

WATER SUPPLY & SANITATION

Schemes providing water supply and sewerage facilities, anti flood works and storm water drainage, desilting of nallahs and sewers in Delhi are included under this sector. The Delhi Jal Board of Govt. of Delhi is entrusted with the responsibility of production and distribution of water and treatment and disposal of sewage in Delhi. It provides water in bulk to NDMC and Cantonment Board for redistribution in their respective areas. Similarly the sewage is received in bulk from these two authorities for final, conveyance and disposal by Delhi Jal Board. In the areas under the jurisdiction of MCD, Delhi Jal Board is responsible for distribution of water and collection and disposal of sewage.

NDMC is implementing water supply & sewerage, anti flood work and covering of Nallah Schemes in its area.

The agency wise financial position under this sector during 10th Plan (2002-2007) Expenditure for the year 2003-04, Approved outlay R. E. for Annual Plan 2004-05 and approved outlay for A.P. 2005-06.is as given below :-

(Rs. In lakh)

S. N.	Name of Agency	10 th F.Y.P. 2002-07 Approved Outlay	Annual Plan 2003-04 Expenditure	Annual Plan 2004-05.		Annual Plan 2005-06. Approved Outlay
				Approved Outlay	R. E.	
1	Delhi Jal Board	365150.00	58285.80	69615.00	67800.00	71000.00
2	TYADB (DJB)	10000.00	1480.59	1700.00	1900.00	2000.00
3	NDMC	1000.00	81.98	125.00	125.00	125.00
4	Urban Dev. Deptt.	450.00	42.00	50.00	99.00	50.00
	Total	376600.00	59890.37	71490.00	69924.00	73175.00

DELHI JAL BOARD

Delhi Jal Board is responsible for production of water in Delhi and its distribution in the area under the control of Municipal Corporation of Delhi. The Board also supplies water in bulk to N.D.M.C. and Delhi Cantonment. Besides, the Board is responsible for collection, treatment and disposal of sewage in Delhi.

Although Delhi is situated on the banks of the river Yamuna, it is unable to draw water from the river as their entire flow is diverted into the Canals upstream of Tajewala for Uttar Pradesh and Haryana. To finalize Delhi's share in the Yamuna waters an MOU was signed on 12.5.1994 between the basin states of Haryana, Uttar Pradesh, Himachal, Rajasthan and Delhi. The allocation for Delhi has not been sufficient to meet the raw water requirements.

As such, Delhi shall have to take recourse to a number of schemes like recycling of waste water at Water Treatment Plants, optimization of water production, exploitation of ground water in the Flood Plains of the river Yamuna, rain water harvesting and conservation of water.

Modernization of DJB: World Bank Study

- (i) To update and streamline the water supply system, the World Bank was approached and has agreed for a grant of 2.5 million U.S. Dollars to fund the cost of preparation of Delhi Water Supply & Sewerage Project from the Project Preparation Facility .The consultancy work involves institutional development and financial management, Water Supply & Sewerage Rehabilitation etc. The consultancy has been completed.

Raw Water Availability and Augmentation/Modernization of Water Treatment

- (ii) The installed capacity of water production at the end of the 7th five year plan (1985-90) was 437 MGD. During the year 1990-1991 and 1991 –1992 it was augmented to 469 MGD and 472 MGD respectively. By the end of the 8th five year plan i.e. 1992 – 97, water production was augmented to 580 MGD. During the 9th five-year plan period, the water treatment capacity was proposed to be augmented to 945 MGD, but due to raw water constraints achievement upto the end of 9th Five Year Plan was only 650 MGD.

- (iii) For bringing raw water for Okhla Water Treatment plant from Western Yamuna Canal, it has been decided to lay 2000 mm dia water main in a length of 11 km from Wazirabad to Haiderpur .

- (iv) For the first time in the Board, 140 MGD water treatment plant at Sonia Vihar is being executed on Design, Build, Operate basis with state of the art technology. On commissioning, the operation & maintenance period will be 10 years. The work has three components:
 - 1. Const. of 3250 mm dia conduit from Murad Nagar to Sonia Vihar

 - 2. Const. of 140 MGD W.T.P. at Sonia Vihar.

 - 3. P/L/Jointing of Transmission mains from Water Treatment Plants to different areas of Delhi.

Raw water is to be drawn from the storage of Tehri Dam where 300 cusecs water has been reserved for Delhi. The work of Sonia Vihar Water Treatment Plant has already been completed and it will be made functional after availability of raw water from Tehri Dam.

Scheme wise details for Annual Plan 2005-06 are given belows:

Water Supply Scheme

1. Providing water supply in unauthorized colonies: (Rs 3400.00 lakh)

There are 1071 un-authorized colonies. Piped water supply exists in 398 unauthorized colonies, and to provide drinking water in these colonies, where piped water supply does not exist, besides departmental tankers, additional mounted tankers and trucks are hired making fleet of average 1000 vehicles during the year to provide water. During the year these Nos. will be reduced after the un-authorized colonies are provided piped water supply in phased manner.

Replacement of departmental vehicles over 15 years age is also needed and new trailer tankers and tractors are required to be added.

An outlay of Rs. 3400.00 lakh has been approved for Annual Plan 2005-06.

2. Replacement of old distribution system and strengthening of Trunks Transmission Network: - (Rs. 8700.00 lakh)

For equitable distribution of water, underground reservoirs and booster pumping stations are being constructed in phases. Besides this, the existing transmission system is also strengthened and old distribution system of length of about 225 Kms is proposed to be replaced in 2005-06.

The following works will be taken up during the year 2005-06

- i. C/O of 12.6 ML capacity UGR & BPS at C&D park Jahangirpuri(Estimated cost Rs 379.00 lacs) The work is in progress & physical achievement is 32%.& Financially progress is 29%.
- ii. Maintenance of 1500 mm dia effluent main Okhla STP (Estimated cost Rs 260.00 lacs) The main has been commissioned two years before. The provision has been considered to replace some old pipes structurally not fit at flexible joints due to have become weak and line remained unutilized 12 to 14 years.
- iii. Major repair of Palam reservoir No. 2 M/S Suresh Saldi (Estimated cost Rs. 60 lacs)
- iv. P/L/J 600 mm dia CI water line from GTK Rd. to CD park Jahangirpuri UGR & BPS (Estimated cost Rs 139.00 lacs).
- v. Constn. of 36 ml capacity UGR & BPS at Malviya Ngr (Estimated cost Rs 600.00 lacs) tenders called & work is to be awarded.
- vi. C/O 12 MI Capacity UGR & BPS at Burari near Ranney well no- A-5. (Estimated cost Rs 892.00 lacs) Land has been acquired for the construction & T.C.E is finalizing tenders documents.
- vii. C/O 27.1 ML Capacity UGR & BPS at Bawana WTP.(Estimated cost Rs 1713.00 lacs). Land is available. Tenders documents being framed by WBPC.
- viii. C/O 47 ML Capacity UGR & BPS at Nangloi. (Estimated cost Rs. 4705.00 lacs). Land is available. Tenders specifications are under finalization of TCE/WBPC.
- ix. P/L/J feeding main from outer Ring road at peera garhi to Nangloi GR&BPS.(Estimated cost Rs1000.00 lacs)
- x. Cost of gram Sabha land at Mohammadpur Majri.(Estimated cost Rs 115.00 lacs) A provision has also been made for construction of UGR/BPS

- xi. C/O 45 ml cap. MBR at Mohammadpur Ramjanpur for Palla tube wells (Estimated cost Rs3169.00 lacs).Tenders are under preparation by WBPC.
- xii. C/O 3.4 ml cap. Reservoir at Narela STP (Estimated cost Rs525.00 lacs).land is available. Tenders are under preparation by WBPC.
- xiii. C/O 4.5 ml cap Reservoir & BPS at Sultanpur Dabas (Estimated cost Rs 590.00 lacs) Land has been acquired for the construction & T.C.E is preparing tenders documents.
- xiv. C/O 7.7 ml cap. UGR&BPS at Qutab garh .i/c C/O boundary walls & feeding mains.(Estimated cost Rs. 640 lacs). Land is available.)
- xv. Replacement of 700 mm dia PSC main from GK-I to GK-II. (Estimated cost Rs.150.00 lacs.
- xvi. C/O 15.6 ml UGR& BPS at Ramleela Ground i/c cost of land.(Estimated cost Rs. 2500.00 lacs). Ramleela ground UGR/BPS land has been identified & pursuance for acquiring of land from MCD is in process.
- xvii. Shifting of 1100 mm dia W/M from GK-I to Malviya Ngr.(alternative relining of the main.)(Estimated cost Rs250.00lacs)
- xviii. Shifting of 900-1100 mm dia MS W/M at Wazirpur depot. (Estimated cost Rs. 80.00 lacs.
- xix. Strengthening of transmission system of Haiderpur water works Phase-I & II (As per TCE) (Costing 2000.00 lacs) T.C.E is finalizing tender documents.
- xx. R/O 1500 mm dia from Gopalpur village to Mukerjinagar Bandh. (Estimated cost Rs.267.00 lacs). Tenders are being invited.
- xxi. Peripheral main for UGR & BPS AT Burari near Tpt. Authority. (Estimated cost Rs.350 lacs). Planning is finalizing the estimate.
- xxii. R/O rising mains of Bhagirathi and Wazirabad. (Estimated cost Rs. 1000.00 lacs).

xxiii. 1200mm dia MS main at Ranhola village: This work is proposed to be taken up during the year 2005-06 and targeted to be completed during the year 2005-06. A provision of Rs.35 lacs has been made for the year 2005-06.

xxiv. An expenditure of Rs.40 lacs is anticipated for press notification (NIT) bills/Third party inspection payments for works being/to be undertaken.

*there are no. of UGRs/BPS namely Jahangirpuri, Burari, New Burari, Malviya Nagar, Bawana which will augment water supply in the respective command areas are included in the budget proposal.

*As a part of conservation of water, replacement of existing damaged PSC pipes of Trunk Transmission are included as a part of the budget proposal.

An outlay of Rs. 8700.00 lakh has been approved for the Annual Plan 2005-06.

3. Improvement of Existing water works. (Rs. 2400.00 lakh)

- i). During the year 2005-06, 160 Kms. new water lines are proposed to be laid.
- ii). Construction of small Under Ground Reservoir and Booster Pumping Stations at various places have been proposed to rationalized and improve water pressure during the year 2005-06.
- iii). Renovation and increasing the capacity of pumps and motors at various Booster Pumping Stations during the year 2005-06.

The following works will be taken up during the year 2005-06

- 1) 16 mgd Water Treatment Plant at Haiderpur is proposed to be constructed for treatment of the backwash Water of Filters and the Clariflocculators.

An expenditure of Rs.1000.00 lacs is anticipated for this work during the year 2005-06.

- 2) Renovation of Chandrawal Water Works is to be taken up. Total estimated cost i/c consultancy services for the work is Rs.1515 lacs (1500 + 15).
 - 3) 10mgd recycling water treatment plant at Bhagirathi water works: The work is likely to start during the current year. Major portion of work shall be executed during 2005-06. Provision has been made for the same.
 - 4) Consultancy for assessing damage probability of structures against earth quack: The existing consultancy job is to be rescinded due to non-performance. New work shall be assigned and work executed. Provision has been made for the purpose.
 - 5) Constn, of stone masonry boundary wall at proposed W.T plant for Narela sub-city at Iradat Nagar.
 - 6) C/O R.R stone masonry B/wall at Wazirabad. Provision has also been made for this purpose.
 - 7) Re-cycling of W.T.P. at Wazirabad. Tender documents under preparation by WBPC.
- The work of replacement of existing pumps, motors, starter etc. as suggested by TERI after Energy Audit of Haiderpur-I along with connected Pumping Stations namely Khyala & Naraina as a part of promoting energy saving of plants/pumping stations.
 - The work of construction of recycling of waste water from the existing Bhagirathi and Wazirabad Water Treatment Plants are included in the Budget Estimate. These works are likely to be completed partially.
 - Renovation of Chandrawal Water Works-I which is the oldest Water Treatment Plant of Delhi is also included in the scheme.

- The work of replacement of Bulk Meters for which work order has already been placed and also the meters to be procured under phase-II for distribution network. Partial provision has also been kept.
- Renovation of existing equipments at various Water Treatment Plants namely clarifiers, rewinding of motors, renovation of transformers, HT/LT switch gears, procurement of rotating assemblies, chlorinators are also included in the Budget Estimate.
- Procurement of Laboratory equipments for various Las at plants including Central Laboratory at Wazirabad.
- Refurbishment of Ozonization and Nitrification Plant at Okhla Water Treatment Plant is also included in the Budget Estimate.

An Outlay of Rs. 2400.00 lakh has been approved for the Annual Plan 2005-06.

4. Ranney wells and Tube wells. (Rs. 3800. lakh)

75 new tube wells/allied works are proposed to be constructed and 150 Nos. reborings of tube wells in the year 2005-06 subject to feasibility of potable ground water and approval of Central Water Ground Water Board.

Repair Maintenance & Operation of more than 450 T/Wells will continue to be undertaken by the E&M Wing working under this Office.

Addl. Provision is required for payment of power connection, RMO etc. Apart from installation of new tube wells, reborings of defunct tube wells due to which provision has been enhanced

The following works will be taken up during the year 2005-06

- i Desilting & Re- Development of Ranney wells A, P, & V Series. (Estimated cost Rs.75.00 lacs).

- ii Renovation of tube wells at Palla. (Estimated cost of Rs. 65.00 lacs).
- iii Installation of tube wells near Bawana RWP House along W.J.C. (Estimated cost of Rs. 289.85 lacs).
- iv Protection of D.J.B land at Palla by C/O Boundary walls/Fencing. (Estimated cost of Rs. 200.00 lacs).
- Procurement of pump assemblies at Ranney Wells for replacement of old ones is included in the Budget proposal.

An outlay of Rs. 3800.00 lakh has been approved for the Annual Plan 2005-06.

5. Staff quarters and office accommodation: (Rs. 500.00 lakh)

The following works will be taken up during the year 2005-06

- 1) Ancillary works of 10 Nos. Type V quarters at Jal Vihar are in progress. These quarters are targeted to be completed by 2005-06. An expenditure of Rs.15.0 lacs is anticipated during this year including final payments for the main works.
- 2) In addition to above the works of construction of training center of DJB and administrative building at Haiderpur are to be taken up. An expenditure of Rs.200.00 lacs is anticipated for these works during 2005-06.
- 3) Construction of staff quarters at Haiderpur: Provision of Rs 10 lacs are proposed for final payments towards the work.
- 4) C/O Community centers at Haiderpur and Keshopur Staff Qtr. (Costing of Rs. 100.00 lacs).
- 5) C/O office Building at Andreujganj i/c allied works. (Costing of Rs. 150.00 lacs).

6) C/O Staff Qtrs at Bawana. (Costing of Rs. 50.00 lacs)

- Improvement works at various staff quarters at Plants is included in the Budget proposal.

An outlay of Rs 500.00 lakh has been approved for the Annual Plan 2005-06.

6. Laying of water mains in regularized/unauthorized colonies (Rs. 860.00 lakh)

For providing water supply in regularized/unauthorized colonies, where development charges as per revised policy are to be deposited by the beneficiaries and for works of augmentation of water supply to these colonies. Achievements under this head are dependent on the public responsible to deposit the development charges.

10 Nos. unauthorized/regularized colonies and 1071 unauthorized colonies which are under the consideration for regularization will also be provided water supply in phased manner.

During the year 2005-06 water mains are to be laid in left out portions/lanes in regularized/unauthorized colonies.

An outlay of Rs 860.00 lakh has been approved for the Annual Plan 2005-06.

7. Raw water arrangement for addl. Needs (Rs. 13280.00 lakh)

The following works will be taken up during the year 2005-06

- 1) The work of construction of parallel lined canal from Munak to Haiderpur is in progress.

The Haryana Irrigation department is carrying out this work for the DJB as a deposit work. Expenditure on this work will be incurred during the year 2005-06

- 2) The work of construction of RCC conduit from Murad Nagar to Sonia Vihar is under progress. However, provision has been kept for final adjustment of accounts with UP govt.
- 3) Also the work of 2000 mm dia raw water main has been initiated during the year 2004-05. will also be taken during the year 2005-06.
- 4) Payments with regard to proportionate cost towards construction of Tehri Dam, Renuka Dam etc., are to be made.

An outlay of Rs 13280.00 lakh has been approved for the Annual Plan 2005-06.

8. Rural Water supply (Rs. 590.00 lakh)

Delhi Jal Board is providing potable drinking water to 219 rural villages. However these villages are extended vertically as well as horizontally thereby creating additional demand of water every year. Under the special component plan, 413 Harijan Basties have also been covered. Under this scheme water supply is also provided to land less laborers (House sites) allotted by Delhi Administration and the to extended abadies under M.N.P. Under 20 Point progress, out of 57 such colonies, 20 Nos. has been provided with water supply and the remaining are being provided. Water supply is also being extended in the extended Lal Dora of the village. Provision has been made for improving, stabilizing and strengthening the rural water supply distribution system besides providing more filtered water in Kanjhawala and Najafgarh Blocks where ground water is increasingly becoming saline.

To overcome the problem of low voltage at tube wells, voltage stabilizer and transformers are propose to be provided, presently, tube wells provided in rural areas have been drilled to about 50—60 meters depth. It is seen that the yield of

these tube wells is declining. There is need to explore the possibility of deeper tube wells. In case of success is obtained in establishing a dependable source of water at that depth, to meet substantially the needs of rural areas. Small Underground Reservoir and Booster Pumping Stations are being constructed to rationalize and improve water pressure.

The DJB is providing portable drinking water to the 20 point programme, plot-holders, Harizen Rural W/S under PMGY Basties and the Rural areas where piped W/S is not available. Provisions is also being made to supply water in the extended Lal Dora of the Villages by improving, stabilizing and strengthening of Rural W/S distribution Systems besides [providing more filtered water supply in Narela Block, Badli Block & Bawana Block.

An outlay of Rs 590.00 lakh has been approved for the Annual Plan 2005-06.

9. Distribution mains and reservoirs for IInd 100 MGD WTP Haiderpur.
(Rs. 3830.00 lakh)

The following works will be taken up during the year 2005-06

- i. C/O 5.3 ml capacity UGR & BPS at Ujhwa. Physical Achievement is 75% E&M shall start their work after finalization the tenders by them
- ii. C/O 20.9 ML UGR & BPS at Kirti Ngr. i/c P/L/J transmission system of Kirti Ngr UGR & BPS. Land allotted by D.DA. tender documents under preparation by T.C.E
- iii. C/O 4.2 ML capacity UGR & BPS at P-Block Mohan Garden. Physical Achievement up to September 04 is 91%
- iv. P/L/J CI/MS peripheral water main for reservoir CT-I Dawarka Phase-I at the risk and cost of M/S Jai Hind. Tenders invited & in process.

- v. P/L/J 900-700-600-500-200 mm dia DI/MS peripheral Water supply mains for built-up area in the command of reservoir CT-2 Dawarka Ph-I (Balance work) Tender under finalization.
- vi. P/L/J 900-600-500-250 mm dia DI/MS peripheral water supply mains for built-up area in the command of reservoir CT-2 Phase-II Dawarka. (balance work) Tenders rescinded and under Finalization.
- vii. P/L/J 800-600 mm dia water main from Najafgarh to Ujhwa. Case is under observation of planning for allocation of water for the UGR under construction.
- viii. Const. of R.R Stone masonry B/wall for 5.3 capacity UGR & BPS at Ujhwa.
- ix. Rain water harvesting & drainage system at UGR & BPS at Ujhwa.
- x. Land for C/O 5.2 ml capacity UGR & BPS at daulatpur. Land has been allotted by Gram Sabha .
- xi. P/L/J 600 mm dia W/M from Kharkhari rd. to Daulatpur reservoir.
- xii. C/O 21.4 ml capacity UGR & BPS at Pitampura. T.C.E preparing tender documents & land is available.
- xiii. P/L/J 1200 mm dia W/M for Pitampura Reservoir.
- xiv. C/O 20 ML capacity UGR & BPS at Awantika. T.C.E Preparing tender documents & land is available.
- xv. P/L/J 1000 mm dia W/M for 20 ml Capacity UGR & BPS at Awantika.
- xvi. C/O 15.5 ML capacity UGR & BPS at Janakpuri. T.C.E Preparing tender documents & land is available.
- xvii. P/L/J 800 mm dia W/M for UGR & BPS at Janakpuri.
- xviii. P/L/J 600 mm dia Water incoming main for UGR & BPS at Mohan Garden. . Tenders called by tender cell.
- xix. C/O R.R stone masonry B/W for UGR & BPS at P-Block Mohan Garden.

- xx. P/L/J Peripheral W/M for UGR & BPS at Mohan Garden.
- xxi. Rain water harvesting scheme & other allied works.
- xxii. C/O 12.4 MI UGR & BPS at Mayapuri including cost of land. case is under consideration. of allotment of land. by DDA.
- xxiii. Constn. 9.1 ML Cap. UGR & BPS at Bijwasan including cost of land Land yet to be identified to acquire from Gram Sabha.
- xxiv. Constn. of UGR/BPS at Palam Reservoir including transmission main
 - There are number of UGRs/BPSs namely Ujhwa, Pitampura, Awantika, Janakpuri, Kirti Nagar, Mohan Garden covered under this head. Token provision has been kept in the budget proposal for the said UGRs including release of balance payment in case of Mohan Garden and Ujhwa UGRs where the works were under full swing during 2004-05.

An outlay of Rs 3830.00 lakh has been approved for the Annual Plan 2005-06.

10. 140 MGD WTP at Sonia Vihar (Rs. 11000.00 lakh)

The following works will be taken up during the year 2005-06

- 1) For consultancy services of Addl. UGRs in TYA. An expenditure of Rs. 10.00 lacs is anticipated for the year 2005-06.
- 2) For Construction of 6 Nos. UGR in Trans Yamuna Area. (Estimated Cost- 1900 lacs for civil works only) The work was in progress during 2004-05. For remaining work a provision of Rs 1000 lac is anticipated for the year 2005-06.
- 3) For 24.3 ML UGR at Vishwakarma Park. . (Estimated Cost- 900 lacs for civil works only) An expenditure of Rs. 700.00 lacs is anticipated for the year 2005-06.

- 4) For 800 mm dia inlet main for Vishwakarma Park. . (Estimated Cost- 220.44 lacs)
An expenditure of Rs. 200.00 lacs is anticipated for the year 2005-06.
- 5) For balance works of Transmission mains from SVWTP in Phase-I, II, and III.
(Estimated Cost-21835 lacs) An expenditure of Rs. 1200 lacs is anticipated for
the year 2005-06.
- 6) For 5 no. UGRs/BPS in South Delhi. (Estimated Cost- 1150 lacs for civil works
only).The work is in progress. An expenditure of Rs. 400 lacs is anticipated for
the year 2005-06.
7. Balance work of Sonia Vihar W.T.P. (Estimated Cost- 11923 lacs for civil works
only) An expenditure of Rs. 2200 lacs is anticipated for the year 2005-06.
8. Construction of additional UGRs in TYA and South Delhi including inlet mains for
these UGRs and also for the UGRs being executed at present. A provision of Rs
2500 lacs has been proposed for the year 2005-06.
- The work of construction of 5 UGRs/BPSs each in South Delhi & Trans Yamuna
Areas which have already been allotted and partially completed during the year
2004-05 shall be constructed and completed during the year 2005-06. These
UGRs will be commissioned with the progress of works and laying of peripheral
mains by the distribution and commissioned as and when raw water is available
and plant commissioned. Construction of UGRs at Vishwakarma Park is also
included in the Budget proposal for the year 2005-06.

An outlay of Rs 11000.00 lakh has been approved for the Annual Plan 2005-06.

11. Const. of 40 MGD WTP at Nanqloi (Rs. 250.00 lakh)

The 40-MGD Water Treatment Plant at Nanqloi has been completed and
commissioned. Provision of Rs. 40 lacs has been made for arbitration awards
and improvement works during the year 2005-06.

- Presently the plant is running to its half of the capacity due to raw water constraints. In the Budget Estimate provision has been kept for renovation of the plant so as to utilize the same for its full rated capacity of 40 MGD WTP Nangloi.

An outlay of Rs 250.00 lakh has been approved for the Annual Plan 2005-06.

12. Const. of 20 MGD WTP at Bawana. (Rs. 300.00 lakh)

* Work has been already completed but release of water to be made by Haryana Govt.

- The plant is almost ready but awaiting raw, water provision has been kept in the Budget Estimate 2005-06 for balance payment to the firm who has constructed the plant, The budget proposal also includes some provision for renovation of Raw Water Pump House at Bawana which caters the raw water requirement of 40 MGD, Nangloi Water Treatment Plant.

An outlay of Rs 300.00 lakh has been approved for the Annual Plan 2005-06.

13. Hydraulic mapping & study of water supply system. (Rs. 20.00 lakh)

The strengthen the leak detection cell, an outlay of Rs. 20.00 lakh has been approved for 2005-06.

14. Large scale testing of water samples including water supply to the weaker section. (Rs. 10.00 lakh)

The Delhi Water Board is presently having 6 well-equipped and modern laborites having facilities to test physical, chemical and bacteriological parameters and are lifting on an average 300 samples per day. Beside this, samples are also

being lifted by junior engineer of DJB who have been provided with `Test Kits' to determine on the spot presence of residual chlorine in drinking water. It is also provided to intensify lifting of water samples and test about 500 samples a day to ensure water quality.

An outlay of Rs 10.00 lakh has been approved for the Annual Plan 2005-06.

15. Captive power plants at WTP. (Rs. 350.00 lakh)

Over 400 Under Ground Reservoir and Booster Pumping Station are being maintained. Where problem of low voltage/electric failure is chronic, diesel generators are being provided. To ensure un-interrupted power supply, provision for installation & commissioning of adequate capacity generator sets has been made in a limited manner during the current year due to limited resources.

- Procurement of portable D.G. Sets for maintenance of rising mains at various Water Treatment Plants are included in the 2005-06.

An outlay of Rs 350.00 lakh has been approved for the Annual Plan 2005-06.

16. Augmentation of water supply for Urban Villages. (Rs. 450.00 lakh)

Delhi Jal Board is providing water supply in 135 Urban Villages. These villages are expanding vertically and also commercialization is taking place, which is causing extra burden on the water supply system. For improvement and strengthening of water supply system in these villages, more tube wells, deep bore hand pumps, laying of water mains and construction of Under Ground Reservoir, Booster Pumping Station are being done.

DJB is supplying water in all the urban villages situated within the Delhi jurisdiction. These villages are expending, industrial as well as commercial activity is also taking place which also causes extra burden on the W/Supply. Their water demand in these villages is being met through piped W/S wherever available, sinking of T/Wells,DBHPs and construction of underground reservoirs etc.

The following works will be taken up during the year 2005-06

* Augment ion of water supply in Mehrauli (constn. of UGR & BPS at Kishangarh & Idgah i/c P/L/J W/M cost of Rs 20.00 lacs.

An outlay of Rs 450.00 lakh has been approved for the Annual Plan 2005-06.

17. Augmentation of water supply in Resettlement Colonies: (Rs. 460.00 lakh)

Delhi Jal Board is providing water in 44 Resettlement Colonies. These colonies are expending vertically as well as horizontally. For augmentation of water supply system in Resettlement Colonies, more tube wells, Under Ground Tank, Booster Pumping Station, Deep Bore Hand Pumps and water mains are to be provided.

DJB is providing water in all the 44 re-settlement colonies. These colonies are expending vertically as well as horizontally. For the augmentation of W/S in the RSC falling under district North & North West more T/Wells, underground tank,BPS,DBHPs are being provided in the year 2005-06.

An outlay of Rs 460.00 lakh. has been approved for the Annual Plan 2005-06.

18. Water supply under EAP funding (Rs. 900.00 lakh)

A provision of Rs. 900.00 lakh has been made for EAP funding for Annual Plan 2005-06.

19. Augmentation of water supply for J.J.Clusters. (Rs. 780.00 lakh)

The water supply services in J.J.Clusters were handed over to the then Delhi Water Supply & Sewage Disposal Undertaking now Delhi Jal Board in June 1992. Water supply services are being provided in these clusters.

Since the population in these clusters is increasing day by day, these areas are increasing in height and area. Re-allocation of many J.J.Clusters is being done. Besides maintenance of existing water supply system to meet the increasing demand Delhi Jal Board is carrying out augmentation works like providing additional tube wells, deep bore hand pumps and public Water Hydrants in these clusters and is also supplying water through departmental as well as additional tankers on hire. Purchase of additional trailer tankers is also proposed to be made.

An outlay of Rs 780.00 lakh. has been approved for the Annual Plan 2005-06.

20. IT Infrastructure (Rs. 100.00 lakh)

An outlay of Rs 100.00 lakh. has been approved for the Annual Plan 2005-06.

Detail modalities of the scheme is being worked out by DJB

21. Capacity Building (Rs. 20.00 lakh)

An outlay of Rs 20.00 lakh. has been approved for the Annual Plan 2005-06.

Detail modalities of the scheme is being worked out by DJB

22. Trans Yamuna Area Development board (Rs. 1300.00 lakh)

The following works will be taken up during the year 2005-06 as these work depends on commissioning of 140 M.G.D. Sonia Vihar W.T.P. and that is linked up with availability of raw water from Tehri Dam

*For balance works including consultancy, final payments of UGR/BPS at Mandawali, Nand Nagari, Shastri Park, Gazipur, Surajmal Vihar, and an expenditure of Rs.60.00 lacs is anticipated for the year 2005-06.

- 5 nos. UGRs/BPSs namely Mandawali, Nandnagri, Shastri Park, Gazipur and Surajmal Vihar are likely to be commissioned during 2005-06 and balance payment shall be releases in the Budget proposal of 2005-06.
- Budget estimate also includes provision for making payment for obtaining electric connections for the BPSs/UGRs.

An outlay of Rs 1300.00 lakh, has been approved for the Annual Plan 2005-06.

SEWERAGE AND DRAINAGE SCHEMES

1. The Delhi Water Board is responsible for providing sewerage facilities in the areas under the command of MCD. In the areas under the command of NDMC, Cantonment Board and DDA Development areas, internal, peripheral and outfall sewers are provided by the respective agencies. However, the Board provides trunk sewers and sewage treatment plants for the entire area of Delhi. It is also carrying out ongoing works of storm water drainage and certain anti flood works, which are now the responsibility of the MCD/ Irrigation & Flood Control Deptt. The Board has constructed sewage treatment plants at Okhla, Keshopur, Coronation Pillar, Kondli, Rithala, Vasant Kunj, Yamuna Vihar, Ghitorni, Narela, Pappan Kalan, Najafgarh, Delhi gate nallah, Sen Nursing Home nallah, Rohini, Nilothi, Mehrauli etc. Oxidation ponds have also been made at Timarpur.

2. Delhi is not only a metropolitan city but also National Capital. It must have a proper sewerage system for collection, pumping, treatment and disposal of domestic effluent to check environmental pollution. Supply of drinking water is being augmented to meet the increasing demand due to rise in population. It is therefore necessary that sewerage facilities also keep pace with the water supply arrangements.

3. **Water & Waste Water Generation**
 - 3.1 The installed capacity for water treatment in Delhi is 640 MGD. At present, the water supply in Delhi is being maintained at around 670 MGD, according to DJB's statistics. Sonia Vihar Water Treatment Plant (140 MGD) is expected to be commissioned by mid 2005 raising the water supply potential in Delhi to 810 MGD. DJB is also constructing water Treatment Plants at Bawana (20 MGD), Dwarka (40 MGD) and Okhla (20 MGD) which would utilize water saved by lining of the carrier channel which brings raw water to the Water Treatment Plants in Delhi from Munak. Hence by 2008, DJB expects to have installed Water Treatment Capacity of 890 MGD.

Actual production would, however, depend upon the Irrigation Department of Govt. of Haryana, which is currently lining the channel on behalf of DJB, completing its job on schedule (May-2006), so that the water saved from the current losses, could be utilized at the new plants.

- 3.2** According to the CPHEEO “Manual of Sewerage and Sewage Treatment” about 80% of water supply can be expected to reach the sewers unless there is data available to the contrary. The sewage generated in Delhi is thus approx. 512 MGD (80% of 640 MGD). Sub-soil water, extracted by the residents of Delhi through their private Tube wells/Bore Wells, generates approximately 100 MGD of sewage. Hence the total domestic waste water, currently generated in Delhi, is around 612 MGD. The report of NEERI estimates industrial waste water generated in Delhi to be approx. 40 MGD, taking the total sewage generation to 652 MGD.
- 3.3** Delhi Jal Board currently has installed capacity to treat 512 MGD of domestic waste water at 17 Sewage Treatment Plants. A study conducted by Tata Consulting Engineers Ltd. has estimated waste water generation of 806 MGD by 2011. Another study, conducted by Price Water House Coopers, in association with DHP Consultants, Netherlands and TCE consulting Engineers, has projected waste water generation of 820 MGD by 2011, reaching 950 MGD by 2021. DJB has examined the reports and after assessing the availability of raw water in Delhi for treatment, it has planned future additions to the sewage treatment capacity.
- 3.4** Delhi Jal Board has proposed to augment the treatment capacity by 128 MGD through construction of five STPs by the year 2008 raising the capacity to 640 MGD. Another six STPs, of capacity 195 MGD, are planned for construction by the year 2015 so that the sewage treatment capacity shall become 835 MGD by the year 2015
- 4.** The total water requirement for the Xth five year plan works out to 1050 MGD. It is planned to augment the water supply to 919 MGD by the end of Xth Plan. Balance requirement of about 130 MGD is expected to be met from private sources of extracting the ground water.

5. DJB have entrusted in Dec 2001 a study on measurement of discharge flowing in 17 major drains out falling into river Yamuna. The results based on measurements for the period from April to June 2001, have indicated that total wastewater flowing through Delhi is about 680 MGD.

6. The plant-wise sewerage treatment capacity's as targeted for the X plan & achievement till March 2003 & targets for 2004-05 & 2005-06 are given as under:-

All the figures are cumulative & in MGD

S.No	Plants	10 th Plan 2002-07 target	Ach. upto March 2003	Annual Plan 2003-04	Annual Plan Target 2004-05	Annual Plan Target 2005-06
1	2	3	4	5	6	7
1.	Okhla	170	140	140	140	140
2.	Keshopur	72	72	72	72	72
3.	Coronation Pillar	50	40	40	40	40
4.	Rithala	110	80	80	80	80
5.	Kondli (Ph.I,II,III&IV)	90	45	45	45	45
6.	Yamuna Vihar(Ph.I&II)	45	20	20	20	20
7.	Vasant Kunj	5	5	5	5	5
8.	Ghitorni	5	5	5	5	5
9.	Pappankalan	40	20	20	20	20
10.	Narela	40	10	10	10	10
11.	Najafgarh	5	5	5	5	5
12.	Mehrauli	5	5	5	5	5
13.	Delhi Gate Nalla	2.2	2.2	2.2	2.2	2.2
14.	Dr. Sen Nursing Home Nalla	2.2	2.2	2.2	2.2	2.2

15.	Rohini	35	15	15	15	15
16.	Timarpur	6	6	6	6	6
17.	Nilothi	40	40	40	40	40
18.	Burapulla Nalla	20	--	--	--	--
19.	Delhi Cantonment	8	--	--	-	-
Total		745.4	512.4	512.4	512.4	512.4

7. UNAUTHORIZED/REGULARIZED COLONIES:-

All the 567 colonies are targeted to be provided with sewerage facilities. Out of these sewer lines had been laid in 482 colonies. The sewerage system in 496 unauthorised/regularized colonies are likely to be laid by Dec-2005 and in 516 unauthorised/regularized colonies are expected to be completed by May-2006.

8. Regarding Urban Villages there was a proposal to complete sewer lines in all the 135 Urban Villages. 98 Urban Villages have been seweraged so far. Sewer lines are likely to be laid in another 5 villages by Dec-2005. Sewerage facilities in all the remaining Urbanized villages are to be provided in a phased manner except where it is not technically feasible to lay sewer lines.
9. Out of 44 Resettlement Colonies, sewer lines have been laid in all 44 Colonies.
10. In addition to construction of new STPs, it is proposed to extend sewerage facilities in remaining unauthorized/regularized colonies, Urban Villages, Rural Villages, Resettlement Colonies subject to technical feasibility and availability of water, Replacement of undersized sewers, laying of new Trunk Sewers, construction of new sewage pumping stations, desilting and rehabilitation of Trunk Sewers, trapping of the storm water drains to prevent flow of untreated waste water to river Yamuna etc in compliance to the directions of the Hon'ble Supreme Court and as per commitments made by in an affidavit filed by the

Chief Secretary GNCTD in the Hon'ble Supreme Court. It is also proposed to utilize the bio-gas generated on various STPs for production of power.

11. WORLD BANK STUDY:-

Delhi Jal Board entrusted a study under World Bank to M/s Price Water House Coopers in association with DHV consultants, the Netherlands and TCE Consulting Engineers Ltd. The Draft report has been received from them. The study gives work involving institutional development, financial management & Water Supply and Sewerage Rehabilitation etc. The study report will be examined and implemented after the final report is received.

12. YAMUNA ACTION PLAN-II (YAP-II)

As a centrally sponsored scheme of YAP-I D.J.B had taken up & completed 2.2 MGD STPs each at Delhi Gate Nalla and Dr. Sen Nursing Home Nalla. In extended phase of YAP-I UV disinfection facility was set up at Dr. Sen Nursing Home STP.

JBIC has now agreed for another phase of Yamuna Action Plan (YAP-II). Out of this funds allocated to Delhi are Rs.375 crores. Following works of DJB are included in the scheme:-

1. Rehabilitation of Ring Road Trunk Sewer.-94 Crores
2. Rehabilitation/replacement of Bela Road Trunk Sewer – Rs.12 Crores.
3. Laying of Noth of Wazirabad Trunk Sewer – Rs.49 crores.
4. Renovation of 72 MGD Keshopur STP – Rs.92 crores
5. Construction of 30 MGD Okhla STP – Rs.70 Crores.

In addition studies for use of treated effluent for irrigation, horticulture & industrial uses & ground water recharge, STP on Najafgarh drain, decentralized STPs, Nalla STP etc. are also to be taken under YAP-II.

1. TRUNK SEWERS (Rs. 5900.00 lakh)

An outlay of Rs. 5900.00 lakh has been approved for the annual plan 2005–2006 for rehabilitation of existing trunk sewers & laying of new trunk sewers. Details are as under.

(a) Desilting & Rehabilitation of existing Trunk Sewers

The existing sewerage conveyance system is a large network of branch, peripheral and trunk sewers of around 5600 Kms. in length.

There are 28 main trunk sewers with sizes ranging from 700mm dia to 2400mm dia with a total length of about 130 KM. The balance length of the sewerage conveyance system comprises the peripheral sewers and internal sewers of smaller sizes.

The trunk sewers have been laid over the years at different stages, some of these trunk sewers are as old as 40-60 years, where as other trunk sewers are comparatively new. The condition of the trunk sewers especially the older ones, has deteriorated as a result of silting and settlements. The level of siltation in these sewers varies between 30-70%.

Rapid urbanization in Delhi has further compounded the pressure on the sewerage system, besides the constraints being experienced in maintenance of these trunk sewers due to widening of carriage way of a number of roads due to which large trunk sewers have come under the main carriage way. This phenomenon has accelerated the degradation of sewer lines.

In view of the above to give relief to local areas substantial quantity of the sewage, which is otherwise required to be conveyed to the respective STPs, is discharged into the open drains. It is estimated that about 91 K.Ms. of Trunk Sewers need desilting and rehabilitation including repair of settlement. Some of the important sewers in this category are Ring Road Trunk Sewer, Indian Express Sewer, Sita Ram Bazar Sewer, University Trunk Sewer, North Trunk Sewer, Harsh Vihar – Haider Puri Sewer, West Delhi Sewer, Outfall sewer from Q Point to Kilokari SPS, Sewer along Arbindo Marg, Cross Connection No. 2,3 & 4, Karol Bagh Sewer, Bela Road Sewer. The work for desilting/rehabilitation in 30 KM length has already been completed & is in progress in 19.5 KM length, which is likely to be completed by June 2005. Further action is being taken to desilt and rehabilitate the remaining Trunk Sewers.

Rehabilitation of Ring Road Trunk Sewer and Bela Road Trunk sewer are included under the YAP II.

(b) New Trunk Sewers :

New Trunk Sewers are also required to be laid to extend sewerage facilities to new areas (Unauthorized/Regularized Colonies, Urban Villages etc.) and cope up with the increased waste water generation due to increase in population and water supply. Some of these are Trunk Sewer along Wazirabad Road in East Delhi, East Punjabi Bagh. Work for Dabri Trunk Sewer and Sagarpur Trunk Sewer and peripheral sewer in Narela is in progress.

List of major schemes/ works is enclosed at ANNEXURE – I.

An outlay of Rs 5900.00 lakh. has been approved for the Annual Plan 2005-06.

2. **SEWAGE TREATMENT PLANTS AND ANCILLIARY WORKS : (Rs. 6900.00 lakh)**

Ancillary Works :

With the setting up of the new sewage treatment plants of additional capacity of 233 MGD, additional Pumping Stations at various places will also be required to be set up as per the reports of the consultant. Some of the Pumping Stations proposed to be set up are at Chilla (80 MGD), effluent pumping station at Yamuna Vihar (90 MGD). There are 3 Nos. of Gravity Ducts leading to Okhla STP from Kilokri/Ring Road Pumping Station. One of the Gravity Ducts does not function in full capacity. It is planned to take improvement works and also fencing to avoid encroachment of land.

List of major schemes/ works is enclosed at ANNEXURE – II.

An outlay of Rs 6900.00 lakh. has been approved for the Annual Plan 2005-06.

3. **RESIDENTIAL ACCOMMODATION, STORES, LAB , GO DOWN ,ETC. : (Rs. 400.00 Lakh)**

Many staff quarters are quite old and require rehabilitation and renovation besides construction of new offices, go-downs, stores & laboratories at Okhla, Keshopur, Kilokari, and Coronation Pillar.

List of major schemes/ works is enclosed at ANNEXURE – III

An outlay of Rs 400.00 lakh. has been approved for the Annual Plan 2005-06.

4. STORM WATER DRAINAGE & ANTI FLOOD WORKS : (Rs. 125.00 lakh)

In the 9th Five Year Plan the work of construction of major drains was with the Delhi Jal Board. But the works of storm water drains have been transferred to MCD (General Wing).

A provision of Rs. 5 lacs has been made in the Annual Plan 2005-2006. To complete continued works/balance works and SW drains of Model town and Adarsh Nagar are to be carried out by DJB.

List of major schemes/ works is enclosed at ANNEXURE – IV

An outlay of Rs 125.00 lakh. has been approved for the Annual Plan 2005-06.

**5. RENOVATION OF EXISTING PLANTS AND PUMPING STATIONS :
(Rs. 700.00 lakh)**

Sewage Treatment Plants at Keshopur (12, 20 & 40 mgd), Okhla Old (30 + 12 + 45 + 37 MGD) , Kondli (10 MGD), Coronation Pillar (10 + 20 MGD), Rithala (40 MGD) are quiet old. Similarly, the Sewage Pumping Stations at Kilokri, Ring Road, Keshopur, Haiderpuri, Jagriti and Preet Vihar, etc. are quiet old and require renovation. The buildings of these Sewage Pumping Stations and Sewage Treatment Plants as well as their staff quarters are very old and require renovation and refurbishment.

List of major schemes/ works is enclosed at ANNEXURE – V

An outlay of Rs 700.00 lakh. has been approved for the Annual Plan 2005-06.

6. LAYING OF INTERNAL SEWERS IN UNAUTHORIZED/ REGULARIZED COLONIES (BRANCH SEWERS) (Rs. 4100.00 lakh)

The sewerage services as per present policy are not being provided in unauthorized colonies and JJ Clusters. The present status of sewerage services in unauthorized/regularized colonies, are as under:

Out of 567 unauthorized/regularized colonies sewer lines have been laid in 491 colonies upto March-2005. It is proposed to lay the sewerage system in 25 unauthorized / regularized colonies in year 2005-06 and for balance unauthorized / regularized colonies sewerage system shall be laid in a phased manner subject to technical feasibility.

List of major schemes/ works is enclosed at ANNEXURE – VI

An outlay of Rs 4100.00 lakh. has been approved for the Annual Plan 2005-06.

7. NON-CONVENTIONAL SOURCE OF ENERGY (UTILIZATION OF GAS AT VARIOUS PLANTS) (Rs. 20.00 lakh)

Vaish committee has recommended for utilization of Bio-Gas at various Sewage Treatment Plants for generation of electricity which can be utilized for operating the STPs. It is proposed to appoint Consultant to prepare feasibility on the subject. Thereafter, the Bio-Gas engines for generation of electricity at various Plants would be taken up. The tenders for appointing Consultant have been invited and the same is under scrutiny. It is proposed to award the schemes of power generation on build, own & operate basis. The DJB will also explore the possibility of utilization of Bio gas produced at our various treatment plant for captive power generation which would result into generation of Revenue from such power plant by way of sale of Bio gas and viz-a-viz purchase of electricity from the DVB.

An outlay of Rs 20.00 lakh. has been approved for the Annual Plan 2005-06.

8. SEWERAGE FACILITIES IN URBAN VILLAGES : (Rs. 565.00 lakh)

There are 135 urban villages and water supply exists in all of them. Sewer lines have been laid in 98 urban villages. Sewer lines in 2 more villages are likely to be laid by March-2005. It is not technically feasible to lay sewer lines in 32 Urban villages and laying of sewer lines in the remaining 3 urban villages is being implemented by DJB in a phased manner by March 2006. In case of village where it is not technically feasible to lay sewer lines, decentralized system such as Mini STPs, bio-digesters are proposed to be provided .

List of major schemes/ works is enclosed at ANNEXURE – VII

An outlay of Rs 565.00 lakh. has been approved for the Annual Plan 2005-06.

9. SEWERAGE FACILITIES IN RESETTLEMENT COLONIES : (Rs. 220.00 lakh)

There are 44 Resettlement colonies in Delhi and water supply exists in all of them. Sewer lines have been laid in all 44 Colonies upto March-2003.

List of major schemes/ works is enclosed at ANNEXURE – VIII

An outlay of Rs 220.00 lakh. has been approved for the Annual Plan 2005-06.

10. TRANS YAMUNA DEVELOPMENT AREA BOARD (TYDAB) : (Rs. 700.00 lakh)

Govt. of NCT of Delhi vide notification dated 4.3.94 constituted Trans Yamuna Area development Board to monitor the progress of work in Trans Yamuna Area. For execution of development works, the works are taken up with the approval of the TYADB.

List of major schemes/ works is enclosed at ANNEXURE – IX

An outlay of Rs 700.00 lakh. has been approved for the Annual Plan 2005-06.

11. INFORMATION TECHNOLOGY INFRASTRUCTURE (Rs. 50.00 lakh)

An outlay of Rs. 50.00 lakh has been approved for the implementation of the Plan Scheme for Annual Plan 2005-06.

Detail modalities are being worked out by DJB.

12. CAPACITY BUILDING (Rs. 20.00 lakh)

An outlay of Rs. 20.00 lakh has been approved for the Plan Scheme for Annual Plan 2005-06.

Detail modalities are being worked out by DJB.

SUBJECT: LIST OF MAJOR SCHEMES

S No.	NAME OF WORK/SCHEMES
A.	TRUNK SEWERS
1	Hiring charges for 12 nos. Jetting machines.
2	Purchase of VT Pumps for SPS Trunk Sewers.
3	Tihar Jail Trunk Sewer.
4	Rehabilitation of 1600 mm dia Harsh Vihar to Haider Puri SPS.
5	Rehabilitation of 23" dia Tri Nagar sewer.
6	Rehabilitation of Pitam Pura Sewer.
7	Desilting of Bharat Nagar siphon.
8	Rehabilitation of Shalimar Bagh Sewer.
9	Rehabilitation of Bela Road Sewer.
10	Rehabilitation of 2200 mm dia Ring Road Trunk Sewer near Gurudwara Damdama Sahib, Wireless Centre and Zoo.
11	Rehabilitation of 66" dia Brick Barrel from Q-Point to SPS Kilokari and 1200 mm dia CC No. 4 from 66" dia brick barrel upto Railway Bridge Nizamudeen.
12	Rehabilitation of 1600-1900 mm dia brick barrel trunk sewer from Delhi Gate to college lane (MCD limits) and 950 X 1425 mm dia egg shape Sita Ram Bazar sewer from Turk Man Gate to Azmeri Gate Master Chamber.
13	Rehabilitation through Trenchless Technology 600mm dia sewer line from Gautam Nagar culvert to Chaudhary Dilip Singh Marg Xing along Arbindo Marg.
14	Rehabilitation through Trenchless Technology of 900 mm dia sewer line from T-Junction Seikh Sarai to Madangir Road No. 13.
15	CCTV inspection and desilting of Ring Road Trunk Sewer from Red Fort to Ring Road Pumping Station Maharani Bagh.
16	Rehabilitation of Ring Road Trunk Sewer from Red Fort to Ring Road Pumping Station Maharani Bagh.
17	L/j 1600 mm dia NP3 RCC pipe from BTTP to SPS Sarita Vihar.
18	L/J 1200 mm dia PSC/MS Rising main from SPS Sarita Vihar to Okhla STP.
19	L/J 900 mm dia sewer line from Mahila Mangal to Road No. 13 Madangir.

20	Trapping of Sidhartha Extn. Sewer into Ring Road Trunk Sewer.
21	P/L relieving sewer parallel to Arbindo Marg.
22	Construction of Boundary Wall along gravity duct from SPS Kilokari to STP Okhla.
23	P/L 1100-1200 mm dia sewer line from Ring Road to Seva Nagar.
24	Tracing, raising and replacing manholes of 66" dia in West Delhi.
25	L/J 1600 mm dia NP-2 class RCC pipes line twin T/S from Outer Ring Road Najafgarh drain Xing the Sayyad Nangloi SPS.
26	Desilting of relieving Trunk Sewers.
27	Miscellaneous works.
28	Desilting of Punjabi Bagh and Jail Road Trunk sewers.
29	Desilting of West Delhi Trunk sewers.
30	P/L outfall sewer in Sbhudara Colony.
31	Desilting & CCTV Survey of NTS from Patel Chest to SPS.
32	Desilting and CCTV survey of UTS from manhole 61 to 72.
33	Restoration of rising main of Sanjay Gandhi Transport Nagar.
34	P/L balance portion of outfall sewer of sewer of Subhadara Colony (By Trenchless Technology).
35	Desilting of NTS from Bharat Nagar tp Patel Chest.
36	Replacement of 1200 mm dia settled NTS from Manhole H.No. 67 –B to 67 at Patel Chest.
37	Repair/Maintenance of trapping of Jahangir Puri Drain near Nehru Vihar.
38	Repairs to damaged outfall sewer in Model Town.
39	P/L peripheral trunk sewer in Narela and adjoining area.
40	Dabri Trunk Sewer.
41	P/L/J Sagar Pur Trunk Sewer.
42	P/L/J Trunk Sewer at Najafgarh.
43	P/L/J 350-1000 mm dia sewer line in Raj Nagar-I & II Palam.
44	Peripheral sewer for Sadh Nagar-I & II.
45	Peripheral Sewer in Najafgarh Phase-II.
46	Trapping of Kamla Nagar Drain.
47	Desilting of trunk sewer No.5 in Shd.
48	Desilting of trunk sewer No.4 in Shd.

49	P/L 900-1000mm dia peripheral sewer in Baber pur, Nathu Colony, Jyoti Colony, Shd.(Balance work)
50	Restoration of the rehabilitation of settled portion 1600mm dia trunk sewer in Preet Vihar SPS to manhole near Jagdish Public School on Vikas Marg
51	P/L/J trunk sewer from Mahila College to Jagriti SPS
52	Maintenance of various trappings from Krishi Vihar to Lajpat Nagar Nallah.
53	Cross connection No. 2 at Bhagwan Dass Road.
54	Trunk Sewer from Geeta Colony to Preet Vihar SPS.
55	Desilting of Trunk and Barrels of North-West Distt. Including restoration of settled sewers.
56	Maintenance of Trappings at various drains.
57	P/L 600 mm dia Trunk Sewer near Inder Lok Metro Station.
58	P/L 900 mm dia Sewer Line from Andha Mughal to Road No. 13, Madangir.
59	P/L outfall sewer of Madan Pur Khadar Village to Jassola Pump House.
60	Rehabilitation of 900 X 1350 mm dia egg shaped brick barrel from Subhash Park to Delhi Gate at Darya Ganj.
61	Rehabilitation of 1200 mm dia CC No. 3 from Sunder Nagar Petrol Pump to Manhole No. 57 of Ring Road Trunk Sewer near Wireless Centre.
62	Rehabilitation of Rohtak Road Trunk Sewer.
63	Desilting & CCTV of brick barrel from Pilli Kothi to Ajmeri Gate.
64	Minor repair of Ring Road Trunk Sewer.
65	Rehabilitation of 1200 mm dia cross connection no. 1 from Ambedkar Terminal to Raj Ghat.
66	Repair of settled sewer in Karkardooma village
67	Rectification of damage man holes sewerlines in Yamuna Vihar at various points
68	Supply/laying of delivery line and suction line and portable diesel engine sete with accessories in East Delhi (E&M works)
69	P/L main sewer line leading to Jagriti S.P.S. from Vivek Vihar
70	P/L 450 mm dia. peripheral S/Line on Loni Road from Jaiswal Road & G.T. Road upto Mandawali Road in shahdara.
71	De-silting of T/Pheripheral sewers in Shahdara.
72	Construction/maintenance & repairs of varioys trappings.
73	Construction of JE's site office cum store at Mayur Vihar phase-I

ANNEXURE – II

B. SEWAGE TREATMENT PLANT/S.P.S. i/c RISING MAINS	
1.	Reimbursement of disaster of 10 MGD STP Kondli Plant.
2.	Construction of 25 MGD STP sub-head-B Kondli balance work.
3.	Installation of flow meters at R/M of SPS.
4.	Construction of 45 MGD at Kondli and Construction of 80 MGD SPS Chilla Regulator.
5.	Construction of 25 MGD at Yamuna Vihar STP.
6.	Construction of 90 MGD effluent P/S at Yamuna Vihar.
7.	Construction of 45 MGD effluent SPS at Dakshin Puri.
8.	Balance work of STP Mehrauli, Ghitorni, Sarita Vihar, Tughlaka Bad.
9.	Bar Screen at SPS Ring Road.
10.	50 MGD new Pump at SPS Ring Road and 30 MGD P/S at SPS Kilokari.
11.	Bar Screen at STP Coronation.
12.	Balance work of STP at Coronation phase-III.
13.	Balance work of 40 MGD STP at Nilothi.
14.	Balance work of SPS Nangloi Sayyad.
15.	Electric connection for SPS Nangloi Sayyad.
16.	Balance work of STP Rohini, Pappan Kalan, and SPS Pragti Vihar, Najafgarh.
17.	Balance work of STP Okhla.
18.	Constn. Of 3 MGD SPS at Ram Pura.
19.	P/L 400 mm dia Rising Main from Ram Pura to Bharat Nagar.
20.	Construction of 20 MGD SPS at Anand Vihar.
21.	Construction of SPS at New Bharat Nagar.
22.	Rehabilitation of 1100 mm dia Twin Rising Main from Bharat Nagar to Pitam Pura.
23.	Construction of 40 MGD STP at Rithala.
24.	Construction of 15 MGD STP at Rohini.
25.	Construction of Mini STP in Rural Villages.
26.	Construction of staff Qtrs at Rithala.
27.	Payment of cost of land for STP.
28.	Construction of lab at 16 MGD STP Okhla.
29.	Construction of 30MGD STP at Okhla.

30.	Consultancy for 30 MGD STP at Okhla.
31.	Construction of 16 MGD STP at Okhla.
32.	Reconditioning of sludge drying bed of 24 MGD STP at Okhla.
33.	Construction of 5 MGD STP at Mehrauli.
34.	Cost of Boundary Wall at STP Mehrauli.
35.	Interconnecting RCC Channel to carry effluent in 40 MGD SPS Okhla.
36.	Construction of retaining wall at Mehrauli STP.
37.	900 mm dia outfall sewer for Mehrauli STP.
38.	Construction of 20 MGD STP at Barapulla Nallah (Nizamudeen East) and 43 MGD SPS.
39.	Construction of 12.5 MGD SPS at Mehrauli.
40.	Construction of 14 MGD SPS at Dakshin Puri.
41.	L/J 1200 mm dia PSC Rising Main Misc. like escalation.
42.	Construction of 3 MGD STP at Vasant Kunj.
43.	Consultancy Charges for Vasant Kunj
44.	Consultancy charges of 5 MGD STP Ghitorni.
45.	Construction of 21.3 MGD SPS at Tughlakabad.
46.	Construction of M/S Grill Boundary Wall along Sarita Vihar SPS.
47.	Supply of 1200 mm dia PSC R/Main for SPS Sarita Vihar.
48.	Construction of 33MGD SPS at Sarita Vihar and Rain Water Harvesting at Sarita Vihar.
49.	Construction of Security Guard Room.
50.	Engineering Consultancy Charges for STP & SPS at Pappan Kalan.
51.	Construction of 20 MGD STP at Pappan Kalan.
52.	Construction of stone massonary Boundary Wall for STP Pappan Kalan.
53.	P/L/J PVC pipe line at 20 MGD STP at Pappan Kalan.
54.	Other Misc. works.
55.	Construction of 15 MGD SPS at Jeewan Park.
56.	Construction of stone massonary Boundary Wall at Coronation Pillar.
57.	P/L rising main of Adarsh Nagar SPS.
58.	STP Coronation Pillar Phase-III.
59.	STP Coronation Pillar Phase-I-B
60.	STP Coronation Pillar Phase-I-A.

61.	STP Coronation Pillar Phase-II-B.
62.	STP Coronation Pillar Phase-I-A.
63.	Restoration of damaged portion of Boundary Wall of Adarsh Nagar SPS.
64.	Shifting of rising main of Adarsh Nagar SPS across MITC.
65.	Nilothi STP.
66.	Narela STP.
67.	Supply of 1200 mm dia H.S. Pipes.
68.	L/J 1200 mm dia Rising Main.
69.	40 MGD SPS at Nangloi Sayyad.
70.	Miscellaneous expenditure.
71.	Supply of 1200 mm dia PSC pipes.
72.	Construction of stone masonry wall at Nilothi.
73.	Najafgarh SPS.
74.	Construction of 5 MGD STP at Najafgarh.
75.	Consultancy work for SPS Sarita Vihar and repair of damaged stone masonry Boundary Wall at SPS Sarita Vihar.
76.	Consultancy services for STP/SPS in TY Region
77.	Constn. of 25MGD STP, 50MGD SPS and 90MGD Effluent Pumping Stn. i/c Conveyance system for disposal of treated effluent into river Yamuna for Kondli.
78.	Constn. of Additional P/Stn. at Preet Vihar
79.	Constn. of Protection wall around the digester, Gas holder and Gas Burner at STP, Yamuna Vihar
80.	Diversion of 450mm dia CI rising main from existing 1200mm dia, Rajeev Nagar to Addl. 10MGD STP, Yamuna Vihar
81.	Structural reviving of 900mm dia PSC rising main, M.S.Park, SPS
82.	Refurbishment of digesters and gas holders of 10MGD STP at Kondli Ph.I
83.	Constn. of 25 MGD STP at Kondli Ph.II (Balance work)
84.	P/L/J 500mm dia rising main from Ram Nagar SPS to Yamuna Vihar SPS
85.	P/L/J 1000mm dia rising main from Jagriti SPS to Kondli STP
86.	P/I 500mm dia CI rising main from Kailash Nagar SWP Stn. to Geeta Colony SPS
87.	Constn. of protection wall around the digester, gas holder & gas burner at STP Yamuna Vihar
88.	Construction of STP at Palam Drain.
89.	Construction of STP at Delhi Gate.

90	Construction of STP at Ring Road Drain.
91	Improvement & augmentation of existing sewage Pump House.
92	Construction of 15 MGD STP at Dayai Nallah.
93	Construction of 1.75 MGD SPS at R.P. Bagh including P/L 300 mm dia MS Rising Main upto G.T.K. Road.
94	Construction of 10 MGD SPS at right bank of MG Drain near Inder Lok Metro Station.
95	Renovation of Mukherjee Nagar SPS.
96	P/L 300 mm dia RCC pipe for disposal of Storm Water from the premises of 10 MGD STP at C.P.
97	Construction of 7 MGD SPS at Punjabi Bagh including 450 mm dia/600 mm dia peripheral sewer.
98	Rehabilitation of 1100 mm dia R/M from Bharat Nagar SPS.
99	Renovation of Haider Puri SPS.
100	Refurbishment of 40 MGD Rithala STP.
101	Rehabilitation of Bharat Nagar SPS.
102	Treatment of effluent passing through drains using bacteria's and enzymes.
103	Constr. Of stone masonry boundary wall around the vacant land of oxidation ponds near 2142, Janta flats GTB Enclave
104	Renovation works of pipes and fixtures of Suction, delivery main tools etc. in East Delhi
105	Supply of bearings Diesel engines and spares i/c valve procurement, electrical and hardware works etc.
106	Constr. Of 50 MGD raw SPS at Yamuna Vihar
107	Constn. Of anaerobic biodegradation digesters and other related civil works for the Multicentric demonstration of microbial process pilot project for treatment of sewage/wastewater by IGIB/CSIR
108	P/L rising main from Vivek Vihar SPS to Mahila College Vivek Vihar.
109	Desilting of sump wells of various SPS in Shd.
110	Constn. Of 53.25 MGD new sewerage pumping station at Preet Vihar including laying of rising main & rehabilitation of old SPS at Preet Vihar.
111	

In addition various small works relating to E & M are also to be carried out in City & Karol Bagh zone, Central zone & South zone.

ANNEXURE – III

C. RESIDENTIAL ACCOMMODATION	
1.	Electrification of staff quarters at Jal Vihar .
2.	Electrification of staff quarters at Coronation Pillar.
3.	Repair and modification of staff quarters.
4.	Construction of Office Building for S.E. at Sector-IV, R.K. Puram, for ZE-III at D-Blk Janak Puri for AE(E&M) at Shiv Chowk, Ranjeet Nagar.
5.	Construction of Boundary Wall ground DJB Nursery at R.K. Puram Sector-IV.
6.	Electrification of newly office Building at R.K. Puram Sector-IV.
7.	Additional and Alternation at JE Store at C-Block Over Head Tank, Naraina Vihar.
8.	Construction of Sewage Pump House at shiv Chowk, Ranjeet Nagar.
9.	Construction of new store at Khyala.
10.	Maintenance of 7 stores in West Zone.
11.	Repair & Maintenance of ZRO office building and local booster pumping station in Janak Puri.
12.	Raising of Boundary Wall of the Office Complex of EE(C)Dr-XV.
13.	Construction of office Building of EE(C)Dr-III
14.	P/L sewer line for office of EE(C)Dr-III.
15.	Repair of existing temp. office sheds at Coronation Pillar.
16.	Misc. works.
17.	Staff Qtrs. At Model Town.
18.	Various works of Varunalaya Ph-I and II.
19.	Construction of office at Pitam Pura transferred to SE(NW).
20.	Construction of office building.
21.	Construction of office building/JE Store in District Central, North, North West, (E&M)C/N
22.	Construction of office Building for EE at Kanhaiya Nagar.
23.	Construction of offices of JE (E&M) at Kewal Park.
24.	Construction of JE(C)'s office at Shah Alam Bandh at Coronation Pillar.
25.	Renovation of EE room at Kanhaiya Nagar.

26	Addition/Alteration/Maintenance of Residential Accommodation of Labs and Godowns.
27	Repairing/Constn./Maintenance of Residential Accommodation in C.No.37,38,39 & 40.
28	Constn. Of sewer store in Yojna Vihar & Madhuban
29	Constn. Of office building for the staff of EE(NE)I at vacant land oxidation pond near 2142 SPS.
30	Renovation of SE(NE) office at GTB Enclave Nand Nagri.
31	Earth filling & dry brick pitching at sewer store, Dilshad Garden.
32	Annual repairing of various sewer store and offices.
33	Construction of Sewer Store & boundary wall at SPS Ghonda-I to maintain newly laid sewerage system in Yamuna Vihar.

ANNEXURE – IV

D. STORM WATER DRAINS & ANTI FLOOD WORKS	
1	Remodeling of Barapulla Nallah.
2	Remodeling of Barapulla Nallah from 480 mtr. to 1050 mtr.
3	Construction of SW drain system for Adarsh Nagar Group of Colonies Part-I.
4	Construction of SW drain system for Adarsh Nagar Group of Colonies Part-II-B (Escalation).
5	Desilting of Model Town RCC Drain.
6	Construction of RCC Drain Model Town Part-III.
7	Construction of SW Drain system for Adarsh Nagar Group of Colonies Part-II-A.
8	Arbitrator's fee for Sh. S.K. Goel V/s. DJB and AP construction Co. V/s. DJB.
9	Shifting of 700 mm dia PSC water main coming in alignment of SW drain at Shah Alam Bund, Adarsh Nagar.
10	Misc. Works.

ANNEXURE – V

E. RENOVATION OF EXISTING PLANTS	
1.	Renovation of Centre Mech. Of FST-II Kondli Ph-I.
2.	Replacement of Bar screen at 10 MGD Kondli Ph-I.
3.	Replacement of Bar screen at Jagriti, Preet Vihar SPS.
4.	Improvement of Power Factor equipment at SPS Andruz Ganj, Nigam Bodh, Batla House.
5.	Replacement of 16 MGD P/S at SPS Andruz Ganj
6.	SI/C of Gear Boxes of Aeration Plant at STP Vasant Kunj.
7.	Renovation of H.T. equipment at SPS Kilokari/RRPS.
8.	Replacement of 13 MGD Pump at SPS Kilokari.
9.	Bar screen at SPS Ring Road, Adarsh Nagar.
10.	Replacement of aerators at 40 MGD STP at Keshopur.
11.	Replacement of 20 MGD Pump at Ring Road P/S.
12.	Replacement of Central Mech. at Kesho Pur.
13.	Replacement of Bio-filter at STP Coronation Pillar.
14.	Renovation of LT Panel at P/S Bharat Nagar.
15.	New Pumps of 12 MGD in place of 6 MGD Pumps.
16.	To provide alternate source of power through Diesel Generating Sets to be installed at various SPSs.
17.	Renovation of work of existing pump sets, Panel Board and suction delivery and valves in East Delhi for E&M (W&S)
18.	Renovation of Electric Pump sets at East Loni Road.
	Renovation of Chain Pulley Block & Electric Hoists at t Loni Road and other Sewage Pumping Stations.
19.	Renovation of H.T./L.T. Panel Boards at various sites in East Delhi for E&M (W&S) North East
20.	Renovation of Existing Pump sets at Ram Nagar, Dilshad Garden, Mansarover

	Park, etc.
21.	Supply of non clog sewage pump sets with panel, cable & accessories in East Delhi for E7M (W&S) East.
22.	Procurement of Hardware items, spares of motors & pumps, bearings, spare parts of starters portable diesel engine sets and valves in East Delhi for E&M (W&S) East.
23.	Renovation work of Bra Screens and Penstock Gates in East Delhi for E&M (W&S) N-East.
24.	Supply of Gas Detectors and Pullers, Pipes and Specials, Bar Screens, etc. in East Delhi for E&M (W&S) N-East.
25	Miscellaneous works hardware and Electrical Items works in East Delhi for E&M(W&S) N-East.
26	P/L internal sewer in remaining portion of Gandhi Ngr.
27	P/L internal sewer in East Old Seelampur(part), Balance portion of Shanti Mohalla and Kasushikpuri road.
28	P/L internal sewer in Jyoti Ngr.
29	P/L internal sewer in Arjun Mohalla, Mohanpuri, Noor-E-Ilahi colony, part of Maujpur.
30	P/L internal sewer in Kabir Nagar.
31	P/L internal sewer in Kartar Nagar.
32	P/L internal sewer in Jyoti Colony, Harijan Basti.
33	P/L internal sewer in Rishi Kardam puri.
34	Balance work of P/L/J internal sewer in Harkesh Nagar, Gamri Extn., Chauhan Bangar, Zafrabad.
35	P/L internal sewer in Vijay colony & Vija Park
36	Desilting of Branch Sewers
37	Improvement of existing sewerage system in left out portions in Shd.
38	Making connection of 450mm dia out fall sewer into 600mm dia sewer at Mandoli road, Shd.

F. LAYING OF INTERNAL SEWERS IN UNAUTHORISED/ REGULARISED COLONIES (BRANCH SEWERS)	
1	Improvement of sewerage system by P/L 200mm dia sewer line at C-2 to C-102 Khajan Basti.
2	Imp. Of sewerage system by replacing old/settled sewer line at C-223 to C-210 Maya Puri, C-203 to E-I, Maya Puri.
3	P/L 250 mm dia sewer line from WZ-182 to 214 Lajwanti Garden, for office building at Sector-IV, R.K. Puram, additional fall at F-102 Maya Puri, House No. 517 to 477 , 541 to 556, 613 to 617, 630 to 660 Sector-IX R.K. Puram, Block No. 6-7 Subhash Nagar.
4	P/L 250 mm dia loop line between H.No. 538-A to 554-A Sector-III, R.K. Puram, DDA Market in Munirka Vihar-II.
5	P/L 450 mm dia sewer line in Centre Portion of main sewer line between Type-5 & 6 CPWD Qtrs. Near Priya Cinema.
6	P/L 300 mm dia sewer line by replacement of old sewer from H.No. C-47 to 117 JJR Inder Puri.
7	Imp. Of sewerage system by replacing old sewer line at F-1 to F-30 Maya Puri Industrial Area, Ram chander Bagh Nangal Raya, near Factory B-101 Naraina Industrial Area, DDA Flats Lado Sarai.
8	Imp. Of sewerage system in Toda Pur Village, Budh Vihar & Mata Mandir at Munirka Village, T-34 to T-61 and V-1 to V-15 Green Park, H. No. F-1690 to 229 Katwaria Sarai, Qutub View Apartment Katwaria Sarai.
9	P/L 300 mm dia loop line from H.No. 59 to Gurudwara Munirka Village.
10	P/L/J 300 mm dia through Trenchless Technology at Main Road Dakshin Puri.
11	Imp. Of sewerage system in Jeewan Nagar, Shalimar Cinema Jang Pura, Tamoor Nagar, Yoga Bai Chopal, Khijrabad Kholi Camp, Garhi Village, Okhla Industrial Area, Defence Colony, A-Block East of Kailash, Sewa Nagar, Tyag Raj Nagar,

	Daya Nand Colony, Lajpat Nagar-III, Andruz Ganj, Kalka Ji, Shiekh Sarai, Chauhan Mohalla, Madan Pur Khadar, H.No. 178-36-B to 177-D Saidulajaib Village, Khand Village, Sector-8 Pushap Vihar, Okhla Phase-II.
12	Replacement of sewer line NDSE upto E-150 to E-112 Kalka Ji, Lajpat Nagar-III Old Double Stories, O & M Block.
13	Diversion of sewer main DDA Flats Badar Pur to Trunk Sewers.
14	Replacement of 6" dia sewer line with 250mm dia in D-Block Saket.
15	Imp. Of sewerage system in P/L sewer line in Pushap Vihar, Pocket A-14, Kalka Ji Extn., U&V Block West Patel Nagar.
16	Desilting of sump wells.
17	Connection of sewer lines of Pocket A-12, Kalka Ji Extn.
18	Imp. Of sewerage system by replacing sewer lines At A-1 to A-15 Maya Puri, Khajan Basti, Narain Industrial Area, kalkaji DDA Slum Area, Jeewan Nagar.
19	Desilting of main sewer line through S.C. Machine at Maya Puri Industrial Area.
20	Construction of additional manhole on main line between Qtr. No. 133 to Tamil Sangam, Sector-IV R.K. Puram, Vasant Marg T-Point between F-3/11 Vasant Vihar.
21.	Supply of Bamboos and Sutties for cvleaning the sewers.
22.	Providing overflow system of Trunk sewer from Mehrauli Badar Pur Road, imp. Of sewerage system, Kumhar Basti Mohamad Pur, Dear Park, Green Park Y-Block, Jamrood Pur, R-Block, Dakshin Puri, Tigri Village Gandhi Park, near 8-A Block.
23	Imp. Of sewer system in near Auto Market Jamrood Pur, Gautam Nagar, Hauz Rani, Khirki Village, Chirag Delhi, Malviya Nagar, Adchini village, Green Parkm Main Extn. CD&F-Block, Mohamad Pur Village, Arjun Nagar, Safdarjung Enclave, Safdarjung Development Area, Dakshin Puri Extn., Savitri Nagar, 25-Block in West Patel Nagar and 8-Block in South Patel Nagar, S-Block Subhash Nagar, Rajouri Garden, Hari Nagar.
24	Replacement of 6" dia sewer ;line with 250mm dia sewer line in Vijay Mandal, Kailash Colony.
25	Desilting of sewer line of Balbir Singh Road Paschim Vihar.

26	Replacement of peripheral sewer line in Thar Village.
27	Improvement of sewerage system in part of block Rajouri Garden Extn.-(A).
28	Improvement of sewerage system in part of block Rajouri Garden Extn.
29	Improvement of sewerage system in part of block Rajouri Garden Extn.
30	P/L internal sewer line in Kiran Garden Gulab Bagh.
31	Improvement of sewerage system in Rajouri Garden
32	Improvement of sewerage system in Shivaji Park.
33	Replacement of under sized sewer line in 250 mm dia NP-2 class.
34	Improvement of sewerage system in Tilak Nagar.
35	Improvement of sewerage system in N and H-Block Kirti Nagar
36	P/L Peripheral sewer in Ramesh Nagar.
37	P/L Internal sewer in Mohan Garden and Rama Park.
38	P/L Peripheral sewer in Prem Nagar
39	P/L 900 mm dia sewer line under railway track for Prem Nagar by Trenchless Technology.
40	Replacement of 6" dia in Roop Nagar.
41	Replacement of 6" dia in Kamla Nagar.
42	P/L Internal sewer in Indira Vikas Colony.
43	P/L Internal sewer in Sanjay Nagar Mahindera Park.
44	P/L sewer line in unauthorized regularized colonies of Narela.
45	Interconnection at Uttam Nagar.
46	CCTV Survey.
47	Other Misc. works.
48	P/L Internal sewer in Kamal Park.
49	P/L Internal sewer in Roshan Pura.
50	P/L Internal sewer in Naya Bazar.
51	P/L Internal sewer in Indira Park.

52	P/L Internal sewer in East Sagar Pur.
53	P/L Internal sewer in Nala Pur Basti.
54	P/L Internal sewer in Palam Enclave.
55	P/L Internal sewer in Sadh Nagar-I.
56	P/L Internal sewer in Sadh Nagar-II.
57	P/L Sewer in Rattan Park, Rajinder Park, Tyagi Colony, Friends Enclave-II.
58	P/L sewer in Yadav Nagar. Teachers Colony etc.
59	Repair of Settled sewer in Pitam Pura, Shalimar Bagh and Saraswati Vihar.
60	Replacement of old and damaged brick barrel by P/L 900 mm dia RCC NP-3 pipes for improvement of sewerage system of bazaar Lal Kuan from Katra Bariyan Chowk to Hauz Quazi Chowk.
61	P/L sewer line in Kartar Nagar
62	-do- in Maujpur village Shahdara
63	-do- in Kabir Nagar
64	-do- in Jyoti Nagar
65	-do- in balance portion of Chand Mohalla, Kaushik Pura and East Seelampur
66	-do- in Harijan Basti, D-Block, Ashok Nagar
67	-do- in Harijan Basti, E&F Block, Ashok Nagar
68	-do- in D-Block, Ashok Nagar
69	Replacement of undersized sewer in districts Central-I, Central-II, North-I, North-II, NW-I, NW-II, NW-III, NW-IV, (E&M)NW, (E&M)C/N
70	P/L Sewage system in Barwala and Bawana.
71	P/L/ sewers in Swatantra Nagar.
72	Desilting, tracing and raising of Internal Sewers of Uttam Nagar Group of colonies.
73	P/L Internal Sewers in Mahavir Enclave & Bangali Colony.
74	P/L Internal Sewers in Raj Nagar-I & II.

75	P/L Internal Sewers in Dharam Pura, Najaf Garh.
76	P/L Internal Sewers in Kailash Puri.
77	P/L PERIPHERAL Sewers in Sadh Nagar-I and Palam Enclave.
78	Peripheral Sewer for adjoining area Ph-II, Najafgarh.
79	Replacement of undersized sewers in city Zone, S.P. Zone, Karol Bagh Zone, Distt. North, Distt. North-West.
80	P/L 250/300 mm dia sewer in Village Tughlakabad.
81	P/L 450 mm dia peripheral main for Kalka Ji Extn. Pkt-A-3.
82	Raising, Repairing,desilting, Improvement of branch sewer line in C.No.37,38,39 &40.

ANNEXURE – VII

GRANT-IN-AID URBAN VILLAGE	
1	Imp. Of sewerage system in Village Hauz Rani Basaidara Pur, Kesho Pur, Jamrood Pur, Khan Pur, Shahpur Jatt.
2	P/L internal sewer in Mangol Pur Kalan.
3	P/L internal sewer in deptt. Pockets of Rithala.
4	P/L internal sewer in Bhalswa.
5	P/L internal sewer in Nawada Village.
6	P/L internal sewer in Hastal Village.
7	P/L internal sewer in Narela Town
8	P/L internal sewer in Ambar Hai.
9	P/L internal sewer in Colonies under 20 Point Programme of Palam Village.
10	P/L internal sewer in Palam Village.
11	P/L internal sewer in Bagdola Village.
12	P/L internal sewer in Matiala Village.
13	P/L internal sewer in Kakrola Village.
14	P/L internal sewer in Pochan Pur Village.
15	P/L internal sewer in Mandoli & Saboli
16	P/L sewerage services in the Urban Villages district North, North West, and Pumping Station, and improving and maintenance of E&M Section.
17	Construction of 2.5 MGD STP & SPS in Bijwasan Village.
18	P/L Internal/peripheral sewer in Bijwasan Village.
19	P/L Internal/peripheral sewer in Kakrola village.
20	P/L Internal/peripheral sewer in Dabri Village.
21	P/L Internal/peripheral sewer in Nasir Pur Village
22	P/L Internal/peripheral sewer in Sagar Pur Village.
23	P/L Internal Sewer in left out portion of Village Amber Hai.

24	P/L Internal Sewer in Bhartal Village.
25	P/L sewer in Dhul Sirvas Village.
26	P/L sewer in Bamnauli.
27	Laying and augmentation of sewerage facilities in UV such as Dhirpur, Haider Pur, Shalimar Bagh Village, Rithala, Sahir Pur, Azad Pur, Wazirpur, Dhakka, Nahar Pur including E&M Works.
28	Repairing and maintenance of S/line in C.No.37,38,39&40.
29	Repair & maintenance of sewer in East-II.
30	P/L/J 250mm dia NP2 RCC pipe in Tahirpur Village.
31	P/L Internal Sewer in Village Chilla
32	P/L Internal Sewer in Village Kondli
33	P/L Internal Sewer in Village Dallupura
34	P/L Internal Sewer in Village Gharoli
35	Repairing/desilting of trunk sewers and other mics. Work
36	P/L Internal Sewer including constn. Of Pumping Station in Village Khera Shd.
37	P/L Internal Sewer in Village Saboli in Shd.

GIA IN RURAL VILLAGES

1	Laying sewer line in village Chilla
2	-do- Dallupura
3	-do- Kondli
4	-do- Gharoli

Non conventional Source of Energy.

1.	Supply of DG at Kalyan Puri & Jagriti SPS, Adarsh Nagar.
2.	Installation of Gas Engines for Power Generation of Okhla.

ANNEXURE – VIII

H. GRANT-IN-AID RESETTLEMENT COLONY	
1	P/L outfall sewers for I-Block Dakshin Puri.
2	Imp. Of sewerage system in Raghubir Nagar & Khayala.
3	P/L sewer in left out portion of Mangolpur, Sultan Puri, Jahangir Puri.
4	Repair of settled sewer in Jahangir Puri.
5	P/l siphon across Nangloi drain.
6	P/L missing link internal sewerage system in Nand Nagari Extn. Block F to L
7	P/L internal sewer in New Kondli
8	Sewerage services in RSCs in North-West-I, NW-II, NW-IV.
9	. Laying and augmentation of sewerage facilities in Resettlement Colonies such as shakurpur, Jahangir Puri, Mangol Puri, Sultan Puri, Wazir Pur, Jwala Puri, Holambi Kalan, Tikri Khurd, Swaran Jayanti Vihar Gautam Colony including E&M Works.
10	P/L sewer in Kalyan puri and khichripur RSC in C No.38.
11	P/L sewer in Trilokpuri and Himmatpuri RSC in C.No.39.
12	P/L/J 250mm dia NP2 RCC pipe in old/new Seemapuri.
13	Raising, Tracing & repairing of buried & damaged manhole in Seemapuri & E-Block Nand Nagri
14	Construction of additional manholes in Seemapuri and E block Nand Nagri
15	Tracing , raising and repairing of various manholes in Nand Nagri and Gokul Puri
16	P/L/J 250 mm dia NP2 RCC pipe in B block Nand Nagri
17	Constr. Of additional manholes and repairing of damaged manholes in Nand Nagri and Gokul Puri
18	Renovation of work of existing pump sets in East Delhi for E & M works
19	P/L internal sewer in Kondli RSC, New Kondli
20	P/L missing links/outfall sewer in Sunder Nagri (Nand Nagri extn.)
21	Misc. works i/c improvement of existing works in East Delhi

ANNEXURE – IX

TRANS YAMUNA DEVELOPMENT BOARD	
1	Balance work of Ghonda-I, II and Braham Puri.
2	Balance work of Yamuna Vihar STP Phase-I.
3	P/L sewer line in left out portion, Jagjit Nagar.
4	Miscellaneous unforeseen work including improvement of laid sewerage system in Shd.
5	Covering of RCC Effluent channel for STP Kondli to Shahdara outfall drain over open area at STP Kondli.
6	P/L 900-1000mm dia peripheral sewer line for Nathu Nagar, Jyoti Ngr. & Babarpur etc. in Shd. (Balance work).

NDMC

COVERING OF NALLAH & ANTI FLOOD WORKS

The Drainage system of New Delhi Municipal Council's 42.78 Sq. km Meter area is managed through 14 segments/systems divided with respect to the catchment area of each system and trunk drainage from system in each case carry the rain water discharge and all of sewer line through auxiliary drains up to the out fall through five outlets in MCD area for final disposal to the River Yamuna. The passing criteria for drainage system in New Delhi Municipal Council area is based on the recommendation contained in Reddy Committee's Report approved by the Govt. of India and quite substantial amount to this (upto 80%) and drainage have been augmented/covered. Therefore, a systematic programme to desilt; augmentation and improvement the SWD drains in New Delhi Municipal Council area is required to be taken up for which area pockets have been identified and are to be taken up in the Tenth Five year Plan as detailed below: -

1. **Aug. the capacity of SWD System No. 1 & 6 to 11 & Covering thereof. (Rs. 20.00 lakh)**

The work of Ecological Improvement of Khushak Nallah from SP Marg to Satya Sadan (Phase-II), Rain Water Harvesting at Shanti Path D-I, II, III Satya Sadan, Golf Link, Imp. to Drainage System at roundabouts in NDMC area. Rehabilitation of covering of nallah at Sarojini Nagar are likely to be taken up in the year 2005-06.

Aug. the capacity & Imp. to roadside drains in NDMC area along Safdarjung Railway Station at CPWD Store Chanakyapuri. Providing GT/bell mouths and repair/replacement of chocked barrel and GT in NDMC area, i.e. Lodhi Road, Talkatora Garden, Jor bagh, Kaka Nagar. Imp. to drainage in Fire Brigade lane in Barakhamba Lane and surrounding area and providing covers to open drains at Moti Bagh, Netaji Nagar, Sarojini Nagar, Laxmi Bai Nagar, Kidwai Nagar, D-II, I, III Satya Sadan, Newzealand Embassy including Thailand Embassy and China Embassy are likely to be taken up and shall be completed in the next financial

year i.e. 2005-06. The work of covering of open drain by RCC slab at Moti Bagh, Netaji Nagar, Laxmi Bai Nagar, Rehabilitation of covering nallah at Sarojini Nagar are also likely to be taken up.

Imp. to drainage system in NDMC colonies at Sarojini Nagar, Middle Circle, Connaught Place, DIZ area Sector I, II III, at Pandara Road and Ravindra Nagar are also likely to be taken up.

Rehabilitation of SWD brick arch barrel between Q Point and Laxmi Bai Nagar and Survey of SWD System in NDMC area shall be taken up.

An outlay of 20.00 lakh is approved for Annual Plan 2005-06.

2. Augmenting the capacity and Improvement to road-side drains in NDMC area (Rs. 20.00 lakh)

The work of repair/renovation of the existing open drain and provision of SFRC removable slabs over (all easily removable) in the area of Moti Bagh, Vinay Marg, Netaji Nagar, Kidwai Nagar, Sarojini Nagar, Jor Bagh etc. The work is likely to be taken up in Gole market, Metropolitan City Central area i.e. Sansad Marg, Ashoka Road, B.K.S Road, S.B.S. road, Talkatora Road, North Avenue, Willingdon Crescent and roundabouts of Chanakya puri, Fire Brigade lane, Barakhamba Lane and its surrounding area, alongwith Safdarjung area, Barakhamba road, Outer Circle from Connaught Place to Tolstoy Marg, Mandir Marg, Shanker Road, Peshwa Road, Moti Bagh, Netaji Nagar, Sarojini Nagar, Laxmi Bai Nagar. The work of Improvement to SWD System and roadside drains will also be taken up with changing of old SWD pipes filled with silt in phases in the NDMC area.

An outlay of 20.00 lakh is approved for Annual Plan 2005-06.

3. Improvement to drainage system in NDMC Colonies (Rs. 30.00 lakh)

The work of Improvement to Drainage System in NDMC area at Tolstoy Marg between Janpath and K.G.Marg, Improvement to SWD Bhagat Singh market and Bangla Sahib Road, Harijan Basti, Mandir Marg, Aug. and Imp. to drainage system in Sector-I, II, III and IV DIZ area, Jor Bagh, Safdarjung Lane, Tuglak Crescent, Akbar Lane, Krishna Menon Marg, K.Kamraj Lane, Pandara Road, Sarojini Nagar, Netaji Nagar, Laxmi Bai Nagar, East Kidwai Nagar, Moti Bagh, Netaji Nagar, Nauroji Nagar and Open Surface drain at Moti Bagh etc. will also be taken up during 10th Five year Plan i.e. 2002-07.

An amount of Rs 30.00 lakh is approved for Annual Plan 2005-06.

4. Technical Repair and Desilting of SWD System in NDMC area. (Rs. 55.00 lakh)

Desilting and Cleaning of NDMC area (System no.1&6 to 11 & 14) in phases is likely to be taken up in the Tenth Five year Plan 2002-07. Old barrels which have been broken/damaged at 3 places in between Q-Point and Lodhi Road from DI-50 to DI-60, CPWD Nursery, Water Boosting Station, Bharti Nagar are to be restored. Further the work of restoration of barrels from Q-Point to Dayal Singh College to Lodhi Road will be taken up during 2002-07.

The work of desilting and Aeration of barrels from Q-Point to Dayal Singh College at Lodhi Road will also be completed in phases in Tenth Five-Year Plan.

An outlay of Rs 55.00 lakh is approved for Annual Plan 2005-06.

URBAN DEVELOPMENT DEPARTMENT

1. SETTING UP OF WATER MISSION AND USE OF NEW TECHNOLOGIES FOR CONSERVATION HARVESTING AND RECYCLING OF WATER (Rs.45.00 LAKH).

- (i). Although Delhi is situated on the banks of river Yamuna the availability of potables water is insufficient to meet growing requirements of Delhi. Delhi's water share is based on an agreement entered to in 1993 amongst the five basin States of Delhi, Haryana, Himachal Pradesh, Rajasthan and Uttar Pradesh.

Based on the present population the water requirement of Delhi is 800 MGD (million gallons per day). Against this the total water supply from all sources is 670 MGD. A water Treatment Plant at Sonia Vihar has been completed and it will be made functional after available a raw water from Tihri Dam and would increase the water treatment capacity by 140 MGD.

- (ii). To augment the water supply the U.P.govt. have been approached for release of additional water from the Upper Ganga Canal by savings in situated through relining and re-furbishing of the existing line channel. The Govt. of Delhi is also working in consultation with the Govt. of Himachal Pradesh to get Renuka Dam Project cleared by the Govt. of India. So as to ensure additional raw water supply for Delhi. Besides this the Lakhvar Vyasi and Kheschau Dam Projects are also under consideration of the Govt. of Delhi for bridging the gap between demand and supply of water.
- (iii). Thus over the next 5-6 years, no addition in water availability is envisaged. This leaves water harvesting and water conservation as the only options for increasing the water supply. This is why the Govt. of Delhi has been attaching importance to water harvesting and water conservation measures.

Rainfall in Delhi is approximately 670.5mm per year. The ground level is depleting due to over utilisation in some areas, thereby affecting the whole of Delhi, there is an urgent need for rainwater harvesting and promoting water conservation in a big way.

- (iv). The local bodies have been asked to adopt water harvesting through storage of rainwater run off. In Delhi rainwater harvesting structures have been made mandatory for new buildings having area above 100 sq. metres by amending the Building Bye-Laws. It has also been made mandatory for all non-residential buildings having discharge of 10,000 litres per day to incorporate a wastewater recycling system. The recycled wastewater can be used for horticultural purpose.
- (v). Since water harvesting and water conservation is the only option to bridge the gap between demand and supply, Govt.of Delhi give incentives/grants to Institutes/agencies/NGOs/RWAs/Group Housing Society for adopting the above measures as also for conducting research studies adopting new technologies for conservation of water and so on.
- (vi). Technical Assistance-Delhi Jal Board has been identified as the nodal agency to impart all technical assistance needed for water harvesting structures in consultation with Central Ground Water Board.
- (vii). Besides this, the Govt.of Delhi also proposes to publicise the importance of water conservation, arrange for wide publicity through pamphlets and electronic media campaigns. School/college students are proposed to be enlisted for inculcating and spreading the message of water conservation. Incentives may also be given to the best achiever in the zone.
- (viii). (a) Grant will be given to Institutes/agencies/and incentive to house-owners for adopting water harvesting measures and or incentives will be given for conducting research studies in the filed of water harvesting and water conservation.

In the first phase the RWAs/Coop Group Housing Societies of South and South-West Districts, being the worst affected areas, are being taken up. In the IInd phase, it is proposed to extend the scheme covering RWAs/ Coop Group Housing Societies of West Delhi Districts and all (aided/unaided) school buildings. Interested RWAs/ CGHS/Schools with design plan duly approved by CGWA will apply to concerned zonal officer of DJB. The applications so received would be examined by a Committee comprising of officers from U.D.Dept., Finance Dept., C.M.Office, Delhi Jal Board and CGWB (Officer-incharge Delhi Unit) under Member (WS), DJB. The Committee shall also undertake site inspection for ascertaining the feasibility/applicability of the scheme.

The financial assistance in the shape of grant to be given to the RWAs/CGHS/Schools, would be the 50% of the total cost of the project subject to a maximum of Rs.50000/-. The financial assistance would be given to the RWAs/CGHS/School only after the completion of the project and to the satisfaction of the committee. The rainwater harvesting structures so constructed would be maintained by the respective RWAs/CGHS/Schools. The RWAs/CGHS/Schools before getting the financial assistance would have to enter into an agreement with the Govt. that the proper maintenance would be ensured by them at all time. If at any stage any RWA/CGHS/School is found wanting in this, other benefits would not be provided to them by the Government.

- (b) Financial incentives to best achiever in the field of water conservation from amongst school children of class VI onwards may be worked out at various levels depending upon the coverage e.g. zone-wise, Distt.-wise and state-wise.
- (c) Funds can also be utilised for publicity including the conduct of seminars, workshops, distribution of pamphlets, press advertisements etc.

To achieve the above targets/objectives, an amount of Rs. 200 lakhs is, approved for the Tenth Five Year Plan (2002-2007).

An outlay of Rs. 45.00 lakh is approved for the Annual Plan 2005-2006.

2. Yamuna River Authority (Rs.4.00 lakh)

It is proposed to set up a Yamuna River Authority which could take care of development of river beds, reduce pollution in Yamuna, develop river banks as tourist spots etc. The draft legislation on Yamuna River Authority is yet to be prepared. It has been decided that a Consultant may be appointed preferably from CWC or WAPCOS whose terms and conditions may be finalised.

An outlay of Rs.150.00 lakh in 10th Five Year Plan has already been approved. An outlay of Rs.4.00 lakh is approved for Annual plan 2005-06 for the implementation/formulation of the scheme.

3. Reformative Restructuring of DJB (Rs.1.00 lakh)

It is proposed to undertake reformative restructuring of DJB so that it could function as financially viable, technically sound and can meet the requirements of population of Delhi in a befitting manner.

An outlay of Rs.100.00 lakh for 10th Five Year Plan and Rs.1.00 lakh is approved for Annual Plan 2005-06.