH IMPLEMENTING RULES AND REGULATIONS OF CHAPTER || — "WATER SUPPLY" OF THE CODE ON SANITATION OF THE PHILIPPINES (P.D. 856), November 24, 1995]

To carry out the provisions of Chapter II - "Water Supply" of the Code on Sanitation of the Philippines, these rules and regulations are hereby formulated for implementation and strict compliance of all concerned.

SECTION 1. SCOPE — These implementing rules and regulations shall apply to all public and private water supply system project planned by any government agency or instrumentality including government-owned or controlled corporations, private organizations, firms, individuals or other entitles.

SECTION 2 . DEFINITION OF TERMS — As used in these Rules and Regulations, the terms below shall be defined as follows:

1. Artesian Well — a well where water is confined under hydrostatic pressure between two relatively impervious layers such as rock formations.

2. Bored Well — a well constructed by manually driven augers into the ground.

3. Cistern — a watertight tank used to store water,

4. Coliform Organisms — any rod-shaped, non-spore- forming, gram negative bacteria capable of growth in the presence of bile salts, or other surface-active agents with similar growth-inhibiting properties which are cytochrome-oxidaze negative and able to ferment lactose at either 35QC or 37°C with the production of acid, gas and aldehyde within 24-48 hours.

5. Complete Treatment—a series or combination of water treatment processes which shall include coagulation, adsorption, sedimentation, slow and rapid sand filtration, aeration and chlorination

6. Contamination — a general term referring to the introduction of materials not normally found in water that make the water less desirable or unfit for its intended use.

7. Deep Well — a well with depth greater than 20 meters constructed in areas characterized by aquifers or water bearing formations generally located at a depth of more than 20 meters below ground surface.

8. Department — the Department of Health.

9. Disinfection— water treatment processes designed to destroy disease-

causing organisms. The efficacy of disinfection is often assessed by measuring the coliform group of organism.

10. Doubtful source — a water supply facility or source that is subject to re-contamination (e.g. open dug well, unimproved spring, surface water).

11. Drilled Well a well constructed by percussion or rotary drills

12. Drinking water — water intended for direct human consumption or for use in food preparation.

13. Driven well — a well constructed by driving an iron pipe with a well point at lower end into the ground water bearing stratum.

14. Dug Well — a well normally circular or rectangular in shape, with diameter ranging from 1 to 1.5 meters. After the well is dug, it is necessary to put a lining made of permanent materials like masonry, brickworks of reinforced concrete which serve as protection against surface or outside contamination. An open dug well shall mean a well dug manually or mechanically to draw water by use of bucket or any container attached to a rope.

15. Groundwater — that portion of the rainwater which has percolated into the earth to form underground deposits called aquifers.

16. Level 1 (point source) — a protected well or a developed spring with an outlet but without distribution system, generally adaptable for rural areas where the houses are thinly scattered. A Level T facility normally serves around 15 households.

17 Level II (communal faucet: system or standposts)

— a system composed of a source, a reservoir, a piped distribution network and communal faucets, generally suitable for rural and urban fringe areas where houses are clustered densely to justify a simple piped system. Usually, one faucet serves 4 to 6 households.

18 Level Ill (waterworks system or individual house connections) — a system with a source, a reservoir, a piped distribution network and household taps, generally suited for densely populated urban areas.

19. Local Health Authority — a government official or employee responsible for the application of a prescribed health measure in a local political subdivision. It is the provincial governor, city or municipal mayor, as the case may be.

20. Local Health Officer— provincial, city or municipal health officer.

21. MPN (Most Probable Number) — a statistical method of determining microbial populations- A multiple dilution tube technique is utilized with a standard medium and observations are made for specific individual tube effects. Resultant coding is translated by mathematical probability tables into population numbers.

22. Pipe Lines — pipes used to transport water.

23. Polluted Water — water whose physical, chemical, bacteriological, biological and radioactive properties have been altered due to the presence of domestic sewage, industrial waste or other substances in water that are possibly objectionable or harmful to human lives.

24. Potable Water/Safe Drinking Water — water that is free of microorganisms or disease-producing bacteria (pathogens). In addition, the water should not possess undesirable taste, odor, color, levels of radioactivity, turbidity or chemicals and it should pass the standards of the Philippine National Standards for Drinking Water.

25. Public or Private Water Supply System — a government or private owned system for the provision of potable water for human consumption. The water system could either be of Level I (point source), Level 11 (communal) or Level III (waterworks) type. The system includes a) any collection treatment, storage and distribution facilities under the control of the operator of such system and used primarily in connection thereto: and b) any collection, pre-treatment, or storage facilities not under the control of the operator of the system which are used primarily in connection with such system.

26. Reservoir — a pond, lake or basin, either natural or artificial, designed for storage, regulation and control of water.

27. Sanitary Engineer — a person duly registered with the Board of Examiners for Sanitary Engineers (R.A. 1364) and who heads the sanitation division or section or unit of the provincial/city/municipal health office or employed with the Department of Health or its regional field health units.

28. Sanitary Seal — a mixture of cement and water placed in the annular space of the well casing and drill hole to seal space and about 3 meters deep to prevent the intrusion of water.

29. Sanitary Survey — an activity to inspect and investigate the existing environmental conditions around the water source which may affect the quality of the water.

30. Sanitation Inspector — a government official or personnel employed by the national, provincial, city or municipal government, who enforces sanitary rules, laws and regulations and implements environmental sanitation activities under the supervision of the provincial/ city/ municipal health officer/sanitary engineer.

31. Secretary — the Secretary of Health

32. Shallow well — a well measured from the natural ground surface with a depth of not more than 20 meters.

33- Springs— ground water seepage visible at the earth's surface due to hydrostatic gradient or head.

34. Surface Water — a mixture of surface run-off and groundwater. Surface sources include rivers, lakes, streams, ponds and impounding reservoirs.

35. Test Well — an excavation made to determine the quality and quantity of water.

36. Water Hauler — any person, firm or company who transports, stores, delivers and operates equipment used to transport or deliver water for human consumption.

37. Water Supplier — any entity, government or private company, responsible for source development, water abstraction, treatment and distribution of water.

38. Well — a man made hole used for recovering ground water from the water bearing strata by digging, boring, drilling or by any other method.

39. Well Driller — an individual, partnership, corporation, cooperative and the like who undertakes well drilling work or activities for the purpose of extracting ground water.

SECTION 3. PROCEDURES — PRESCRIBED STANDARDS AND

3.1 Standard Parameters and Values for Drinking Water — Before water is used, distributed or sold for drinking, it should pass the criteria on standard parameters and values for bacteriological, physical, chemical, biological and radiological quality set by the Philippine National Standards for Drinking Water.

3.2 Water Treatment —Treatment is necessary so as to render water supply potable. The degree and manner of treatment will depend on the quality of the raw water, however, the bacteriological quality shall be used as the main criterion. No water supplier shall be allowed to operate water system for public use unless necessary treatment has been provided.

For the purpose of classifying and evaluating raw-water quality with respect to its treatment requirements, the following criteria shall be used:

1. Group I. Water Requiring Disinfection Only: Water from underground or surface sources subject to a low degree of contamination, and having a MPN of coliform organisms not exceeding 50 per 100 ml.

2. Group It. Water Requiring Complete Treatment: Water from underground or surface sources having a MPN of coliform organisms 50 per 100 ml. to not more than 5,000 per 100 ml.

3.3 Water Disinfection —

a. Disinfection of water supply facilities shall be required for the following:

1. Newly constructed water supply facilities.

2. Water supply facility that has been repaired/ improved.

3. All existing water facilities that exceeded the bacteriological value set by the Philippine National Standards for Drinking Water.

4. All water facilities that require continuous disinfection.

5. Drinking water collected from a doubtful source.

b. Disinfectant — Chlorine shall be used as main water disinfectant. Other disinfectant shall be used provided that it has residual effect to ensure disinfecting capacity in the distribution system.

c. Responsible Agencies/Persons for Disinfection — Water disinfection shall be the responsibility of the following as shown on the table:

Type of Water Supply	**Agencies/Persons Responsible for Disinfection**	**Person Responsible**
Public Level I (wells, springs)	BWSA, Barangay Official and Local Health Agency	Caretaker with Sanitation Inspector (SI)
Levels II & III	Water Supplier (e.g. MWSS, LWUA or water district)	Waterworks Personnel
Private Wells	individual/owner	Private Owner with SI technical assistance

d. Requirements for Chlorination of Level Water Supplies.

1. Appropriate chlorination equipment shall be installed to ensure continuous and effective disinfection.

a. Chlorination equipment shall have a capacity of at least 50% greater than the highest expected dosage to be applied at anytime to attain satisfactory operation.

b. Automatic proportioning of Chlorine dosage to the rate of flow of treated water shall be provided at all plants where rate of flow varies more than 50% above or below the average flow. Manual control

is permissible when rate of flow is relatively uniform or an attendant is present to effect dosage adjustments.

c. Standby units shall be provided to ensure continuous operation.

d. Solution of calcium hypochlorite shall be prepared in a separate mixing tank, diluted and allowed to settle so that only clear supernatant liquid is withdrawn from the solution storage tank and to the chlorination.

e. Devices and instruments for the determination of the amount of daily chlorine dosage and chlorine residua! shall be provided.