CITY OF BROOKINGS
SPECIAL COUNCIL STUDY SESSION MINUTES
City Hall Council Chambers
898 Elk Drive, Brookings, OR 97415
June 23, 2001
10:00 a.m.

I. CALL TO ORDER

Mayor Bob Hagbom called the meeting to order at 10:05 a.m.

II. PLEDGE OF ALLEGIANCE

Led by Community Development Director Leo Lightle

III. ROLL CALL

Council Present: Mayor Bob Hagbom, Council President Larry Curry, Councilors Frances Johns, Lorraine Kuhn, and Rick Dentino, a quorum present.

Council Absent: none

Staff Present: City Manager Leroy Blodgett, Community Development Director Leo Lightle, and Administrative Secretary Sharon Ridens

Media Present: none

Other: one citizen

IV. WATER MANAGEMENT AND CONSERVATION PLAN REVIEW - HGE, Inc., Architects Engineers Surveyors & Planners

Mayor Hagbom reviewed the purpose of the special study session. Council President Curry confirmed there would be no Council action taken at this meeting. City Manager Blodgett stated there would be no need for any action today, since this meeting was strictly a review of the Water Manage Plan that HGE, Inc. has been working on for about two years. HGE, Inc. representative Engineer Richard Nored was present to walk Council through the plan and to be sure everyone understands. Community Development Director Lightle had no comments. Blodgett turned the study session over to Nored.

Nored handed out the Brookings Master Plan and Conservation Plan to Council and proceeded to review it with Council. (A copy of this plan is not included in these minutes, but one is included in the vault copy of minutes.) A copy is available for public

review at City Hall.) The study recently completed has provided the first complete analysis of our water system since 1976 and the first comprehensive layout of water service level boundaries. He noted service level boundaries are important to assure adequate water pressure to all residents of Brookings. After important background issues were presented to Council, Nored continued the review of the plan, which included detailed information and maps of the current system needs and two phases for improvements projecting to the year 2025. This included the projected combined costs for these needs and Phase I improvements - totaling $9,004,350 to $12,361,925: raw water transmission, treated water pumping, water filtration for Chetco River, Ferry Creek improvements, reservoir storage, and distribution and booster pumping. Engineer Nored recapped and provided grant suggestions and opportunities available for financing.

Nored reviewed the Water Conservation Plan, which included working with others to assess unaccounted water usage, adopting curtailment ordinance for during low river flow periods, adopting programs to reduce unaccounted water usage, and considering rationing during drought years.

Mayor Hagbom informed Council we would be working closely with the County's plan, however we will not wait for their process completion in order to implement our City's plan. Hagbom noted the City's last rate increase on water was in 1980 (not sewer). Some discussion ensued regarding water issues throughout Curry County and our cities of same, with Council agreeing the importance of similar plans on both sides of the river and within the County. Nored and Hagbom stated the next six months of water usage will help us determine the impact of the City's ability to take in water for the future.

V. OTHER

There were no other issues discussed.

VI. ADJOURNMENT

By consensus, the Mayor declared the meeting adjourned at 12:30 p.m.

Respectfully submitted:

Bob Hagbom

Bob Hagbom
Mayor

ATTEST by City Recorder this 10 day of July, 2001.

Randy Reed

Randy Reed
Finance Director/City Recorder

BROOKINGS WATER SYSTEM

Master Plan and Conservation Plan

City Manager's Office copy

10/23/09

HGE INC

HGE INC. ARCHITECTS, ENGINEERS, SURVEYORS, & PLANNERS

SYSTEM CAPACITY NEEDS

- Water Supply is Critical. In Summer of 1999, Water Plant Operated at Capacity, 24 Hours Per Day, and Could Not Keep Up With Demand
- Brookings Could Not Maintain Reservoir Levels, and Was Forced to Implement Water Usage Restrictions

EXISTING SYSTEM

- **Source - Chetco River**
- **Intake - Ranney Well - Current Capacity 2.6 to 3.0 MGD**
- **Water Treatment - Conventional Type - Current Capacity 2.2 to 2.6 MGD**
  - Dependent on River Level
- **Storage - Base Level - 1.5 MG**

  - High Level Capacity - 361,500 Gallons

  (In Several Reservoirs)

WATER RIGHTS...cont.

- City Also has Water Rights for 3.23 cfs from Ferry Creek
- This Equates to Current Availability of 2 MGD from Ferry Creek if Water was Available. City also Maintains Storage Rights for 55 Million Gallons from Ferry Creek
- All Rights are Prior to Minimum Instream Flows Set by State

WATER SOURCE AND TREATMENT NEEDS

- Water Treatment Plant was Constructed in mid 1970's
- State has Declared Water From Ranney Well as Groundwater, and No Longer Requires Treatment Except Disinfection For Groundwater
- Ranney Well was Developed in 1989 on Chetco River
- City Also has Control of Ferry Creek Impoundment, Which Could Supply City with 10 to 20 Days of Maximum Water Demand

RAW WATER PUMPING AND TRANSMISSION CAPABILITIES AND NEEDS

CURRENT

- Estimated Capacity — 2.6 MGD TO 3 MGD
- Estimated Time Until Expansion is Needed — 1 to 4 Years

PHASE I UPGRADE RECOMMENDATIONS

- Phase I — Replace 4,900 Feet of 12" Line with 16" (Old Line)
- Estimated Capacity — 3.2 to 3.6 MGD
- Projected Year Capacity Will Last Through — 2005 to 2010
- Estimated Cost — $ 530,000

COUNCIL NEEDS A DECISION ON FILTRATION

- Council Must Decide on Level of Treatment
- 1970's Council Made Decision to Provide Full Treatment to Standards of Time
- In 1989, Oregon Health Declared Water from Ranney Well as Groundwater
- Concern Logically is That Water from Ranney Well Does Enjoy Natural Filtration, but Starts Out as Surface Water
- If Ferry Creek Becomes a Source of Water, Will Need to Provide Separate Treatment Because Ferry Creek Will be Much More Difficult to Treat

TREATMENT ALTERNATIVES FOR CHETCO RIVER

- **Treatment Alternatives for Chetco River**
  - Natural Filtration
  - Split Stream Treatment. Flows in Excess of 2.2 MGD Bypass Treatment Plant
  - Conventional Rapid Sand Filtration
  - Membrane Microfiltration
- **Brookings Currently Provides Complete Treatment with Rapid Sand Filtration. HGE Believes that Complete Treatment Offers Best Public Health Protection for Brookings. (However, Oregon Will Accept Natural Filtration Through Ranney Well at Current Time)**
- **If City Elects Not to Expand Treatment Capacity, HGE Suggests that City Utilize Split Stream Treatment for Phase I, and Maintain Existing Plant in Operation**

WATER FILTRATION FOR CHETCO RIVER SOURCE

CURRENT

- Estimated Capacity — 2.2 MGD to 2.6 MGD
- Estimated Time Until Expansion is Needed — 0, at Capacity

PHASE I UPGRADE

- Phase 1 — Upgrade with Split Stream Treatment, conventional filtration, or membrane microfiltration
- Estimated Capacity — 3.2 MGD to 4.4 MGD
- Projected Year — 2005 to 2015
- Estimated Cost — $ 100,000 to $ 2,100,000

WATER FILTRATION FOR FERRY CREEK SOURCE **

▪ Regulatory Requirements	$ 63,250
▪ Infrastructure Rehab. Costs	$ 388,800
▪ Pipeline Costs	$ 1,122,300
▪ Water Treatment Plant Special Improvements	$ 245,000
▪ Storage Expansion to 55 MG	$ 630,000
▪ Dam Safety Rehabilitation	$ 276,000
TOTAL ESTIMATED COST	$ 2,725,350

** Estimates Provided by Dames & Moore Study, and Indexed for Inflation

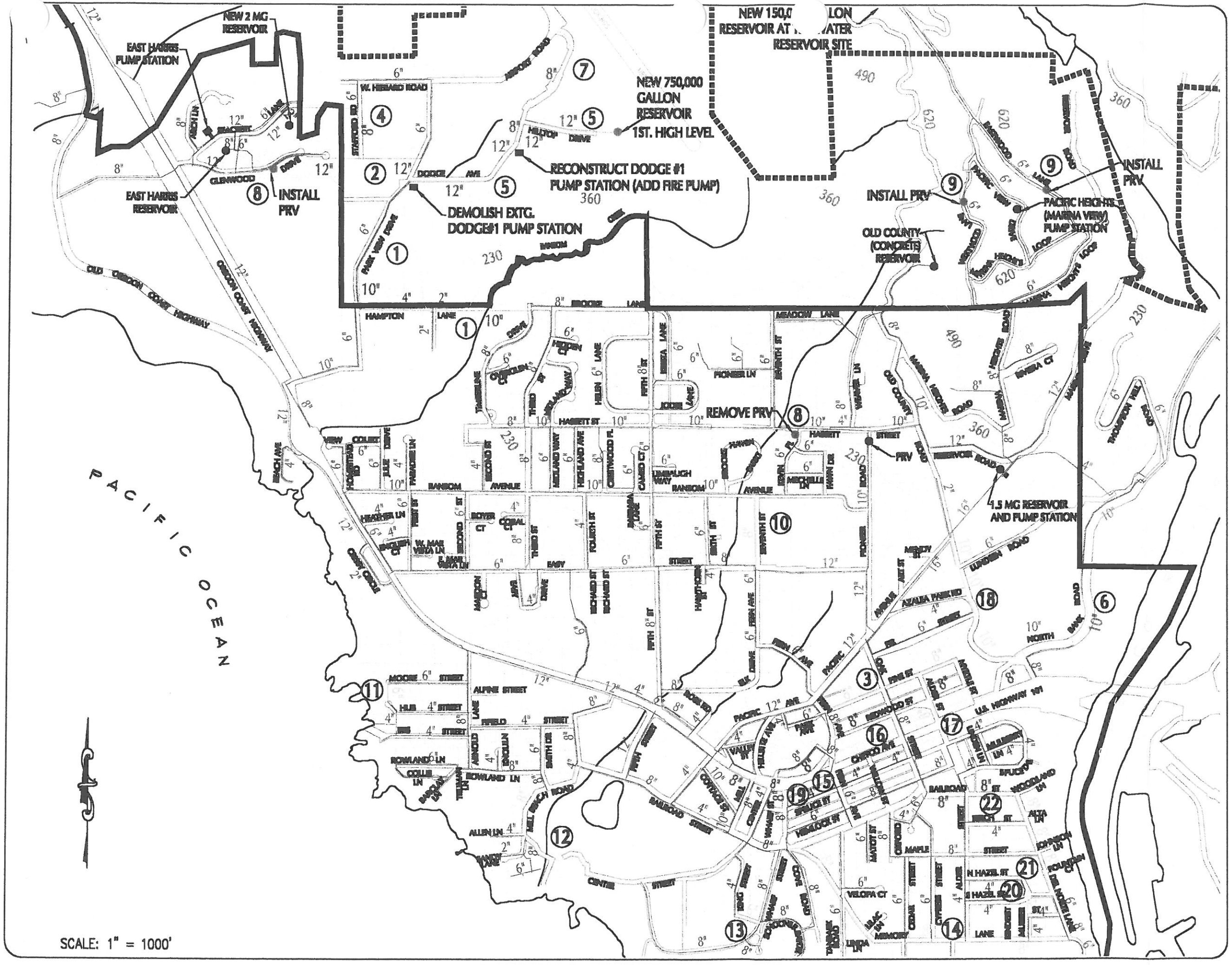
RESERVOIR STORAGE

CURRENT

- Estimated Capacity — 50% of Max. Day + Fire
- Estimated Time Until Expansion Is Needed — 0, at Capacity

PHASE I UPGRADE RECOMMENDATIONS

- Phase I Construction — 2.0 MG Base Level Reservoir
  750,000 Gal. 1st High Level
  150,000 Gal. 4th High Level
- Estimated Capacity — 4,76 MG (One Maximum Day)
- Projected Year Capacity Will Last Through — 2014
- Estimated Cost — $ 3,285,000



DISTRIBUTION AND STORAGE IMPROVEMENTS

TIE VARIOUS PRESSURE BANDS TOGETHER

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IMPROVE LOOPING FOR FORE PROTECTION

8" PRIORITY 1 IMPROVEMENTS

PRIORITY 2 IMPROVEMENTS

⑩ PROJECT REFERENCE NUMBER (SEE TABLE 10.1 FOR DESCRIPTION)

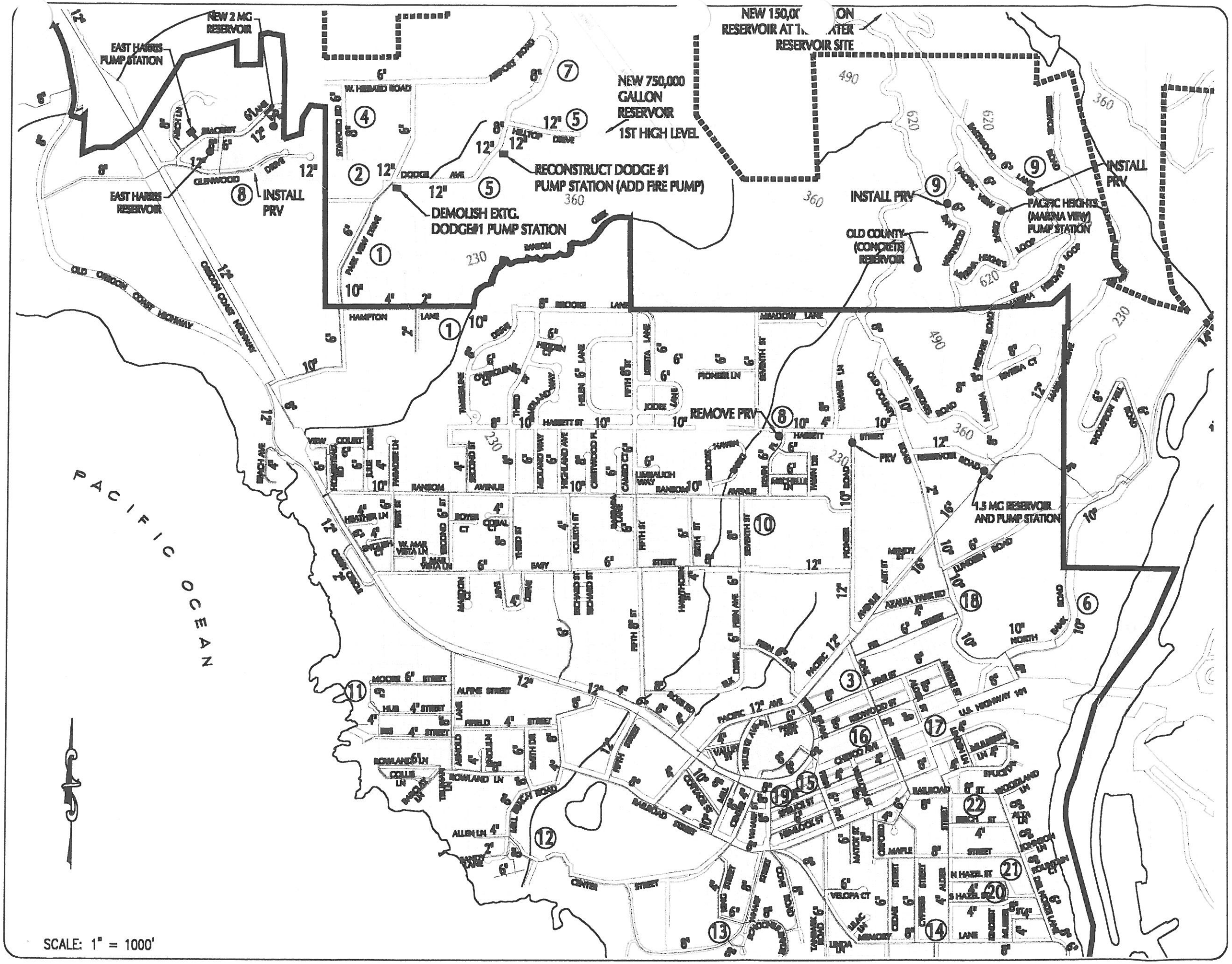
HGE

FIGURE 10.1

DISTRIBUTION AND BOOSTER PUMPING REQUIREMENTS

▪ PHASE I IMPROVEMENTS

▸ Distribution Mains, Valves & Hydrants	$ 2,000,000
▸ East Harris Heights P.S. Improvements	$ 34,000
▸ Dodge # 1 and # 2 Pump Station Improvements	$ 210,000
▸ Priority 1 Total	$ 2,244,000



PRESSURE ZONE CONSOLIDATION

(See Figure 10.1 for Improvement Identification)

BASE LEVEL
1st HIGH LEVEL
2nd HIGH LEVEL (AIRPORT)
2nd / 3rd HIGH LEVEL
4th HIGH LEVEL

SHOWS VARIOUS PRESSURE LEVELS

SERVICES TIED TOGETHER FOR VARIOUS REGIONS

NOTE:
SECOND & THIRD HIGH LEVEL REGIONS ARE TIED TOGETHER ON MARINA HEIGHTS

HGE

FIGURE 10.2

COMBINED COSTS

- SYSTEM NEEDS
- PHASE I IMPROVEMENTS

▸ Raw Water Transmission	$ 530,000
▸ Treated Water Pumping	$ 120,000 to $1,477,575
▸ Water Filtration for Chetco River	$ 100,000 to $2,100,000
▸ Ferry Creek Improvements	$ 2,725,350
▸ Reservoir Storage	$ 3,285,000
▸ Distribution and Booster Pumping	$ 2,244,000

- TOTAL COSTS $ 9,004,350 to $ 12,361,925

WATER CONSERVATION PLAN

- Work with Others to Assess Unaccounted Water Usage
- Adopt Curtailment Ordinance for During Low River Flow Periods
- Adopt Program to Reduce Unaccounted Water Usage
- Consider Rationing During Drought Years