



# DuPage Water Commission

600 E. Butterfield Road, Elmhurst, IL 60126-4642  
(630)834-0100 Fax: (630)834-0120

**NOTICE IS HEREBY GIVEN THAT A COMMITTEE OF THE WHOLE MEETING OF THE DU PAGE WATER COMMISSION WILL BE HELD AT 2:30 P.M. ON THURSDAY, JANUARY 9, 2003, AT ITS OFFICES LISTED BELOW. THE AGENDA FOR THE COMMITTEE OF THE WHOLE MEETING IS AS FOLLOWS:**

## **AGENDA**

**COMMITTEE OF THE WHOLE  
THURSDAY, JANUARY 9, 2003  
2:30 P.M.**

**600 EAST BUTTERFIELD ROAD  
ELMHURST, IL 60126**

- I. Discussion of the Open Meetings Act
- II. Five Year Capital Improvement Plan
  - Review Calculation of Indexing Costs

Board/Agendas/Committee of the Whole/Cotw0301.doc

All visitors must present a valid drivers license or other government-issued photo identification, sign in at the reception area and wear a visitor badge while at the DuPage Pumping Station.



# **DuPage Water Commission**

## **MEMORANDUM**

TO: Chairman & Commissioners

FROM: General Manager

DATE: January 3, 2003

SUBJECT: Committee of the Whole Meeting

The starting time of the Committee of the Whole meeting has been changed to 2:30 PM on Thursday, January 9th. The starting time was changed to allow for a question and answer session on the Open Meetings Act with Ms. Nancy Wolfe, an Assistant State's Attorney for DuPage County. All interested Commissioners are invited to attend. Following the question and answer session, at 3:00 PM, we will discuss the Five Year Capital Improvement Plan.



# DuPage Water Commission

## MEMORANDUM

TO: Chairman and Commissioners

FROM: General Manager

DATE: December 19, 2002

SUBJECT: Comments on Five Year Capital Improvement Plan

The following are Commissioner comments on the Five Year Plan. Staff will prepare a response for the Committee of the Whole meeting.

### **Ray Benson**

Ray is in favor of all the projects listed in the Five Year Plan. The following are his priorities:

1. Contract TIB
2. Electrical Generator
3. 30 Million Gallon Reservoir
4. Contract TW-3

Ray thinks we need to study the costs versus benefits for the 30 million gallon reservoir and Contract TW-3. He wonders if it makes more sense to pay off the bonds with the extra money. Ray feels we need to do these projects as fast as we can because we have the funds. Ray prefers using AB&H because they have the necessary experience.

### **Elizabeth Chaplin**

1. Are we currently using any protection system? Has a Cathodic sacrificial anode system ever been used?
2. How often do we replace the blow off valves? Are we replacing them or repairing them? Is there any other design that could be used to make this more cost efficient?
3. Have we ever done a corrosion survey? If so how often is a survey completed?
4. It appears that there is concern about service disruption from Chicago. Should we allow for more storage? Are there any off site storage facilities? Should this be moved up on the priority list?

I think getting the engine generators done in 2004 is a great idea.

**Richard Thorn**

Page 2; What needs to be done to lower the rate to the customers to \$1.55?

Every community is having a difficult budget time and could sure use the money.

Page 7; The C-factor assumptions are no longer valid. This is like assuming that the growth rate in Sales tax will be 6% instead of 2%.

**DU PAGE WATER COMMISSION  
2003 - 2004  
FIVE YEAR CAPITAL IMPROVEMENT  
PLAN**

**DECEMBER 12, 2002**



# **DuPage Water Commission**

## **MEMORANDUM**

TO: Chairman Vondra and Commissioners

FROM: General Manager

DATE: December 12, 2002

SUBJECT: Draft Five-year Capital Improvement Plan

In accordance with Commission policy, the Five-year Capital Improvement Plan is reviewed and evaluated by staff in connection with each new budget cycle. A draft of the updated plan is then submitted to the Commission for its consideration. This annual document is based on the Commission's anticipated needs for normal operations and improvements to the system, which may be required for emergency conditions. It is formulated on the basis of anticipated revenue sources net of routine expenditures needed to keep the Commission in normal operations. To allow additional review time, this Five-year Capital Improvement Plan is being distributed in December rather than the customary time of January.

The plan is divided into several operational sections—distribution system improvements, pump station improvements and standpipe improvements. A summary shows the capital outlay (funded by sales tax revenues) and major non-recurring maintenance items (funded by water rates) on a fiscal year basis. Each fiscal year's programmed expenditures are included in the financial projection of Commission revenues and expenditures through fiscal year 2007-08.

The status of the improvements approved in last year's plan is as follows:

Construction of the West Transmission Main, Contract TW-2 continues and should be completed in early 2003.

The draft fiscal year 2003-04 planning document represents the eighth consecutive year in which a five-year plan has been evaluated and approved by the Commission. Utilizing this process over the years has allowed the Commission to have a much better understanding of its long-term capital and operating needs and the level of funding required from various sources.

Last year the Commission increased the portion of its sales tax revenues currently used to fund the Water Revenue Bonds from 25% to 43%. This allowed the total average charter customer rate to drop from its current level of \$1.75 to \$1.65 per 1,000 gallons. This also had the effect of reducing fixed cost and missed fixed cost aggregates by an additional \$7.7 million per year thereby making it more economically feasible for future customers to join the Commission's system.

Even with the assumption used in this Five-year Plan that sales tax receipts will grow at an annual rate of only 2%, the Commission's wholesale rate can be held stable at the level of \$1.65 per 1,000 gallons for the next six fiscal years--long enough to complete this five-year capital plan. This includes the \$10 million fund of the water quality loans to Commission customers. In order to stabilize rates under this scenario, a portion of sales tax funds will need to be used for operating expenses in fiscal year 2008-09.

Planned improvements accepted by the Board will be included in the 2003-04 budget document. That document will be sent to the Board for its review in February and released, in tentative draft form, to the Charter Customers prior to March 1, 2003.

**DU PAGE WATER COMMISSION**  
**2003 – 2004**  
**FIVE YEAR CAPITAL IMPROVEMENT PLAN**

<b>SUMMARY.....</b>	<b>1</b>
Five Year Projection Assumptions.....	2
Summary of Revenues, Expenditures and Fund Balances.....	3
Summary of Estimated Costs.....	4
<b>DISTRIBUTION SYSTEM IMPROVEMENTS.....</b>	<b>6</b>
Distribution System Introduction.....	7
Proposed Improvements. ....	8
Contract TW-3; St. Charles Road to Standpipe No. 1.....	9
Contract TIB-1; Route 83.....	11
Contract BOV-1.....	13
Corrosion Survey.....	14
<b>PUMP STATION IMPROVEMENTS.....</b>	<b>15</b>
30 Million-Gallon Reservoir.....	16
Taste and Odor Facilities.....	18
Storage Building & Yard.....	20
Engine Generator Facility.....	22
Pump #10.....	24
<b>STANDPIPE IMPROVEMENTS.....</b>	<b>25</b>
Install Pumps at Standpipes.....	26



**DU PAGE WATER COMMISSION  
2003 – 2004  
FIVE YEAR CAPITAL IMPROVEMENT PLAN**

**SUMMARY**

**DU PAGE WATER COMMISSION**  
**2003 – 2004**  
**FIVE YEAR CAPITAL IMPROVEMENT PLAN**

- The fiscal year 2002-03 budget has been adjusted for known major variances.
- Operation and maintenance revenues are based on 95.7% of the IDNR allocation for each fiscal year.
- Fixed cost revenue requirements are 50% of the yearly debt service scheduled for the Commission's outstanding revenue bonds. Sales taxes are used to pay the remaining 50%.
- The total charter customer average water rate remains \$1.65 per thousand gallons.
- Subsequent customer differential grows only as new customers are added. New customer capital costs are recaptured by rates charged from date of first service until April 30, 2024.
- Sales taxes increase 2% annually.
- Interest income is based on prior year's earnings versus prior year's net revenues excluding interest earned applied to the same figure for each projected fiscal year.
- Water purchase expense is based on the Commission billing 97.5% of all water purchased from Chicago and 4% annual increases in the Chicago water rate.
- The 20% water purchase credit is based on annual anticipated purchases. This credit ends during fiscal year 2004-05.
- All other operating expenses, including electricity and operating costs at both the DuPage and Lexington Pumping Stations, are anticipated to rise 5% per year.
- Principal and interest costs are the scheduled debt service payments for the Commission's 1993 revenue bonds and general obligation bonds of 2001.
- Construction and major capital repair costs are inflated 2% per year.
- The target fund balance available for emergency repairs will increase by 3% per year. However, once this amount reaches a targeted maximum of \$50 million, the balance will hold at that level. (Presently the Commission indexes its targeted emergency repair balance to be 5% of the original construction costs escalated by the annual increases in the Engineering News Record Construction Index.)
- Sales tax proceeds not needed for immediate appropriation are reserved for construction through April 30, 2008. Water sales receipts not needed for immediate appropriation are reserved for rate stabilization.

DU PAGE WATER COMMISSION - 5 YEAR PROJECTION  
SUMMARY OF REVENUES, EXPENDITURES AND FUND BALANCES  
MAY 1, 2003 TO APRIL 30, 2008

ACCOUNT TITLE	ALL FUNDS FY 01-02 ACTUAL	ALL FUNDS FY 02-03 ADJ. BUDGET	ASSUMPTION OR % CHGE FY 02-07	ALL FUNDS FY 03-04 FORECAST	ALL FUNDS FY 04-05 FORECAST	ALL FUNDS FY 05-06 FORECAST	ALL FUNDS FY 06-07 FORECAST	ALL FUNDS FY 07-08 FORECAST
<b>REVENUES</b>								
O & M PAYMENTS	41,228,304	42,294,370	CALCULATED	45,354,388	46,113,986	47,002,888	47,398,583	47,793,186
SALES TAXES USED FOR O & M COSTS	0	0	CALCULATED	0	0	0	0	0
FIXED COST PAYMENTS (% PAID BY SALES TAX)	13,376,050	10,164,758	50.0%	8,916,329	8,916,551	8,916,002	8,915,586	8,916,607
SUBSEQUENT CUSTOMER DIFFERENTIAL	801,353	989,958	1.0%	999,857	1,009,856	1,019,955	1,030,155	1,040,457
SALES TAXES USED FOR CONSTRUCTION AND BOND PAYMENTS	33,002,484	32,655,132	2.0%	33,308,235	33,974,400	34,653,888	35,346,906	36,053,905
INTEREST INCOME	5,027,429	5,887,039	EXTRAPOLATED	5,945,467	6,157,281	6,155,738	5,899,413	5,080,113
OTHER INCOME	3,002,774	370,750	0.0%	0	0	0	0	0
<b>TOTAL REVENUE</b>	<b>97,598,897</b>	<b>92,362,007</b>		<b>94,524,286</b>	<b>96,172,184</b>	<b>97,728,531</b>	<b>98,590,803</b>	<b>98,866,245</b>
<b>OPERATING EXPENDITURES</b>								
WATER PURCHASES (4% ANNUAL RATE INCREASES)	36,332,674	38,481,262	CALCULATED	41,688,910	44,084,031	46,388,855	48,602,203	50,961,074
20% CREDIT THRU SEP 2004	(7,266,535)	(7,696,252)	CALCULATED	(8,337,382)	(4,188,092)	0	0	0
5 YEAR CAPITAL PLAN MAJOR REPAIRS	141,769	2,600,000	CALCULATED	3,698,000	3,121,000	0	0	0
OZONE TREATMENT OPERATIONS	0	0	CALCULATED	0	0	0	0	2,406,850
OTHER OPERATING EXPENSES (EXCL BOND INTEREST/DEPRC)	7,625,117	11,219,680	5.0%	11,780,604	12,368,897	12,988,182	13,637,591	14,319,471
REVENUE BOND PRINCIPAL AND INTEREST COSTS	17,835,408	17,832,908	CALCULATED	17,832,058	17,833,322	17,832,123	17,831,172	17,837,213
G.O. BOND PRINCIPAL AND INTEREST COSTS	15,701,673	13,122,850	CALCULATED	13,112,850	13,122,150	13,124,150	13,117,900	13,117,050
CAPITAL EQUIPMENT	193,957	163,850	5.0%	172,043	180,645	189,677	199,161	209,119
<b>TOTAL OPERATING EXPENDITURES</b>	<b>70,524,383</b>	<b>75,724,088</b>		<b>79,845,543</b>	<b>86,502,755</b>	<b>90,492,747</b>	<b>93,388,027</b>	<b>98,871,377</b>
5 YEAR CAPITAL PLAN NEW CONSTRUCTION	8,923,732	7,713,000	CALCULATED	7,884,000	11,503,000	16,363,000	35,976,000	17,119,000
5 YEAR CONSTRUCTION PLAN (DELAY)-CATCH-UP	0	(1,256,000)	CALCULATED	0	0	0	0	0
NEW CUSTOMERS & OTHER MINOR RELATED OUTLAYS	1,893,866	570,500	4.0%	500,000	520,000	540,800	562,432	584,929
WATER QUALITY LOANS	0	10,000,000	BOARD POLICY	0	0	0	0	0
<b>TOTAL CASH OUTLAYS AND COMMITMENTS</b>	<b>81,342,103</b>	<b>92,751,598</b>		<b>88,333,543</b>	<b>98,525,753</b>	<b>107,336,547</b>	<b>129,926,459</b>	<b>116,576,306</b>
<b>NET TRANSACTIONS</b>	<b>16,256,794</b>	<b>(880,591)</b>		<b>6,190,743</b>	<b>(2,353,569)</b>	<b>(9,608,056)</b>	<b>(31,335,656)</b>	<b>(17,709,056)</b>
UNRESTRICTED NET ASSETS - BEGINNING	113,148,022	127,243,034	CALCULATED	125,501,471	131,692,214	129,338,645	119,730,589	88,394,933
CONVERTED (TO) - FROM RESTRICTED OR CAPITAL NET ASSETS	(2,161,782)	(1,351,972)		0	0	0	0	0
<b>UNRESTRICTED NET ASSETS - ENDING</b>	<b>127,243,034</b>	<b>125,501,471</b>		<b>131,692,214</b>	<b>129,338,645</b>	<b>119,730,589</b>	<b>88,394,933</b>	<b>70,685,875</b>
HELD FOR EMERGENCY REPAIRS-TARGET (1)	27,800,000	28,100,000	3.6%	28,900,000	29,800,000	30,700,000	31,600,000	32,500,000
O&M RATE STABILIZATION RESERVE	46,471,406	48,118,095		48,482,244	42,991,538	34,391,690	23,134,322	6,263,766
CONSTRUCTION RESERVE	53,471,826	49,283,378		54,309,970	56,547,107	54,636,899	33,620,611	31,822,109
<b>UNRESTRICTED NET ASSETS - ENDING</b>	<b>127,243,034</b>	<b>125,501,471</b>		<b>131,692,214</b>	<b>129,338,645</b>	<b>119,730,589</b>	<b>88,394,933</b>	<b>70,685,875</b>
O & M RATE	1.33	1.34		1.38	1.38	1.39	1.39	1.39
FIXED COST RATE	0.43	0.32		0.27	0.27	0.26	0.26	0.26
<b>TOTAL RATE</b>	<b>1.76</b>	<b>1.66</b>		<b>1.65</b>	<b>1.65</b>	<b>1.65</b>	<b>1.65</b>	<b>1.65</b>

(1) TO MAX OF \$0,000,000

SUMMARY OF ESTIMATED NEW CONSTRUCTION COSTS						
BASED ON FY 00-01 COSTS	FY 03/04	FY 04/05	FY 05/06	FY 06/07	FY 07/08	Total
<b>DISTRIBUTION SYSTEM IMPROVEMENTS</b>						
Contract TW-3; St. Charles Road - Engineering		1,000,000	800,000	1,200,000		3,000,000
Contract TW-3; St. Charles Road - Construction			8,500,000	11,701,000		20,201,000
Contract TIB-1; Route 83 - Engineering	600,000	120,000				720,000
Contract TIB-1; Route 83 - Construction	6,000,000	2,250,000				8,250,000
<b>PUMP STATION IMPROVEMENTS</b>						
30 Million Gallon Reservoir - Engineering		738,000	475,000	400,000	400,000	2,013,000
30 Million Gallon Reservoir - Construction			5,625,000	11,250,000	5,625,000	22,500,000
Taste and Odor Facilities - Engineering				850,000	850,000	1,700,000
Taste and Odor Facilities - Construction				8,500,000	8,500,000	17,000,000
Vehicle Storage Bldg & Yard - Engineering		41,000				41,000
Vehicle Storage Bldg & Yard - Construction			270,000			270,000
Engine Generator Facility - Engineering	168,000	168,000				336,000
Engine Generator Facility - Construction	1,120,000	1,120,000				2,240,000
Pump #10-Engineering					40,000	40,000
Pump #10-Installation					400,000	400,000
<b>STANDPIPE IMPROVEMENTS</b>						
Install Pumps at Standpipes-Tank Site #2,3,4 Engineering	100,000	440,000				540,000
Install Pumps at Standpipes-Tank Site #2,3,4 Construction		5,400,000				5,400,000
	7,988,000	11,277,000	15,670,000	33,901,000	15,815,000	84,651,000
INFLATION FACTOR 2% PER YEAR	100.0%	102.0%	104.0%	106.1%	108.2%	105.0%
	7,988,000	11,503,000	16,303,000	35,976,000	17,119,000	88,889,000

SUMMARY OF ESTIMATED MAJOR REPAIR COSTS						
BASED ON FY 00-01 COSTS	FY 03/04	FY 04/05	FY 05/06	FY 06/07	FY 07/08	Total
DISTRIBUTION SYSTEM IMPROVEMENTS						
Contract BOV-1; Rehab 320 Blowoff Valves-Engineering Reviews	398,000	385,000				783,000
Contract BOV-1; Rehab 320 Blowoff Valves-Engineering Tech Observ.	DWC In House	DWC In House				0
Contract BOV-1; Rehab 320 Blowoff Valves-Construction	2,700,000	2,675,000				5,375,000
Corrosion Survey	500,000					500,000
PUMP STATION IMPROVEMENTS						
None						0
STANDPIPE IMPROVEMENTS						
None						0
	3,598,000	3,060,000	0	0	0	6,658,000
INFLATION FACTOR 2% PER YEAR	100.0%	102.0%	104.0%	106.1%	108.2%	100.9%
	3,598,000	3,121,000	0	0	0	6,719,000

**DU PAGE WATER COMMISSION  
2003 – 2004  
FIVE YEAR CAPITAL IMPROVEMENT PLAN**

**DISTRIBUTION SYSTEM IMPROVEMENTS**

**DU PAGE WATER COMMISSION  
2003 – 2004  
FIVE YEAR CAPITAL IMPROVEMENT PLAN**

**DISTRIBUTION SYSTEM INTRODUCTION**

The Commission operates and maintains 170 miles of pipeline ranging in size from 12" to 90" in diameter. Water supply from Chicago is provided by 90" and 72" Transmission Mains. The 90" Transmission Main, with a C-factor of 120, is sized for the year 2020 maximum day demand for the Commission's service area. The 72" Transmission Main, with a C-factor of 120, is sized to provide year 2020 average day demand. Average day demand is defined as the total amount of water used by a customer within a year divided by 365. The projected average day demand is referred to as the Department of Natural Resources (DNR) allocation. Maximum day demand is defined in the Water Purchase Agreement as 1.7 times average day demand.

The pipeline system within DuPage County is sized in accordance with DNR allocations that were based upon estimates made by Commission customers in the early 1980's. This is also based upon C-factors of 120 for pipelines greater than 20 inches in diameter and 100 for pipelines 20 inches or smaller in diameter. The distribution system is looped to minimize disruption in the event of a break in one of the mains.

**DU PAGE WATER COMMISSION  
2003 – 2004  
FIVE YEAR CAPITAL IMPROVEMENT PLAN**

**PROPOSED IMPROVEMENTS**

As approved in previous five-year capital improvement plans, the Commission is constructing a western transmission main. This improvement provides two benefits to the Commission. First, it will provide an additional conduit to improve flow in the southwestern and southern part of the Commission's distribution system. In addition, it will provide a way for water to get to the northern and southern part of the distribution system in the event of a break in the North, the Northwest, the South or the Southwest Transmission Mains.

Contract TW-2, which will be completed this fiscal year, connects the Northwest and Southwest Transmission Mains. Project TW-3, first proposed in the 1997-98 five-year capital improvement plan, will complete the western connection between the Northwest and North Transmission Mains.

Project TIB-1, which is currently under design, will increase flow in the system in the event of a break on the Northwest or Southwest Transmission Mains. These mains are the primary conduits for water leaving the DuPage Pumping Station. TIB-1 will become the eastern connection between the Southwest and Northwest Transmission Mains along Illinois Route 83.

To eliminate the need to repair or replace leaking corroded blow-off valves throughout the County during peak and non-peak service periods, the rehabilitation of 320 blow-off valves on the Commission's transmission and feeder mains, project BOV-1, began this fiscal year and should be completed Fiscal year 2004 -2005.

Due to the increasing incidence of corrosion related pipeline repairs, a corrosion engineering survey of the entire underground pipeline system was authorized as a part of the 2001-2002 Capital Improvement Plan. The corrosion evaluation will provide the Commission with a blueprint indicating areas of potential pipeline corrosion failure. The report will also identify the design and installation of cathodic protection systems and recommend methods for continuing inspection and testing of the underground pipeline system.



**DU PAGE WATER COMMISSION  
2003 – 2004  
FIVE YEAR CAPITAL IMPROVEMENT PLAN**

**PROJECT:** Contract TW-3, St. Charles Road to Standpipe No. 1

**LOCATION:** Wayne and Bloomingdale Townships

**DESCRIPTION:** Install 50,000 feet of a 48" transmission main and two remotely operated valves. This transmission main will extend the West Transmission Main north and east to the end of the North Transmission Main. This West Transmission Main will be installed from the existing West Transmission Main at St. Charles and Fair Oaks Roads via various roads and areas to the end of the North Transmission Main in Roselle.

**PURPOSE:** To connect the West and North Transmission Mains, to increase reliability, to provide service in the event of a break on one of the main transmission mains.

**BENEFIT:** To improve the Commission's ability to transport water between the West and North Transmission Mains during a break on either transmission main. In addition to maintaining a higher level of service during a break of one of the Commission's primary transmission mains, this West Transmission Main will reinforce the northwestern limit of the Commission's distribution system, and provide an available supply of water to the northwest section of the County.

**ESTIMATED COST (2002 DOLLARS):**

**ENGINEERING:** \$3,000,000

**LAND/ROW:** Minimal; pipe primarily installed in public rights-of-way.

**CONSTRUCTION:** \$20,201,000

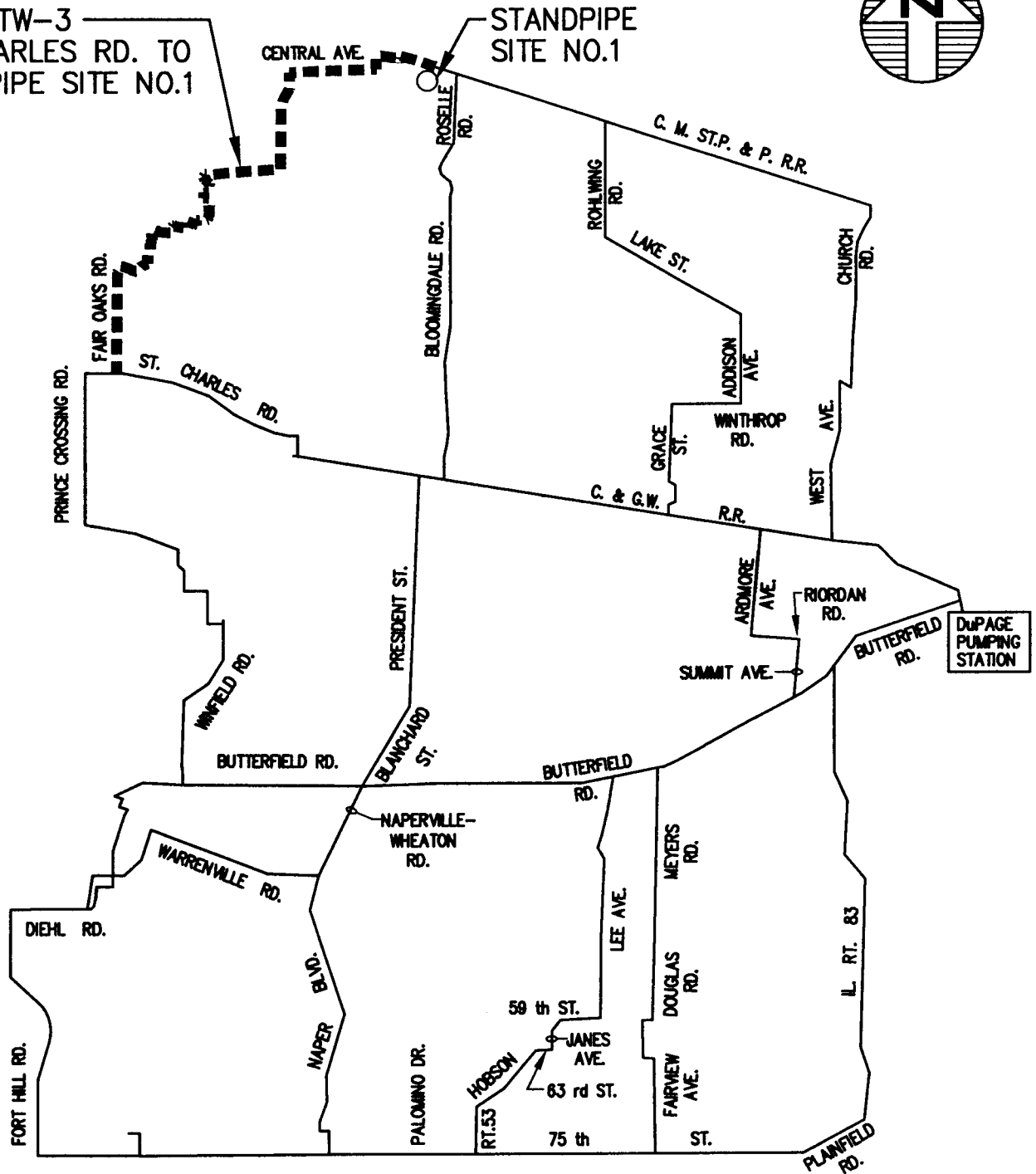
**TIMING:** Fiscal year 2004-2005 – Design  
Fiscal year 2005-2006 – Construction begins

See location map on next page.

# CONTRACT TW-3 DU PAGE WATER COMMISSION



TW-3  
ST. CHARLES RD. TO  
STANDPIPE SITE NO.1



**DU PAGE WATER COMMISSION  
2003 – 2004  
FIVE YEAR CAPITAL IMPROVEMENT PLAN**

**PROJECT:** Contract TIB-1; Route 83

**LOCATION:** Elmhurst and Oakbrook Terrace

**DESCRIPTION:** Install 11,000 feet of a 72" transmission main and one remotely operated valve. This transmission main will connect the Northwest Transmission Main with Southwest Transmission Main by Route 83.

**PURPOSE:** To increase flow in the event of a break on the Northwest or Southwest Transmission Mains which are the main conduits for water leaving the DuPage Pumping Station.

**BENEFIT:** During a break of the Southwest Transmission or Northwest Transmission Main, service is severely disrupted. This improvement minimizes the disruption and provides additional flow to satisfy average day demand during emergency conditions.

**ESTIMATED COST (2002 DOLLARS):**

**ENGINEERING:** \$720,000 (Remaining)

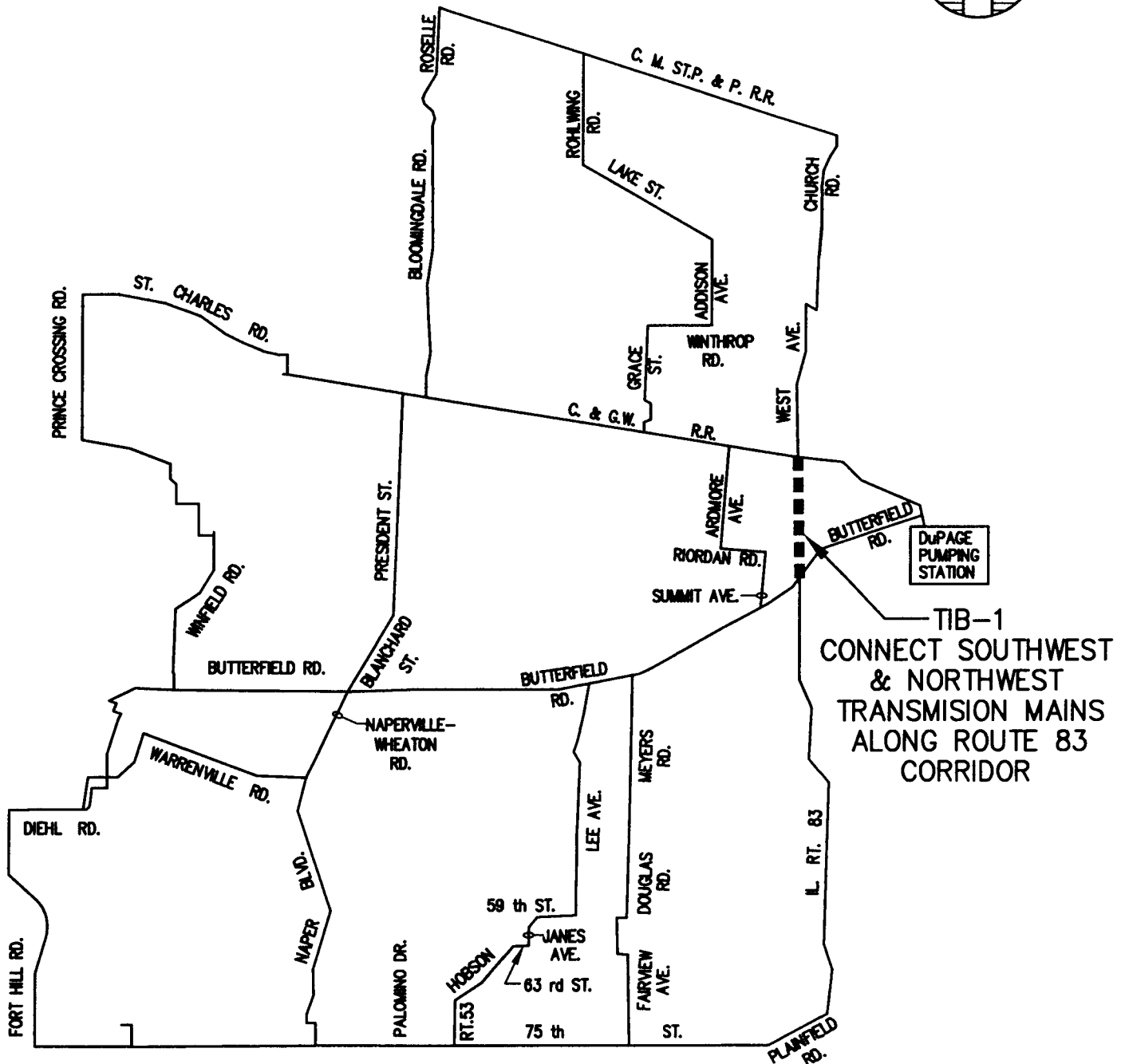
**LAND/ROW:** Minimal; pipe installed in public right-of-way

**CONSTRUCTION:** \$8,250,000

**TIMING:** Fiscal year 2003-2004 – Construction begins

See location map on next page.

# CONTRACT TIB-1 DU PAGE WATER COMMISSION



**DU PAGE WATER COMMISSION  
2003 – 2004  
FIVE YEAR CAPITAL IMPROVEMENT PLAN**

**PROJECT:** Contract BOV-1; Blow-off Valve Repair

**LOCATION:** Entire County

**DESCRIPTION:** Rehabilitate 320 blow-off valves on the Commission's Transmission and Feeder Mains

**PURPOSE:** To reduce the number of leaking blow-off valves that requires continuous repair and/or replacement by systematically rehabilitating all such valves.

**BENEFIT:** This rehabilitation will eliminate untimely leaks throughout the County on the Commission's system.

**ESTIMATED COST (2002 DOLLARS):**

**ENGINEERING:** \$783,000 (Remaining; reviews only, technical observation by DWC personnel)

**LAND/ROW:** None; work performed on Commission owned pipe

**CONSTRUCTION:** \$5,375,000

**TIMING:** Fiscal Year 2004-2005 – Repairs completed

**DU PAGE WATER COMMISSION  
2003 – 2004  
FIVE YEAR CAPITAL IMPROVEMENT PLAN**

**PROJECT:** Corrosion Survey

**LOCATION:** System wide

**DESCRIPTION:** Engineering corrosion survey of total pipeline system

**PURPOSE:** Identify areas of potential pipeline corrosion failure.

**BENEFIT:** Reduce pipeline corrosion failures

**ESTIMATED COST (2002 DOLLARS):**

**ENGINEERING:** \$500,000

**LAND/ROW:** None; work performed on Commission owned pipe

**CONSTRUCTION:** \$0

**TIMING:** Fiscal Year 2003-2004 – Engineering

**DU PAGE WATER COMMISSION  
2003 – 2004  
FIVE YEAR CAPITAL IMPROVEMENT PLAN**

**PUMP STATION IMPROVEMENTS**

**DU PAGE WATER COMMISSION  
2003 – 2004  
FIVE YEAR CAPITAL IMPROVEMENT PLAN**

**PROJECT:** 30 Million-Gallon Reservoir

**LOCATION:** South of two existing 15 million-gallon (MG) reservoirs at the DuPage Pumping Station

**DESCRIPTION:** Two 15-MG concrete reservoirs with baffled walls to prevent short-circuiting. The reservoirs will operate in series with the existing reservoirs. The influent of the proposed reservoirs will be constructed to allow for the addition of a taste and odor chemical feed system, if needed in the future.

**PURPOSE:** Increase storage capacity in the event of disruption in service from Chicago.

**BENEFIT:** Provide additional time for the Commission's customer utilities in the event of disruption of supply from Chicago and ability to take more water off peak to decrease power demand charge at Lexington Pumping Station.

**ESTIMATED COST (2002 DOLLARS):**

**ENGINEERING:** \$2,013,000 (remaining)

**LAND/ROW:** Construction on property owned by Commission

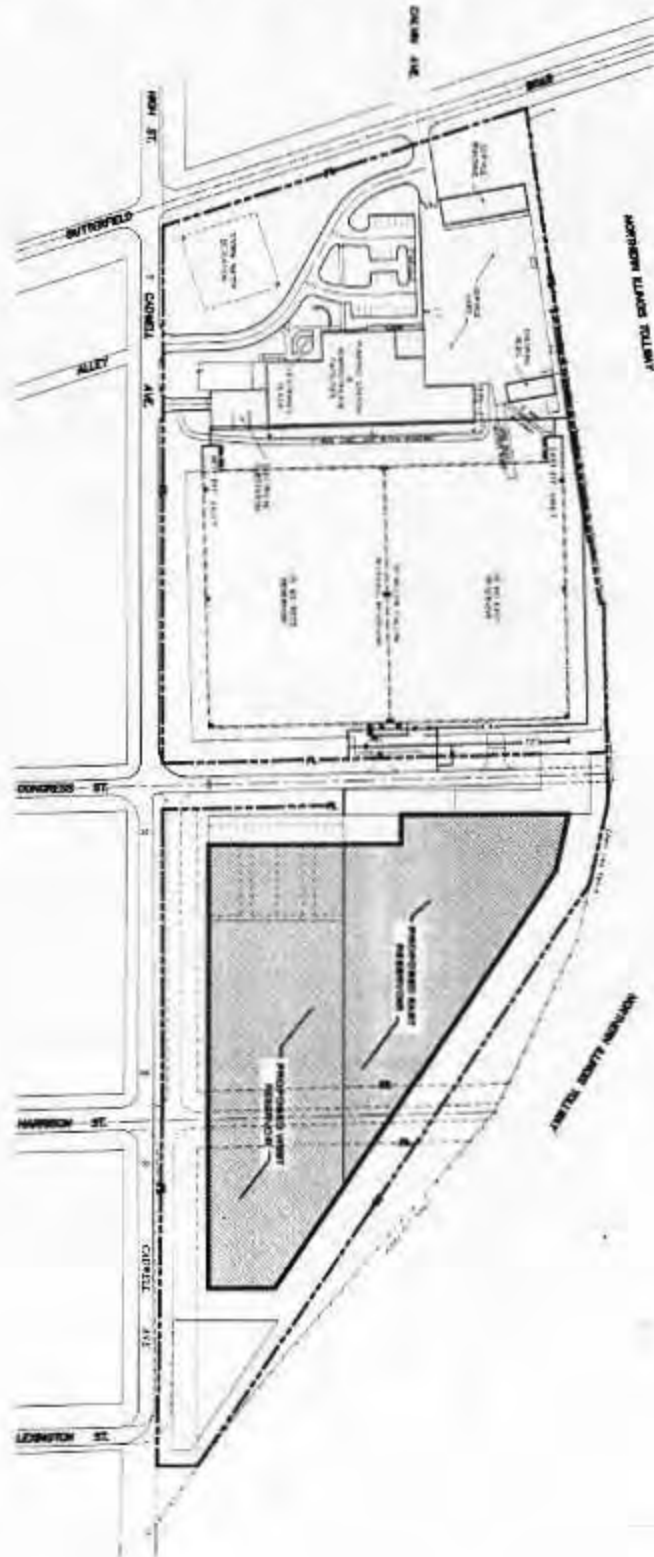
**CONSTRUCTION:** \$22,500,000

**TIMING:** Fiscal year 2004-2005 – Design  
Fiscal year 2005-2006 – Construction begins

See location map on next page.



# PROPOSED 30 MG RESERVOIR DU PAGE WATER COMMISSION



**DU PAGE WATER COMMISSION  
2003 – 2004  
FIVE YEAR CAPITAL IMPROVEMENT PLAN**

**PROJECT:** Taste and Odor Facilities

**LOCATION:** As part of the proposed 30 million-gallon reservoir at the DuPage Pumping Station

**DESCRIPTION:** Ozone and hydrogen peroxide chemical application facilities.

**PURPOSE:** Remove musty earthy taste and odor from water and provide additional barrier against Cryptosporidium.

**BENEFIT:** Provide higher quality water without musty earthy taste and odor. The installation of an ozone facility would provide a practical and cost-effective additional protection against Cryptosporidiosis.

**ESTIMATED COST (2002 DOLLARS):**

**ENGINEERING:** \$1,700,000 (10%)

**LAND/ROW:** Construction on property owned by Commission

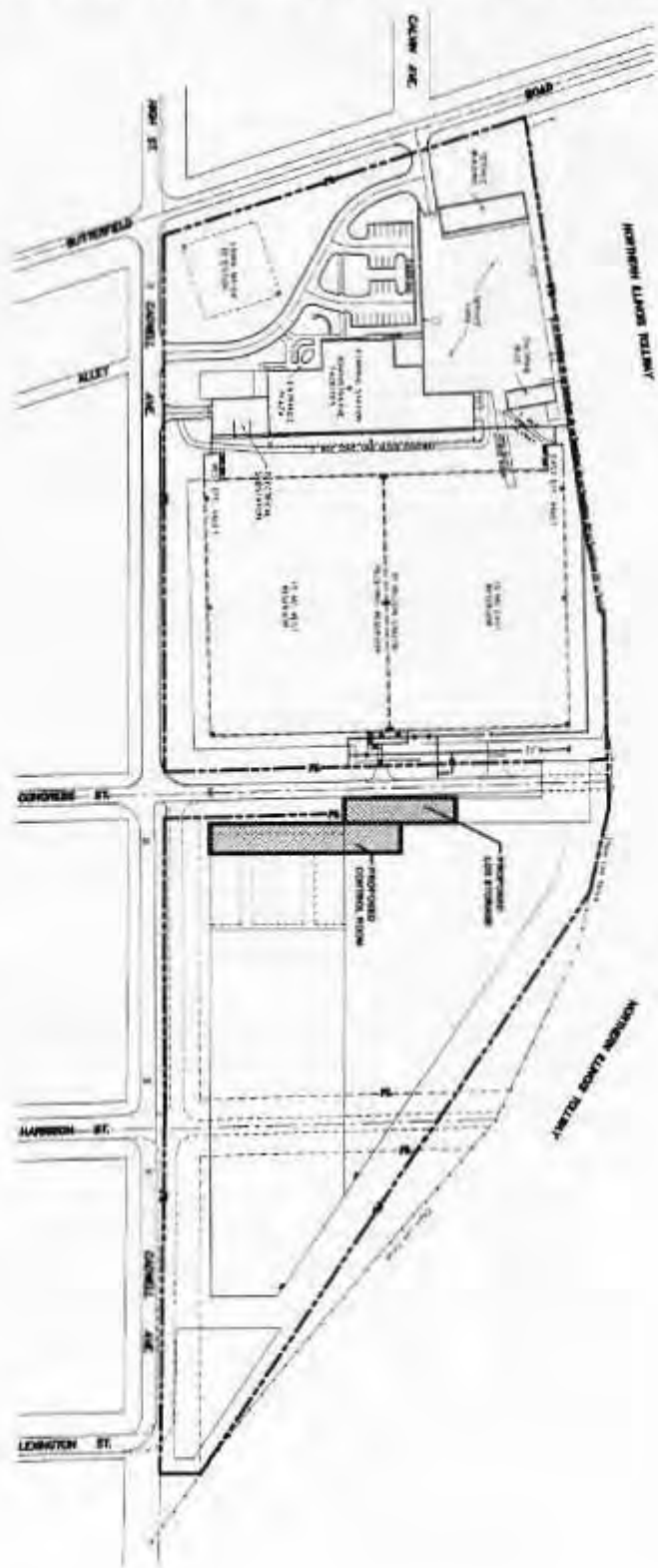
**CONSTRUCTION:** \$17,000,000

**OPERATION:** \$0.07/1,000 gallons

**TIMING:** Fiscal year 2006-2007 – Design  
Fiscal year 2006-2007 – Construction begins

See location map on next page.

# PROPOSED TASTE & ODOR FACILITIES DU PAGE WATER COMMISSION



**DU PAGE WATER COMMISSION  
2003 – 2004  
FIVE YEAR CAPITAL IMPROVEMENT PLAN**

**PROJECT:** Storage Building & Yard

**LOCATION:** South of the existing 30 Million-Gallon Reservoir at the DuPage Pumping Station

**DESCRIPTION:** Construct a garage type structure to house Commission's construction equipment. In addition to the construction equipment building, a three-sided structure will be built to store spare repair pipe. The three-sided structure is necessary to shield the spare pipe from ultraviolet light in order to prevent degradation of the PVC tape coating.

**PURPOSE:** The Commission has limited inventory of spare construction material. Presently, the spare pipe and materials are kept next to the parking area by the service building and are subject to damage during snowplow operations.

**BENEFIT:** Protect construction equipment and spare pipe from the elements and decrease material cost by keeping stock material.

**ESTIMATED COST (2002 DOLLARS):**

**ENGINEERING:** \$41,000

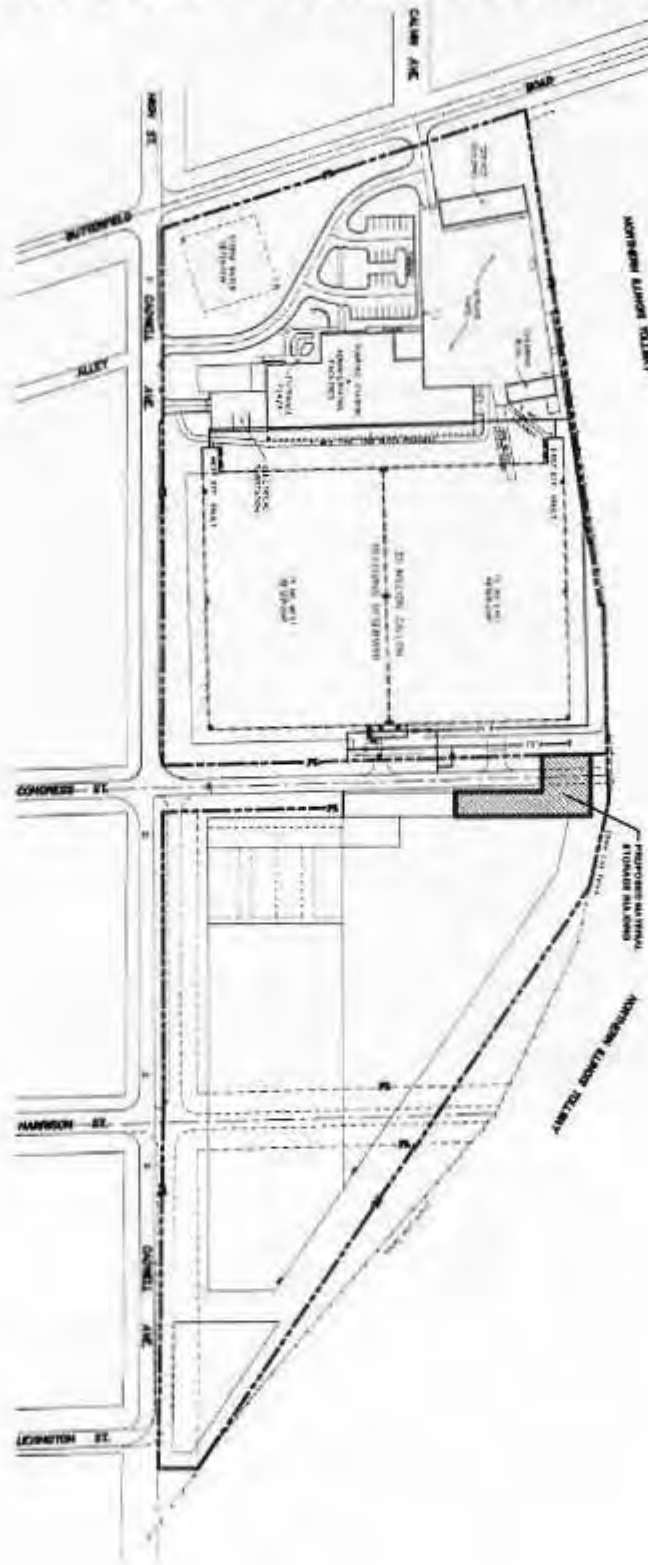
**LAND/ROW:** Constructed on property owned by Commission

**CONSTRUCTION:** \$270,000

**TIMING:** Fiscal year 2004-2005 – Design  
Fiscal year 2005-2006 – Construction

See site plan on next page.

# PROPOSED STORAGE BUILDING & YARD DU PAGE WATER COMMISSION



**DU PAGE WATER COMMISSION  
2003 – 2004  
FIVE YEAR CAPITAL IMPROVEMENT PLAN**

**PROJECT:** Engine Generator Facility

**LOCATION:** Between the DuPage Pumping Station and the existing 30 Million-Gallon Reservoir

**DESCRIPTION:** Building and four engine generators.

**PURPOSE:** To provide sufficient electrical power to operate three pumps.

**BENEFIT:** To provide maintain pumping operations during electrical power outages. In addition to providing a backup power supply, the engine generators can supplement electrical power during high electrical demand periods, which will result in lower electrical rates.

**ESTIMATED COST (2002 DOLLARS):**

**ENGINEERING:** \$336,000

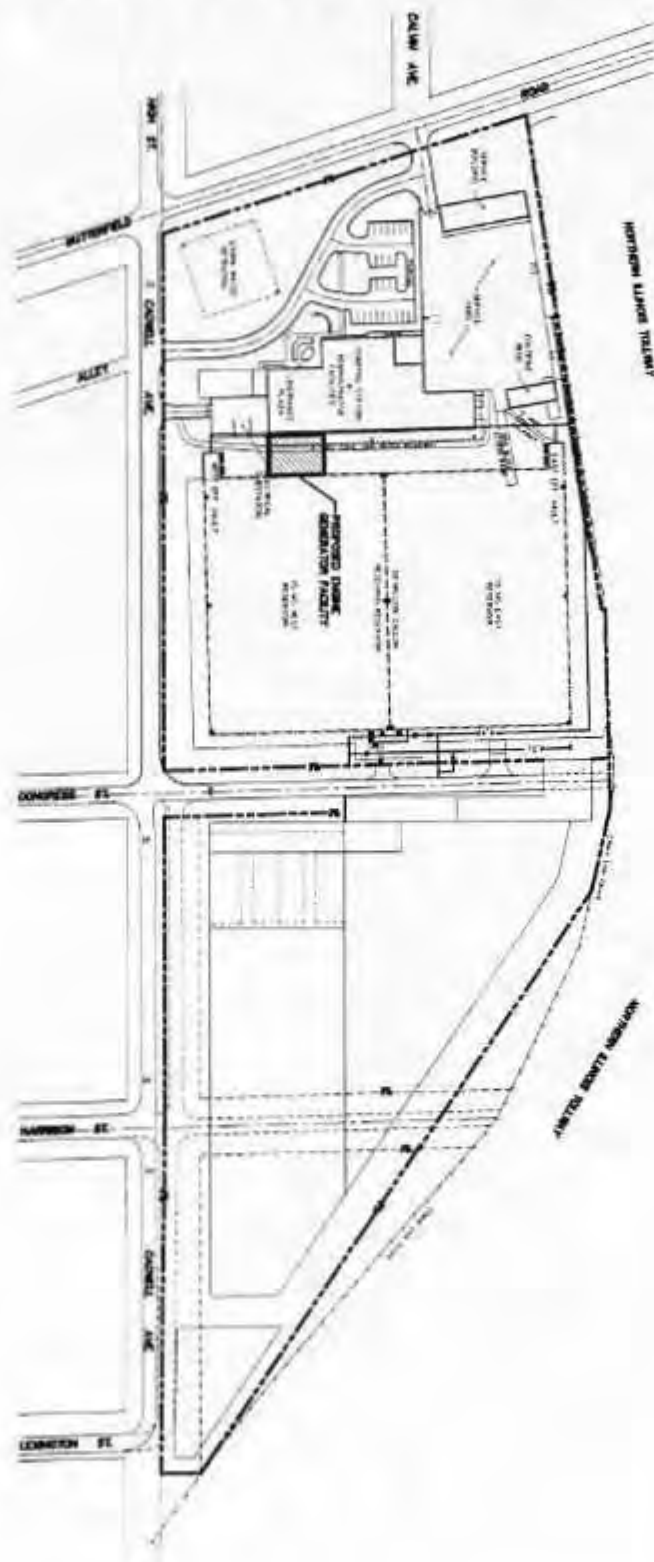
**LAND/ROW:** Constructed on property owned by Commission

**CONSTRUCTION:** \$2,240,000

**TIMING:** Fiscal year 2003-2004 – Design  
Fiscal year 2003-2004 – Construction

See site plan on next page.

# PROPOSED ENGINE GENERATOR FACILITY DU PAGE WATER COMMISSION



**DU PAGE WATER COMMISSION  
2003 – 2004  
FIVE YEAR CAPITAL IMPROVEMENT PLAN**

**PROJECT:** Pump #10

**LOCATION:** DuPage Pumping Station

**DESCRIPTION:** Install 30 MGD split case centrifugal pump and associated piping in space reserved for future pump.

**PURPOSE:** To increase firm pumping capacity from 210 MGD to 240 MGD to satisfy future demand requirements.

**BENEFIT:** To keep up with current rising water demands, new customers and maintain current ability to remove pumps from service without reducing pumping capacity.

**ESTIMATED COST (2002 DOLLARS):**

**ENGINEERING:** \$40,000 (10%)

**LAND/ROW:** Improvements to be constructed on property presently owned by the Commission

**CONSTRUCTION:** \$400,000

**TIMING:** Fiscal year 2007-2008 – Engineering  
Fiscal year 2007-2008 – Installation



**DU PAGE WATER COMMISSION  
2003 – 2004  
FIVE YEAR CAPITAL IMPROVEMENT PLAN**

**STANDPIPE IMPROVEMENTS**

**DU PAGE WATER COMMISSION  
2003 – 2004  
FIVE YEAR CAPITAL IMPROVEMENT PLAN**

**PROJECT:** Install Pumps at Standpipes

**LOCATION:** Tank #2 – Glendale Heights, Tank #3 – Naperville and Tanks #4E & #4W Lisle Township.

**DESCRIPTION:** Install three 3-MGD pumps and pump house at each standpipe.

**PURPOSE:** To allow for a weekly draining of the majority of water within a standpipe.

**BENEFIT:** By allowing water to be recirculated, these pumps will assist in reducing taste and odor problems that result from stale water. The proposed improvements will reduce the age of the water in the tanks. The addition of pumps at the standpipes will also increase water storage within the system to aid in emergency situations. Presently, the bottom two thirds of each standpipe is unusable storage. This installation of the pump station at Tank Site #1 will be used as a model for the other tank sites.

**ESTIMATED COST (2002 DOLLARS):**

**ENGINEERING:** \$540,000

**LAND/ROW:** Improvements to be constructed on property presently owned by the Commission.

**CONSTRUCTION:** Tank Sites #2, #3 and #4: \$5,400,000 (\$1,800,000 per standpipe site)

**TIMING:** Fiscal year 2003-2004 – Design  
Fiscal year 2004-2005 – Construction