I. INTRODUCTION

Water is an integral part of life on this planet. Water have been studied and managed as separate resources, although they are interrelated. Surface water seeps through the soil and becomes groundwater. Conversely, groundwater can also feed surface water sources. Surface water or groundwater, can contain a range of contaminants that may make the water unsafe to drink or aesthetically unacceptable (e.g. bad taste, odor or appearance). Such contaminants include: particles, microbiological contaminants, naturally occurring chemical substances and chemical substances derived from human activities. Treatment for these contaminants is particularly important for surface waters and shallow groundwater that are effect on the human health. To identify the safe drinking water it is necessary to study the Physico-chemical parameter and by comparing the parameter with the standard values.

II. MATERIAL AND METHODS

There are ten sampling stations were selected in Naldurg region dist. Osmanabad. The water samples were collected from bore well and dug well for the physico chemical analysis. The entire sample collected in the morning into a high grade colorless plastic bottles in the month of July-2013 and brought immediately to the lab for analysis. During the analysis the temperature is kept constant at 27°C. Analysis of water sample is done by using standard procedures. For example TDS were measured in lab by using standard procedure of Trivedi and Goel. The pH measure by digital pH meter. Chlorides, calcium, magnesium, sulphate etc. were measured by the standard methods given APHA. Result of the physicochemical parameters of different villages of Naldurg region.

All parameters are in mg/L except pH and Turbidity, Turbidity in NTU.

<table>
<thead>
<tr>
<th>Villages</th>
<th>Temp</th>
<th>color</th>
<th>odor</th>
<th>Tur.</th>
<th>pH</th>
<th>TDS</th>
<th>Total H</th>
<th>Ca</th>
<th>Mg</th>
<th>Cl</th>
<th>Na</th>
<th>K</th>
<th>Fe</th>
<th>F</th>
<th>SO₄</th>
<th>NO₃</th>
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<td>odorless</td>
<td>0.3</td>
<td>7.6</td>
<td>643</td>
<td>420</td>
<td>136</td>
<td>48</td>
<td>18</td>
<td>20</td>
<td>1</td>
<td>0.16</td>
<td>0.36</td>
<td>45</td>
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<td>odorless</td>
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<td>24</td>
<td>13</td>
<td>3</td>
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<td>8.0</td>
<td>392</td>
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<td>34</td>
<td>25</td>
<td>1</td>
<td>0.17</td>
<td>0.38</td>
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<tr>
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III. RESULT AND DISCUSSION

The collected water sample from different stations was the colorless and odorless and the temperature of the entire water sample is maintained 27°C.

**pH:** It is a measure of how acidic/basic water is. The range is from 0 - 14, with 7 being neutral. pH less than 7 indicate acidic, whereas a pH greater than 7 indicates a basic. pH is really a measure of the relative amount of free hydrogen and hydroxyl ions in the water. The standard range pH is 6.5 to 8.5 given by ISI and WHO. In the analysis the pH of Gandhora and Khudawadi water sample has the pH above the standard range (8.8 & 8.6 respectively).

**Turbidity:** turbidity is the measure of relative clarity of a liquid. Clarity is important when producing drinking water for human consumption. Turbidity can provide food and shelter for pathogens. If not removed, turbidity can promote growth of pathogens in the distribution system, leading to waterborne disease outbreaks, which have caused significant cases of gastroenteritis throughout the United States and the world. Although turbidity is not a direct indicator of health risk, numerous studies show a strong relationship between removal of turbidity and removal of protozoa. In the water sample of all stations have the turbidity below the standard range of ISI and WHO.

**TOTAL HARDNESS:** In ground water hardness is mainly due to carbonates, bicarbonates, sulphates, chloride of Ca and Mg. The data of the analysis reveal that the total hardness of Naldurg (876 mg/l), Gandhora (681 mg/l), Sahapur (760 mg/l), are above the standard value of WHO.

**TOTAL DISSOLVE SOLID (TDS):** TDS is directly related to the purity of water. The TDS is the term used to describe the inorganic salts and small amounts of organic matter present in solution in water. The principal constituents are usually calcium, magnesium, sodium, and potassium cations and carbonate, hydrogen carbonate, chloride, sulfate, and nitrate anions. The TDS of water sample of Khudawadi (1214 NTU) and Gandhora (1175 NTU) having the range above the standard values of WHO.

**CALCIUM:** CALCIUM is a mineral that is an essential part of bones and teeth. The heart, nerves, and blood-clotting systems also need calcium to work but higher the amount of calcium causes harmful effects on the health. In the water sample of the many villages of Naldurg region the calcium is present above the range given by WHO. The villages such as Gugnur (349 mg/l), Naldurg (373 mg/l), Vagdari (206 mg/l) and Aliabad (206 mg/l).

**MAGNESIUM:** Hardness of water is directly concern with the magnesium and the sample of the different villages of Naldurg region ranging below the standard value given by the WHO.

**CHLORIDE:** In the investigated water samples in which the water sample of Naldurg (310 mg/l) which were found above the limit of ISI and WHO.
SODIUM: The sodium concentration into the all sample of Naldurg region lower than the prescribed limit by WHO and ISI.

POTASSIUM: It is found that the content of potassium is higher in the water sample of Chikundra (112 mg/l) & Naldurg (39 mg/l).

IRON: The concentration of Iron in the water sample of Kundawadi(0.71 mg/l) & Gandhora(0.38mg/l) ranging above the standard value given by the WHO and ISI.

FLUORIDE: Fluoride can occur naturally in water and the fluoride concentrations above recommended levels, which can have several long term adverse effects, including severe dental fluorosis, skeletal and weakened bones. The World Health Organization recommends a guideline maximum fluoride value of 1.5 mg/L as a level at which fluorosis should be minimal. In the analysis of the water sample it is found that the fluoride is below the standard range.

SULPHATE: Sulfate is a constituent of TDS and may form salts with sodium, potassium, magnesium, and other cations. Sulfate is commonly found in nature and can be present at concentrations of a few to several hundred milligrams per liter.

NITRATE: The nitrate concentration in the water sample of the Khudawadi(49mg/l) and Naldurg (44 mg/l) ranging above the standard limit of ISI.

IV. CONCLUSION
The physico-chemical analysis of ground water samples in and around Naldurg region reveals that water of all villages is fit for drinking but needs some primary treatment except S10 & S11 because of high TDS & total hardness.

V. REFERENCES
1. ICMR, Manual of Standards of Quality for Drinking Water Supplies. Indian Council Medical Research, New Delhi, Special Reports, No.; 1975, (44)27.