

## **3.2 Phase 2 Improvements**

### ***3.2.1 Distribution System***

This phase of improvements allows for a more efficient operation of the distribution system. This will be accomplished with the construction of larger water mains to help reduce friction loss throughout the system, eliminating the booster pumping stations, and keeping up with the minimum storage requirements. During this phase, the OCEDA Campus will require the addition of a new 18-inch main, a 24-inch main, and a new 1,000,000 gallon elevated storage tank. Because of the addition of the larger mains in this area, the Allen Lane booster pump station can then be eliminated. It is also proposed to decommission the 1.5 ground storage tank and build a new elevated 1,500,000 gallon tank, which will allow the 1.5/Industrial booster pumping station to be decommissioned. By this phase of improvements, all storage tanks south of I-71, including the new 1,500,000 gallon elevated tank, will be on the same hydraulic grade. Figure 2 shows these proposed improvements in blue.

## **3.3 Phase 3 Improvements**

### ***3.3.1 Well Field***

In the next 10-20 years, two new wells will be constructed to keep up with the continued growth in the district. The wells will then be capable of delivering 13 MGD through the raw water main to the water treatment plant.

### ***3.3.2 Distribution System***

During this final phase of improvements, the key goal will be to add more tanks to keep up with storage requirements, continue to reduce friction losses through the addition of more large diameter mains, meet fire demands, and eliminate the remaining booster pumping stations. To accommodate future growth, an additional 1,000,000 gallons of storage will be needed. Also included is an 18-inch main that will tie the Centerfield, Osage, Ballardsville, and Zhale Smith tanks together, minimizing friction loss between them. A new 24-inch water main along SR 53 is proposed to provide another route for water to flow to the south end of the distribution system. The existing 14-inch main along US 42 and SR 393 is older and will have to be replaced during this phase with an 18-inch main. The area out US 42 near the Liberty tank is expected to develop in the future and a new 8-inch main has been proposed to provide water to this area. The area served by the KPI tank is also growing and a larger water main will be required to serve this area during the next 20 years. A 10-inch water main has been proposed for this purpose.

**TABLE 2**

**PLANNED PHASE 2 SYSTEM IMPROVEMENTS**

<b>Project</b>	<b>Description</b>	<b>Estimated Construction Cost (Rounded)</b>	
2.1	ELIMINATE ALLEN LANE PUMP STATION*	-	
2.2	PROPOSED 24-INCH WATER MAIN ACROSS I-71 TO THE MOODY LANE STORAGE TANK	\$1,110,000	
2.3	PROPOSED 18-INCH WATER MAIN THROUGH THE OCEDA DEVELOPMENT TO THE ZHALE SMITH STORAGE TANK	\$920,000	
2.4	ELIMINATE BOTH THE 1.5 PUMP STATION AND GROUND STORAGE TANK AND REPLACE WITH AN ELEVATED 1.5 MILLION GALLON TANK	\$1,600,000	
2.5	PROPOSED 18-INCH WATER MAIN FROM SR 393 WEST TO THE INDUSTRIAL STORAGE TANK	\$490,000	
2.6	PROPOSED 1,000,000 GALLON MOODY LANE ELEVATED STORAGE TANK	\$1,100,000	
2.7	PROPOSED 12-INCH WATER MAIN FROM BALLARDSVILLE STORAGE TANK THEN EAST ALONG SR 22	\$1,020,000	
		<b>SUBTOTAL</b>	<b>\$6,240,000</b>
		<b>CINTINGENCIES (10%)</b>	<b>\$620,000</b>
		<b>TOTAL</b>	<b>\$6,860,000</b>

\*This project is a result of completing projects 1.3, 1.4 and 2.2.

**TABLE 3**

**PLANNED PHASE 3 SYSTEM IMPROVEMENTS**

<b>Project</b>	<b>Description</b>	<b>Estimated Construction Cost (Rounded)</b>	
3.1	PROPOSED 500,000 GALLON ELEVATED STORAGE TANK NEAR CENTERFIELD	\$600,000	
3.2	PROPOSED 500,000 GALLON ELEVATED STORAGE TANK NEAR WOODLAWN TANKS	\$600,000	
3.3	PROPOSED 24-INCH MAIN ALONG US 42 AND SOUTH ALONG SR 53 TO WOODLAWN TANKS	\$2,450,000	
3.4	PROPOSED 10-INCH MAIN ALONG US 42 TO THE KPI ELEVATED STORAGE TANK	\$1,060,000	
3.5	ELIMINATE OLD STATE ROAD PUMP STATION*	-	
3.6	PROPOSED 18-INCH MAIN ALONG US 42 AND SOUTH ALONG SR 393 TO THE 1.5 MILLION GALLON ELEVATED STORAGE TANK	\$2,140,000	
3.7	PROPOSED 8-INCH WATER MAIN ALONG US 42 TO THE LIBERTY STORAGE TANK AND THE GOSHEN METER	\$1,050,000	
3.8	PROPOSED 18-INCH WATER MAIN ALONG SR 22 TO THE OSAGE AND BALLARDSVILLE STORAGE TANKS AND NORTH ALONG SR 53 TO THE ZHALE SMITH STORAGE TANK	\$2,470,000	
3.9	PROPOSED TWO NEW CONVENTIONAL WELLS	\$560,000	
		<b>SUBTOTAL</b>	<b>\$10,930,000</b>
		<b>CINTINGENCIES (10%)</b>	<b>\$1,090,000</b>
		<b>TOTAL</b>	<b>\$12,020,000</b>

\*This project is a result of completing projects 3.4.