SUPREME AUDIT INSTITUTION OF INDIA
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Report of the Comptroller and Auditor General of India on Saryu Nahar Pariyojana

Government of Uttar Pradesh

Report No. 3 of 2025

(Performance Audit-Civil)

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Preface

This Report of the Comptroller and Auditor General of India has been prepared for submission to the Governor of Uttar Pradesh under Article 151 of the Constitution of India.

The Report contains results of the Performance Audit of Saryu Nahar Pariyojana covering the period 2017-18 to 2021-22.

The instances mentioned in this Report are those which came to notice in the course of test audit for the period 2017-18 to 2021-22 as well as those which came to notice in earlier years but could not be reported in the previous Audit Reports; matters subsequent to the year 2021-22 have also been included, wherever necessary.

The audit has been conducted in conformity with the Auditing Standards issued by the Comptroller and Auditor General of India.

Executive Summary

Executive Summary

The Performance Audit of Saryu Nahar Pariyojana (SNP) was carried out focusing on the execution of works during April 2017 to March 2022. It aims at assessing the efficiency and economy in the implementation of the project, identifying the lapses, if any, in obtaining the benefits envisaged from the project, and suggest to the State Government for corrections and improvements.

SNP was formulated in 1982 at an estimated cost of ₹ 299.20 crore by enlarging the scope of Left Bank Ghaghara canal project which was formulated by the State Government in the year 1978 to irrigate 3.54 lakh hectare area of trans-Ghaghara region in the eastern part of Uttar Pradesh. A Culturable Command Area (CCA) of 11.29 lakh hectare was to be created under the project covering nine eastern districts of Uttar Pradesh. An irrigation potential of 14.04 lakh hectare was to be generated in the CCA of 11.29 lakh hectare area. SNP was commissioned in December 2021 at an expenditure of ₹ 10,003.11 crore (March 2022). SNP received funds from the State Government resources, central assistance from Government of India under Accelerated Irrigation Benefit Programmes, National Project and loan from National Bank for Agriculture and Rural Development (NABARD).

The project suffered majorly due to delay in acquisition/purchase of land required for the project and delayed funding. The Department took long time in purchasing land from the farmers which not only delayed the completion of the project but also put extra financial burden on the public exchequer because of cost escalations including hike in amount of land compensations to the farmers. The project was not provided funds as per the annual requirements which also hindered the progress of works.

Audit noticed that detailed estimates were prepared without approval to Longitudinal section of canals and drawings of the masonry structures which led to significant changes in the scope of contracts. Cost estimates were not prepared as per the norms prescribed in the Schedule of Rates and in the Detailed Project Reports due to which there were cases of overestimation in the work's estimates.

Contract management was weak. The tenders were invited without technical sanctions. Insufficient time was given to the bidders to submit the bids. Instances of excess expenditure and undue advantage to the contractors were noticed. Quality assurance in the execution of works was weak as prescribed tests for earth works and masonry works were not carried out as per norms.

The project was commissioned in December 2021 after almost 40 years from the date of start of works. However, many of the canals were incomplete/not taken up for construction. Rapti Main Canal and its distribution system was not utilised for want of outlets and sumps to carry water from canal to fields. Command area development works were completed only in 20 *per cent* CCA hindering the flow of water from canals to field.

Recommendations:

- *The State Government should investigate the reasons for incorrect assessment of the requirements of the project leading to significant variations in the scope of works during execution and consequential delays in the completion of project.*
- *The State Government should carry out comprehensive field surveys to determine the actual area covered with the Saryu Nahar Pariyojana for correct assessment of required development work and for effective irrigation planning.*
- *In view of the persistent situation of time and cost overrun in many of the schemes/programmes, the State Government should fix responsibility for lapses and delays in project execution.*
- *The State Government should find out the circumstances under which the contracts were awarded without finalising designs and drawings and quantities of works.*
- *The quality of construction of the major structures of the project should be verified.*
- *Internal control mechanism should be strengthened through regular internal audits, technical inspections and maintaining the records and documents.*
- *The canals constructed under Rapti Main Canal and its distribution system should immediately be put to use by constructing outlets, sumps in the canals and field channels and drains below the outlets.*
- *There is an urgent need to identify the solution for providing adequate water in the command area of the Saryu Nahar Pariyojana, especially in Rabi season so that farmers can get the expected benefits.*
- *Water user associations should be formed immediately to ensure equal distribution of available water in the canal network.*
- *Maintenance of created assets should be ensured to keep the assets usable in order to get the envisaged benefits.*

Chapter –I

Introduction

Chapter-I

Introduction

In this chapter, brief about Saryu Nahar Pariyojana (SNP), audit objectives, criteria, scope and methodology have been discussed.

Brief snapshot of the Chapter

- SNP was formulated in 1982 at an estimated cost of ₹ 299.20 crore to create Culturable Command Area of 12 lakh hectare in nine eastern region districts of Uttar Pradesh. The targeted CCA was revised to 11.29 lakh hectare in December 2017.
- The project was commissioned in December 2021 against the target of completion in 1988-89.
- SNP received ₹ 10,346.70 crore against which ₹ 10,003.11 crore was spent as of March 2022.

1.1 Introduction

Left Bank Ghaghara Canal project was formulated by the State Government in the year 1974 to irrigate 3.54 lakh hectare Culturable Command Area (CCA) of trans-Ghaghara region in the eastern part of Uttar Pradesh. Subsequently, the State Government extended (March 1982) the scope of the Left Bank Ghaghra Canal project to 12 lakh hectare area (irrigation potential: 14.04 lakh hectare[1]) covering the trans-Rapti area also. The project was renamed as Saryu Nahar Pariyojana (SNP) at the estimated cost ₹ 299.20 crore and targeted to be completed by 1988-89.

The project went through multiple cost revisions and delays since its inception. The project cost was revised (August 1985) to ₹ 696 crore due to increase[2] in price of construction material and labour, inadequate funding and inclusion of additional works in the scope of the project. The project was targeted for completion by 1992-93. However, the target was not met as planned outlay envisaged for the project was not available and the project cost was again revised to ₹ 1,256 crore in 1992-93. The remaining work of the project was divided (1992-93) into three phases ***(Appendix 1.1)*** with timeline set for completion of works of each phase. The completion of the third phase was scheduled for 2005-06.

In June 1998, the Expenditure Finance Committee (EFC) of the State Government decided to stop the work of Phase-III (Rapti Main Canal and its distribution system) and directed to prepare separate Detailed Project Report (DPR) for these works based on actual survey. Thus, works of Phase I and Phase II only continued thereafter. The project cost of the works of Phase-I and Phase-II was further revised to ₹ 2,522.02 crore in November

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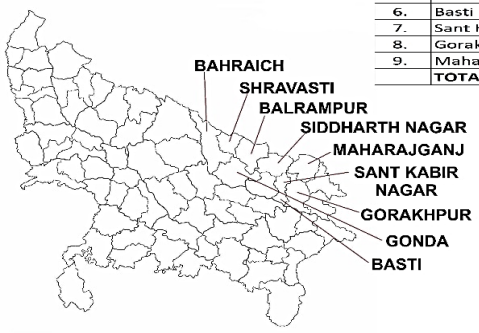
[1] Irrigation potential of 14.04 lakh hectare includes Kharif: 9.24 lakh hectare and Rabi: 4.80 lakh hectare.
[2] The capital cost (₹ 299.20 crore) of the project was based on the price index of 1978.

2006. Meanwhile, in February 2000, the Rapti Canal System (i.e., Phase III work) was found to be feasible in the feasibility studies and a further revision of the DPR in March 2010 increased the project cost to ₹ 7,270.32 crore which *inter alia* included the works of Rapti system, targeting completion of the project by the year 2014. Subsequently, in the revised DPR 2017, the State Government revisited the coverage of the project and reduced the CCA to 11.29 lakh hectare from earlier planned CCA of 12 lakh hectare mainly due to urbanisation. The inclusion of additional works and increase in costs of labour and material caused the project cost to increase to ₹ 9,802.68 crore in October 2017 with a revised completion date of December 2019. However, the project was commissioned in December 2021 with a total expenditure of ₹ 10,003.11 crore up to March 2022. Further, as of March 2022, entire main canals (257 Km) and branch canals (777 Km) were completed, but 228 Km of distributary and minor canals out of 5,377 Km proposed distributary and minor canals were not constructed. The financial closure of the project was yet to be done (October 2024).

The CCA of 11.29 lakh hectare at present covers the nine eastern districts of the State, *vis*., Bahraich, Balrampur, Basti, Gonda, Gorakhpur, Maharajganj, Sant Kabir Nagar, Siddharthnagar and Shravasti, as depicted in **Map 1.1**.

Map 1.1: Districts covered under SNP

S.No.	District	TOTAL	
		CCA (Lakh Ha)	IP (Lakh Ha)
1.	Bahraich	1.78	2.08
2.	Shravasti	0.61	0.77
3.	Balrampur	1.28	1.68
4.	Gonda	2.47	2.9
5.	Siddarthnagar	1.5	1.96
6.	Basti	1.97	2.36
7.	Sant Kabir Nagar	0.65	0.76
8.	Gorakhpur	0.74	1.08
9.	Maharajganj	0.29	0.45
	TOTAL	11.29	14.04



*MAP NOT TO SCALE

The SNP (erstwhile Left Bank Ghaghara Canal Project) was funded from the State Government's resources during 1977-78[3] to 1995-96, under Accelerated Irrigation Benefit Programme (AIBP) from 1996-97 to 2011-12, under National Project from 2012-13 to 2014-15 and from 2015-16 to 2021-22 under Pradhan Mantri Krishi Sinchayee Yojana (PMKSY). Besides, the project also received loan from National Bank for

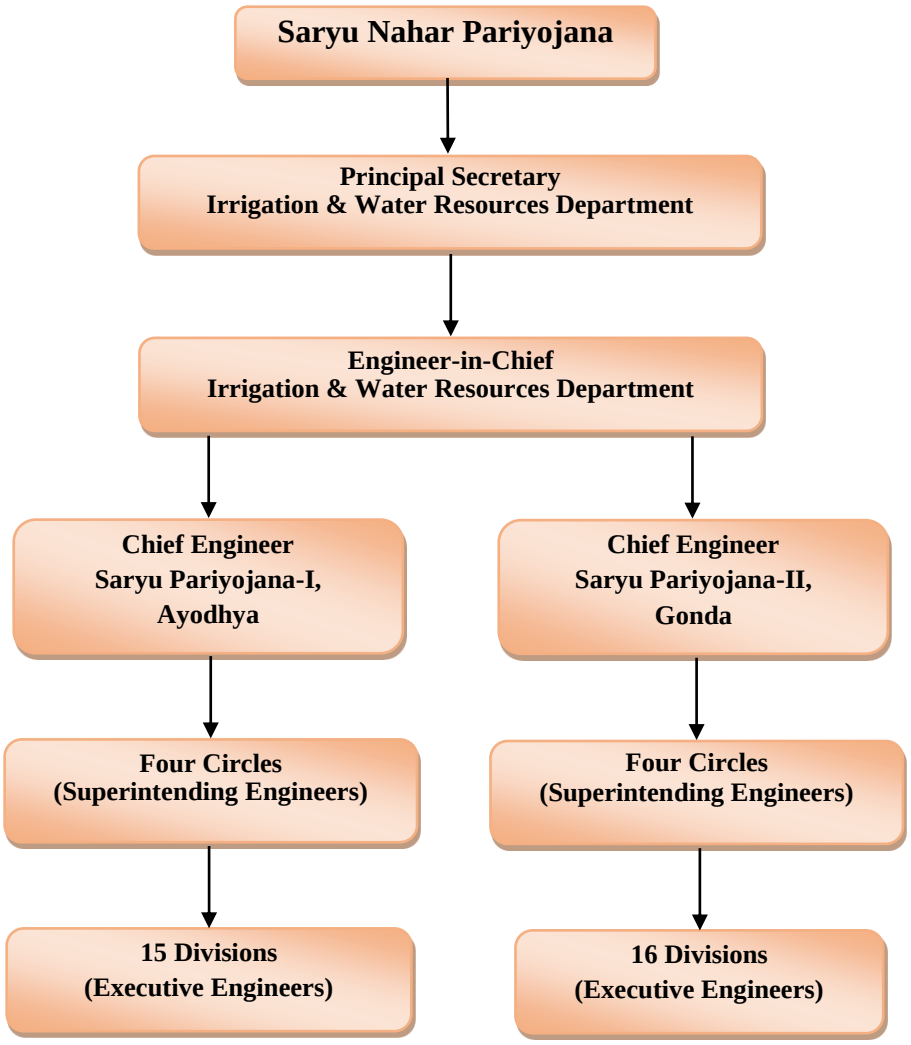
[3] Left Bank Ghaghara Canal Project (now SNP) was though prepared in the year 1974, the fund was allotted for project since 1977-78.

Agriculture and Rural Development (NABARD) from 1996-97 to 2004-05. Thus, SNP received ₹ 10,346.70 crore during 1977-78 to 2021-22 against which ₹ 10,003.11 crore was spent as of March 2022.

1.2 Organisational set-up

SNP was implemented by Irrigation and Water Resources Department (I&WRD), which is responsible for providing irrigation water to farmers in the State. I&WRD is headed by Principal Secretary and the implementation of various irrigation project is carried out under the technical control of the Engineer-in-Chief at the State level, Chief Engineers at the Zone level, Superintending Engineer (SE) at Circle level and Executive Engineers (EE) at the Division level. The implementation of SNP was carried out under the technical supervision of Chief Engineers, Saryu Pariyojana-I, Ayodhya and Saryu Pariyojana-II, Gonda with eight SEs and 31 EEs. The organogram of SNP is given in **Figure 1.1.**

Figure 1.1: Organogram of SNP



Command area development works in command of SNP were carried out by Commissioner, Greater Sharda Sahayak Command Area Development

Authority (GSSCADA), Lucknow which is also under the administrative control of I&WRD.

1.3 Audit objectives

The performance audit of SNP has been carried out with the following audit objectives:

- Whether project was conceptualised after assessing its feasibility and taking into account the need of the command area;
- Whether funds were adequate, available timely and utilised properly;
- Whether project was executed in an economic, efficient and effective manner;
- Whether contemplated culturable command area was created and utilised; and
- Whether the project implementation was monitored effectively.

1.4 Audit criteria

The audit criteria have been drawn from the following sources:

- Irrigation Manual of Orders of the State Government;
- Guidelines for Submission, Appraisal and Acceptance of Irrigation and Multipurpose Projects, 2010 and 2017 issued by the Central Water Commission (CWC);
- Guidelines on Command Area Development & Water Management Programme issued by the GoI;
- Environment (Protection) Act, 1986 and Environment Impact Assessment Notification, 1994 issued by the GoI;
- Land Acquisition Act, 1894 and the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, *Karar Niyamavali*, 1997 issued by the State Government for land purchase and other Government orders;
- Financial rules and instructions issued by the State Government; and
- Detailed Project Reports of SNP.

1.5 Audit scope and methodology

The Performance Audit (PA) has covered the period from 2017-18 to 2021-22 with backward and forward linkages to assess, broadly, whether SNP after its long journey of construction was completed as per the laid down objectives and whether the envisaged benefits were delivered actually to the command area of the project. Records were examined in the offices

of the Principal Secretary (I&WRD), E-in-C (I&WRD), two CEs, eight SEs[4] and 17 divisions (all 12 divisions carrying out construction works and five out of 17 other divisions[5] engaged in maintenance, repair and delivery of water). Sampling was done using statistical sampling method[6].

Records were also examined in the office of Commissioner, GSSCADA in respect of development of command area of SNP. Further, information regarding micro irrigation[7] facility in the command area of the project have been obtained from Horticulture and Food Processing Department. Apart from examination of records, joint physical visits of the selected canals[8] by Audit with SNP officials were also undertaken to observe the status of maintenance of created assets under the project.

Audit objectives, criteria and scope were discussed with the State Government in an entry conference held on 26 September 2022. Exit meeting was held on 21 November 2023 with the State Government to discuss the findings of the draft PA report and recommendations made therein. The State Government furnished replies in November 2023 and January 2024, which have been suitably incorporated in the draft report.

1.6 Components of the project

The project envisages transferring water to the canal network of the project from Girija barrage on river Ghaghara, Saryu Barrage on river Saryu and from Rapti Barrage on river Rapti. Cumulatively, 76.20 to 359.42 cumec water during months of Kharif season and 14.50 to 178.03 cumec water during the months of Rabi season was to be supplied to the canal network of the project. The major components of the project included two barrages, *vis*., Saryu Barrage and Rapti Barrage; four main canals, *vis*., Saryu Link Channel (SLC- 47.135 Km), Saryu Main Canal (SMC- 63.150 Km), Rapti Link Channel (RLC- 21.400 Km) and Rapti Main Canal (RMC- 125.682 Km); ten branch canals (776.606 Km; and distributaries and minor canals (5377.440 Km), as detailed in ***Appendix 1.2***. A schematic diagram of SNP is given in **Figure 1.2**.

[4] (i) Irrigation Construction Circle, Bahraich, (ii) XVth Circle Irrigation works, Gonda, (iii) Quality Control Circle, Ayodhya, (iv) Drainage Circle, Gonda, (v) Irrigation Construction Circle, Basti, (vi) IXth Circle Irrigation Works, Bahraich, (vii) Rapti Canal Construction Circle-1, Balrampur, and (viii) Rapti Canal Construction Circle -2, Basti.

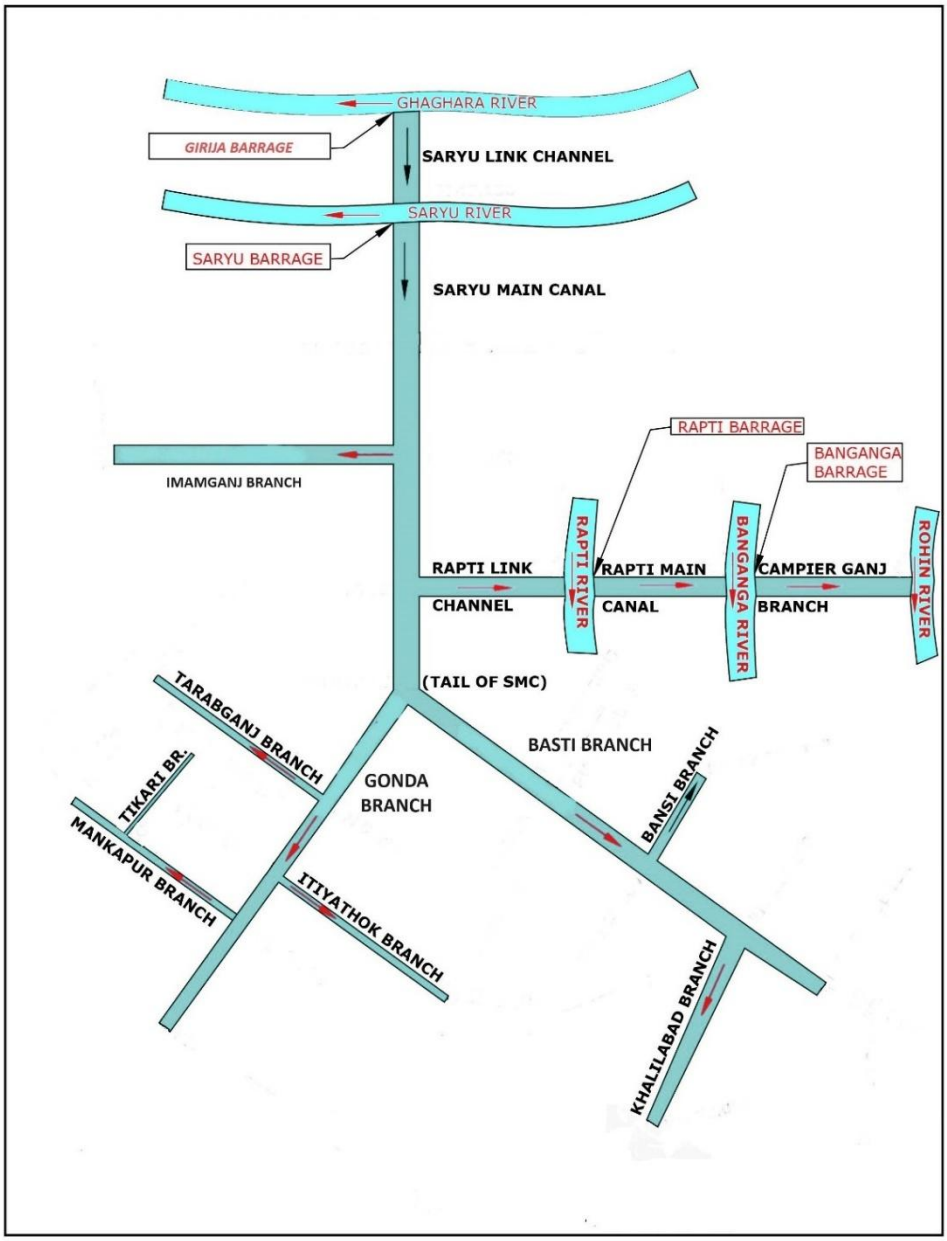
[5] Two quality control divisions were not taken in sample and the information in respect of quality control were obtained from the SE, quality control circle Ayodhya under which these two quality control divisions were working.

[6] Probability Proportionate to Size Without Replacement method.

[7] Method of irrigation to enhance water use efficiency.

[8] For the purpose of sampling, canals were grouped in upper reach, middle reach, and tail reach. Overall, thirty-five canals covering canals from each group, were selected using Simple Random Sampling Without Replacement (SRSWOR) method. All 216 villages under the command areas of the selected canals were kept under the scope of PA for examination of data related cropping pattern and productivity.

Figure 1.2: Schematic diagram of Saryu Nahar Pariyojana



(Source: Index map of SNP provided by CE, Saryu Pariyojana-1, Ayodhya)

The Trans-Ghaghara region receives water through Imamganj Branch Canal from SMC, Basti Branch Canal (including Bansi and Khalilabad Branch Canals) and Gonda Branch Canal (including Tarabganj, Mankapur, Itiyathok and Tikri Branch Canals). The Trans-Rapti region receives water through RMC originating from the Rapti Barrage and Campierganj Branch Canal originating from Banganga Barrage. Four pump canals, *vis*., Utraula, Dumariyaganj, Ayodhya and Gola were also constructed under the project to augment water supply into the canal network. Apart from these, drains were also to be constructed by 1989-90 in the command area of the project to control water logging.

1.7 Past Performance Audit of the project

A PA of SNP earlier appeared in the Audit Report (Civil) of the Comptroller and Auditor General of India for year ended 31 March 2008 – Government of Uttar Pradesh covering examination of records for the period from 2003-04 to 2007-08. In the previous PA, it was concluded that the project launched in 1977-78 and stated to complete by 1988-89, failed to achieve the intended objective as envisaged despite spending ₹ 2,440.72 crore during 1977-2008 due to improper planning leading to cost escalation (₹ 1,705.35 crore) and addition of new items (₹ 517.47 crore). The report highlighted that the delay in completion of the project was due to slow progress in acquisition of land in the absence of a firm policy and proper guidelines for land acquisition. The functional canal system had huge number of gaps and it was unable to carry water till tail end for irrigation. Apart from this, inadequate quality assurance in the execution of works and weak monitoring and internal controls were also highlighted in the report.

The action taken in respect of the audit observations included in the previous PA of the project was awaited (November 2024) [9] from the State Government. However, in the present PA, it was observed that most of the deficiencies pointed out in the previous PA continued which affected the completion of project and achievement of project outcomes, as discussed in the Report.

1.8 Structure of Report

This report has been structured in following four Chapters:

Chapter-I: Introduction: deals with conceptualisation of SNP, its coverage, Audit objective, criteria, scope and methodology.

Chapter-II: Project Planning: deals with preparation of Detailed Project Reports on the basis of surveys and investigations on geographical, environmental and technical parameters.`

Chapter-III: Project Implementation: deals with issues related to financial management, acquisition/purchase of land, contract management, quality assurance, technical supervision of works, internal control including documentation and evidencing.

Chapter-IV: Project Deliverables: deals with completion and commissioning of the project, creation and utilisation of CCA, command area development and maintenance of canal network; and human resource availability.

[9] Public Accounts Committee (PAC) Uttar Pradesh informed (11 November 2024) that the outstanding paragraphs related to Performance Audit of SNP included in the CAG's Audit Report for the year 2007-08 were pending for settlement and Irrigation and Water Resources Department had not submitted the information on the action taken to the PAC.

1.9 Acknowledgement

We acknowledge the co-operation extended by I&WRD and its field offices, Agriculture Department and Horticulture and Food Processing Department in conducting the PA of SNP.

Chapter –II

Project Planning

Chapter-II

Project Planning

This chapter deals with issues related to formulation of Saryu Nahar Pariyojana including surveys and investigations to assess the soundness of the project.

Audit objective: ***Whether project was conceptualised after assessing the feasibility and viability of the project and taking into account the need of the command area?***

Brief snapshot of the Chapter

- The planning of the project was inadequate and deficient as necessary surveys and investigations to determine the alignment of the canals, area to be served with the project, suitability of construction sites, were not carried out sufficiently.
- The alignment of Rapti Main Canal (RMC) was along the foothills of the Himalayan Range like a contour canal. However, adequate arrangements were not made to protect the left embankment of the canal from getting damaged due to the strong water current coming from the hills during monsoon. This had made the RMC vulnerable.

2.1 Introduction

Comprehensive and in-depth planning is the backbone of success of a canal irrigation project. According to the Guidelines of Central Water Commission (CWC), surveys and investigations are carried out on various parameters of geographical, environmental, technical aspects to assess the feasibility of the project and Detailed Project Report (DPR) is prepared for the implementation of project.

2.2 Project formulation

As per the guidelines of CWC, DPR should be prepared after assessing the feasibility and soundness of the project on the basis of detailed surveys and investigations and by considering various issues, such as international/inter-state aspects, hydrology, irrigation planning, environmental aspects, intended benefits, *etc.* Significant audit observations regarding project formulation have been discussed in the succeeding paragraphs:

2.2.1 Surveys and investigations

Guidelines of CWC envisages for detailed surveys on the aspects such as topography, hydrology, geology, seismicity, foundation of structures and availability of construction material[1], both qualitative and quantitative, within economical reach.

[1] Availability of quarry area and suitability of available material to be used for the works of the project.

As per DPR[2] of the project, surveys *vis.*, topographical, meteorological, hydrological, hydrogeological, ecological, seismological and soil were carried out for preparation of DPR. It was observed that data of rainfall for sixteen rain gauge stations lying within the command area of the project and availability of rain water for field application was analysed in meteorological surveys. Water discharge of Ghaghara, Saryu and Rapti river was analysed under hydrological surveys and ground water resources in the command area of the project was determined and analysed through hydrogeology studies. Besides, quality of soil on the construction sites was assessed through soil testing.

Details of topographical surveys and seismological surveys were neither appended with the DPR nor the CEs, SNP and the test checked divisions provided these to Audit, though requisitioned. However, Audit noticed various issues indicating inadequacies in the topographical surveys and designing of Reinforced Cement Concrete (RCC)/Cement Concrete (CC) structures taking into account proper Indian Standard (IS) codes for seismic risk zone as discussed in the succeeding paragraphs.

2.2.1.1 Topographical surveys

Topographical survey of the command area is the most significant aspect of planning for the canal project. Inputs obtained from the topographical surveys are used to determine the Culturable Command Area (CCA) to be covered under the project and Longitudinal Section (L-section) of canals. L-section of canal *inter alia* depicts natural surface level, full supply level and broad details of hydraulic data of outlets, regulators, bridges, drainage crossings, off taking channels, *etc.*

As discussed above, in absence of details of topographical surveys, the adequacy of the survey could not be examined in Audit. However, Audit noticed following shortcomings in L-section and determination of command area:

(i) Deficiencies in Longitudinal section of canals

There was major deviation in L-section of RMC during execution of work due to inadequate topographical survey

L-section of RMC was approved by CE, SNP in February 2013. However, RMC was not constructed as per the approved L-section, as it underwent multiple changes during the course of construction. As against 209 masonry structures approved (February 2013) in the L-section of RMC, 230 masonry structures were constructed during execution of the work due to inclusion of 45 new structures and exclusion of 24 approved structures[3]. These new masonry structures includes 11 structures[4] added even after the last revision of DPR (December 2017). As a result of delay in finalisation of design even after approval of L-Section, timelines given to the contractors to complete the works could not be adhered to, as discussed in detail in Chapter III.

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[2] Detailed Project Report revised in 2017.

[3] It included nine Head Regulators, two Escapes with Cross Regulators, three Canal Crossings and Aqueduct at Ban Ganga river, *etc*.

[4] Three inlets, one syphon, three pipe syphons, two head regulators, one drainage crossing and one village road bridge.

In reply, the State Government stated (November 2023) that the L-section of RMC was approved in the year 2013 based on surveys conducted at that time. The State Government also stated that in the past years, urbanisation took place, the number of villages increased and roads were built, due to which, the location and capacity of some proposed canals and other structures were changed. In respect of unavailability of details of topographical surveys, the State Government added that detailed topographical survey in respect of command area of SNP was carried out, records of which were with the respective divisions of the project. The State Government also provided (January 2024) samples of topographic and contour sheets of the project in support of its reply.

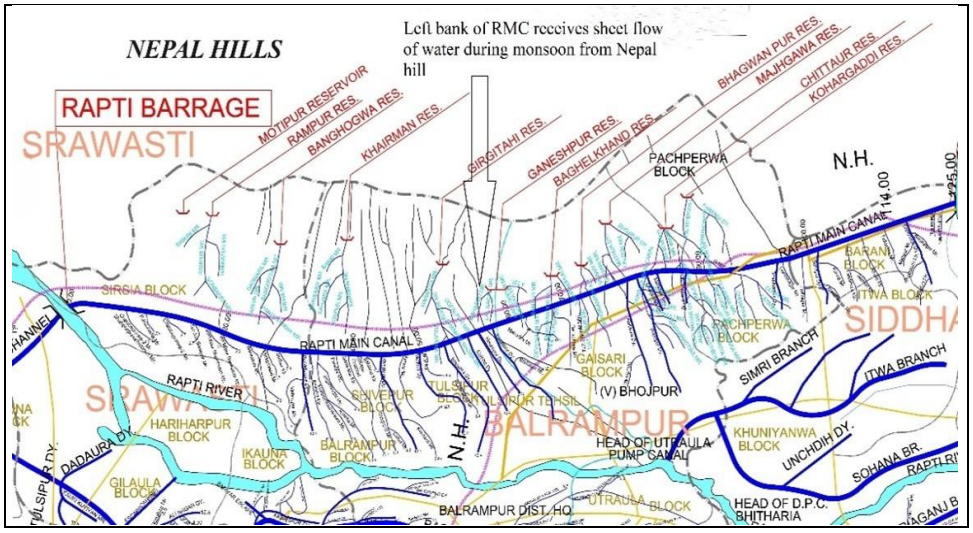
The reply of the State Government was not acceptable, as there were major deviations in L-section of RMC during the course of construction of canal, thereby, indicating that the inputs obtained/used from the topographical surveys were inadequate for determining canal structures (L-Section). Further, CEs as well as test checked divisions did not provide any document in respect of topographical surveys.

(ii) Inadequate technical measures for the safety of canals

Alignment of canal should be determined after assessing the geographical conditions of the area.

Audit observed that RMC was aligned to run across the natural drainage slope of the area and is almost parallel to the toe[5] of Himalayan range. A sketch of route of RMC is depicted in **Figure 2.1**.

Figure 2.1: Rapti Main Canal



(Source: DPR 2017)

Audit examination of records disclosed that the expert committee of CWC visited the RMC in July 2018 and noticed that RMC got damaged at many places due to flood water as well as by the locals to pass accumulated flood

[5] The junction of the face of a hill with the ground surface.

water into the canal as the canal has acted as obstruction to the natural flow of the streams coming from the nearby hills in the left side of RMC. Though several drainage crossings were made in the canal, the Cross Drainage (CD) system were not working effectively. The expert suggested measures which *inter alia* included channelisation of CD structures/drains by providing suitable toe drain along the left bank of RMC to protect the RMC from the sheet flow of water.

Audit examination of records disclosed that RMC was damaged in October 2022 from water flow of heavy rain. During joint physical verification (December 2022), Audit noticed severely damaged irrigation assets of RMC as depicted in the following photographs:

	
Photograph-2.1: Damaged Portion of RMC at Km 20.300 due to sheet flow of water from Nepal hills	**Photograph-2.2: Damaged Portion of RMC at Km 0.200-0.350 due to sheet flow of water from Nepal hills**

The above mentioned situations indicated that the left bank of RMC was not protected adequately from the flow of water, despite recommendations of CWC.

In reply, the State Government stated (November 2023) that all the main canals under the project were mainly conceived and constructed as contour canals. Contour canals are type of canals which are constructed depending on geographical condition and it is not possible to make technical changes in it. In respect of not providing safety to the left bank of RMC, the Government replied that on the basis of the suggestions of the Technical Experts Committee of CWC in July 2018, earth work was carried out to raise the embankment of Saryu Link Channel and Saryu Main Canal. Ditch drains in about 46.450 km length were constructed and the same was in progress at some other important places along RMC for providing proper drainage of water.

The fact remains that though the L-section of RMC was approved in 2013, the issue of receiving sheet flow of water from the nearby hills damaging the left bank of RMC was brought to the notice of the Department by CWC in July 2018. If the geographical conditions had been studied extensively for the construction of RMC by the Department, necessary provisions could have been made in L-section to protect the left embankment of RMC from the water flow coming from the hills.

(iii) Incorrect determination of CCA

Determination of CCA to be commanded by the canal project is a significant aspect of planning for a canal project. After deciding the head discharge of canal, the area to be irrigated by canal system is worked out by preparing land use maps and considering other factors, *vis.* area already under cultivation, soil types, habitations, roads, drainages, and contours of the area. On the basis of size of command area, the quantum of benefits from the project is determined.

A CCA of 12 lakh hectare area in the nine eastern districts of Uttar Pradesh was conceived for the project as per DPR of 1982. The Department revisited the CCA at the time of cost revision of the project in 2017 and CCA was reduced to 11.29 lakh hectare citing urbanisation during the period of 34 years and other factors affecting the quantum of CCA.

Proposed CCA of 11.29 lakh hectare in SNP was inflated as compared to actual CCA of operational canals

Audit examination of records, however, revealed that the quantum of re-determined CCA was inflated as compared to the actual CCA. Audit compared the combined list of 894 canals of the project maintained by CEs indicating proposed CCA of 11.29 lakh hectare *vis-a-vis* CCA actually created as per canal lists available in the test checked divisions. As per records of the three out of five test checked divisions [6], CCA of 145 operational canals was found to be 1.25 lakh hectare as against proposed CCA of 2.36 lakh hectare for these 145 canals in the combined list maintained by CEs. Thus, the actual CCA created in respect of these 145 canals was only 53 *per cent* of the proposed CCA for these canals. This indicated that the proposed CCA of 11.29 lakh hectare as determined in the DPR was inflated.

In reply, the State Government provided (November 2023) the details of CCA in respect of 145 canals adding to 1.25 lakh hectare but did not furnish comment on the audit observation of showing more CCA under the coverage of project than the actual availability of CCA. The inflated command area of the project was indicative of inadequate topographical surveys.

2.2.1.2 Hydrological surveys

The upstream and downstream water availability at Ghaghara river and Saryu and Rapti barrages was analysed in the revised DPR 2017 of SNP after collecting data for the period from 1975 to 2016. The hydrological studies concluded that 76.20 to 359.42 cumec water during Kharif season (Irrigation potential: 9.24 lakh hectare) and 14.5 to 178.03 cumec water during Rabi season (Irrigation potential; 4.80 lakh hectare) was required for SNP. Month-wise details of requirement and availability of water for SNP as detailed in hydrological study were as given in **Table 2.1.**

[6] Out of 17 test checked divisions, five divisions were involved in the operation of canals created under Phase I and II.

Table 2.1: Requirement and availability of water for SNP

(in cumec)

Month	Assessed requirement of water	Assessed average availability of water	Assessed 75 *per cent* average availability of water[7]	Assessed shortage at average water availability	Assessed shortage at 75 *per cent* average water availability
January	173.98	102.26	50.48	71.72 (41)	123.50 (71)
February	178.03	74.76	32.40	103.27 (58)	145.63 (82)
March	14.50	83.23	32.45	Nil	Nil
April	0	248.60	169.33	Nil	Nil
May	76.20	327.65	281.96	Nil	Nil
June	359.42	360	360	Nil	Nil
July	162.04	360	360	Nil	Nil
August	208.99	360	360	Nil	Nil
September	334.38	360	360	Nil	Nil
October	273.47	360	360	Nil	Nil
November	149.13	342.08	280.79	Nil	Nil
December	146.25	137.03	77.52	9.22(6)	68.73 (47)

(Source: DPR 2017 of SNP)

In view of shortage of water during Rabi crops in December, January and February, the DPR 2017 of SNP proposed that Department would have to consider less water consuming crops and improved method of irrigation, such as sprinkler and drip alongwith implementation of conjunctive use of surface water and ground water after formation of water user association with participatory approach.

The State Government stated (November 2023) that Rabi crops are mainly dependent upon the winter rain and due to late sowing/cutting of Kharif crops, only one watering is required for the Rabi crops during December and January. The State Government added that adequate water was available for the Rabi crops during 2022-24. However, audit noticed inadequate supply of water in Saryu Main Canal during Rabi season 2022-23[8] as detailed in **Paragraph 4.5.1.1**. Further, shortfall in achievement under Command Area Development and Water Management Programme (*Har Khet Ko Pani*) and Per Drop More Crop (PDMC) components under Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) for promoting efficient water conveyance and for development of micro-irrigation infrastructure for facilitating use of devices like underground piping system, *etc*., for sprinklers, drips, *etc*. are discussed under **Paragraphs 4.7** and **4.7.1**.

2.2.1.3 Seismology studies

Guidelines of CWC envisaged for seismic study and for determination of site specific design parameters for creation of structures in the seismic risk zones. Bureau of Indian Standard (BIS) prescribes codes in respect of reinforced concrete structures taking into account the accepted level of seismic risk, building typologies, and materials and methods used in construction. BIS in this respect prescribed codes *vis*. IS Code 1893-2002 (Criteria for earthquake resistant design of structures) and 13920-1993 (Ductile detailing of reinforced concrete structures subjected to seismic

[7] 75 *per cent* average availability of water is the dependable flow using runoff series meaning by 75 *per cent* of time water shall be available.

[8] State Government had provided data on water release only for the Kharif season in 2023-24.

forces) for designing the Reinforced Cement Concrete (RCC)/Cement Concrete (CC) structures. Therefore, it was imperative for the Department to prepare drawings and designs of the structures considering the risk of earthquake and IS codes.

As per DPR of 2017, out of nine districts covered in the project, seven districts are earthquake affected districts, *vis*., Shravasti, Balrampur, Siddharthnagar, Maharajganj and a part of Bahraich, Basti and Gonda falls under high damage risk zone IV whereas some part of Bahraich, Gonda and Basti falls under moderate risk zone III. The RMC and its distribution system is lying within the territory of districts Shravasti, Balrampur, Siddharthnagar.

Audit examination of records revealed that in the terms of the six contracts related to the construction of RMC and its distribution system, it was mentioned that all works shall be carried out in accordance with the detailed specifications described in the contracts and in case specifications of any work are not given, the same shall be carried out in accordance with relevant Indian Standard (I.S.)/ Indian Roads Congress (I.R.C.) specifications. Qualifying the above mentioned terms in respect of technical specifications of the structures, it was also specified that the structures shall be built to the lines/grades and dimensions shown on the construction design as per requirements of IS 456:2000 (Plain and reinforced concrete).

Audit further test checked drawings of 270 structures out of 874 structures created in RMC and its distribution system and got confirmed that 98 drawings (36 *per cent*) were prepared by using the provisions of IS code 456:2000 and in the remaining 172 drawings, no mention was made regarding use of IS code or any other parameters for providing protection against earthquake hazards. Thus, IS Codes 1893-2002 and 13920-1993 prescribed for earthquake resistant design of structures and for ductile detailing of reinforced concrete structures subjected to seismic forces were not considered while preparing drawings of any of the 270 CC/RCC structures in RMC and its distribution system.

In reply, the State Government stated (January 2024) that provisions for earthquake force and requirements governing reinforcement and detailing earthquake resistant have been given in the clause 19.1, 19.4, 26.1 and 26.1.2 of IS code 456:2000. The State Government further stated that in the annexure B 2.3 of IS code 456:2000, provision for increase in permissible stress due to earthquake has also been made and have specifically been mentioned in all the drawings of RMC.

The reply of the State Government was not acceptable because the scope of IS code 456 says that this standard deals with the general structural use of plain and reinforced concrete. It further elaborates that special requirements of structures such as hydraulic structures and earthquake resistant structures covered in respective standards have not been covered in IS code 456 and these standards shall be used in conjunction with IS code 456. Therefore, IS codes 1893-2002 and 13920-1993 should have been applied in the designing of structures such as head regulators, cross regulators, canal road bridges,

drainage crossings, canal crossings, syphons, aqueducts, falls and super passages.

2.2.2 Time overrun and consequent cost overrun

Delay in acquisition of land, tardy allocation of funds, changes in the scope of works, delayed approval of designs and drawings of the canal structures led to time overrun and consequent cost overrun in the project

As discussed in Paragraph 1.1, the project cost was revised from ₹ 299.20 crore in 1992 (price level 1978) to ₹ 696 crore in 1985 (price level 1985), ₹ 1,256 crore in 1992 (price level 1992), ₹ 2,522.02 crore in 2006 (price level 2004-05), ₹ 7,270.32 crore in 2010 (price level 2008) and ₹ 9,802.68 crore in 2017 (price level 2016). The cost revisions in the project were mainly due to time overrun in completing the project which led to increase in the cost of construction material, labour and land acquisition. Besides, the scope of work was not firmed up in the DPR due to which additional works were added at the time of subsequent revisions of the DPR, which shows inadequate planning for the project.

Audit examination of DPR of project revised in 2017 disclosed that changes in the quantities of works were mainly in respect of construction of RMC as detailed in **Table 2.2**.

Table 2.2: Variation in the quantities in RMC during 2010-16

(₹ in crore)

Item of work	Unit	DPR 2010		DPR 2017		Increase (+)/ Decrease in Quantity
		Quantity	Cost	Quantity	Cost	
(1)	(2)	(3)	(4)	(5)	(6)	(7) = (5)-(3)
A- Preliminary	Lumpsum	Lumpsum	3.29	Lumpsum	17.04	NA
B- Land (permanent acquisition)	Hectare	1,600.00	62.63	1,421.71	255.69	(-)178.29
C- Work (inlets)	Number	Nil	Nil	30	14.69	(+) 30
D- Regulators	Number	32	9.10	39	16.49	(+)7
E- Fall	Number	10	6.86	12	18.51	(+) 2
F- Cross drain	Number	42	197.70	70	1,522.27	(+) 28
G- Bridges	Number	57	42.90	103	295.00	(+) 46
H- Escape	Number	06	10.50	03	36.37	(-) 3
K- Buildings	Number	775	20.26	150	18.29	(-) 625
L- Earthwork	Lakh cum	276.46	254.24	173.19	218.13	(-)103.27
M- Plantation	Km	125	1.12	Not mentioned	12.76	NA
O- Miscellaneous	Lumpsum	Lumpsum	1.59	Lumpsum	33.09	NA
P- Maintenance	Lumpsum	Lumpsum	5.48	Lumpsum	8.64	NA
R- Communication	Km	250	8.73	61.05	6.84	(-)188.95
X- Environment & Ecology	Lumpsum	Lumpsum	0.60	Lumpsum	0.99	NA

(Source: DPRs of SNP) (NA – Not applicable)

As detailed in Table 2.2, there were significant increase in masonry structures, *vis.* inlets (30 number), regulators (seven number), fall (two number), cross drainage (28 number) and bridges (46 numbers) in respect of construction of RMC and its distribution system in DPR 2017 as compared to 2010. Besides, there was decrease in provisions for earthwork, buildings and communication. No justification for these variations was found in records.

Audit noticed that the work of Phase III of the SNP, which included construction of Rapti main canal and its distribution system, was stopped midway by the Expenditure Finance Committee (EFC) in February 1999 with the direction to prepare DPR based on actual survey of Rapti canal system. Subsequently, EFC approved (March 2010) the construction work of Rapti canal system in the revised DPR 2010 which found construction of Rapti canal system feasible. However, major changes in DPR 2017 in respect of the work items determined in March 2010 indicates that the respective components of work were not determined on the basis of adequate surveys.

As discussed in Chapter III, the time overrun in the project was mainly due to delay in acquisition/purchase of land, tardy allocation of funds as against the requirement of funds assessed in annual work plans, changes in the scope of works due to not being able to estimate the quantum of works accurately, delayed approval of designs and drawings of the canals and structures by the departmental officers and slow progress of construction works by the contractors. These delays and revision in scope of the work led to cost overrun in the project.

In reply, the State Government stated (November 2023) that the project was originally started in 1982 at a cost of ₹ 299.20 crore and subsequently its cost was revised in the years 2002 (₹ 2,765.16 crore), 2010 (₹ 7,270.32 crore) and 2017 (₹ 9,802.68 crore). The State Government further stated that construction works were completed based on detailed survey according to conditions of the work site. In order to complete the works under the project, the project cost was revised from time to time due to the changes in circle rate of land and Schedule of Rates.

The fact remains that the survey carried out for preparing DPR 2010 in order to determine the scope of work of RMC proved to be inadequate and there were significant changes in the number of structures required to complete the project. This also led to delays in finalisation of designs and drawings of the canals and structures which further delayed the project. Besides, the delays in completion of project also led to increase in acquisition cost of land and price escalations.

To sum up, the project suffered due to inadequate surveys and investigations owing to which even the significant aspects of the project such as determination of command area to be benefited, longitudinal section of the canals to cover the proposed area, scope of project works including quantum of works' items could not be firmed even up to last revision of the DPR in 2017. This led to significant time overrun in the project and consequent cost overrun. The project could be commissioned only after about 40 years from the date of its commencement (1982).

Recommendation 1: *The State Government should investigate the reasons for incorrect assessment of the requirements of the project leading to significant variations in the scope of works during execution and consequential delays in the completion of project.*

Recommendation 2: *There is an urgent need of formulating effective mechanism for stringent monitoring of irrigation projects for timely completion.*

Recommendation 3: *The State Government should carry out comprehensive field surveys to determine the actual area covered with the Saryu Nahar Pariyojana for correct assessment of required development works and for effective irrigation planning.*

Chapter –III

Project Implementation

Chapter-III

Project Implementation

This chapter deals with the financial management and execution of works of the Saryu Nahar Pariyojana to get the envisaged benefits.

Audit Objectives: ***Whether funds were adequate, available timely and utilised properly; project was executed in an economic, efficient and effective manner; and was monitored effectively?***

Brief snapshot of the Chapter:

- Saryu Nahar Pariyojana received funds from the State Government, Government of India under Accelerated Irrigation Benefit Programme, National Project, Pradhan Mantri Krishi Sinchayee Yojana, and also from National Bank for Agriculture and Rural Development for the implementation of project during 1977-2022. Against the allotment of ₹ 10,346.70 crore from all sources during 1977-78 to 2021-22, ₹ 10,003.11 crore was spent as of March 2022.
- Funds for the implementation of the project was not made timely and adequately due to which requirement of funds as per the Annual Action Plans during 2012-22 (except 2015-16 and 2020-21) was not met, remaining short by 17 to 85 *per cent.*
- Due to not purchasing of land in time, the work of the project got delayed and with the passage of time, the cost of the land also increased, which put a burden on the Government exchequer.
- The contract for construction of Rapti Main Canal and its distribution system was awarded to the contractors without approving design and drawing of the canals. Significant changes in the works' scope of the contracts had taken place subsequently and the works were completed late.
- The estimates for the works of Rapti Main Canal and its distribution system were prepared at rates higher than the norms, as a result of which the estimates got inflated.
- The quality of the construction works was not assured as their quality checking was not done as per prescribed norms and criteria.
- Internal control was weak.

3.1 Introduction

Implementation of canal project primarily requires adequate and timely availability of funds, timely acquisition and purchase of land, preparation of detailed estimates for works and award of contracts for execution of works.

Audit observations related to financial management, procurement of land and execution of works have been discussed in the succeeding paragraphs:

3.2 Financial Management

3.2.1 Allotment and expenditure

Saryu Nahar Pariyojana (SNP) received ₹ 10,346.70 crore during 1977-78[1] to 2021-22 against which ₹ 10,003.11 crore was spent as of March 2022. This included expenditure of ₹ 4,817.68 crore during 2017-22, *i.e.*, the period covered under this Performance Audit (PA). Year-wise details are given in **Table 3.1**.

Table 3.1: Allotment and Expenditure thereagainst during 1977-2022

(₹ in crore)

Year	Allotment	Expenditure	Savings/ Surrender
(1)	(2)	(3)	(4)
1977-1978 to 2016-17	5,285.93	5,185.43	100.50
2017-2018	994.83	767.81	227.02
2018-2019	1,060.00	1,060.00	0.00
2019-2020	1,510.25	1,494.18	16.07
2020-2021	1,055.25	1,055.25	0.00
2021-2022	440.44	440.44	0.00
Total	**10,346.70**	**10,003.11**	**343.59**

(Source: CE, Saryu Pariyojana-1, Ayodhya)

As against estimated project cost of ₹ 9,802.68 crore, the allotment of ₹ 10,346.70 crore on SNP included central loan assistance/grant under Accelerated Irrigation Benefits Programme (AIBP - ₹ 828.62 crore during 1996-2012), National Project/Pradhan Mantri Krishi Sinchayee Yojana (PMKSY - ₹ 2,243.18 crore during 2012-22) and loan from National Bank for Agriculture and Rural Development[2] (NABARD - ₹ 238.39 crore during 1996 to 2005). Year-wise details of funding from different sources are given in ***Appendix-3.1***.

The Irrigation and Water Resources Department (I&WRD) proposed another revision of the project cost to ₹ 10,198.04 crore to the Expenditure Finance Committee (EFC) of the State Government for meeting outstanding payments. In April 2024, the EFC directed that the proposal be submitted to the cabinet for approval. However, as of October 2024, the process of obtaining cabinet approval was in progress. Thus, the financial closure of the project was yet to be done.

3.2.2 Tardy allocation of funds

SNP was included under the National Project (NP) during 2012-13 to complete the balance work of the project by March 2016. The annual requirement of funds assessed in the work programme prepared by Chief Engineers (CEs) and allotment to the project by the State Government during 2012-13 to 2021-22 was as detailed in **Table 3.2** and **Chart 3.1.**

[1] Including funds received during 1977-82 for erstwhile Left Bank Ghaghara Canal project (subsequently renamed as Saryu Nahar Pariyojana in March 1982).

[2] State Government did not make available (November 2024) the term and condition of loan received from NABARD.

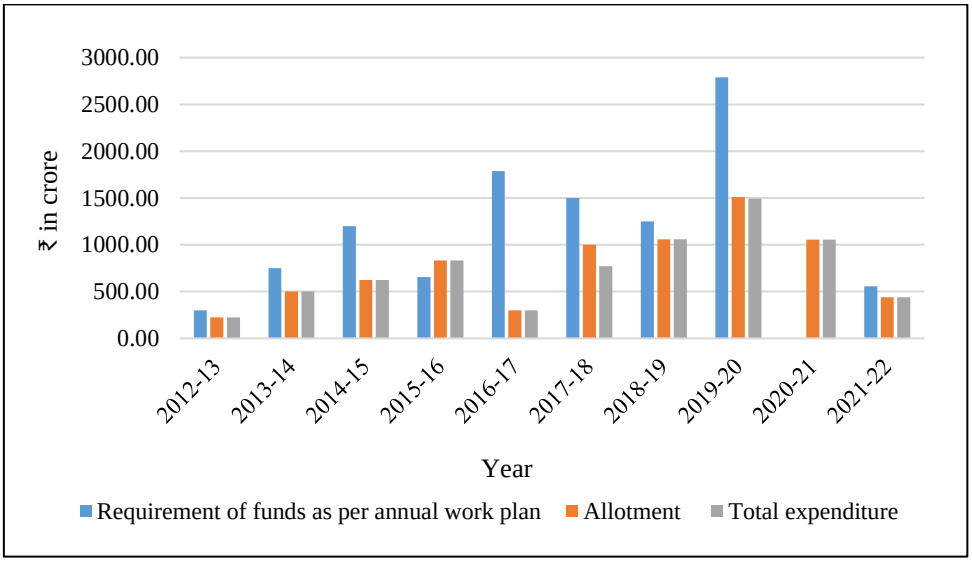
Table 3.2: Allotment of funds *vis-a-vis* annual work programme

(₹ in crore)

Year	Requirement of funds as per annual work programme	Allotment against column 2 (*per cent* to col. 2)	Total expenditure (*per cent* to col 3)
(1)	(2)	(3)	(4)
2012-13	300.00	224.47 (75)	224.47 (100)
2013-14	750.00	499.70 (67)	499.70 (100)
2014-15	1,200.00	623.00 (52)	623.00 (100)
2015-16	654.00	834.00 (128)	834.00 (100)
2016-17	1,787.63	300.00 (17)	300.00 (100)
2017-18	1,500.00	994.83 (66)	767.81 (77)
2018-19	1,251.87	1,060.00 (85)	1,060.00 (100)
2019-20	2,789.55	1,510.25 (54)	1,494.18 (99)
2020-21	Not provided to Audit	1,055.25	1,055.25 (100)
2021-22	555.00	440.44 (79)	440.44 (100)
Total		**7,541.94**	**7,298.85**

(Source: Information provided by CE, Saryu Pariyojana-I, Ayodhya and Utilisation Certificates submitted by the State Government)

Chart 3.1: Allotment of funds *vis-a-vis* annual work programme



Fund was not provided for the project as per requirement assessed in the Annual Work Plan

It can be observed from **Table 3.2** that availability of funds was limited to 17 to 85 *per cent* of the funds required as per the annual work programmes prepared by CEs during 2012-22 (except in the years 2015-16 and 2020-21).

Audit further noticed that as per Memorandum of Understanding (MoU) signed (December 2012) between the Ministry of Water Resources, GoI and Government of Uttar Pradesh under the National Project programme, GoI was to release ₹ 2,710.38 crore (90 *per cent* of the balance cost of work, *i.e.*, ₹ 3,011.53 crore) to the State Government for creation of 4.73 lakh hectare CCA under the SNP upto March 2016. Central Assistance (CA) was to be provided on year-to-year basis on production of utilisation certificates of 80 *per cent* amount released in previous instalment. GoI further directed the State Government in the release orders of CA to put in place a monitoring system to achieve the scheduled milestones and envisaged outcomes of the project.

The GoI released CA of ₹ 659.58 crore during 2012-13 to 2014-15. Thereafter, the project was taken up under PMKSY with revised funding share of 60:40 between GoI and the State Government. CA of ₹ 1,583.60 crore was released for the project during 2015-16 to 2021-22 against the assessed requirement of balance CA as on April 2015 as ₹ 1,728.58 crore.

The annual physical targets were also not achieved as per projected targets and shortfall in this respect ranged between 14 *per cent*[3] and 100 *per cent* during 2012-13 and 2019-20 as detailed in ***Appendix 3.2.*** As per Detailed Project Report (DPR) 2017, the progress of work as per target could not be achieved due to less release of fund for the project.

In reply, the State Government stated (January 2024) that the State Government had demanded the necessary funds from GoI from time to time for carrying out works under the project. The State Government further stated that central assistance could not be received during 2012-13 to 2014-15 as per budget provisions due to which works could not be progressed as per timelines. The State Government further added that the progress of works also suffered due to delay in land acquisition in view of disputes.

The fact remains that the allocation of funds was not made for the project according to the projected requirement. Further, as observed from Utilisation Certificate for 2015-16 in respect of CA received under National Project programme, the State Government created CCA of only 1.27 lakh hectare up to March 2016 against the target of 4.73 lakh hectare envisaged in the MoU. Moreover, no reason for short release of central assistance was in records of CE, SNP. No reference to milestones or not reaching them thereto as reason for short receipt of funds was made in the reply of the department.

3.2.2.1 Delay in release of fund for completion of gaps in AIBP portion

The project was included under AIBP in the year 1996-97 to create Irrigation Potential (IP) of 9.31 lakh hectare initially till 2003-04. However, works of AIBP portion (phase I and II works) could not be completed even up to March 2010. As per the DPR revised in March 2010, works costing ₹ 1,575.33 crore was yet to be completed under phase I and II. These balance works included construction of canals in gaps, measuring about 540.03 Km, which were affecting the utilisation of about 3.10 lakh hectare (blocked potential) out of 9.31 lakh hectare created IP.

In 2012-13, when the balance works of the project were taken up under NP, the balance works of Phases I and II (AIBP portion) were not included in the scope of works of NP. Thus, the State Government was required to provide funds to complete the balance work of these Phases. However, as per DPR 2017, the State Government did not provide funds to complete these gaps in the canals constructed under Phase I and Phase II. The State

[3] Shortfall upto ten *per cent* excluded.

Government, however provided ₹ 1,279.16 crore during 2016-22 for completing the gaps in the canals of Phase I and II. Thus, the construction works to complete the works of Phase I and Phase II were delayed as the State Government did not provide funds to complete the gaps in canals during 2012-16.

In reply, the State Government stated (November 2023) that the funds were allocated as per the then existing policies and available resources of the Central Government and the State Government. The State Government further stated that the progress of works also suffered due to delay in land acquisition in view of disputes.

Fact remains that required funds could not be provided to the project during 2012-16 for completion of gap works of Phase I and Phase II.

3.3 Undischarged liabilities

Audit observed that in 14 test checked divisions, financial liabilities amounting to ₹ 108.46 crore were created and lying unadjusted as of March 2022 for want of funds (***Appendix 3.3***). Creation of liabilities mainly included payment to the contractors for work done and measured.

Audit further observed that 14 test checked divisions had a liability of ₹ 29.51 crore (***Appendix 3.4***) towards land owners wherein land had been utilised for construction of canals but registry of land was yet to be made to the State Government.

The State Government did not furnish reason for creation of liabilities amounting to ₹ 108.46 crore in 14 test checked divisions. In respect of pending payment amounting of ₹ 29.51 crore to land owners in 14 test checked divisions, the State Government stated (November 2023) that the canals over the land were constructed with the consent of farmers but registry of the land could not be done due to disputes among farmers, inheritance issues, unavailability of landowners, *etc*.

Execution of works

3.4 Land acquisition

3.4.1 Purchase of land *vis-a-vis* requirement

According to DPR 2017 of the project, the project required 31,290.35 hectare land against which 23,128.40 hectare land was acquired/purchased till 2016. The Department, thereafter, reassessed (2017) the quantum of land required to complete the project and decided to purchase only 1,868.10 hectare land beyond the existing purchase of 23,128.40 hectare land.

As per information provided by CEs, SNP, 1487.36 hectare land was purchased upto March 2022 against the requirement of land reassessed in 2017. However, Audit noticed that 18 canals involving CCA of 0.24 lakh hectare proposed to be constructed under Rapti Main Canal (RMC), Campierganj Branch Canal (CBC) and their distribution system were not constructed as of March 2022 as detailed in Paragraph 4.3.2.

In reply, the State Government stated (November 2023) that land acquisition was done continuously, and the project was commissioned. The State Government further stated that the canals pointed out in the audit observation are covered under pressure irrigation and the work of forming the project for creation of pressure irrigation system through underground pipeline was in progress.

The reply was not tenable, because Department could not purchase even the reassessed requirement of land of 24,996.50 hectare leaving a shortfall of 380.74 hectare upto March 2022 and the CCA of canals which were intended to be covered under this project are now proposed to be covered under another project.

3.4.1.1 Slow pace of acquisition/purchase of land

Purchase/ acquisition of land was slow which affected the pace of canal work

Land for public purpose is acquired under the provisions of the Land Acquisition Act, 1894 (LAA). The Government of India (GoI) enacted the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (2013 Act) which came into force from January 2014. The process of acquisition of land under LAA involves publication of notifications in the Gazette of the State Government and the collector of the concerned district awards the compensation to the land owners in lieu of purchase/acquisition of land.

Uttar Pradesh Land Acquisition (Determination of Compensation and Declaration of Award) Rules, 1997 (*Karar Niyamawali)* also came in force with effect from September 1997. According to *Karar Niyamawali*, 1997, the body or department for which the land is being acquired may, at any stage of the proceedings, fix the terms, conditions and rates of the land under acquisition with the owners of the land. Thereafter, in June 2011, the State Government implemented a new policy of land acquisition, in which, along with the fixed amount of compensation in lieu of sale of land, provision for payment of a lump sum amount on account of rehabilitation was made for the landowners.

Audit observed slow pace of acquisition/purchase of land which adversely affected the pace of works of canal constructions. Audit analysed the records related to purchase of land during 2012-13 to 2021-22[4] and noticed that out of total purchase of 24,615.76 hectare land for the project, 2,899.24 hectare land was purchased during 2012-22. The yearly targets set by the Department for purchase of land during 2012-22 was not met every year except during 2018-19 and 2019-20. Year-wise details of purchase of land *vis-a-vis* targets during 2012-13 to 2021-22 are given in **Table 3.3**.

[4] During this period, land was purchased for the balance works of Phase I and II and construction of canals under Phase III.

Table 3.3: Year-wise details of purchase of land

(Area in hectare)

Year	Target for the year	Land acquired/ purchased during the year	Shortfall (-) / Excess (+) *vis-a-vis* target	Percentage shortfall *vis-a-vis* annual targets
(1)	**(2)**	**(3)**	**(4) = (2-3)**	**(5)**
2012-13	500.30	110.03	(-) 390.27	(-) 78
2013-14	1,800.00	540.25	(-) 1,259.75	(-) 70
2014-15	1,550.00	412.45	(-) 1,137.55	(-) 73
2015-16	500.00	229.76	(-) 270.24	(-) 54
2016-17	696.44	116.39	(-) 580.05	(-) 83
2017-18	550.00	267.93	(-) 282.07	(-) 51
2018-19	489.70	584.62	(+) 94.92	(+) 19
2019-20	401.69	507.86	(+) 106.17	(+) 26
2020-21	132.02	103.44	(-) 28.58	(-) 22
2021-22	41.34	23.51	(-) 17.83	(-) 43
Total		**2,896.24**		

(Source: Information provided by CEs, SNP)

It can be observed from **Table 3.3** that land could not be purchased according to the annual targets during 2012-22 (except during 2018-20). Slow pace of purchase of land not only disrupted the project completion schedules but also the cost of the project increased due to increase in the rates of land manifold with the passage of time.

In reply, the State Government stated (November 2023) that for smooth acquisition/purchase of land to develop infrastructure speedily, rules and provisions had to be changed time to time. The State Government also stated that due to personal disputes among the farmers in respect of distribution of land, delay takes place even after purchasing the land through mutual negotiations with the farmers. The Government further stated that the process adopted by the Department to purchase the land through the special land acquisition officers and through mutual negotiation with the farmers proved fruitful.

The fact remains that the SNP was started in 1982 after reformulation of its scope, but Department continued purchasing the land for project till 2022. During the period, the circle rate of land kept increasing as a result of which expenditure on the procurement of land also increased manifold. Audit in this respect analysed the records of purchase of land during 1999-2022 and observed sharp increase in the cost of land as discussed in succeeding paragraph.

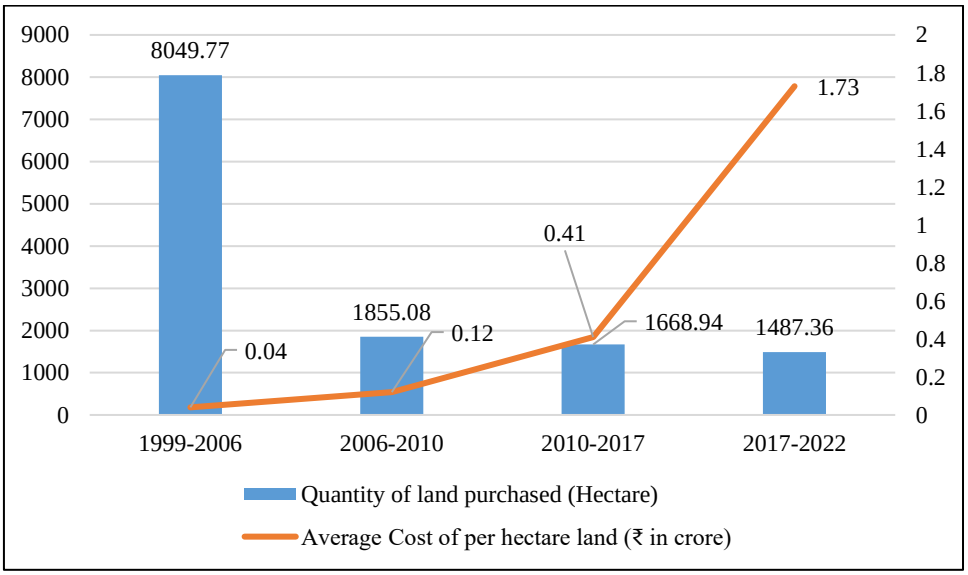
3.4.1.2 Avoidable financial burden on purchase of land

The average per hectare cost of land was ₹ four lakh during 1999 to 2006[5] which had increased to ₹ 1.73 crore per hectare during 2017 to 2022. Year-wise hike in land cost during 1999-2022 has been detailed in

[5] During 1999-2022, the project cost was revised in year 1999, 2006, 2010 and 2017, therefore, the cost of land has been examined in respect of purchases made during 1999-2006, 2006-10, 2010-17 and 2017-22.

Appendix 3.5 and a summarised graphical representation is given in the **Chart 3.2.**

Chart 3.2: Increase in average cost of land



During 2017-18 to 2021-22, the increase in the cost of land was significant (increased from ₹ 1.79 crore per hectare to ₹ 2.30 crore per hectare) mainly due to payment of land compensation to land owners at the four times to the circle rate, as was mandated in the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, promulgated with effect from 2015-16.

The State Government stated (November 2023) that frequent increase in circle rates led to excess expenditure on purchase of land.

The fact remains that delays in implementation of the project led to avoidable financial burden on purchase of land.

3.4.1.3 Non-transfer of ownership of land

Transfer of ownership of land in the name of the Department in the land records after acquisition/purchase of land from the land owners was required.

Overall status of transfer of ownership in respect of land purchased for the project was not available in the records. Audit however observed that nine[6] out of 17 selected divisions purchased 1,228.36 hectare land during 2012-13 to 2021-22. In the nine test checked divisions, ownership of land was transferred only in respect of 826.20 hectare (67 *per cent*) of land as of March 2022 (***Appendix 3.6***).

In reply, the State Government stated (November 2023) that mutation of most of the land purchased for SNP had been completed. The State Government added that in respect of remaining land purchased by the

[6] Remaining eight divisions did not furnish information in respect of purchase and mutation of land.

Department, the concerned divisions had taken action for the mutation of the ownership by making personal contacts with the officers of the Revenue Department and through the District Consolidation Officers in respect of land falling under *chakbandi*. The State Government further stated that the process of mutation is monitored at the level of the State Government.

The fact remains that mutation of about 33 *per cent* land purchased by the Department during 2012-22 was not completed in the name of the State Government as of March 2022 in the nine test checked divisions. As a result, misuse of land title could not be ruled out by the land owners.

3.5 Contract Management

During the period covered in the PA (2017-22), works under 293 contracts (Agreed cost: ₹ 2,946.99 crore) and 1,557 contracts (₹ 142.83 crore) were executed by eight Superintendent Engineers (SEs) and 17 selected divisions respectively[7] (***Appendix 3.7)***. This included the six major contracts entered into during March-April 2013 for construction of RMC and its distribution system between Km. 0.000 to 125.682 (***Appendix 3.8)***.

Apart from general scrutiny of records of all ongoing contracts, 15 *per cent* of contract bonds of SEs and 10 *per cent* contract bonds of Executive Engineers (EEs) were selected[8] for detailed examination of records. Accordingly, 77 contracts (agreed cost: ₹ 2,366.06 crore) and 184 contracts (agreed cost: ₹ 33.40 crore) of SEs and EEs respectively **(*Appendix 3.9*)** were selected for detailed examination of records in the PA.

3.5.1 Delayed accord of technical sanctions

As per the State Government order (August 2011), tenders for the execution of the contracts should be issued after obtaining the Administrative/ Technical/ Financial approvals by the competent authority adhering to the procedures prescribed in the financial rules.

Notice for Inviting Tenders were issued before Technical Sanctions of the respective works

Audit however observed that Notice for Inviting Tenders (NITs) in respect of 25 contracts (Cost: ₹ 804.92 crore) out of 48 test checked contracts[9], executed by the SEs, were issued before accord of Technical Sanction (TS) by CEs and SEs. It was further observed that TS for these works were accorded after lapse of upto 395 days from the date of these NITs ***(Appendix 3.10)***.

Similarly, out of 76 test checked contracts[10] executed by EEs, in 11 contracts, (Cost: ₹ 1.72 crore) NITs were issued before TS. TS on the detailed estimates of these 11 works were given after a lapse of periods

[7] Including the contracts which were though entered into before 2017-18 but work on these contracts continued during 2017-22.

[8] The selection of contract included contracts executed during 2017-22 and contracts executed before 2017 but works on these contracts continued during 2017-22.

[9] Out of 77 selected contracts of SEs, the details of TS and NIT of only 48 contracts were made available to Audit.

[10] Out of 184 selected contracts of EEs the details of TS and NIT of only 76 contracts were made available to Audit.

ranged up to 324 days from the date of NITs. Details of these cases have been given in ***(Appendix 3.11)***.

Further, the above mentioned 36 NITs included 15 those NITs in respect of which even the financial bids were opened without obtaining TS from the competent authorities (***Appendix 3.12***).

The Bill of Quantities (BoQs) included in tenders have to be based on TS, thus, issue of NITs before TS was against the tenets of transparency in the tendering for award of works.

In reply, the State Government stated (November 2023) that the administrative and financial approval of ₹ 9,802.68 crore was accorded for SNP by the State Government in December 2017. The State Government further stated that the administrative, financial and technical sanctions for all works under SNP were already received before commencement of works under the project in accordance with Para 318 of Financial Hand Book (FHB), Volume-VI which states that "For every work proposed to be carried out, a properly detailed estimate must be prepared for sanction by the competent authority. This sanction is known as Technical Sanction to the estimate and it must be obtained before the work is commenced".

The reply of the State Government was not acceptable, as the State Government had in its order (August 2011) clearly directed the I&WRD to issue NITs after obtaining the TS from the competent authority. This direction of the State Government had already taken into account the codal provisions under Para 318 of FHB. Further, the BoQs for tender cannot be reasonably determined without sanction of detailed estimates, *i.e.*, TS. TS guarantees that the proposals are structurally sound and estimates are reasonable and accurately computed based on adequate data. Thus, TS should be accorded before commencement of works and before tender documents are issued in case the work is executed through contractor.

3.5.2 Overestimation due to incorrect rate analysis

Estimated costs of earthwork and RCC/CC works were inflated due to application of unjustified rates

According to Para 523 of FHB, Volume-VI, the rates entered in estimates should generally agree with the Schedule of Rates (SoR). Audit noticed that the DPR of SNP included analysis of rates in respect of various items of works. Thus, it was imperative for the CEs, SNP to prepare analysis of rates for detailed estimates adhering to the norms provided in the DPR and by applying the rates given in SoR.

3.5.2.1 Earthworks in canals

The SoR of I&WRD in respect of earth works prescribes per cubic meter rates for various components, *vis.*, constructing channels manually or by tractor, lead and lift, compaction, dressing, *etc*. The SoR also provides hiring charges for hydraulic excavator.

Audit observed that in the detailed estimates approved (March 2013) for RMC and its distribution system, rates for digging of earth through manual

means or by tractor was adopted in the analysis of rates for earth works. The applicable SoRs of the respective Circles also provided approved rates for use of hydraulic excavators. Audit determined the cost of earth works in these canals applying the rates of digging of earth using hydraulic excavators (Poclain) and by providing the rates for other components included in earth work, *vis*., lead, lift, dressing, *etc*., same as were provided in the rate analysis of the approved detailed estimates. Comparison of per cubic meter rate for earth work by manual means and by hydraulic excavators disclosed that per cubic meter cost of earth work was cheaper in audit analysis by ₹ 6.65 to ₹ 29.17 per cubic meter. As a result, the cost of earth works in canal in the six contracts of construction of RMC and its distribution system was overestimated by ₹ 18.95 crore (***Appendix 3.13)***.

The use of hydraulic excavator in the construction of RMC at Laxminagar, Balrampur can be viewed from the photographs-3.1, provided by Rapti Canal Construction Division-2, Shohratgarh, Siddharthnagar.

Photograph-3.1: Digging of RMC at Laxminagar, Balrampur using hydraulic excavators (Poclain machines)

In reply, the State Government stated (November 2023) that the rate of earthwork was assessed by Audit without incorporating other technical issues. The State Government further stated that the rate analysis for earth work in the estimate involved excavation of earth, calculation of lead and lift in shifting of excavated earth on both banks of canal for formation of canal section, rates for construction of *daula, etc*. The State Government added in the reply that it was not appropriate to calculate the rate of earth work on the basis of earth excavation by Poclain machine only.

The reply was not acceptable as the rate analysis determined by Audit included excavation of earth by hydraulic excavators (Poclain machine) and all other components such as lead, lift, compaction, dressing, *etc*. as same as provided by the department in the rate analysis. Rates for construction of *daula* was not included in the rate analysis for earth work taken in approved detailed estimates. Pertinently, the Department carried out the rate analysis for restoration work of Saryu Link Channel and Saryu Main Canal during 2016-17 using earth excavators (Poclain) and, therefore, rate analysis for the works of RMC and distribution system through manual means and on different lines was not justified.

3.5.2.2 RCC/CC works in canals

The cumulative cost of Reinforced Cement Concrete (RCC)/Cement Concrete (CC) work included cost of material (stone grit, coarse sand and cement) and cost of laying of RCC/CC. Rate analysis of procurement of material included cost of material and transportation charges, from quarry to work site.

In the two out of six works[11] of construction of RMC and its distribution system, ₹ 151.20 per cum was provided in the rate analysis of RCC/CC works in the detailed estimates on account of re-handling of material/carriage ranging from one to three Km. Audit further observed that transportation charges for carrying material to work site and re-handling of material had already been provided in the rate analysis of procurement of material for RCC/CC works. Thus, inclusion of re-handling charges again in the estimates of laying RCC/CC works was unjustified and inflated the estimated cost of works by ₹ 4.71 crore, as detailed in **Table 3.4.**

Table 3.4: Re-handling charges in RCC/CC works

Construction of RMC and its distribution system	Executed quantity of RCC/ CC work upto March 2022 (cum)	Re-handling charge on RCC/CC works taken in estimate (per cum)	Amount for re-handling (col. 2*3) (₹ in lakh)
(1)	**(2)**	**(3)**	**(4)**
Km 80.000 to 114.00	1,92,165.88	151.20	290.55
Km 114.000 to 125.682	1,19,263.80	151.20	180.33
Total	**3,11,429.68**		**470.88 Say ₹ 4.71 crore**

(Source: Information provided by test checked divisions)

It is worth mentioning that in other four works of RMC and its distribution system, charge for re-handling of material was provided only once, at the time of bringing the material at work sites.

In reply, the State Government stated (November 2023) that re-handling charges were included in the estimates owing to constraint in carriage/transport of construction material at work sites which were situated at distant hilly locations and mostly approachable through un-metalled roads.

The State Government reply was not tenable as the carriage of material to worksite and re-handling was already provided in the cost of material used for RCC/CC work.

3.5.3 Approval of designs and drawings of the canals

According to Para 356 of the FHB, Volume-VI, before a work is given on contract, a contract document must be prepared which *inter alia* included a complete set of drawings showing the general dimensions of the proposed work. Besides, in the contract document of the six works of RMC and its distribution system, it was mentioned that the drawings of the proposed

[11] Construction of RMC and its distribution system between Km 80.000 to 114.000 and Km 114.000 to 125.682.

structures were to be made a part of agreements, thereby, the drawings of the structures were to be made available to the contractors at the time of award of contract.

According to the Irrigation Manual of Orders, Longitudinal sections (L-section) of the canals should have been approved by CE. In May 1990, the Engineer-in-Chief (E-in-C), I&WRD had delegated the powers of CE for sanctioning of the L-section to SE in respect of canals having discharge upto three cumec. In respect of the approval of drawings of the masonry structures also, E-in-C had delegated (May 1990) the powers of CE for approval of drawings of the masonry structures to SE (upto 15 cumec canal discharge) and to EE (for the canal discharge upto 1.50 cumec).

Audit examination of records related to the construction of RMC and its distribution system disclosed that in all the six works, the contracts were awarded without approval of the Longitudinal section (L-section) of the canals and drawings of the masonry structures by the competent authorities, as discussed in the succeeding paragraphs:

3.5.3.1 Award of contract without approving the design of canals

Audit observed that the scope of the six contracts executed in respect of construction of RMC and its distribution system, involved construction of 13 distributaries and 38 minor canals. CE, SNP accorded TS on the six detailed estimates in March 2013 without finalising the L-sections of 13 distributaries and 38 minor canals. The contracts for these works were awarded during March and April 2013. Audit observed that out of these 51 canals, L-section of only one canal[12] was approved before the award of contract. The details are given in **Table 3.5**.

Table 3.5: Delayed sanction of L-sections

Construction of RMC and its distribution system	Category of canal	Total number of canals constructed	Date of Technical Sanction	Date of award of contract	No. of canals, L-section of which was approved before the date of award of contract
(1)	(2)	(3)	(4)	(5)	(6)
Km 00.000 to 35.000	Dy.	01	02.03.2013	30.03.2013	01
	Minor	14			00
Km 35.000 to 50.000	Dy.	02	02.03.2013	15.04.2013	00
	Minor	08			00
Km 50.000 to 60.000	Dy.	04	04.03.2013	08.04.2013	00
	Minor	02			00
Km 60.000 to 80.000	Dy.	03	04.03.2013	08.04.2013	00
	Minor	02			00
Km 80.000 to 114.000	Dy.	01	04.03.2013	19.04.2013	00
	Minor	07			00
Km 114.000 to 125.682	Dy.	02	04.03.2013	12.04.2013	00
	Minor	05			00
Total		**51**			01

Note: Dy.- Distributary canals and Minor- Minor canals
(Source: Information provided by test checked divisions)

[12] L-section of Bahadurpur distributary canal was approved before the date of award of contract.

Audit further observed that the L-section of these canals were approved after a lapse of 06 to 79 months (12 distributary canals) and 03 to 73 months (38 minor canals) from the date of award of contracts ***(Appendix 3.14)***.

In reply, the State Government stated (November 2023) that it was appropriate to get the work of distributary and minor canals done after the construction of RMC. The State Government further stated that after completion of construction of /identification of levels of RMC, the works of distributaries and minor canals were carried out by preparing/revising the longitudinal sections of these distributary and minor canals.

The reply of the State Government was not acceptable because the detailed estimates approved by CE in 2013 included the works of both RMC and its distribution system. Thus, provisions in respect of distribution system was made in the detailed estimates without preparation of L-section of distributary and minor canals. This led to major deviations in the BoQs executable under the contract as discussed in Paragraph 3.5.3.2.

3.5.3.2 Award of work without approving drawings of masonry structures

The six contracts executed by SEs for construction of RMC and its distribution system involved construction of 874 masonry structures. The details of approval of drawings of these masonry structures were provided (***Appendix 3.15)*** to Audit in respect of 859 cases of these six contracts. Audit noticed that contracts of RMC and its distribution system were awarded without approval of drawings of these 859 structures. Summary of these cases have been depicted in **Table 3.6.**

Table 3.6: Details of approval of drawings of masonry structures

Construction of RMC and its distribution system	Number of Pucca works	Date of award of contract	Number of pucca structures drawing of which was approved before the date of award of contract	Delay in sanctioning of drawing from the date of award of contract (in months)
(1)	(2)	(3)	(4)	(5)
Km 0.000 to 35.000	166	30.03.2013	00	04 to 97
Km 35.000 to 50.000	149	15.04.2013	00	06 to 90
Km 50.000 to 60.000	173	08.04.2013	00	10 to 71
Km 60.000 to 80.000	106	08.04.2013	00	10 to 94
Km 80.000 to 114.000	141	19.04.2013	00	09 to 102
Km 114.000 to 125.682	124	12.04.2013	00	09 to 92
Total	**859**			

(Source: Information provided by test checked divisions)

The detailed estimate prepared without finalising the L-sections of distributary and minor canals and without finalising the drawings of the structures led to incorrect assessment of quantities of work items. Audit in this respect noticed that not only number of variations in the quantities of work had taken place during actual execution but many items of works remained completely unexecuted. Details in this respect are given in the **Table 3.7**.

Table 3.7: Variations in the quantities of works in the estimates

(₹ in crore)

Construction of RMC and its distribution system	Estimated cost of work	Number of item of works as per BoQ	Item of works not taken up		Item of works partially executed	
			No. of works	Cost of work	No. of works	Cost of work
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Km 0.000 to 35.000	375.77	90	35	10.61	44	162.09
Km 35.000 to 50.000	305.49	90	07	5.53	45	103.05
Km 50.000 to 60.000	153.93	69	18	3.73	23	45.85
Km 60.000 to 80.000	308.06	69	33	48.87	18	65.50
Km 80.000 to 114.000	365.41	77	33	31.70	27	119.31
Km 114.000 to 125.682	317.48	77	35	28.96	19	197.30
Total	**1,826.14**	**472**	**161**	**129.40**	**176**	**693.10**

(Source: Information provided by test checked divisions)

In reply, the State Government stated (November 2023) that detailed estimates were prepared on the basis of approved L-section of RMC and typical drawings of different structures such as bridges, drainage syphons, canal crossings, falls, head regulators, cross regulators, *etc*. The State Government further stated that due to non-acquisition of land for the construction of distribution system, estimates for construction of different structures in the distribution system were prepared on the basis of discharge capacity of the canals and typical drawings of the structures.

Fact remains that estimates of the works were prepared without finalising the designs and drawings and these were approved after a lapse of significant time period from the date of award of the contracts. Further, the delays in finalisation of drawings also led to delays in the execution of works and were one of the grounds for providing time extension to the contractors in all the six contracts. Besides, many works included in BoQs were either not done or partially done.

3.5.4 Inadequate time for submission of bids

Para 360 (2) of the FHB, Volume-VI stipulates that the time for submission of tenders should be at least one month after the date of first advertisement.

Prospective bidders were given inadequate time for submission of bids in 39 per cent test checked contracts

Audit examination of records disclosed that in 103 contracts[13] (39 *per cent*) out of 261 test checked contracts, only five to 28 days' time were given for submission of bids as against the minimum prescribed time of one month. This included 16 contracts in which only eight to 18 days' time was given to the prospective bidders to submit the bids. Details are given in ***Appendix 3.16.*** However, no reason for giving lesser time for submission of bids and permission of the higher authorities for the same was available in the records.

Thus, the prospective bidders remained deprived of adequate time to make

[13] 103 contracts include 87 EE level contracts and 16 SE level contracts.

their assessments and prepare their technical and financial bids for submission.

In reply, the State Government stated (November 2023) that the decision to invite short term tenders was taken owing to urgency to complete the works and in most of the cases, three-four bidders participated. It further stated that the period of 30 days for submission of bid was required at the time when tender notices are published in the newspapers for publicity. Now-a-days the bids get publicised on electronic media instantly.

The reply of the State Government was not acceptable because procedures prescribed in the financial rules with regard to tendering and contracting was to be adhered to mandatorily, irrespective of mode of publication of tender notices.

3.6 Excess and irregular expenditure

3.6.1 Excess expenditure on RCC/CC works

The mix of RCC/CC comprises of stone grit, cement, sand and water. The ratio of these materials is determined as per the design mix for the RCC/CC mix. The terms of contracts of the works of RMC and its distribution system stipulated that variation in consumption of cement on either side due to change in design mix shall be accordingly adjusted at the issue rate of cement specified in the contract.

Audit examination of the estimates of masonry structures using RCC/CC mix[14] of the six works of construction of RMC and its distribution system disclosed that cost of RCC/CC works was estimated on the basis of use of 4.30 to 11.90 bags cement for per cum of RCC/CC mix. However, during the execution of works, the design mix prepared for structures prescribed use of 4.20 to 9.52 bags per cum of mix. Audit further observed that the variation in consumption of cement due to change in design mix was not adjusted[15] by the concerned divisions in four works. This led to execution of 3,18,987.24 cum RCC/CC works at the excess cost of ₹ 14.08 crore. Details are given in ***Appendix 3.17.***

In reply, the State Government stated (November 2023 and January 2024) that in terms of the contracts of RMC and its distribution system executed in 2012-13, deductions amounting to ₹ 26.33 crore have been made in aforesaid four contracts based on lesser consumption of cement as per the design mix.

Audit subsequently verified (June 2024) the status of actual deductions from the records of concerned divisions and noticed that out of the said recovery of ₹ 26.33 crore, recovery of ₹ 12.26 crore was not entered into the Measurement Books (MBs) of the Divisions in respect of canal work between Km 50.000 to Km 60.000 (₹ 11.18 crore[16]) and between Km 60.000

[14] Stone grit, cement, coarse sand and water

[15] RCCD 1, Tulsipur, Balrampur partially adjusted the variation.

[16] As against State Government reply that ₹ 12.78 crore was recovered for variation due to less consumption of cement, only ₹ 1.60 crore was entered into the MB for adjustment and the final bill was yet to be paid.

to Km 80.000 (₹ 1.08 crore). Besides, recoveries related to other works/other item of works amounting to ₹ 1.17 crore were also found included in the aforesaid recovery of ₹ 26.33 crore. Further recovery of ₹ 14.08 crore, as mentioned in ***Appendix 3.17***, was not made as of June 2024 though recovery of ₹ 12.90 crore was entered into MBs but yet to be adjusted in the final bill to be paid to contractor.

3.6.2 Excess payment of royalty to contractors

As per the State Government order (November 2012), royalty at the rate of ₹ 14.00 per cubic meter was to be levied on the earthworks. Subsequently, the said royalty was withdrawn vide the State Government order of March 2018.

Audit observed that in the six estimates of construction of RMC and its distribution system, the estimated cost of the earthworks included royalty at the rate of ₹14.00 per cubic meter and accordingly contracts were executed with the contractors. Therefore, the amount of royalty included in the estimated cost of earthwork was required to be recovered in cases of payments made to contractors after March 2018 order of the State Government.

Scrutiny of records however disclosed that in four out the six works, the divisions paid the contractors for the earthworks at the contracted rate even after withdrawal of royalty on earthworks from March 2018 but did not recover the excess payment of the royalty from the contractors. This had resulted in excess payment amounting to ₹ 5.98 crore to the contractors as detailed in ***Appendix 3.18.***

In reply, the State Government stated (January 2024) that provision of royalty was made in the estimates as per the rates prevailed at that time and deductions of royalty were made accordingly. The State Government further stated that royalty on earthworks was abolished from 2018 and royalty at the rate of ₹ 14.00 per cum had been recovered on the basis of final measured quantity of earthworks. The State Government also provided work-wise details of the recovery of royalty amounting to ₹ 21.67 crore in respect of total executed quantity of earthworks upto March 2022 in respect of four works.

Audit subsequently verified (June 2024) the status of recovery of royalty on earthworks executed, after withdrawal of royalty in March 2018 and observed that the recovery of ₹ 5.98 crore as mentioned in ***Appendix 3.18*** was pending as of June 2024 though recorded in the MBs.

3.6.3 Excess payment to the contractor

According to condition no. 27 of Special Conditions of the contract, executed for construction of RMC and its distribution system (between Km 0.00 and Km 35.000 excluding Km 0.485 to Km 6.740 and Km 23.340 to Km 23.880) in March 2013, all expenses in connection with the compliance of provision of labour laws enforced in the State of Uttar Pradesh shall be borne by the contractor.

Audit observed that Labour Cess amounting to ₹ three crore was first added and then deducted from running bills up to June 2019[17] of the contractor. Thus, despite deduction of Labour Cess from the contractor's bills, the financial burden of payment of Labour Cess was borne by the Department. This resulted in undue advantage of ₹ three crore to the contractor.

In reply, the State Government stated (November 2023) that recovery of ₹ 3.00 crore paid to contractors on account of Labour Cess was subsequently entered into MBs. However, subsequent verification in Audit (June 2024) of the status of recovery of Labour Cess from contractor's bill revealed that no such recovery was made as of June 2024.

3.6.4 Undue advantage to contractors

The term (clause no. 31) of contract executed for construction of RMC and its distribution system *inter alia* stipulates that if the contractor neglects or fails to proceed with the work with due diligence or violates any of the provisions of the contract and if contractor fails to take satisfactory corrective action, the Engineer-in-charge will terminate the contract in whole or in part. In case the entire contract is terminated, the amount of security deposit together with the value of the work done but not paid for, shall stand forfeited by the Government. The term of contract further says that on completion of such works, if the expenses incurred for carrying out such works, exceeds the value of the work credited to the contractor, the difference shall be paid by the contractor. The contractor shall also be liable for the liquidated damages under the contract.

Audit observed that M/s SEW Infrastructure Ltd. was awarded (March 2013) contract for construction of RMC and its distribution system between Km. 0.000 to 35.000 with the stipulated date of completion of works on 29 September 2015. However, M/s SEW Infrastructure Ltd. did not complete the works even upto February 2020. Due to slow progress in work, CE decided (February 2020) to execute fresh contracts to complete the work. Subsequently, SE and EE executed 100 contracts during 2019-20 to 2021-22 to complete the balance works of the contract awarded to M/s SEW Infrastructure Ltd. Of these 100 contracts, in five contracts, 17 items of works were executed at the higher rates (four to 89 *per cent*) as compared to the rates agreed upon with M/s SEW in the original contract. As a result, these 17 items of works were executed at the extra cost of ₹ 12.60 crore (***Appendix 3.19***). As per the terms of contract, the excess expenditure of ₹ 12.60 crore was recoverable from M/s SEW Infrastructure Ltd along with the appropriate liquidated damages. However, no such recovery was either imposed or recovered from the contractor as of December 2022.

In reply, the State Government stated (November 2023) that the works of agreement no. 21/SE/2012-13 was completed through debitable agencies[18] under the terms of contract. The State Government further stated that to

[17] ₹ 1.61 crore by SNK-3, Bahraich: up to 57th running bill (June 2019) and ₹ 1.39 crore by SNK-4, Bahraich: up to 46th running bill (June 2019).

[18] Contractors to whom balance work of agreement number 21/SE/2012-13 was awarded.

complete the work of an agreement, engagement of debitable agencies does not warrant cancellation of original agreement. If works through debitable agencies are executed at the rates higher to the original agreement, provision exists for recovery of excess amount from the bill of original agreement. In respect of agreement number 21/SE/2012-13, the State Government replied that required recovery of excess payment along with all other legal recoveries have been proposed from the final bills of M/s SEW Infrastructure Ltd.

The State Government, however, did not state the reasons for not taking up action against the original contractor (M/s SEW Infrastructure Ltd.) earlier. Moreover, the proposed recovery from the contractor was yet to be made.

3.7 Quality Assurance

In the construction work, it is imperative to control the quality and standards of material and conformation to the required shape, dimension, strength, *etc*. The terms of contracts (technical specification number 20) for construction of RMC and its distribution system envisaged that quality tests, shall be carried out as per relevant Indian Standard Codes at the prescribed frequency (***Appendix 3.20).*** The Memorandum of Understanding (MoU) executed in December 2012 between GoI and the State Government in respect of National Project also envisaged that the State Government shall establish independent quality control organisation and adequate number of quality control laboratories in the project area to maintain quality of works. The sampling and testing will be carried out in accordance with the relevant Bureau of Indian Standards codes.

Audit observed that two Quality Control Divisions, one at Gonda and other at Basti were established for conducting quality tests of works. Audit however noticed deficiencies in the quality testing as discussed in the succeeding paragraphs:

3.7.1 Quality testing of earth works

Quality testing of earth works was not done

Quality of the earth work is tested through four laboratory tests, *vis.*, grain size analysis; field density; standard proctor test; and moisture content in the earth. Frequency and purpose of these four tests have been described in **Table 3.8.**

Table 3.8: Requirement of quality testing for earth work

Name of Test	Frequency of Test	Purpose of test
(1)	(2)	(3)
Grains size analysis and Atterberg limits	Every 3000 cum	To know the classifications of soil actually used
Field density[19]	One test for every 1500 cum and at least one test in each layer laid on embankment	To determine the placement density and moisture content.
Standard Proctor test	Every 10000 cum of compacted earth or where there is change in the borrow area or change in soil texture, limited to minimum three samples and maximum 10 samples	To determine maximum dry density and optimum moisture content of the soil
Moisture content	One test in each sample	To know the moisture content of the sample

(Source: Terms of contracts)

Test check of records of construction of RMC and its distribution system revealed that 161.87 lakh cum earth works at the cost of ₹ 184.23 crore were executed during 2012-2022. However, Audit did not find evidence in the records of the test checked divisions of having carried out quality test of earth works against the four indicators mentioned above.

When Audit specifically asked about not conducting the prescribed quality test for earth works, three out 12 test checked divisions involved in the construction of RMC and its distribution system stated that the chainage of RMC in their command falls under cutting reach therefore no quality test was required and also said that manual compaction[20] was provisioned in the rate analysis of estimate and the works were carried out accordingly. The five other divisions did not furnish reasons for not conducting the required four quality tests related to earthwork. These five divisions[21] majorly stated about use of machines, layer-wise compaction, tests conducted as per requirement, *etc*. The remaining four divisions did not furnish replies. SE, Quality Control Circle, Ayodhya also confirmed that quality tests of the works were limited to only RCC/CC works.

The State Government did not provide specific reply to audit observation and merely stated (November 2023) that the earth work for construction of RMC was carried out without controlled compaction in which compaction is carried out by manual means. The State Government further added that by natural weathering the earth gets compacted up to 90 *per cent* in first year, 95 *per cent* in 2nd year and 97.5 *per cent* in 3rd year, therefore, compaction test was not required.

Thus, the quality and ultimately the sustainability of the earth works were compromised as was evident from the fact that left bank of RMC was damaged due to sheet flow of water from hills, as discussed in Chapter II.

[19] In place density test governed by proctor density and in place density test of cohesion less soils governed by Relative Density test.

[20] Compaction of earth using vibro compactor is known as mechanical compaction whereas compaction done manually is known as manual compaction.

[21] Remaining five out of 12 construction divisions did not furnish replies to the audit queries related to quality test of earthwork.

3.7.2 Quality testing of masonry works

Quality tests of RCC/CC works should have been carried out on the representative samples to ascertain the desired quality of the structures. Type, quantum of samples and purpose of tests for conformity of the desired quality have been prescribed in various IS Codes as given in **Table 3.9.**

Table 3.9: Details of quality tests for masonry works

Name of Test	Frequency of Test	Purpose of test
(1)	(2)	(3)
1. Cement Chemical and Physical analysis	For each consignment	To know Alkalies, Oxides, Chloride, Fineness, Soundness, Consistency, Setting time, Compressive strength *etc*.
2. Fine Aggregate Screen analysis, Bulkage, Impurities, Soundness, Specific Gravity, Moisture Content *etc*.	One test for every 150 cum	To know grain size and the fineness modulus of sand, quality of sand
3. Coarse Aggregate Sieve analysis, Soundness, Impurities, Petrographic Examination *etc*.	One test for every 150 cum or less and twice in one working season (Petrographic examination)	To know gradation and percentage of various size of aggregate, quality, deleterious constituents and silt in coarse aggregate
4. Water PH value of water	Two samples for each source	To know PH value of water (Organic and Inorganic)
5. Reinforcement	For each consignment	To know weight, diameter, ultimate test, strength, yield stress and elongation *etc*.
6. Cement Mortar in Masonry and Concrete Cube test for concrete and cement mortar	3 tests specimens per 50 cum of concrete subject to a minimum of three samples per day for each grade of concrete	Compressive strength

(Source: Terms of contracts)

Quality testing of masonry work was inadequate

Test check of records of construction of RMC and its distribution system revealed that 8.74 lakh cum RCC/CC works were executed at an expenditure of ₹ 709.91 crore during 2012-2022. Quality tests in respect of these works should have been carried out as per the prescribed criteria. Audit, however, observed shortcomings in the quality testing as below:

(i) Out of the 15 types of quality tests[22], only two types of quality tests (Concrete Cube test and Sieve analysis tests) were carried out in respect of masonry structures. No reason for not conducting the remaining 13 types of quality tests was on records of the SE, Quality Control Circle, Ayodhya and in the test checked divisions. Incomplete quality testing indicated that assurance over the quality of the masonry works was not adequately ensured.

(ii) Quality tests should have been carried out on the representative samples as prescribed in the respective IS codes. The sample size for any quality test is based on the quantum of material and mix of RCC/CC. It was imperative for the divisions to maintain records detailing the sampling for quality tests *vis-a-vis* quantum of material/mix used in the work, details of

[22] Cement: two; fine aggregate: five; coarse aggregate: four; water: one; reinforcement: one; cement mortar, masonry and concrete: two tests.

test performed and result of the quality tests. In case of any deficiency/shortcoming reported through the quality test reports, corrective action should have been taken. Audit however observed that in the 17 test checked divisions, all the 2,759 quality test reports, submitted to Audit related to 176 masonry structures, were found satisfactory. However, adequacy of samples for these 2,759 test reports could not be ascertained in Audit for want of mention of quantities of RCC/CC works sampled and tested.

In reply, the State Government stated (November 2023) that most of the prescribed quality tests, required for testing of concrete at work site such as sieve analysis, silt content, *etc*. for quality of sand and slump test, cube test, and material test for concrete works were carried out by the related agencies. The State Government further stated that the cube tests for the concrete work done by the divisions, related to construction works, were carried out as per norms records of which were available with the respective divisions.

The reply of the State Government was not acceptable because out of 15 types of prescribed quality tests, the test checked divisions provided details of quality test of Concrete Cube test and Sieve analysis test. Also, the State Government, did not explain the reason for non-maintenance of records of sampling of concrete mix for quality testing.

3.8 Internal control

3.8.1 Internal Audit

With a view to make the organisation responsive and thus accountable to the people, it was imperative that a system to detect error signals was put in place and adhered to. It was observed that internal audit of the divisions under various organisations of Irrigation and Water Resources Department (I&WRD) was carried out by the Auditors working under the Finance Controller of the I&WRD after getting the action plan approved from Directorate of Internal Accounts and Audit, Uttar Pradesh.

Audit examination of records revealed that during the period from 2017-18 to 2021-22, out of 31 divisions of SNP, internal audit was planned and conducted in four (13 *per cent*) to 17 (55 *per cent*) divisions only. It was further observed that the compliance by the concerned divisions on the internal audit reports was lax because out of 51 reports issued during 2017-22, no compliance was made in respect of 22 reports (43 *per cent*) and in 20 internal audit reports (39 *per cent*), partial compliance was made by the concerned divisions.

Thus, internal audit was inadequate as well as ineffective due to non-compliance on the issues highlighted by it.

In reply, the State Government stated (November 2023) that internal audit of the divisions were carried out by the departmental audit teams time to time.

Reply of the State Government was not tenable because internal audits in all the test checked divisions were not carried out during 2017-22 as discussed above.

3.8.2 Site inspections

Technical inspection is a vital element to ensure adherence to the drawings, designs, specification, quality of material, workmanship, *etc*., in the execution of works. Central Vigilance Commission (CVC) also emphasised over the site inspections and stated that site inspection is basically to assess the quality of work being carried out and any compromise in the quality will not only defeat the very purpose of stipulating such elaborate quality standard but also causes irreversible loss to the public exchequer.

All the Technical inspections of the works are carried out by the Technical Audit Cell, established at the State level through visits of the work site periodically. Besides, zonal CEs and SEs were also to carry out site inspections of works' sites from the technical point of view to recourse mid-course rectifications/corrections, if needed.

3.8.2.1 Technical inspection by Technical Audit Cell

Technical inspections by Technical Audit Cell was not carried out during 2017-22

As per contracts for SNP, all the works during the progress and after the completion shall be subject to inspection by the Technical Audit Cell (TAC)[23] I&WRD Uttar Pradesh/Quality Control wing of the project. Any defect of material or workmanship pointed out by the technical examiner and established as such shall be rectified by the contractor at his own cost. Any recovery for the reduction in rates considered necessary by the technical examiner/officer of the quality control wing shall be realised from the contractors' subsequent bills or from the security of the contractors or contractors' dues available with the I&WRD in other divisions, even if the work has been accepted by the Engineer in charge.

Audit however, observed that in none of the 17 test checked divisions TAC inspections were carried out during 2017-22. Thus, the quality of works through the technical inspections by TAC was not ensured despite the fact that during 2017-22, large number of construction works had taken place.

In reply, the State Government stated (November 2023) that the TAC of the State Government had carried out inspections during 2022-23. It, however, did not provide reason due to which TAC inspections were not carried out during 2017-22 in the test checked divisions.

Thus, the mechanism in place for technical inspections of the works was not utilised to ensure the execution of work adhering to the prescribed specification and quality.

[23] TAC constituted at the Government level is responsible for inspection of the works from time to time.

3.8.2.2 Site inspections by CEs and SEs

According to Para 4.3 of Irrigation Manual of Orders (IMO) of Uttar Pradesh, CE was required to visit the construction sites time and again. In respect of inspection of works by SE, Para 6.5 of IMO envisages that SE would inspect different works of the circle.

Audit examination of records disclosed that CEs, SNP during 2019-22 carried out 43 visits of the sites of works carried out by 11 out of 17 test checked divisions. Apart from this, four out of eight SEs of SNP carried out 34 site inspections during 2019-22. Details are given in ***Appendices 3.21(a)*** and ***3.21(b).*** The construction works carried out during 2017-22 mainly included construction of Rapti Main Canal (RMC) and its distribution system. Construction of RMC and its distribution system included construction of 874 masonry works. Against this, 43 site inspections by CEs involving 115 structures and 34 site inspections by SEs involving 233 structures seems inadequate.

The State Government did not furnish specific replies to the audit observations and stated (November 2023) that the site inspections were carried out which enabled the department to complete the works with quality. Audit, however, could not draw assurance over the adequacy of the site visits by the CEs and SEs.

3.9 Documentation and evidencing

3.9.1 Improper maintenance of stock accounts

As per the provisions of the Financial Rules, Volume-VI, all stock items should be taken in the stock account as and when it is received in the store. The receipt of stock in the store and issue of stock from the store should be recorded in the sub-divisional stock accounts. On the basis of receipt, issue and balances recorded in the sub-divisional stock accounts, the divisional stock accounts should be prepared on six monthly basis and closing balances of the stock alongwith cost thereof should be arrived at. Para 237 of FHB, Volume-VI also states for physical verification of store periodically. Similarly, as per Para 768 of the FHB, Volume-VI, Tools and Plant (T&P) register should be closed once in a year to ascertain the balances of T&Ps in the divisions.

Audit examination of records in 17 test checked divisions revealed that closing of divisional stock accounts was not done for the last six months to 108 months (on six monthly basis). Due to non-updation of stock accounts, the position of stock material received in the stores and balances of the same after issue/utilisation of stock on works, was not verifiable.

Similarly, yearly closing of the T&P accounts was also not done for the last one to 14 years in 17 test checked divisions. Due to the pending closing of T&P accounts, the status of T&Ps in these test checked divisions was not ascertainable. The concerned test checked divisions stated that action would be taken to update and close the accounts of stock and T&P.

In reply, the State Government stated (January 2024) that the records have been prepared and copies of records in respect of some of the divisions have been attached for reference.

The reply of the State Government was not acceptable, as the test checked divisions were not maintained the stock and T&P accounts. The State Government also did not attach the copies of stock accounts stated to have been prepared by the divisions.

3.9.2 Non-maintenance of records of plant for mixing of concrete

In the terms of contracts executed for construction of RMC and its distribution system, it was mentioned that the contractor shall maintain a record of the number of the batches mixed and all other details required for checking the correctness of mix as per the directions of the Engineer-in-Charge.

Audit noticed that in the estimates of six works of RMC and its distribution system, mixing of RCC/CC was provisioned through batch mix plant. The cost of mixing through batch mix plant was higher than that of through mechanical mixing. In these six works, 6.07 lakh cum of RCC/CC, amounting to ₹ 532.76 crore, was executed using batch mix plant. However, the concerned divisions did not maintain records such as Batch Mix Plant Register in support of use of batch mix plant. SE, Rapti Canal Construction Circle 2, Basti[24] did not provide the reasons for not maintaining the plant records and stated that batch mix plant was established at the work site by the contractors and the work was monitored by the concerned divisions.

In reply, the State Government stated (November 2023) that keeping in view the huge quantum of concrete mix and to maintain quality in the RCC/CC works rate of batching plant was taken. The State Government also stated that IS codes prescribes for taking ingredients of concrete mix by weight which was possible through use of batching plant. However, the State Government did not provide any reply regarding non-maintenance of record of the number of the batches mixed and all other details required for checking the correctness of mix as per the directions of the Engineer-in-Charge, as desired in the terms of contract.

3.9.3 Non-submission of documents of technical bids

The work of construction of RMC and its distribution system was distributed in six lots with estimated cost ranging between ₹ 153.93 crore to ₹ 375.77 crore. SE, Rapti Canal Construction Circle-2, Basti issued (October 2012) NIT for submission of technical bids in respect of all the six lots. In response to the NITs, four to ten bidders submitted their technical bids in respect of each of six lots of which one to five bidders were declared disqualified on the ground of not submitting documents, vis., IDT-1 (character certificate), IDT-2 (financial capacity), registration in I&WRD and certified copy of bid document within time. The tender documents

[24] Construction of RMC and its distribution system between Km. 80.000 to 114.000 and Km. 114.000 to 125.682.

prescribed submission of these document as pre-qualification criteria for the prospective bidders in respect of each of the six lots.

Audit requisitioned (January 2023 and June 2024) documents submitted by all the bidders participated in the technical bid evaluation. However, SE, Rapti Canal Construction Circle-2, Basti[25] provided documents/records only in respect of the bidders who were declared qualified in the financial bid evaluation and got the contracts[26]. SE, IXth Circle Irrigation Works, Bahraich and SE, Rapti Canal Construction Circle-1, Balrampur who awarded the contracts to the successful bidders after financial bid evaluation also did not provide these documents to Audit despite requisition. Due to this, Audit could not verify the documents submitted by the bidders who were declared qualified in technical bid evaluation but could not get contracts after financial bid evaluation and the bidders who were declared disqualified in technical bid evaluation.

3.10 Other points of interest

3.10.1 Irregular provision in the cost estimates

According to 'The Building and Other Construction Workers' Welfare (BOCW) Cess Act, 1996', Labour Cess at the rate of one *per cent* of construction cost was to be recovered from the employer and the same was to be remitted to Uttar Pradesh BOCW Board.

Audit noticed that the estimated cost of ₹ 9,802.68 crore for SNP as per DPR 2017 included ₹ 42.75 crore on account of payment of Labour Cess. Since contractor was responsible for payment of Labour Cess, its inclusion in the estimates inflated the estimates by ₹ 42.75 crore.

During the exit conference, the State Government stated (November 2023) that Labour Cess was deducted from contractor's bills and deposited to the Uttar Pradesh BOCW Board. It was further stated that allocation of ₹ 42.75 crore for labour cess in the estimated cost of the project was utilised on works of the project.

The fact remains that the provision of ₹ 42.75 crore in the estimated cost of the project on account of Labour Cess was unnecessary and utilisation of the same on other works of the project constituted irregular diversion of funds.

3.10.2 Forest clearance not obtained for use of forest land

Construction of RMC involved transfer of 60.15 hectare of forest land for construction of RMC between Km 0.450 and Km 6.600.

Audit observed that the Forest Department accorded in principal permission in June 2016 for use of these 60.15 hectare of forest land on the condition that the State Government would pay ₹ 12.86 crore to the Forest Department on account of compensation for non-forest use of forest land and falling of

[25] SE, Rapti Canal Construction Circle-2, Basti published and examined technical bids of all the six works.
[26] Except bid document in respect of L&T Construction Ltd. Chennai which was disqualified in all the six works.

trees over it. However, the State Government deposited only ₹ 9.32 crore to the Forest Department leaving balance payment of ₹ 3.54 crore. As a result of this, final clearance of use of forest land was not accorded by the Forest Department as of November 2022.

Pertinently, the canal had been constructed on the said forest land. Construction of canal without final concurrence from the Forest Department was irregular.

In reply, the State Government stated (November 2023) that against the due payment of ₹ 12.86 crore to the Forest Department, ₹ 9.32 crore was paid. E-payment system was started in October 2017 after which Forest Department was repeatedly requested for providing DDO code, treasury code and details of account of CCL/DCL, to transfer the remaining funds. However, the same was not provided by the Forest Department due to which the funds could not be transferred. The remaining payment of ₹ 3.54 crore is proposed to be made.

3.10.3 Advances to contractors

3.10.3.1 Mobilisation Advances

As per the terms of contract, Mobilisation Advance (MA), not exceeding to five *per cent*[27] of the contract amount shall be given, if requested by the contractor in writing within three months of the date of notice to proceed with the work. In respect of recovery of MA, it was envisaged that the entire advance would be recovered by the time 80 *per cent* of the value of contract is completed.

Mobilisation Advances were not recovered from contractors as per terms and conditions of the contracts

Audit observed that interest free MA amounting to ₹ 88.71 crore was granted (during April 2013 to December 2013) to the six contractors in respect of six contracts related to execution of works of RMC and its distribution system.

Audit further observed that contrary to the term of contracts, MA amounting to ₹ 17.23 crore (53 *per cent*) in two contracts (Total MA: ₹ 32.54 crore) was with the contractors for the period, ranging between 14 to 38 months even after payment of 80 *per cent* of contracts' value. Details are given in ***Appendix 3.22.*** Thus, the contractors were extended undue advantage.

The State Government did not furnish specific reply and stated (November 2023) that the MA against six major contracts was provided in accordance with the conditions of the contract which had been recovered from their bills. However, the State Government did not elaborate the circumstances under which the contractors were allowed to retain the MA beyond the prescribed period for recovery.

[27] Based on the requirement, assessed by the Engineer-in-charge on the basis of work program submitted by the contractor.

3.10.3.2 Machinery Advances

As per terms of contract (Clause 4 of General Conditions of Contract) for construction of RMC and its distribution system, an advance for new plant and machinery, *i.e*., Machinery Advance (McA), required for work and brought to site by the contractor was to be given if requested by the contractors. The advance was to be limited to ninety *per cent* of the price of such new plant and equipment paid by the contractor for which the contractor would produce satisfactory evidence. It was, however, made clear that ninety *per cent* of the price of new plant and equipment or 10 *per cent* of the contract amount, whichever was less, was further subject to condition that both plant and equipment are (a) considered by the engineer in charge to be necessary for the work (b) in working order, and (c) hypothecated to the Government.

Audit observed that in two[28] out of six agreements for construction of RMC and its distribution system, the contractors were granted interest-free McA amounting to ₹ 27.00 crore . The irregularities in grant of McA to the contractors are discussed below:

- McA amounting to ₹ 12 crore was granted (December 2013) to M/s Patel Apco Joint Venture (agreement number 02/SE/2013-14) on account of purchase of 63 machines. Audit, however, observed that out of these 63 machines, 60 machines were purchased by the contractor before the date of contract (date of contract: April 2013; date of purchase of machines: February 2012 to March 2013). Thus, grant of McA on the machines purchased (cost: ₹ 11.47 crore) before the date of agreement was irregular being in violation of clause 4 (a) of General Conditions of Contract.

- In respect of McA amounting to ₹ 27 crore granted to M/s Valecha Engineering Ltd. (agreement number 01/SE/2013-14) and M/s Patel Apco Joint Venture (agreement number 02/SE/2013-14) on account of purchase of 137 machines[29], the required hypothecations to the Government were not made available to Audit, despite repeated requests. Details are given in ***Appendix 3.23.***

In reply, the State Government stated (January 2024) that in place of hypothecation of machines, Bank Guarantees (BG) equal to the amount of McA were obtained in accordance with the State Government order (October 2012). All the McAs had been recovered from the contractors' bills.

The reply of the State Government was not tenable, as the General Conditions of contracts clearly mentioned that machinery against which McA was granted, had to be hypothecated to the Government and no exception was provided in this context. Further, the State Government did

[28] Agreement number 01/SE/2013-14 (agreed cost: ₹ 316.86 crore) for construction of RMC and its distribution system from Km 114.000 to Km 125.682 and 02/SE/2013-14 (agreed cost: ₹ 306.90 crore) for construction of RMC and its distribution system from Km 60.000 to Km 80.000.

[29] McA of ₹ 12.00 crore to M/s Patel Apco Joint Venture against 63 machines and ₹ 15.00 crore to M/s Valecha Engineering Pvt. Ltd. against 74 machines.

not provide reply for grant of McA on the machineries which were purchased before the date of contract and thereby not eligible for McA.

Thus, the grant of McA for the machines purchased before executing the contracts and non-hypothecation of the machineries to the Government was irregular and the contractors were extended undue advantage.

3.10.4 Pending adjustment of Miscellaneous Works Advances

Miscellaneous Works Advance (MWA) is a temporary head of account meant to record expenditure incurred on deposit works in excess of deposits received, losses due to deficiencies in cash or stocks, errors in accounts awaiting adjustments and the items which cannot be adjusted until recovery or settlement for want of details. These are required to be cleared as early as possible. However, in the test checked 10 out of 17 divisions, ₹ 76.48 crore was lying in the MWAs for adjustment (***Appendix 3.24***). The divisions did not provide records due to which details of debits such as nature of charges, contract/ supply orders to which it relates *etc*. could not analysed in Audit. The above MWAs were provided to officers/officials, firms and others by charging the amount on the expenditure of SNP provisionally.

On being pointed out the issue in Audit, the concerned divisions did not give specific reason for non-adjustment of advances for such a long period and merely stated that action would be taken to settle the advances. The unadjusted advance for a long period had also risk of being misappropriated. The State Government replied (November 2023) that vouchers in respect of registry of land and purchase of construction material had been received and the advances had been adjusted at the level of construction divisions. The State Government, however, did not provide evidence in support of its statement. In further verification of records by Audit in two test checked divisions[30], it was disclosed that the unadjusted advances amounting to ₹ 194.84 lakh were lying unadjusted as of February 2024 which contradicted the statement of the State Government that advances had been adjusted.

To sum up, the project was bereft of timely availability of funds because of weak expenditure management. Unauthorised financial liabilities were created and funds earmarked for payment of Labour Cess was utilised unauthorisedly. The Department failed to purchase land according to the targets. In execution of works, there was *ad hocism* in preparation of detailed estimates. Contracts were awarded without finalising designs & drawings due to which the scope of works also had to be changed several times. The contractors not only could not complete the works in time but also got undue benefit due to allowing higher rates in the estimates. Various instances of excess and irregular expenditure were noticed. Inadequate time to submit bids was noticed in 39 *per cent* of test checked contracts. Quality checks were not carried out as per the prescribed norms and internal control was lax as technical inspections by Technical Audit Cell were not carried out during 2017-22. Site inspections by Chief Engineers and Superintending Engineers were also inadequate.

[30] SNK, Bansi, Siddharthnagar (₹ 185.72 lakh) and RCCD-2 Shohratgarh, Siddharthnagar (₹ 9.12 lakh).

Documentation and evidencing were weak, depriving the officers of noticing the errors in the implementation of projects.

Recommendation 4*: In view of the persistent situation of time and cost overrun in many of the schemes/programmes, the State Government should fix responsibility for lapses and delays in project execution.*

Recommendation 5: *The State Government should take appropriate action to settle the financial liabilities and ensure financial closure of the project at the earliest.*

The State Government replied (November 2023) that action was in progress for financial closure of the agreements.

Recommendation 6: *The State Government should find out the circumstances under which the contracts were awarded without finalising designs and drawings and quantities of works.*

The State Government replied (November 2023) that agreements were executed on the basis of drawings prepared for the creation of structures and the works were executed at the agreed rates. The State Government also stated that the works were delayed due to situation of that time and other hurdles.

The reply of the State Government was not tenable because the estimates were prepared on the basis of typical drawings[31] as mentioned in the estimate.

Recommendation 7: *The quality of construction of the major structures of the project should be verified.*

The State Government replied (November 2023) that quality tests were carried out to ensure the quality of the construction works and deductions in respect of deficiencies in workmanship were made.

The reply of the State Government was not tenable because quality tests of earth works were not carried out and in respect of masonry works only two out of 15 types of prescribed tests, were carried out.

Recommendation 8: *Internal control mechanism should be strengthened through regular internal audits, technical inspections and maintaining the records and documents.*

[31] Typical drawing is the standard drawings of various structures of the project. The structure is however, created on the basis of actual drawing considering various factors such as location of the structure, geographical condition, purpose of the structure *etc*.

Chapter –IV

Project Deliverables

Chapter-IV

Project Deliverables

This chapter deals with the achievements in respect of envisaged deliverables as a result of implementation/execution of Saryu Nahar Pariyojana.

Audit Objective: ***Whether contemplated culturable command area was created and utilised?***

Brief snapshot of the Chapter:

- Under the Saryu Nahar Pariyojana, an irrigation potential of 14.04 lakh hectare was to be created in 11.29 lakh hectare cultivable area in Kharif and Rabi seasons by constructing 894 canals under the project. However, the Department did not provide canal-wise status of construction due to which overall status of construction of canals and creation of CCA under the project could not be ascertained in Audit.
- The project was commissioned in December 2021. However, about 228.47 Km distributary and minor canals out of target of 5,377.44 Km were not constructed as of March 2022. Further, in the 17 test checked divisions, 29 out of 432 canals were either not constructed or constructed in patches.
- The work of command area development was also lagging behind and against the creation of CCA of 11.29 lakh hectare in the project, the work of command area development was done in only 20 *per cent* area.
- Outlets and Sumps to deliver water from canals to fields were also not completed.

4.1 Introduction

Saryu Nahar Pariyojana (SNP) envisages creation of irrigation facility in 11.29 lakh hectare area of nine eastern districts of Uttar Pradesh by 2019-20[1]. A canal network comprising of main canals (257.367 Km), branch canals (776.606 Km) and distributary and minor canals (5,377.44 Km) were to be created to deliver irrigation water to the fields to obtain irrigation potential[2] of 14.04 lakh hectare (Kharif: 9.23 lakh hectare and Rabi: 4.81 lakh hectare). The project also targeted change in the existing

[1] As per Detailed Project Report 2017.
[2] Gross irrigation in Kharif and Rabi seasons.

cropping pattern with a view to introduce crops requiring lesser water for irrigation. Apart from this, increase in the production was targeted by increasing the productivity of the crops.

4.2 Completion and commissioning of project

Audit observed that works of Phase I and Phase II were not completed by the target date of 2003-04 and continued till March 2022. Audit observed that even by the date of cost revision of project in 2017, 540.03 Km canal was incomplete. Many canals had gaps leading to non-establishment of hydraulic connectivity between the canals. Due to this, about 3.10 lakh hectare created CCA was lying dry and the objective of utilising the constructed canals under Phase I and Phase II was only partially achieved till 2017. Similarly, works of Phase III continued till March 2022, though these were to be completed originally by 2014[3].

About 228.47 Km distributary and minor canals were not constructed as of March 2022

The project was commissioned in December 2021. However, as per the details provided by CEs, SNP, about 228.47 Km distributary and minor canals out of target of 5,377.44 Km were not constructed as of March 2022. Audit examination of records of the test checked divisions disclosed that construction of many of the canals were either not taken up or had gaps as of November 2023. Apart from above, outlets and sumps on the canals were also incomplete. Achievements *vis-a-vis* targets of the works of SNP as per information provided by CEs, SNP are given in **Table 4.1.**

Table 4.1: Targets and achievement of completion of works

Component	Target	Achievement (As of March 2022)
(1)	**(2)**	**(3)**
Main canals (Km)	257.367	257.367
Branch canals (Km)	776.606	776.606
Distributary and minor canals (Km)	5,377.440	5148.970
Pump canals (Number)	04	04
Drains (Km)	3996.660	3858.210
Outlets (Number)	17639	16585
Sumps (Number)	942	Nil

(Source: Information provided by the CEs, SNP)

In reply, the State Government stated (November 2023) that some of the canals under Phase I and Phase II could not be constructed in their full length due to various reasons related to purchase of land. Due to this, hydraulic connectivity could not be fully established in these canals. The State Government added that at present, the work of canal construction had been completed and water was being released in the canals.

[3] Revised date of completion: December 2019.

The reply of the State Government was not tenable because in the test checked divisions, Audit found that construction of many of the canals, outlets and sumps were incomplete as of March 2022, as discussed in the succeeding paragraphs:

4.3 Construction of canals

As per information provided by the Department, 894 canals[4] were to be constructed to create CCA of 11.29 lakh hectare under the project. The Department did not provide canal-wise status of construction of these 894 canals due to which overall status of construction of canals and creation of CCA under the project could not be ascertained in Audit.

Audit, however, observed from the examination of records of 17 test checked divisions that 29 out of 432 canals were either not constructed or constructed in patches, as discussed in the succeeding paragraphs.

4.3.1 Incomplete construction of canals of Phase I and Phase II

Audit observed that in five test checked divisions[5], eight canals were either not constructed or constructed in patches as detailed in **Table 4.2.**

Table 4.2: Incomplete canals of Phase I and II

S/N	Name of canal	Offtake point	Total length (Km)/ CCA (hectare)	Details of non-construction of canal			
				No. of gaps	Chainage of first gap (Km)	Unusable length[6] of canal *(per cent)*	Unusable CCA[7] *(per cent)*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Payar Kohana Mr.	Jagdishpur Dy.	6.20 720	3	1.87	4.323	470
2	Netuwa Mr.	Tinich Dy.	3.15 679	2	1.98	1.17	398
3	Kaurhe Mr.	Meghawa Dy.	3.50 350	4	0.950	3.41	255
4	Itwa branch	Utraula pump canal	25.30 33229	NA	18.30	7.00	9194
5	Maina Dy.	Itwa branch	18.36 7173	01	11.35	7.01	2739
6	Kishunpur Mr.	Nagar Dy.	4.65 720	NA	2.5	2.15	333
7	Veerpur Mr.	Nagar Dy.	4.81 557	NA	1.08	3.73	432
8	Mahadevri Mr.	Haraia Dy.	6.02 873	NA	5.71	0.31	45
Total			**71.99 44,301**			**29.103 (40)**	**13866 (31)**

Note: Dy.- Distributary canals and Mr.- Minor canals

(Source: Information provided by the divisions) (NA – Not available)

[4] Including Main canals, Branch canals, Distributary canals and Minor canals.
[5] Five out of 17 selected divisions were involved in the construction of canals under Phase I and II.
[6] Length of canals remaining after the first gap.
[7] CCA worked out proportionately in cases of serial number 4 to 8 due to not provided to Audit by the divisions.

As evident from Table-4.2**,** in the five test checked divisions of the project, 71.990 Km canals involving CCA of 44,301 hectare were partly completed due to gaps rendering 29.103 Km of canal length unusable.

4.3.2 Canals not constructed/partially constructed in Phase III

Audit test checked records of construction of canals under Phase III in 12 test checked divisions and observed that out of 96 canals proposed to be constructed under Rapti Main Canal (RMC), Campierganj Branch Canal (CBC) and their distribution system, 18 canals involving CCA of 0.24 lakh hectare were not constructed as of March 2022 as detailed in **Table 4.3.**

Table 4.3: Details of canals not constructed

(CCA in hectare)

S/N	Name of canal	Parent canal	CCA
(1)	**(2)**	**(3)**	**(4)**
1	Semri minor canal	Pakdihwa minor canal	1,867
2	Jogia minor canal	Baikunthpur distributary canal	665
3	Rampur minor canal	Campierganj branch canal	3,214
4	Dharwar minor canal	Rampur distributary canal	958
5	Sonbarsa minor canal	Brijmanganj distributary canal	990
6	Laxmipur distributary canal	Campierganj branch canal	6,394
7	Chainpur distributary canal	Laxmipur distributary canal	580
8	Mahuri minor canal	Laxmipur distributary canal	1,119
9	Kakrahi minor canal	Laxmipur distributary canal	957
10	Surapar minor canal	Laxmipur distributary canal	465
11	Shivnathpur minor canal	Laxmipur distributary canal	732
12	Pokharbhinda minor canal	Laxmipur distributary canal	917
13	Haraiya minor canal	Dharampur distributary canal	1,514
14	Ramnagar minor canal	Dharampur distributary canal	880
15	Chautarwa minor canal	Dharampur distributary canal	746
16	Mohammadpur minor canal	Dharampur distributary canal	655
17	Gopalpur minor canal	Dharampur distributary canal	641
18	Indrapur minor canal	Dharampur distributary canal	1,176
Total			**24,470**

(Source: Information provided by the test checked divisions)

Apart from above, Bankatwa minor canal was constructed upto 2.210 Km against a total design length 9.200 Km and Bankatwa distributary canal was constructed only upto 8.800 Km against the design length of 18.800 Km. Besides, Prempur distributary canal of 14.000 Km length had a gap at Km 4.500.

The above mentioned status of construction of canals under Phase I to III was in respect of canals in the test checked divisions, therefore, the State Government should ascertain canal-wise status of physical completion of works *vis-a-vis* proposed in the project and take immediate steps to complete the balance works in a time bound manner in order to put the project fully functional.

In reply, the State Government stated (November 2023) that as per the guidelines of the Central Water Commission, irrigation facility in 1.01 lakh hectare out of 11.29 lakh hectare CCA of the project was to be extended through pressure/sprinkler system for which provision of funds was not made in the approved cost of the project. The canals pointed out in the audit observation are covered under pressure irrigation. The State Government further stated that the work of forming the project for creation of pressure irrigation system through underground pipeline was in progress.

The fact remains that the canals envisaged in SNP were not constructed and as replied by the State Government, the balance work is being taken up in a new project.

4.4 Construction of Outlets and Sumps

Outlets and Sumps were not constructed in any of the canals constructed in Rapti system. Due to this, supply of water from the canal to the field was not made till March 2022

Outlet is a masonry structure which acts like a head regulator for the watercourse. An outlet is provided at the canal bank to transfer water from the canal to fields to be irrigated. Provision of construction of 17,639 outlets and 942 sumps was made in the project at an estimated cost of ₹ 104.07 crore.

Audit observed from the records of CE, SNP that 16,585 outlets were constructed as of March 2022. Due to not constructing of outlets and sumps, even if water is available in the canal, it cannot be used for irrigation in the fields. Adverse impact of not constructing sumps was more serious in respect of created CCA of 2.18 lakh hectare under RMC and its distribution system, as 0.87 lakh hectare (40 *per cent*) of CCA under the system was to be covered under pressure irrigation. Audit in this respect also observed that outlets and sumps were not constructed in any of the canals constructed in Rapti system till March 2022 due to which supply of water from the canals to the field was not made. The test checked divisions stated that the construction of outlets and sumps would be taken up in future through separate project.

In the field visits conducted by Audit, it was observed that at some places of Rapti system water was being used by the farmers by pumping water from canals with their personal means as can also be seen from the Photograph below.

Photograph-4.1: Farmers pumping water from Rapti Main Canal

In reply, the State Government stated (November 2023) that projects of construction of outlets/sumps in the distribution systems between Km 0.000 to Km 125.682 of Rapti Main Canal has been approved for construction in the year 2023-2025.

The reply of State Government was not tenable, as the construction of 17,639 outlets and 942 sumps was already included in SNP (DPR 2017) at an estimated cost of ₹ 104.07 crore. However, only 16,585 outlets were created and the works of sumps were not taken up as of March 2022. Further, outlets/sumps were not constructed in the distribution system of RMC to carry forward the water to the field, despite it being part of SNP's DPR.

4.5 Utilisation of CCA

Audit observed shortfalls in availability of water at the head of canal network leading to inadequate supply of water in the canal network and consequently to fields. Development of command area of the created canals was also lagging behind the requirement. Significant audit observations are discussed in the succeeding paragraphs.

4.5.1 Arrangements for diversion of water from rivers

Out of 11.29 lakh hectare CCA of SNP, 2.18 lakh hectare CCA was to be created in Rapti Rohin doab (RMC and distribution system) and remaining 9.11 lakh hectare area was lying in Ghaghara Rapti doab. The Saryu barrage at river Saryu receives 360 cumecs water from Girija barrage through Saryu Link Channel. The Saryu Main Canal (SMC) which offtakes from the left bank of Saryu barrage provides water to both Rapti Ghaghara doab and Rapti Rohin doab. SMC bifurcates at its tail at Km 63.150 into Gonda and

Basti branches. Apart from Gonda and Basti branches, the network of seven other branch canals, *vis.*, Imamganj, Tarabganj, Mankapur, Tikari, Itiyathok, Bansi and Khalilabad covers the entire Ghaghara Rapti doab. Similarly, Rapti Rohin doab, receives water through RMC takes off on the left bank of Rapti barrage and CBC offtakes from Banganga river. The planning for supply of water into the canal network of SNP has also been depicted in **Table 4.4**.

Table 4.4 (A): Network of canal system for supply of water into Ghaghara Rapti doab

Name of barrage/feeder canal	Name of canals/barrage receiving water
Girija Barrage	Saryu Link Channel
Saryu Link Channel	Saryu Barrage
Saryu Barrage	Saryu Main Canal & its system
Saryu Main Canal	(i) Imamganj branch canal & its system (ii) Basti branch canal & its system (iii) Gonda branch canal & its system *Besides, Saryu Main Canal also provide 95 cumec water to Rapti Link Channel for Rapti system*
Gonda Branch	(iv) Tarabganj branch canal & its system (v) Itiyathok branch canal & its system (vi) Mankapur branch canal & its system
Mankapur Branch	(vii) Tikari branch canal & its system
Basti Branch	(viii) Bansi branch canal and its system (ix) Khalilabad branch canal and its system

(Source: Information provided by CE, Saryu Pariyojana-I, Ayodhya and DPR)

Table 4.4 (B): Network for supply of water into canal system in Rapti Rohin Doab

Name of barrage/feeder canal	Name of canals receiving water
Rapti Link Channel	Rapti Barrage
Rapti Barrage	Rapti Main Canal system
Rapti Main Canal	Banganga Barrage
Banganga Barrage	Campierganj branch canal and its system

(Source: Information provided by CE, Saryu Pariyojana-I, Ayodhya and DPR)

It can be observed from the details given in above tables that water to canal network of SNP is provided mainly through SMC. From SMC, Imamganj, Gonda and Basti branch canals feed water to the six branch canals. Apart from this, SMC also feeds water to RMC through RLC.

4.5.1.1 Release of water to canal network

In the DPR of the project, crop water requirement was assessed at 76.20 to 359.42 cumec during Kharif season and 14.50 to 178.03 cumec during Rabi season.

Audit analysed the data of release of water in SMC *vis-a-vis* actual demand of water in the command area of SNP during 2017-22. The status of supply of water in SMC is given in **Table 4.5** and **Table 4.6.**

Table 4.5: Days of running of Saryu Main Canal

Year	Kharif (No. of days)			Rabi (No. of days)		
	Demand	Running of canal	Shortfall (*per cent*)	Demand	Running of canal	Shortfall (*per cent*)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2017-18	132	106	26 (20)	Nil	Nil	Nil
2018-19	98	63	35 (36)	18	18	Nil
2019-20	131	123	08 (06)	15	15	Nil
2020-21	64	61	03 (05)	84	84	Nil
2021-22	91	78	13 (14)	33	33	Nil

Note: Shortfall of less than 10 per cent has been ignored.

(Source: Information provided by the SE, Irrigation Construction Circle, Bahraich)

Table 4.6: Release of water in Saryu Main Canal

Year	Kharif		Rabi	
	No. of days during which water not released as per demand (out of col. 3 of Table no. 4.5)	Percentage[8] shortfall in release of water (number of days out of col.2)	No. of days during which water not released as per demand (out of col. 6 of Table no. 4.5)	Percentage shortfall in release of water (number of days out of col.4)
(1)	(2)	(3)	(4)	(5)
2017-18	74	14-50 (22) 54-88 (52)	Nil	Nil
2018-19	50	11-49 (43) 56-80 (07)	04	23-35 (02) 56-78 (02)
2019-20	61	12-44 (59) 55-76 (02)	15	48 (01) 51-73 (14)
2020-21	23	12-45 (23)	76	13-50 (12) 54-93 (64)
2021-22	21	14-45 (12) 73 (09)	14	40 (02) 51-85 (12)

Note: Shortfall of less than 10 per cent has been ignored.

(Source: Information provided by the SE, Irrigation Construction Circle, Bahraich)

[8] The percentages of shortfall have been shown in two groups in column (3) and column (5), *vis.* 11 to 50 *per cent* (the first row) and 51 *per cent* & above (the second row).

It is evident from the tables above that there was short release of water ranging between 11 and 88 *per cent* in Kharif and 13 to 93 *per cent* in Rabi season against the demand of water during 2017-22. Short release of water in SMC adversely impacted the supply of water into connected[9] Imamganj, Basti and Gonda branch canals as detailed in ***Appendix 4.1.***

10 to 69 per cent canals in Kharif season and 26 to 85 per cent canals in Rabi season were not operated during 2017-22

Audit in this respect further observed that in the five test checked divisions[10], 10 to 69 *per cent* canals in Kharif and 26 to 85 *per cent* canals in Rabi season were not operated during 2017-22. The details of operation of canals during 2017-22 was as below:

Table 4.7: Operational status of canals of Phase I and II in the test checked divisions

Year	Total number of canals[11]	CCA[12]	Number of canals remained in operation (*per cent* to col. 2)		Number of canals not operated (*per cent* to col. 2)	
			Kharif	Rabi	Kharif	Rabi
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2017-18	336	3,80,969	103 (31)	69 (21)	233 (69)	267 (79)
2018-19	336	3,80,969	119 (35)	52 (15)	217 (65)	284 (85)
2019-20	336	3,80,969	210 (63)	111 (33)	126 (37)	225 (67)
2020-21	336	3,80,969	248 (74)	183 (54)	88 (26)	153 (46)
2021-22	336	3,80,969	304 (90)	249 (74)	32 (10)	87 (26)
Total	**336**	**3,80,969**	**(31 to 90)**	**(15 to 74)**	**(10 to 69)**	**(26 to 85)**

(Source: Information provided by the test checked divisions)

The concerned divisions stated that operation of canals depends upon the availability of water. In reply, the State Government provided (November 2023) status of release of water in the canal system during 2022-23 (both Rabi and Kharif season) and 2023-24 (only Kharif season) and stated that almost cent *per cent* irrigation water was provided against the demand during 2022-23 and 2023-24. The State Government did not furnish specific reply to the Audit observations relating to non-operation of canals and stated (November 2023) that all the completed canals were being operated after commission of the project in December 2021.

However, the State Government did not clarify the reasons for less water supply during 2017 to 2022 as mentioned in the audit observation. Apart from this, the State Government's claim that water was being provided from the canals as per the demand, was also not acceptable, because according to the data provided by the Government in the reply, there was less release of

[9] As per information provided by SE, Irrigation Construction Circle, Bahraich, there was no demand of water in RLC during 2017-22, hence no water was released from SMC to RLC.

[10] Canals of Phase-I & II (Ghaghra-Rapti doab) were operational. However, no canals of Phase-III (Rapti-Rohin doab) were operated as of March 2022. Five out of 17 divisions, involved in the operation of canals of Phase-I and II, were selected in PA. They are SNK, Ayodhya, SNK-2, Gonda, SNK-3, Gonda, SNK-4, Gonda and SNK-4, Basti.

[11] SNK, Ayodhya (62 canals), SNK-2, Gonda (52 canals), SNK-3, Gonda (31 canals), SNK-4, Gonda (91 canals) and SNK-4, Basti (100 canals).

[12] This CCA pertains to Gonda, Mankapur, Tikari, Itiyathok, Khalilabad and Basti Branch canals and their distribution system.

water in Saryu Main Canal during rabi season (only 29 to 53 *per cent* during 11 days of January 2023, 26 to 70 *per cent* during 20 days of February 2023 and 26 to 74 *per cent* during 21 days of March 2023).

Further, less water availability in the canals of the project during Rabi season was disclosed in the hydrological survey carried out by the Department for assessing the feasibility of the project. Inadequate availability of water for the Rabi seasons still persisted. Therefore, there was an urgent need to identify the solutions for providing adequate water in the command area of the project so that farmers can get the expected benefits.

The proposed irrigation through RMC and distribution system was not started up to March 2022 because of non-construction of outlets and sumps in the canals.

4.6 Irrigation coverage

SNP targeted creation of Irrigation Potential (IP) of 14.04 lakh hectare in the 11.29 lakh hectare CCA during the twin cropping seasons *vis.*, Rabi: 4.80 lakh hectare; and Kharif: 9.24 lakh hectare. Audit, however, observed shortfalls in IP during 2017-22 as detailed in **Table 4.8** and **Charts 4.1** and **4.2.**

Table 4.8: Details showing irrigation coverage

(Area in lakh hectare)

Year	Kharif			Rabi		
	Target as per DPR	Achievement *(per cent)*	Shortfall *(per cent)*	Target as per DPR	Achievement *(per cent)*	Shortfall *(per cent)*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2017-18	9.24	2.07 (22)	7.17 (78)	4.80	0.87 (18)	3.93 (82)
2018-19	9.24	2.14 (23)	7.10 (77)	4.80	0.99 (21)	3.81 (79)
2019-20	9.24	3.59 (39)	5.65 (61)	4.80	1.68 (35)	3.12 (65)
2020-21	9.24	4.29 (46)	4.95 (54)	4.80	2.19 (46)	2.61 (54)
2021-22	9.24	4.80 (52)	4.44 (48)	4.80	2.89 (60)	1.91 (40)

(Source: Information provided by CE, Saryu Pariyojana-I, Ayodhya)

Chart 4.1: Achievement in Irrigation Intensity Kharif

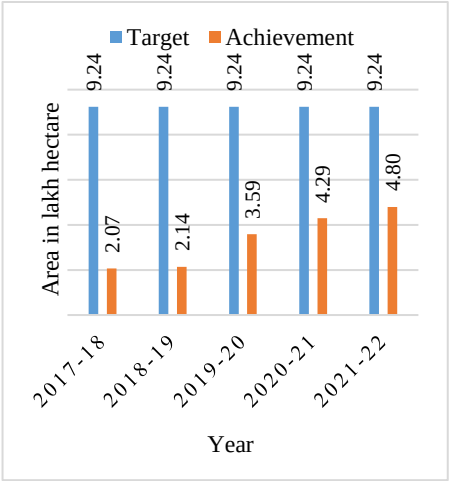
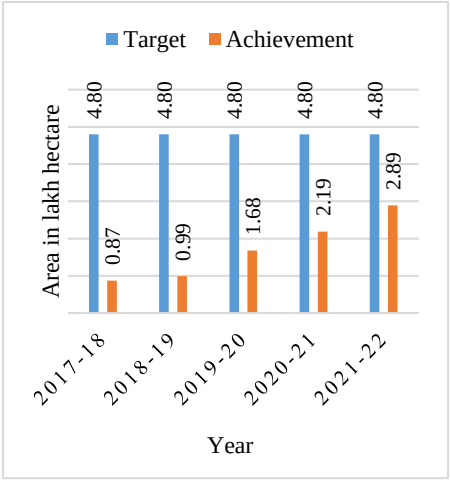


Chart 4.2: Achievement in Irrigation Intensity Rabi



Position of achievement in irrigation intensity in the test checked divisions is given in ***Appendix 4.2.*** Thus, shortfalls in extending irrigation facility in the command area of SNP during Kharif ranged between 48 and 78 *per cent* with 41 to 80 *per cent* in the test checked divisions. Similarly, in Rabi, the overall shortfalls ranged between 40 and 82 *per cent* with a shortfall ranging between 32 and 86 *per cent* in the test checked divisions. Amongst other reasons, not utilising of 2.18 lakh hectare CCA (IP: 3.27 lakh hectare) created under Rapti Main Canal system due to absence of outlet and sump to carry water from canals to field, also declined the achievements significantly against the target of creation of IP.

In reply, the State Government stated (November 2023) that the work of development of the command area was being carried out by Greater Sharda Sahayak Command Area Development Authority (GSSCADA), after which, the farmers of the entire command area of the project would get water for irrigation easily.

The fact remains that even after the completion of the project, the irrigation targets for both Kharif and Rabi crops were not achieved.

4.7 Development of command area

Command Area Development works were completed in only 20 per cent area of the project as of March 2023

Optimum utilisation of canal water in the fields depends upon the development of command area of the canal system. The Command Area Development and Water Management (CAD&WM) Programme has to be implemented in a holistic manner so that irrigation potential created (IPC) gets utilised soon after its creation, improves water use efficiency, increases agricultural productivity and production and brings sustainability in the irrigated agriculture in a participatory environment.

According to the revised guidelines of CAD&WM Programme issued by GoI in September 2015, the activities of command area development *inter*

alia included survey, planning, design and execution of On Farm Development (OFD) works including construction of field channels. The CAD&WM programme is implemented under Pradhan Mantri Krishi Sinchai Yojna (PMKSY) - *Har Khet Ko Pani* from 2015-16 onwards. In order to promote water use efficiency in irrigation, the CAD&WM programme has been targeting at least 10 *per cent* of CCA for development of micro-irrigation infrastructure for facilitating use of devices like underground piping system, *etc*., for sprinklers, rain guns, pivots, *etc*.

In Uttar Pradesh, GSSCADA under the administrative control of I&WRD, is responsible for development of command area of the canal systems. GSSCADA has taken up work of development of command area of SNP in 1999-2000 in three phases as detailed in **Table 4.9**.

Table 4.9: Details of works taken for development of command area

Phase	Area proposed (lakh hectare)	Estimated cost (₹ in crore)	Year in which work taken up	Year of completion	Area developed (lakh hectare)	Expenditure (₹ in crore)
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
Phase I	1.62	124.00	1999-2000	2008-09	1.62	143.96
Phase II	2.80	571.90	2009-10	Incomplete	0.65	Not provided
Phase III	4.80	Not provided	2021-22	On going	Under progress	6.26[13]
Total	**9.22**				**2.27**	

(Source: Information provided by the GSSCADA)

Out of total proposed creation of 11.29 lakh hectare under SNP, GSSCADA developed (1999-2009) 1.62 lakh hectare CCA (205 canals) under Phase I by constructing 11,894.621 Km earthen field channels, 1,347.39 Km lined field channel and 353.66 Km field drains. Further, GSSCADA had taken up development works in 2.80 lakh hectare area under Phase II in 2009-10 but till March 2018, only 0.65 lakh hectare (23 *per cent*) area was developed. Further examination of records in this respect disclosed that I&WRD had forwarded a DPR in February 2019 to GoI for seeking funds under AIBP to complete the remaining work of Phase II (1.64 lakh hectare[14]). GoI however, directed (July 2019) to the State Government for sending a comprehensive proposal in respect of the remaining area of Phase II (1.64 lakh hectare) and for the area of 2.07 lakh hectare[15], not taken up by GSSCADA (total 3.71 lakh hectare[16]). I&WRD however did not forward the revised proposal to GoI as of March 2023.

[13] As of March 2023.
[14] Proposed area under Phase II = 2.80 lakh hectare - 0.51 lakh hectare (unserviceable area)-0.65 lakh hectare (developed area) = 1.64 lakh hectare.
[15] 11.29 lakh hectare – (1.62 + 2.80 + 4.80) lakh hectare = 2.07 lakh hectare.
[16] Total CCA created by I&WRD = 11.29 lakh hectare. GSSCADA developed 1.62 lakh hectare in Phase I and 0.65 lakh hectare in Phase II. GSSCADA declared that 0.51 lakh hectare area was not serviceable and 4.80 lakh hectare area was proposed in Phase III. Thus, 3.71 lakh hectare area was left to be covered.

Besides, work of development of 4.80 lakh hectare CCA was also taken up in 2021-22 under Phase III which was at the stage of survey and tendering as of March 2023.

Thus, as of March 2023, only 2.27 lakh hectare (20 *per cent*) out of total CCA of 11.29 lakh hectare created under SNP was developed by GSSCADA.

Audit also conducted joint physical verification and noticed minimal existence of field channels in the command area of the test checked canals. It was noticed that in only one canal (Chilbila minor canal, Saryu Nahar Khand, Ayodhya), out of 35 test checked canals, field channels were found constructed. Audit also observed that in respect of two canals, outlets in the canals were established but field channels to carry water to the fields were not constructed as can be viewed from the photographs below:

Photographs of Outlets without field channel

	
Photograph-4.2: Birmapur minor canal	**Photograph-4.3 Chilbila minor canal[17]**

In reply, the State Government stated (November 2023) that GoI had directed to prepare DPR in respect of Saryu Nahar Pariyojana Phase III, Arjun Sahayak Project, Madhya Ganga Phase II, Bansagar canal project and 15 other projects under incentivisation scheme for bridging irrigation gap (ISBIG). These 15 projects included Saryu Nahar Pariyojana Phase-II (balance area: 2.15 lakh hectare). Subsequently, GSSCADA prepared DPR for development of 1.64 lakh hectare under AIBP and forwarded the same to GoI for approval. In response, GoI directed to prepare DPR in respect of 3.71 lakh hectare in place of DPR of 1.64 lakh hectare. The State Government further stated that after completion of Saryu and Rapti canal systems, the DPR for the development of balance area would be prepared

[17] Under Saryu Nahar Khand-4, Gonda.

and forwarded for approval. The State Government also stated that construction of outlets had been completed in most of the canals.

The State Government however did not state the circumstances under which only 0.65 lakh hectare area could be developed during 2009-10 to 2017-18. Besides, the State Government did not forward the DPR for 3.71 lakh hectare area as of November 2023, as desired by GoI due to which balance work in 2.15 lakh hectare under Phase-II remained incomplete. Consequently, development of command area was lagging behind and only 20 *per cent* out of total CCA of 11.29 lakh hectare under SNP was developed by GSSCADA as of November 2023.

4.7.1 Non-execution of component of CAD&WM

The broad activities under CAD&WM programme were On-Farm Development (OFD) works including construction of lined field channels, construction of lined field, intermediate and link drains, correction of system deficiencies and reclamation of waterlogged areas, creation of micro-irrigation facility in at least 10 *per cent* of the CCA of each project, software activities like training, monitoring, evaluation, demonstration with respect to water use efficiency and adaptive trials and one time functional/ infrastructure grant to registered Water User Associations (WUAs). According to the guidelines issued by GoI in September 2015, all aspects of the CAD&WM Programme need be taken up in an integrated, convergent and coordinated manner.

Audit however, observed that in the development of 2.27 lakh hectare[18] area as of March 2023, the components, *vis*. correction of system deficiencies and reclamation of waterlogged areas, at least 10 *per cent* of the CCA of each project under Micro-irrigation, software activities like training, monitoring, evaluation, demonstration with respect to water use efficiency and adaptive trials and one time functional/ infrastructure grant to registered Water User Associations (WUAs) were not executed.

Further, Per Drop More Crop (PDMC) component of PMKSY *inter alia* envisaged promoting efficient water conveyance and precision water application devices like drips, sprinklers, pivots, rain-guns in the farm, secondary storage structures at tail end of the canal system to store water when available in abundance, extension activities for promotion of scientific moisture conservation and agronomic measures, capacity building, training and awareness campaign, information communication technology interventions in the field of water use efficiency, precision irrigation technologies, on farm water management, crop alignment, *etc*. The

[18] Component wise details was provided in respect of Phase I work (1.62 lakh hectare) and in respect of development of 0.65 lakh hectare area under Phase II, details of components of CAD&WM executed was not provided.

Department of Horticulture and Food Processing implemented this scheme in the State.

As per information provided by Director, Horticulture and Food processing, Lucknow, the financial as well as physical targets for providing facilities of drip/sprinkler irrigation in the eight districts[19] covered under SNP were not achieved during 2017-22. Details of allotment of funds and expenditure there against during 2017-22 in the eight districts has been given in **Appendix 4.3(a)** and summerised in **Table 4.10.**

Table 4.10: Financial achievements in PDMC scheme

Year	Financial (₹ in lakh)		
	Allotment	Expenditure *(per cent)*	Surrender *(per cent)*
(1)	(2)	(3)	(4)
2017-18	618.66	377.65 (61)	241.01 (39)
2018-19	973.90	947.58 (97)	26.32 (03)
2019-20	1,886.92	1,781.45 (94)	105.47 (06)
2020-21	2,512.50	2,499.02 (99)	13.48 (01)
2021-22	1,835.88	1,814.07 (99)	21.81 (01)

(Source: Data provided by the Director, Horticulture and Food Processing, Lucknow)

The achievements of physical targets of PDMC in the eight districts during 2017-22 were in the range of 20 to 72 *per cent* during 2017-18, 39 to 100 *per cent* during 2018-19, 71 to 100 *per cent* during 2019-20, 21 to 100 *per cent* during 2020-21 and 15 to 63 *per cent* during 2021-22, as detailed **Appendix 4.3(b)**. The shortfalls in the physical targets were mainly due to slower adoption of new technology, unavailability of willing and suitable beneficiaries and farmers of Schedule Caste Sub Plan (SCSP) and Covid-19 pandemic. Thus, the purpose of promoting micro irrigation in the command of the project was not achieved.

In reply, the State Government stated (November 2023) that determination and construction of field channels and pressure wells was possible only after the operation of water in the canals. The State Government further added that in 1.01 lakh hectare CCA, irrigation was to be provided through pressure/sprinkler system for which provision of funds was not part of the estimated cost of ₹ 9,802.68 crore of SNP. The State Government stated that after completion of project, work on project for laying of underground pipelines to extend irrigation facility in 900 hectare through pressure irrigation was taken up as pilot project which was in progress.

The reply of the State Government was not tenable, because project cost of ₹ 9,802.68 crore included ₹ 16.14 crore for construction of sumps (pressure well) on different locations of RMC and Campierganj branch canal and on distributary and minor canals.

[19] Gonda, Balrampur, Shravasti, Bahraich, Gorakhpur, Basti, Sant Kabir Nagar and Siddharthnagar. Information in respect of Maharajganj was not provided.

4.7.2 Water User Association not formed

Water User Association (WUA) at *kulaba*, minor or distributary canal level was to be constituted by I&WRD with the main objective to bring about water users' participation in water management and also to create among the water users', a sense of ownership of irrigation system in their area.

Audit examination of the records, however, revealed that WUAs were not constituted in the command area of SNP compromising the efficient operation of the canal network.

In reply, the State Government stated (November 2023) that the process of formation of WUAs was in progress in command area of canals constructed in Phase-I and II of the Saryu Nahar Pariyojana.

The fact remains that one of the most essential components of water distribution from the canals could not be executed due to which the objective of optimum utilisation of available water in the canals with public participation, remained unachieved as of November 2023.

4.8 Maintenance of canals

Proper and periodic maintenance of canal structures is vital to ensure effective utilisation of created assets. Assessment of need of maintenance through regular survey and physical verifications, timely availability of adequate funds and effective system of maintenance of canals are the components to keep the structures fit for use. The State Government prescribed (December 2000) norms [20] in respect of funding for the maintenance of canals of different capacity.

Audit observed that during 2017-22, ₹100.81 crore was allotted to CEs, SNP for maintenance of canals, which included ₹ 23.79 crore allotted to the five test checked divisions for canal maintenance. Engineer-in-Chief, I&WRD, however, did not provide the basis for allocation of funds to SNP.

The per year requirement of fund as per norms and allotment to the five test checked divisions during 2017-22 was as detailed in **Table 4.11**.

Table 4.11: Allotment of fund to the test checked divisions

(₹ in lakh)

Name of division	No of canals	Total CCA (hectare)	Fund required as per norms per year	Allotment of fund (*per cent*)				
				2017-18	2018-19	2019-20	2020-21	2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
SNK, Ayodhya	62	42,522	93.22	44.47	77.20	126.33	71.22	268.41
SNK-2 Gonda	52	79,534	161.94	10.00	8.00	6.00	48.86	196.45
SNK-3 Gonda	31	69,214	142.07	10.00	8.00	7.00	55.13	155.56

[20] ₹ 210 per hectare for main, branch and distributary canals and ₹ 195 per hectare for minor canals.

Name of division	No of canals	Total CCA (hectare)	Fund required as per norms per year	Allotment of fund (*per cent*)				
				2017-18	2018-19	2019-20	2020-21	2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
SNK-4 Gonda	91	1,15,836	232.37	10.00	18.00	28.86	58.37	259.03
SNK-4 Basti	100	73,863	148.84	11.23	26.28	295.48	197.02	382.52
Total	**336**	**3,80,969**	**778.44**	**85.70 (11)**	**137.48 (18)**	**463.67 (60)**	**430.60 (55)**	**1,261.97 (162)**

(Source: Data collected from the test checked divisions)
Note: SNK- Saryu Nahar Khand

The five test checked divisions did not estimate the requirement of funds for maintenance of canals during 2017-22 due to which adequacy of funds *vis-a-vis* requirements could not be ascertained in Audit. However, the allocation of funds to the five test checked divisions during 2017-21 was only 11 to 55 *per cent* as compared to the norm prescribed by the State Government in the year 2000. The allocation of funds in the year 2021-22 was, however, more than the norms (162 *per cent*).

Audit also examined the performance of maintenance of canals in above mentioned five test checked divisions and noticed that during 2017-22, only 12 to 83 *per cent* canals were taken up for maintenance as detailed in **Table 4.12.**

Table 4.12: Details of canals taken up for maintenance during 2017-22

Name of division	Total number of canals	2017-18	2018-19	2019-20	2020-21	2021-22
		Number of canals (*per cent*)	Number of canals (*per cent*)	Number of canals (*per cent*)	Number of canals (*per cent*)	Number of canals (*per cent*)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
SNK, Ayodhya	62	25 (40)	28 (45)	32 (52)	12 (19)	17 (27)
SNK-2, Gonda	52	07 (13)	08 (15)	06 (12)	16 (31)	50 (96)
SNK-3, Gonda	31	NA	NA	NA	16 (52)	31 (100)
SNK-4, Gonda	91	08 (09)	04 (04)	17 (19)	27 (30)	85 (93)
SNK-4, Basti	100	00 (00)	06 (06)	39 (39)	14 (14)	95 (95)
Total	**336**	**40 (12)**	**46 (14)**	**94 (28)**	**85 (25)**	**278 (83)**

Note: Not made available (NA), SNK- Saryu Nahar Khand
(Source: Schedule of works expenditure provided by test checked divisions)

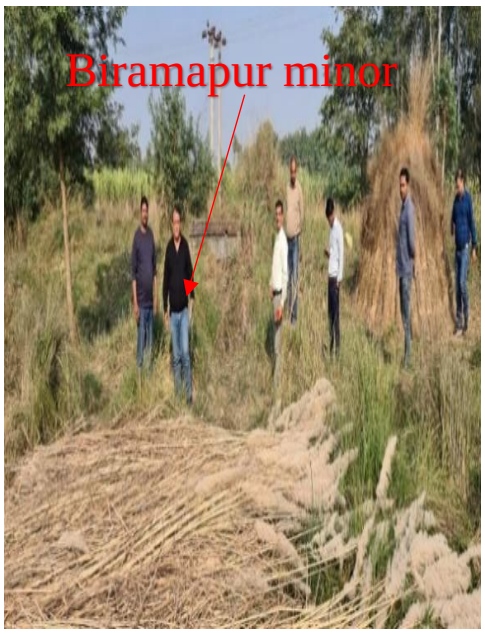
The divisions stated that in view of limited availability of finance, the maintenance work was done keeping in view the condition of the canals.

Joint physical verification of selected canals by Audit disclosed poor condition of canals as the canals were full of shrubs/vegetation and the banks of many canals were found damaged, as depicted in photographs below:

Photographs showing poor maintenance of canals

Photograph-4.4: Chilbila minor

Photograph-4.5: Udaipur minor



Photograph-4.6: Biramapur minor canal

Photograph-4.7: Narayanpur Dy.

In reply, the State Government stated (January 2024) that under SNP, an amount of ₹ 151.84 crore has been estimated on the basis of rates determined by CWC for annual maintenance of canals which is proposed for inclusion in budgetary provisions for next year.

Thus, a significant component of maintenance of created assets under the project was marred with *ad-hocism* due to which the physical condition of the canals constructed under the project had deteriorated majorly.

4.9 Human resources availability

For implementation of an irrigation project, apart from planning for the aspects, *vis.*, technical, agricultural, environmental and financial, aspect of suitable and sufficient organisational structure including human resources should also be considered and adequate number of human resources should be put in place with proper documentation.

According to the Irrigation manual of order prescribed by I&WRD, Deputy Revenue Officer along with *Jiledar* is responsible for canal revenue and matters related to revenue establishment.

Besides, *Amin* is responsible for measurement of irrigation and to prepare the '*Jamabandis*'[21] for revenue collection. The '*Patraul*' is to read and report the gauges of water flow in the canals and to give information about the total areas irrigated till that date in the gauge reports on the 10th and 25th of every month, as well as to submit this information in Form 14B by 25th of every month to *Jiledar*.

There were shortages of human resources affecting upkeep of records

Audit examination of records in the test checked divisions however revealed shortage of key human resources, affecting the operation of SNP. It was observed in Audit that in 14 out of 17 test checked divisions, in respect of 10 to 52 *per cent* posts, the officers/officials were not deployed as per the sanctioned strength and the shortages ranged between six to 100 *per cent*. The shortage of human resource was more critical in respect of posts, *vis. Jiledar, Seench Parvekshak*[22], and *Seenchpal*[23] who are responsible for overseeing the operation of canals and canal revenue related issues. It was observed in 14 out of 17 test checked divisions that Deputy Revenue Officers/*Jiledar* were not deployed alongwith huge shortage of other staff ranging between 11 *per cent* to 100 *per cent*. Details are given in ***Appendix 4.4.*** Due to shortage of staff, upkeep of records related to operation of canals was very poor in all test checked divisions.

In reply, the State Government stated (January 2024) that revenue related works had been executed through contractors by hiring manpower under contingency item.

Audit, however, did not find any evidence in the records in respect of such engagements in the test checked divisions.

[21] Records of irrigation provided and collection of revenue from the beneficiaries.
[22] To prepare *Jamabandi*, assist WUA and to monitor the functions of *Seenchpal.*
[23] To record and report gauges of water, to report correctness of outlets, to record irrigated area *etc.*

To sum up, the Saryu Nahar Pariyojana was commissioned in December 2021, however all the components of the works were not completed. There was shortfall in creation of CCA envisaged under the project due to incompleteness of the canals. Besides, the created CCA was not being used effectively as even though water was available in the canals, it could not be diverted into the field due to not constructing of outlets and sumps. Shortfall in release of water in the Saryu Main Canal against demand was in the range of 11 to 88 *per cent* during kharif and 13 to 93 *per cent* during rabi season during 2017-22. The canals lacked adequate maintenance which deteriorated the canal constructed under the project majorly.

The command area development work was completed only in a small part of the created CCA, due to which the proposed irrigation facility could not be extended in Ghaghara Rapti Doab and Rapti Rohin Doab. Water user associations were not formed. Key personnel were not deployed in the test checked divisions due to which upkeep of records related to operation of canals was inadequate.

Recommendation 9: *The State Government should immediately determine the status of physical completion of works and creation of culturable command area and accordingly should expedite the completion of balance works.*

The State Government replied (November 2023) that railway bridges were to be constructed at several places and operation of canals was obstructed due to non-acquisition of land at some places. The State Government further stated that the action had almost been completed on these issues.

Recommendation 10: *The canals constructed under Rapti Main canal and its distribution system should immediately be put to use by constructing outlets, sumps in the canals and field channels and drains below the outlets.*

Recommendation 11: *There is an urgent need to identify the solution for providing adequate water in the command area of the Saryu Nahar Pariyojana, especially in Rabi season so that farmers can get the expected benefits.*

Recommendation 12: *There is an urgent need to review the works of Command Area Development in view of huge gap between the created CCA and utilised CCA.*

Recommendation 13: *Water user associations should be formed immediately to ensure equal distribution of available water in the canal network.*

Recommendation 14: *Maintenance of created assets should be ensured to keep the assets usable in order to get the envisaged benefits.*

(RAM HIT)
Principal Accountant General (Audit-I)
Uttar Pradesh

PRAYAGRAJ
THE 13 APR 2025

COUNTERSIGNED

(K. SANJAY MURTHY)
Comptroller and Auditor General of India

NEW DELHI
THE 17 APR 2025

Appendices

Appendix 1.1
Phases of Saryu Nahar Pariyojana

(Reference: Paragraph 1.1)

Phase-I (target date of completion: 1999-2000[1])

Head regulator of Saryu Link Canal, Saryu Barrage, Rapti Barrage, head of Utraula Pump Canal, head of Dumariyaganj Pump Canal, SLC, SMC, Imamganj branch canal, distribution system of SMC and Imamganj branch canal, cross drainage works/syphon of SLC and SMC, pucca works of Saryu canal system and Imamganj branch canal.

Phase-II (target date of completion: 2003-04)

Pump house of Ayodhya Pump Canal, pump house of Gola Pump Canal, Main canal and branches, i.e., Basti Branch, Gonda Branch, Bansi Branch, Tarabganj Branch, Itiyathok Branch, Mankapur Branch and Khalilabad Branch and their distribution system.

Phase-III (target date of completion: 2006)

Construction of canals in Trans-Rapti area (Rapti Main Canal and its distribution system).

[1] Earlier, works of Phase-I set was targeted to complete by 1993-95.

Appendix 1.2
Components of Saryu Nahar Pariyojana

(Reference: Paragraph 1.6)

Component	Unit	Proposed quantity
(1)	(2)	(3)
Head works		
Additional Head works	Number	01
Saryu Link Channel	Number	01
Saryu Barrage	Number	01
Rapti Barrage	Number	01
Main Canals		
Saryu Link Channel	Km	47.135
Saryu Main Canal	Km	63.150
Rapti Main Canal	Km	125.682
Rapti Link Channel	Km	21.400
Branch Canals		
Imamganj Branch Canal	Km	58.600
Basti Branch Canal	Km	160.800
Gonda Branch Canal	Km	120.600
Bansi Branch Canal	Km	67.360
Tarabganj Branch Canal	Km	89.800
Itiyathoke Branch Canal	Km	54.400
Mankapur Branch Canal	Km	30.000
Khalilabad Branch Canal	Km	77.060
Tikari Branch Canal	Km	55.880
Campierganj Branch Canal	Km	62.106
Distributary and Minor canals	Km	5377.440
Pump canals		
Ayodhya Pump Canal	Number	01
Dumariyaganj Pump Canal	Number	01
Utraula Pump Canal	Number	01
Gola Pump Canal	Number	01
Drains	Km	3996.660
Construction of outlets	Number	17639
Construction of sump wells	Number	942
On Farm Development	Lakh Hectare	11.29

(Source: Detailed Project Report 2017)

Appendix 3.1
Details of financial statements of Saryu Nahar Pariyojana

(Reference: Paragraph 3.2.1)

(₹ in crore)

S/N	Year	Central Loan Assistance / Central Assistance				State share	Grand total (Col. 6+7)	Expenditure	Savings/ Surrender
		Loan	Grant-in-aid	NABARD assistance	Total (col. 3+4+5)				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	1977-1978 to 2016-17	466.55	1,583.65	238.39	2,288.59	2,997.34	5,285.93	5,185.43	100.50
2	2017-2018	0.00	0.00	0.00	0.00	994.83	994.83	767.81	227.02
3	2018-2019	0.00	305.00	0.00	305.00	755.00	1,060.00	1,060.00	0.00
4	2019-2020	0.00	358.30	0.00	358.30	1,151.95	1,510.25	1,494.18	16.07
5	2020-2021	0.00	358.30	0.00	358.30	696.95	1,055.25	1,055.25	0.00
6	2021-2022	0.00	0.00	0.00	0.00	440.44	440.44	440.44	0.00
	Total	**466.55**	**2,605.25**	**238.39**	**3,310.19**	**7,036.51**	**10,346.70**	**10,003.11**	**343.59**

(Source: Information provided by CE, Saryu Pariyojana-I, Ayodhya and Central Water Commission monitoring reports)

Year-wise Budget provision, Central and State share release

(₹ in crore)

S/N	Year	Budget provision	Allotment	Central share released	State share released
(1)	(2)	(3)	(4)	(5)	(6)
1	2012-13	300.00	224.47	67.98	156.49
2	2013-14	750.00	499.70	380.75	118.95
3	2014-15	1,200.00	623.00	210.85	412.15
4	2015-16	800.00	834.00	500.00	334.00
5	2016-17	2,000.00	300.00	62.00	238.00
6	2017-18	1,002.11	994.83	0.00	994.83
7	2018-19	1,276.87	1,060.00	305.00	755.00
8	2019-20	1,420.25	1,510.25	358.30	1,151.95
9	2020-21	1,404.00	1,055.25	358.30	696.95
10	2021-22	610.00	440.44	0.00	440.44
	Total		**7,541.94**	**2,243.18**	**5,298.76**

(Source: Information provided by CE, Saryu Pariyojana -I, Ayodhya and appropriation account for budget provision)

Appendix 3.2
Physical target and achievement

(Reference: Paragraph 3.2.2)

S/N	Item of work	Unit	Target for 2012-13	Achievement	Shortfall in *per cent*	Target for 2013-14	Achievement	Shortfall in *per cent*	Target for 2014-15	Achievement	Shortfall in *per cent*	Target 12/2015 to 03/2016	Achievement	Shortfall in *per cent*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	Land	Hectare	500.30	110.03	78	1800.00	540.25	70	1550.00	412.45	73	500.00	229.76	54
2	Afflux Bund Pucca Works	Number	06	00	100	05	03	40	00	00	00	02	00	100
	Earth Work	Km	1.400	0.000	100	5.500	0.000	100	0.000	0.000	00	0.000	0.000	000
3	**Main canal & branch canal**													
	Pucca Works	Number	69	55	20	55	73	00	207	167	19	187	187	00
	Earth Work	Km	5.560	0.720	87	60.000	70.270	00	61.010	40.490	34	3.000	1.980	34
4	**Distributary & minor canals**													
	Pucca Works	Number	754	705	06	500	501	00	552	287	48	250	15	94
	Earth Work	Km	380.610	36.610	90	1200.000	106.450	91	792.000	64.270	92	270.000	6.500	98
5	**Escape channel**													
	Pucca Works	Number	10	16	00	10	17	00	08	15	00	05	00	100
	Earth Work	Km	7.170	5.890	18	7.170	0.190	97	3.100	0.140	95	1.500	0.000	100
6	**Drains**													
	Pucca Works	Number	103	139	00	1000	145	86	92	75	18	15	00	100
	Earth Work	Km	162.150	0.400	100	200.000	2.000	99	29.150	40.000	00	30.000	0.000	100
Range of *per cent*[2]					**18 to 100**			**40 to 100**			**18 to 95**			**34 to 100**

[2] Ignored upto ten *per cent* short achievement.

S/N	Item of work	Unit	Target for 2016-17	Achievement	Shortfall in *per cent*	Target for 2017-18	Achievement	Shortfall in *per cent*	Target for 2018-19	Achievement	Shortfall in *per cent*	Target for 2019-20	Achievement	Shortfall in *per cent*
			(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
1	Land	Hectare	696.44	116.39	83	550	267.93	51	489.70	584.62	00	401.689	507.86	00
2	Aflux Bund Pucca Works	Number	00	00	00	00	00	00	00	00	00	00	00	00
	Earth Work	Km	16.500	0.700	96	7.900	00	100	2.680	2.000	25.000	16.500	00	100
3	**Main canal & branch canal**													
	Pucca Works	Number	120	160	00	120	147	00	162	225	00	227	222	02
	Earth Work	Km	25.000	5.190	79	17.000	3.520	79	27.700	19.480	30.000	52.840	43.320	18
4	**Distributary & minor canals**													
	Pucca Works	Number	550	181.00	67	300	115	62	517	546	00	1490	1104	26
	Earth Work	Km	500.000	42.970	91	225.000	13.830	94	396.050	302.210	24.000	701.220	227.680	68
5	**Escape channel**													
	Pucca Works	Number	05	07	00	05	07	00	02	00	100	14	02	86
	Earth Work	Km	10.000	0.000	100	5.000	00	100	1.700	0.250	85.000	17.730	0.100	99
6	**Drains**													
	Pucca Works	Number	30.00	15.00	50	20	15	25	07	04	43	00	00	00
	Earth Work	Km	100.000	0.000	100	50.000	43.000	14	37.000	14.750	60.000	84.100	2.800	97
Range in *per cent*					**50 to 100**			**14 to 100**			**24 to 100**			**18 to 100**

(Source: Information provided by CE, Saryu Pariyojana-I, Ayodhya.)

Appendix-3.3
Undischarged financial liabilities on work in the test checked divisions

(Reference: Paragraph 3.3)

(₹ in crore)

S/N	Name of division	Liabilities on works
(1)	**(2)**	**(3)**
1	Saryu Nahar Khand-4, Basti	3.70
2	Saryu Nahar Khand, Bansi, Siddharthnagar	26.02
3	Rapti Canal Construction Division-1 Tulsipur, Balrampur	4.56
4	Rapti Canal Construction Division-1 Shohratgarh, Siddharthnagar	21.98
5	Rapti Canal Construction Division-2 Shohratgarh, Siddharthnagar	3.15
6	Rapti Canal Construction Division-3 Shohratgarh, Siddharthnagar	11.58
7	Saryu Nahar Khand-3, Bahraich	6.22
8	Saryu Nahar Khand-4, Bahraich	11.00
9	Saryu Nahar Khand-6, Shravasti	0.30
10	Saryu Nahar Khand-7, Bahraich	3.33
11	Saryu Drainage Khand-3, Gonda	9.10
12	Saryu Nahar Khand-5, Gonda	3.90
13	Saryu Nahar Khand-4, Gonda	1.55
14	Saryu Nahar Khand, Ayodhya	2.07
Total		**108.461**

(Source: Information provided by test checked divisions & SE, IXth Circle Irrigation Works, Bahraich)

Appendix 3.4
Undischarged financial liabilities on land in the test checked divisions

(Reference: Paragraph 3.3)

(₹ in crore)

S/N	Name of division	Land acquired but payment not made
(1)	**(2)**	**(3)**
1	Rapti Canal Construction Division-1, Shohratgarh, Siddharthnagar	0.76
2	Rapti Canal Construction Division-2, Shohratgarh, Siddharthnagar	0.66
3	Rapti Canal Construction Division-3, Shohratgarh, Siddharthnagar	0.55
4	Saryu Nahar Khand-3, Bahraich	0.15
5	Saryu Nahar Khand-4, Bahraich	0.58
6	Saryu Nahar Khand-6, Shravasti	5.64
7	Saryu Nahar Khand-7, Bahraich	0.25
8	Saryu Nahar Khand-3, Gonda	2.70
9	Saryu Drainage Khand-3, Gonda	1.77
10	Saryu Nahar Khand-5, Gonda	3.30
11	Saryu Nahar Khand-2, Gonda	2.20
12	Saryu Nahar Khand-4, Basti	3.52
13	Saryu Nahar Khand-4, Gonda	2.05
14	Saryu Nahar Khand, Ayodhya	5.38
Total		**29.51**

(Source: Information provided by test checked divisions & SE, IXth Circle irrigation Works, Bahraich)

Appendix-3.5
Year-wise increase in cost of land during 1999-2022

(Reference: Paragraph 3.4.1.2)

(₹ in crore)

Year	Land purchased (in hectare)	Expenditure incurred	Cost of land per hectare (col.3/col.2)
(1)	**(2)**	**(3)**	**(4)**
1999-2000	1,102.45	25.10	0.02
2000-01	1,088.81	33.10	0.03
2001-02	1,622.30	58.87	0.04
2002-03	881.96	42.61	0.05
2003-04	851.35	34.19	0.04
2004-05	798.13	31.00	0.04
2005-06	1,704.77	92.23	0.05
Sub total (1999-2006)	**8,049.77**	**317.10**	**0.04**
2006-07	629.96	96.07	0.15
2007-08	503.80	48.46	0.10
2008-09	645.52	70.16	0.11
2009-10	75.80	6.06	0.08
Sub total (2006-2010)	**1,855.08**	**220.75**	**0.12**
2010-11	197.59	26.68	0.14
2011-12	62.47	14.35	0.23
2012-13	110.03	55.58	0.51
2013-14	540.25	143.71	0.27
2014-15	412.45	127.44	0.31
2015-16	229.76	214.49	0.93
2016-17	116.39	54.98	0.47
Sub total (2010-2017)	**1,668.94**	**637.23**	**0.41**
2017-18	267.93	479.94	1.79
2018-19	584.62	602.28	1.03
2019-20	507.86	851.32	1.68
2020-21	103.44	189.37	1.83
2021-22	23.51	54.07	2.30
Sub Total (2017-2022)	**1,487.36**	**2,176.98**	**1.73**
Grand Total (1999-2022)	**13,061.15**	**3,352.06**	**3.90**

(Source: Information provided by CE, Saryu Pariyojana-I, Ayodhya and CE, Saryu Pariyojana-II, Gonda)

Appendix 3.6
Non-transfer of ownership of land

(Reference: Paragraph 3.4.1.3)

(Area in hectare)

S/N	Name of division	Total land purchased	Land ownership transferred	Land ownership transferred *in per cent*
(1)	**(2)**	**(3)**	**(4)**	**(5)**
1	Saryu Nahar Khand, Bansi, Siddharthnagar	213.45150	212.38950	99.50
2	Saryu Nahar Khand -2, Gonda	68.85640	13.02400	18.90
3	Saryu Nahar Khand -5, Gonda	273.22970	252.93620	92.60
4	Saryu Nahar Khand -7, Bahraich	123.10309	21.83090	17.70
5	Rapti Canal Construction Division-1, Tulsipur, Balrampur	162.24200	86.07800	53.10
6	Saryu Nahar Khand-3, Gonda	35.09200	19.89770	56.70
7	Saryu Nahar Khand-6, Shravasti	250.60200	199.02400	79.40
8	Saryu Nahar Khand-4, Gonda	66.55300	Nil*	Nil
9	Rapti Canal Construction Division-3, Shohratgarh, Siddharthnagar	35.22600	21.01550	59.70
	Total	**1228.35569 Say 1228.36**	**826.19580 Say 826.20**	**67.30**

(Source: Information provided by test checked divisions)
**In progress*

Appendix 3.7
Total number of SEs' level and EEs' level contract bonds

(Reference: Paragraph 3.5)

(₹ in lakh)

S/N	Name of division	SE level contract bonds		EE level contract bonds	
		Total number of contract bonds	Total amount	Total number of contract bonds	Total amount
(1)	(2)	(3)	(4)	(5)	(6)
1	Rapti Canal Construction Division-1, Shohratgarh, Siddharthnagar	45	13075.13	06	50.24
2	Rapti Canal Construction Division-1, Tulsipur, Balrampur	31	64335.64	86	847.01
3	Rapti Canal Construction Division-2, Shohratgarh, Siddharthnagar	10	1943.17	11	122.60
4	Rapti Canal Construction Division-2, Tulsipur, Balrampur	59	42271.71	10	224.90
5	Rapti Canal Construction Division-3, Shohratgarh, Siddharthnagar	22	3064.89	02	14.70
6	Saryu Drainage Khand-3, Gonda	29	5316.05	52	447.44
7	Saryu Nahar Khand, Ayodhya	02	91.67	314	2493.88
8	Saryu Nahar Khand, Bansi, Siddharthnagar	24	46090.62	79	785.80
9	Saryu Nahar Khand-2, Gonda	01	38.48	210	1945.02
10	Saryu Nahar Khand-3, Bahraich	19	40510.74	10	249.52
11	Saryu Nahar Khand-3, Gonda	01	41.76	236	1724.90
12	Saryu Nahar Khand-4, Bahraich	07	8394.58	80	1651.11
13	Saryu Nahar Khand-4, Basti	18	2158.15	299	2206.02
14	Saryu Nahar Khand-4, Gonda	02	3759.82	140	1303.31
15	Saryu Nahar Khand-5, Gonda	03	15455.18	07	59.32
16	Saryu Nahar Khand-6, Shravasti	09	45660.12	07	85.39
17	Saryu Nahar Khand-7, Bahraich	11	2491.71	08	71.63
Total		**293**	**294699.42**	**1557**	**14282.79**
			Say ₹ 2946.99 crore		**Say ₹ 142.83 crore**

(Source: Information provided by test checked divisions)

Appendix 3.8
Six major works for construction of Rapti Main Canal (RMC) and its distribution system

(Reference: Paragraph 3.5)

(₹ in crore)

S/N	Name of work	Estimated cost	Name of circle	Agreement number	Date of agreement	Agreed cost
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
1	Construction of RMC and its distribution system between Km 0.000 to 35.000	375.77	SE, IXth Circle Irrigation works, Bahraich	21/SE/2012-13	30.03.2013	354.39
2	Construction of RMC and its distribution system between Km 35.000 to 50.000	305.49	SE, IXth Circle Irrigation works, Bahraich	03/SE/2013-14	15.04.2013	296.48
3	Construction of RMC and its distribution system between Km 50.000 to 60.000	153.93	SE, Rapti Canal Construction Circle-1, Balrampur	01/SE/2013-14	08.04.2013	144.14
4	Construction of RMC and its distribution system between Km 60.000 to 80.000	308.06	SE, Rapti Canal Construction Circle-1, Balrampur	02/SE/2013-14	08.04.2013	306.90
5	Construction of RMC and its distribution system between Km 80.000 to 114.000	365.41	SE, Rapti Canal Construction Circle-2, Basti	02/SE/2013-14	19.04.2013	360.89
6	Construction of RMC and its distribution system between Km 114.000 to 125.682	317.48	SE, Rapti Canal Construction Circle-2, Basti	01/SE/2013-14	12.04.2013	316.87
	Total	**1826.14**				**1779.67**

(Source: Information provided by test checked divisions)

Appendix 3.9
Total selected works (SE level and EE level contract bonds)

(Reference: Paragraph 3.5)

(₹ in lakh)

S/N	Name of division	Selected SE level works		Selected EE level works	
		Total number of contract bonds	Total amount	Total number of contract bonds	Total amount
(1)	(2)	(3)	(4)	(5)	(6)
1	Rapti Canal Construction Division-1, Shohratgarh, Siddharthnagar	10	7,650.72	02	18.15
2	Rapti Canal Construction Division-1, Tulsipur, Balrampur	04	31,774.24	09	164.12
3	Rapti Canal Construction Division-2, Shohratgarh, Siddharthnagar	04	1,276.83	04	63.51
4	Rapti Canal Construction Division-2, Tulsipur, Balrampur	09	37,891.82	03	78.08
5	Rapti Canal Construction Division-3, Shohratgarh, Siddharthnagar	07	1,572.87	01	7.73
6	Saryu Drainage Khand-3, Gonda	04	2,355.36	07	105.62
7	Saryu Nahar Khand, Ayodhya	02	91.67	30	541.53
8	Saryu Nahar Khand, Bansi, Siddharthnagar	06	41,950.58	09	140.34
9	Saryu Nahar Khand-2, Gonda	01	38.48	21	432.02
10	Saryu Nahar Khand-3, Bahraich	05	38,036.92	02	60.07
11	Saryu Nahar Khand-3, Gonda	01	41.76	24	410.40
12	Saryu Nahar Khand-4, Bahraich	04	8,984.66	09	270.28
13	Saryu Nahar Khand-4, Basti	05	443.12	40	624.55
14	Saryu Nahar Khand-4, Gonda	02	3,760.42	13	298.23
15	Saryu Nahar Khand-5, Gonda	02	14,706.51	02	40.15
16	Saryu Nahar Khand-6, Shravasti	05	45,104.24	04	46.89
17	Saryu Nahar Khand-7, Bahraich	06	925.55	04	38.33
Total		**77**	**2,36,605.75**	**184**	**3,340.00**
			Say ₹ 2,366.06 crore		**Say ₹ 33.40 crore**

(Source: Information provided by test checked divisions)

Appendix 3.10
Division-wise Notice Inviting Tender issued before Technical Sanction
(SE level contracts)

(Reference: Paragraph 3.5.1)

(₹ in lakh)

S/N	Name of division	Total number of works (contract bonds)	Total contract bond amount	NIT before technical sanction (range in days)
(1)	(2)	(3)	(4)	(5)
1	Rapti Canal Construction-1, Tulsipur, Balrampur	04	31,774.24	03 to 335 days
2	Rapti Canal Construction-2, Tulsipur, Balrampur	04	741.81	03 to 279 days
3	Rapti Canal Construction-3, Shohratgarh, Siddharthnagar	02	551.20	56 to 76 days
4	Saryu Nahar Khand, Bansi, Siddharthnagar	04	2,079.46	01 to 20 days
5	Saryu Nahar Khand-4, Basti	02	254.39	04 to 88 days
6	Saryu Nahar Khand-6, Shravasti	03	44,165.71	08 to 395 days
7	Saryu Nahar Khand -7, Bahraich	06	925.55	08 to 375 days
	Total	**25**	**80,492.36**	**01 to 395 days**
			Say ₹ 804.92 crore	

(Source: Information provided by test checked divisions)

Appendix 3.11
Division-wise Notice Inviting Tender issued before Technical Sanction
(EE level contracts)

(Reference: Paragraph 3.5.1)

(₹ in lakh)

S/N	Name of division	Total number of works (contract bonds)	Total contract bond amount	NIT before technical sanction (range in days)
(1)	(2)	(3)	(4)	(5)
1	Rapti Canal Construction-1, Tulsipur, Balrampur	04	79.97	83 to 293 days
2	Rapti Canal Construction-2, Shohratgarh, Siddharthnagar	02	14.80	29 to 33 days
3	Saryu Nahar Khand, Ayodhya	01	22.33	09 days
4	Saryu Nahar Khand-3, Gonda	03	45.63	258 to 324 days
5	Saryu Nahar Khand-6, Shravasti	01	8.97	25 days
	Total	**11**	**171.70**	**09 to 324 days**
			Say ₹1.72 crore	

(Source: Information provided by test checked divisions)

Appendix 3.12
Division-wise details of financial bids opened before Technical Sanction (TS)

(Reference: Paragraph 3.5.1)

(i) Opening of financial bid before TS (SE level works)

(₹ in lakh)

S/N	Name of division	Total number of works (contract bonds)	Total contract bond amount	Opening of financial bid before technical sanction (range) in days
(1)	**(2)**	**(3)**	**(4)**	**(5)**
1	Rapti Canal Construction-1, Tulsipur, Balrampur	02	919.75	22 to 309 days
2	Rapti Canal Construction-2, Tulsipur, Balrampur	02	338.72	90 to 239 days
3	Rapti Canal Construction-3, Shohratgarh, Siddharthnagar	01	430.48	70 days
4	Saryu Nahar Khand, Bansi, Siddharthnagar	01	803.27	29 days
5	Saryu Nahar Khand-4, Basti	01	56.24	68 days
6	Saryu Nahar Khand-7, Bahraich	01	85.22	351 days
	Total	**08**	**2,633.68**	**22 to 351 days**
			Say ₹ 26.34 crore	

(Source: Information provided by test checked divisions)

(ii) Opening of Financial Bid before TS (EE level works)

(₹ in lakh)

S/N	Name of Division	Total number of works (contract bonds)	Total contract bond amount	Opening of financial bid before technical sanction (range) in days
(1)	**(2)**	**(3)**	**(4)**	**(5)**
1	Saryu Nahar Khand-1, Tulsipur, Balrampur	03	54.80	61 to 68 days
2	Saryu Nahar Khand-2, Shohratgarh, Siddharthnagar	01	6.40	13 days
3	Saryu Nahar Khand-3, Gonda	02	25.86	221 days
4	Saryu Nahar Khand-6, Shravasti	01	8.97	6 days
	Grand Total	**07**	**96.03**	**06 to 221 days**

(Source: Information provided by test checked divisions)

Appendix 3.13
Over estimation in earth work in six major works of Rapti Main Canal (RMC) and its distribution system
(Reference: Paragraph 3.5.2.1)

(Quantity in cum and rate in ₹ per cum)

S/N	Name of work (Construction of RMC and its distribution system)	Name of division	Item of Earth Work	Executed Quantity of Earth work		Rate analysed in estimate		Rate analysed by Audit		Excess provision of rate in estimate		Excess over estimated cost of Earth Work		Over estimation in cost of Earth Work (col. 13+14)
				RMC	Dys & Minors	RMC	Dys & Minors	RMC	Dys & Minors	RMC (col. 7-9)	Dys & Minors (col. 8-10)	RMC (col. 5*11)	Dys & Minors (col. 6*12)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	Km 0.000 to 35.000	Saryu Nahar Khand-3, Bahraich	Cutting above spring level	1448673.21	14354.90	83.56	70.15	71.61	63.50	11.95	6.65	17311644.86	95460.09	17407104.94
2			Cutting below spring level	444170.94	0.00	197.56	0.00	185.61	0.00	11.95	0.00	5307842.73	0.00	5307842.73
3		Saryu Nahar Khand -4, Bahraich	Cutting above spring level	1738372.83	8231.42	83.56	70.15	71.61	63.50	11.95	6.65	20773555.29	54738.94	20828294.24
4			Cutting below spring level	200057.90	0.00	197.56	0.00	185.61	0.00	11.95	0.00	2390691.91	0.00	2390691.91
5	Km 35.000 to 50.000	Saryu Nahar Khand -7, Bahraich	Cutting above spring level	563082.53	114812.82	78.56	70.15	66.61	63.50	11.95	6.65	6728836.17	763505.23	7492341.40
6			Cutting below spring level	522328.87	0.00	182.56	0.00	170.61	0.00	11.95	0.00	6241829.98	0.00	6241829.98
7			Filling (105 m lead)	0.00	286630.71	0.00	88.00	0.00	81.35	0.00	6.65	0.00	1906094.23	1906094.23
8		Saryu Nahar Khand -6, Shravasti	Cutting above spring level	676895.20	82010.80	78.56	70.15	66.61	63.50	11.95	6.65	8088897.64	545371.79	8634269.43
9			Cutting below spring level	548869.59	0.00	182.56	0.00	170.61	0.00	11.95	0.00	6558991.60	0.00	6558991.60
10			Filling (105 m lead)	0.00	102272.51	0.00	88.00	0.00	81.35	0.00	6.65	0.00	680112.17	680112.17
11	Km 50.000 to 60.000	Saryu Nahar Khand -5, Gonda	Cutting above spring level	1109136.68	174814.03	92.08	70.78	80.13	64.13	11.95	6.65	13254183.33	1162513.30	14416696.63
12			Cutting above spring level	225147.09	0.00	92.08	70.78	80.13	64.13	11.95	6.65	2690507.73	0.00	2690507.73
13			Cutting below spring level	483461.58	0.00	126.08	0.00	114.13	0.00	11.95	0.00	5777365.88	0.00	5777365.88
14			Cutting below spring level	406710.52	0.00	126.08	0.00	114.13	0.00	11.95	0.00	4860190.71	0.00	4860190.71
15			Filling (105 m lead)	55145.57	0.00	102.30	102.30	90.35	90.35	11.95	11.95	658989.56	0.00	658989.56
16	Km 60.000 to 80.000	Saryu Drainage Khand -3, Gonda & Rapti Canal Construction Division-1, Tulsipur, Balrampur	Cutting above spring level	2101684.45	29271.91	89.52	73.22	77.57	66.57	11.95	6.65	25115129.18	194658.20	25309787.38
17			Cutting below spring level	690560.20	0.00	127.52	0.00	115.57	0.00	11.95	0.00	8252194.39	0.00	8252194.39
18			Filling (105 m lead)	74826.42	164281.75	102.30	102.30	90.35	90.35	11.95	11.95	894175.72	1963166.91	2857342.63
19	Km 80.000 to 114.000	Rapti Canal Construction Division -2, Tulsipur, Balrampur & Rapti Canal Construction Division -2, Shohratgarh, Siddharthnagar	Cutting above spring level	1104814.73	22377.15	101.50	87.00	72.33	64.83	29.17	22.17	32227445.67	496101.42	32723547.09
20			Filling (105 m lead)	49348.79	0.00	142.50	135.50	113.33	113.33	29.17	22.17	1439504.20	0.00	1439504.20
21			Cutting above spring level	362150.32	17170.69	101.50	87.00	72.33	64.83	29.17	22.17	10563924.86	380674.18	10944599.04

S/N	Name of work (Construction of RMC and its distribution system)	Name of division	Item of Earth Work	Executed Quantity of Earth work		Rate analysed in estimate		Rate analysed by Audit		Excess provision of rate in estimate		Excess over estimated cost of Earth Work		Over estimation in cost of Earth Work (col. 13+14)
				RMC	Dys & Minors	RMC	Dys & Minors	RMC	Dys & Minors	RMC (col. 7-9)	Dys & Minors (col. 8-10)	RMC (col. 5*11)	Dys & Minors (col. 6*12)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
22	Km 114.000 to 125.682	Saryu Nahar Khand, Bansi, Siddharthnagar	Filling (105 m lead)	70654.43	4662.92	142.50	135.50	113.33	113.33	29.17	22.17	2060989.72	103376.96	2164366.68
	Total											**181196891.15**	**8345773.42**	**189542664.57**
														Say ₹ 18.95 crore

(Source: Information provided by test checked divisions)

Appendix 3.14
Delayed sanction of L-section of canals

(Reference: Paragraph 3.5.3.1)

S/N	Name of work (construction of RMC chainage)	Name of canal	Category of canal	Date of award of contract	Date of approval of L-section	Delay in months from the date of award of contract
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Km 0.000 to 35.000	Shahpur Pureshivdeen	Minor	30.03.2013	10.09.2013	5
2		Choubeypurva-2 Parsohna	Minor	30.03.2013	10.09.2013	5
3		Choubeypurva	Minor	30.03.2013	11.07.2013	3
4		Tendua Sonpur	Minor	30.03.2013	11.07.2013	3
5		Barbahan Bairihawa	Minor	30.03.2013	11.07.2013	3
6		Badalpur Bankatwa	Minor	30.03.2013	26.12.2014	20
7		Buthar	Minor	30.03.2013	25.11.2013	7
8		Bankatwa	Minor	30.03.2013	19.01.2015	21
9		Pure Parsad	Minor	30.03.2013	25.11.2013	7
10		Bahadurpur	Distributary	30.03.2013	15.03.2013	0
11		Amaraha	Minor	30.03.2013	20.01.2014	9
12		Motipur Badhrahwa	Minor	30.03.2013	20.01.2014	9
13		Janki Nagar	Minor	30.03.2013	17.01.2015	21
14		Arnhwa	Minor	30.03.2013	17.01.2015	21
15		Vishnupur	Minor	30.03.2013	17.01.2014	9
16	Km 35.000 to 50.000	Parsia	Minor	15.04.2013	15.12.2013	8
17		Ganwaria	Minor	15.04.2013	15.01.2014	9
18		Sahjana	Minor	15.04.2013	01.10.2014	18
19		Khairman	Distributary	15.04.2013	20.01.2014	9
20		Singhpur	Minor	15.04.2013	28.02.2014	10
21		Laliya	Minor	15.04.2013	10.12.2014	20
22		Kanhara	Minor	15.04.2013	08.12.2014	20
23		Amwa	Minor	15.04.2013	31.10.2013	6
24		Motipur	Distributary	15.04.2013	31.10.2013	6
25		Sikri	Minor	15.04.2013	16.08.2014	16
26	Km 50.000 to 60.000	Bhujehra	Distributary	08.04.2013	25.08.2014	16
27		Roopnagar	Minor	08.04.2013	16.04.2015	24
28		Gulriha	Distributary	08.04.2013	03.01.2015	21
29		Hisampur	Distributary	08.04.2013	03.11.2014	19
30		Gopalpur	Distributary	08.04.2013	19.09.2014	17
31		Badalpur	Minor	08.04.2013	01.10.2014	18
32	Km 60.000 to 80.000	Bankatwa	Distributary	08.04.2013	19.09.2014	17
33		Mahadev	Minor	08.04.2013	17.06.2014	14
34		Bhadui	Minor	08.04.2013	01.10.2014	18
35		Prempur	Distributary	08.04.2013	25.08.2014	16
36		Hallaura	Distributary	08.04.2013	09.07.2014	15
37	Km 80.000 to 114.000	Chaipurwa	Minor	19.04.2013	09.10.2014	18
38		Mahua	Minor	19.04.2013	29.09.2014	17
39		Jamdhara	Minor	19.04.2013	16.05.2019	73
40		Dumri	Minor	19.04.2013	16.05.2019	73
41		Birdpur	Distributary	19.04.2013	14.11.2019	79
42		Pakadihawa	Minor	19.04.2013	29.09.2014	17
43		Khairi	Minor	19.04.2013	22.05.2015	25

S/N	Name of work (construction of RMC chainage)	Name of canal	Category of canal	Date of award of contract	Date of approval of L-section	Delay in months from the date of award of contract
(1)	(2)	(3)	(4)	(5)	(6)	(7)
44		Talkunda	Minor	19.04.2013	16.02.2015	22
45	Km 114.000 to 125.682	Gulhaura	Minor	12.04.2013	04.09.2014	17
46		Parsa	Minor	12.04.2013	04.02.2015	22
47		Beninagar	Minor	12.04.2013	28.01.2015	21
48		Banchauri	Distributary	12.04.2013	04.09.2014	17
49		Matiyar	Minor	12.04.2013	28.01.2015	21
50		Pachuth	Minor	12.04.2013	28.01.2015	21
51		Dhanaura	Distributary	12.04.2013	04.09.2014	17

(Source: Information provided by test checked divisions)

Appendix 3.15
Delayed approval of drawings of masonry structures

(Reference: Paragraph 3.5.3.2)

S/N	Name of canal	Category of canal	Name of structure	Chainage of construction	Date of award of contract	Date of approval of drawing	Delay in sanction of drawing from date of award of contract (in months)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Chainage of RMC: KM 0.000 to 21.000							
1	Rapti Main Canal	Main	Super passage	7.180	30.03.13	08.05.14	13
2	Rapti Main Canal	Main	Village Road Bridge (VRB)	7.900	30.03.13	28.12.13	8
3	Rapti Main Canal	Main	Head Regulator (HR)	7.960	30.03.13	18.04.14	12
4	Rapti Main Canal	Main	Syphon	9.620	30.03.13	17.11.14	19
5	Rapti Main Canal	Main	Provincial Road Bridge (PRB)	10.000	30.03.13	25.11.13	7
6	Rapti Main Canal	Main	HR	10.050	30.03.13	18.04.14	12
7	Rapti Main Canal	Main	VRB	12.080	30.03.13	19.08.13	4
8	Rapti Main Canal	Main	HR	12.550	30.03.13	18.04.14	12
9	Rapti Main Canal	Main	VRB	13.000	30.03.13	27.03.16	35
10	Rapti Main Canal	Main	VRB	14.050	30.03.13	28.08.13	4
11	Rapti Main Canal	Main	Syphon	14.680	30.03.13	21.11.14	19
12	Rapti Main Canal	Main	PRB	16.185	30.03.13	28.12.13	8
13	Rapti Main Canal	Main	HR(R/B)	16.500	30.03.13	18.04.14	12
14	Rapti Main Canal	Main	Syphon	16.750	30.03.13	06.06.14	14
15	Rapti Main Canal	Main	District Road Bridge (DRB)	17.265	30.03.13	25.11.13	7
16	Rapti Main Canal	Main	HR (R/B)	18.400	30.03.13	28.01.14	9
17	Rapti Main Canal	Main	Syphon	18.650	30.03.13	12.11.14	19
18	Rapti Main Canal	Main	DRB	19.000	30.03.13	28.12.13	8
19	Rapti Main Canal	Main	Syphon	19.510	30.03.13	18.07.14	15
20	Rapti Main Canal	Main	HR (R/B)	20.100	30.03.13	24.02.15	22
21	Rapti Main Canal	Main	Inlet	15.550	30.03.13	02.01.21	93
22	Shahpur Pureshivdeen	Minor	VRB	0.795	30.03.13	01.04.14	12
23	Shahpur Pureshivdeen	Minor	VRB	1.410	30.03.13	01.04.14	12
24	Shahpur Pureshivdeen	Minor	VRB	1.975	30.03.13	01.04.14	12
25	Shahpur Pureshivdeen	Minor	PRB	2.540	30.03.13	01.04.14	12
26	Chaoubeypurwa-2 Parsohana	Minor	VRB	0.200	30.03.13	16.04.14	12
27	Chaoubeypurwa-2 Parsohana	Minor	Syphon	0.691	30.03.13	16.10.15	30
28	Chaoubeypurwa-2 Parsohana	Minor	VRB	1.460	30.03.13	16.04.14	12
29	Chaoubeypurwa-2 Parsohana	Minor	Tailfall	2.030	30.03.13	27.12.14	20
30	Choubeypurwa	Minor	VRB	0.465	30.03.13	16.04.14	12
31	Choubeypurwa	Minor	VRB	0.985	30.03.13	16.04.14	12
32	Choubeypurwa	Minor	VRB	1.195	30.03.13	16.04.14	12
33	Choubeypurwa	Minor	VRB	1.655	30.03.13	16.04.14	12
34	Choubeypurwa	Minor	VRB	1.930	30.03.13	16.04.14	12
35	Choubeypurwa	Minor	Tailfall	2.500	30.03.13	27.12.14	20
36	Tendua Sonpur	Minor	Syphon	0.380	30.03.13	NMA	
37	Tendua Sonpur	Minor	VRB	0.530	30.03.13	01.04.14	12
38	Tendua Sonpur	Minor	VRB	1.100	30.03.13	01.04.14	12
39	Tendua Sonpur	Minor	VRB	1.840	30.03.13	01.04.14	12

S/N	Name of canal	Category of canal	Name of structure	Chainage of construction	Date of award of contract	Date of approval of drawing	Delay in sanction of drawing from date of award of contract (in months)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
40	Tendua Sonpur	Minor	DRB	2.070	30.03.13	01.04.14	12
41	Tendua Sonpur	Minor	Tailfall	2.350	30.03.13	27.12.14	20
42	Barbaha Bairihawa	Minor	Syphon	0.510	30.03.13	25.03.15	23
43	Barbaha Bairihawa	Minor	Syphon	1.000	30.03.13	25.03.15	23
44	Barbaha Bairihawa	Minor	DRB	1.008	30.03.13	10.06.14	14
45	Barbaha Bairihawa	Minor	Tailfall	2.050	30.03.13	27.12.14	20
46	Badalpur Bankatwa	Minor	Syphon	0.350	30.03.13	04.10.19	78
47	Badalpur Bankatwa	Minor	VRB	0.963	30.03.13	12.02.15	22
48	Badalpur Bankatwa	Minor	Syphon	1.512	30.03.13	25.03.15	23
49	Badalpur Bankatwa	Minor	VRB	1.635	30.03.13	12.02.15	22
Chainage of RMC: KM 21.000 to 35.000							
50	Rapti Main Canal	Main	Syphon Aqueduct	21.530	30.03.13	29.05.14	13
51	Rapti Main Canal	Main	VRB	21.600	30.03.13	23.02.16	34
52	Rapti Main Canal	Main	PRB	22.732	30.03.13	05.12.14	20
53	Rapti Main Canal	Main	Inlet	23.340	30.03.13	21.11.20	91
54	Rapti Main Canal	Main	Drainage Syphon	23.950	30.03.13	15.01.15	21
55	Rapti Main Canal	Main	HR	24.200	30.03.13	06.02.15	22
56	Rapti Main Canal	Main	VRB	25.500	30.03.13	25.11.13	7
57	Rapti Main Canal	Main	HR	26.300	30.03.13	07.06.14	14
58	Rapti Main Canal	Main	VRB	27.500	30.03.13	25.11.13	7
59	Rapti Main Canal	Main	Drainage Syphon	28.000	30.03.13	06.06.16	38
60	Rapti Main Canal	Main	HR	28.160	30.03.13	06.12.14	20
61	Rapti Main Canal	Main	DRB	28.650	30.03.13	27.11.13	7
62	Rapti Main Canal	Main	Drainage Syphon	30.750	30.03.13	15.01.15	21
63	Rapti Main Canal	Main	HR	31.107	30.03.13	24.12.14	20
64	Rapti Main Canal	Main	VRB	31.310	30.03.13	23.02.16	34
65	Rapti Main Canal	Main	HR	32.400	30.03.13	07.06.14	14
66	Rapti Main Canal	Main	DRB	33.550	30.03.13	25.11.13	7
67	Rapti Main Canal	Main	HR	33.750	30.03.13	07.06.14	14
68	Rapti Main Canal	Main	VRB	30.750	30.03.13	09.04.15	24
69	Aranahwa	Minor	VRB	0.625	30.03.13	01.10.20	90
70	Aranahwa	Minor	VRB	0.805	30.03.13	01.10.20	90
71	Aranahwa	Minor	Drainage Syphon	1.010	30.03.13	01.10.20	90
72	Aranahwa	Minor	VRB	1.210	30.03.13	01.10.20	90
73	Aranahwa	Minor	Drainage Syphon	1.725	30.03.13	01.10.20	90
74	Aranahwa	Minor	VRB	1.820	30.03.13	01.10.20	90
75	Aranahwa	Minor	DRB	2.110	30.03.13	05.10.20	90
76	Aranahwa	Minor	VRB cum fall	2.410	30.03.13	01.10.20	90
77	Aranahwa	Minor	VRB	2.680	30.03.13	01.10.20	90
78	Aranahwa	Minor	VRB cum fall	3.010	30.03.13	01.10.20	90
79	Aranahwa	Minor	VRB	3.360	30.03.13	01.10.20	90
80	Aranahwa	Minor	DRB cum fall	4.320	30.03.13	01.10.20	90
81	Aranahwa	Minor	VRB cum fall	4.680	30.03.13	01.10.20	90
82	Aranahwa	Minor	Drainage Syphon	6.200	30.03.13	01.10.20	90
83	Aranahwa	Minor	DRB	6.610	30.03.13	01.10.20	90
84	Jankinagar	Minor	VRB	0.380	30.03.13	24.04.17	48
85	Jankinagar	Minor	VRB	0.810	30.03.13	24.04.17	48
86	Jankinagar	Minor	VRB	1.810	30.03.13	24.04.17	48
87	Jankinagar	Minor	VRB cum fall	2.400	30.03.13	18.03.20	83

S/N	Name of canal	Category of canal	Name of structure	Chainage of construction	Date of award of contract	Date of approval of drawing	Delay in sanction of drawing from date of award of contract (in months)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
88	Jankinagar	Minor	Syphon	2.530	30.03.13	22.04.20	84
89	Jankinagar	Minor	VRB	2.800	30.03.13	24.04.17	48
90	Jankinagar	Minor	VRB	3.450	30.03.13	24.04.17	48
91	Jankinagar	Minor	VRB cum fall	4.110	30.03.13	27.05.21	97
92	Jankinagar	Minor	Fall	4.450	30.03.13	27.05.21	97
93	Jankinagar	Minor	DRB	4.660	30.03.13	24.04.17	48
94	Motipur Badrahwa	Minor	DRB	0.890	30.03.13	15.07.16	39
95	Motipur Badrahwa	Minor	PRB cum fall	1.800	30.03.13	21.06.18	62
96	Motipur Badrahwa	Minor	VRB cum fall	3.450	30.03.13	20.12.14	20
97	Motipur Badrahwa	Minor	Syphon	4.000	30.03.13	22.04.20	84
98	Motipur Badrahwa	Minor	DRB cum fall	4.350	30.03.13	20.12.14	20
99	Motipur Badrahwa	Minor	DRB cum fall	4.970	30.03.13	20.12.14	20
100	Motipur Badrahwa	Minor	VRB	6.100	30.03.13	16.06.14	14
101	Motipur Badrahwa	Minor	HR	6.200	30.03.13	05.05.21	97
102	Motipur Badrahwa	Minor	DRB cum fall	6.600	30.03.13	20.12.14	20
103	Motipur Badrahwa	Minor	VRB cum fall	8.025	30.03.13	20.12.14	20
104	Motipur Badrahwa	Minor	VRB cum fall	8.600	30.03.13	20.12.14	20
105	Motipur Badrahwa	Minor	VRB cum fall	9.100	30.03.13	20.12.14	20
106	Motipur Badrahwa	Minor	VRB	9.700	30.03.13	16.06.14	14
107	Motipur Badrahwa	Minor	Drainage Syphon	10.200	30.03.13	27.05.21	97
108	Motipur Badrahwa	Minor	DRB cum fall	10.800	30.03.13	20.12.14	20
109	Amaraha	Minor	VRB	0.550	30.03.13	23.05.14	13
110	Amaraha	Minor	VRB	1.100	30.03.13	23.05.14	13
111	Amaraha	Minor	VRB cum fall	2.400	30.03.13	18.11.14	19
112	Amaraha	Minor	VRB	3.000	30.03.13	23.05.14	13
113	Amaraha	Minor	DRB	3.200	30.03.13	23.05.14	13
114	Amaraha	Minor	VRB cum fall	3.800	30.03.13	20.12.14	20
115	Amaraha	Minor	VRB cum fall	4.700	30.03.13	20.12.14	20
116	Amaraha	Minor	VRB	5.100	30.03.13	23.05.14	13
117	Amaraha	Minor	VRB cum fall	5.800	30.03.13	20.12.14	20
118	Amaraha	Minor	Syphon	6.500	30.03.13	05.10.20	90
119	Amaraha	Minor	DRB	7.000	30.03.13	23.05.14	13
120	Amaraha	Minor	VRB	7.600	30.03.13	23.05.14	13
121	Amaraha	Minor	DRB	9.050	30.03.13	23.05.14	13
122	Amaraha	Minor	VRB cum fall	9.500	30.03.13	20.12.14	20
123	Amaraha	Minor	Syphon	10.200	30.03.13	05.10.20	90
124	Vishunpur	Minor	VRB	0.720	30.03.13	08.10.20	90
125	Vishunpur	Minor	Syphon	1.000	30.03.13	05.10.20	90
126	Vishunpur	Minor	VRB	1.525	30.03.13	08.10.20	90
127	Vishunpur	Minor	DRB	2.260	30.03.13	08.10.20	90
128	Vishunpur	Minor	VRB cum fall	2.850	30.03.13	05.10.20	90
129	Vishunpur	Minor	VRB	3.300	30.03.13	08.10.20	90
130	Vishunpur	Minor	VRB	3.900	30.03.13	08.10.20	90
131	Vishunpur	Minor	Syphon	4.670	30.03.13	05.10.20	90
132	Vishunpur	Minor	Syphon	4.770	30.03.13	05.10.20	90
133	Vishunpur	Minor	VRB cum fall	5.000	30.03.13	05.10.20	90
134	Vishunpur	Minor	VRB	5.530	30.03.13	08.10.20	90
135	Vishunpur	Minor	VRB cum fall	5.850	30.03.13	05.10.20	90
136	Vishunpur	Minor	VRB	6.600	30.03.13	08.10.20	90

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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
137	Vishunpur	Minor	VRB	6.900	30.03.13	08.10.20	90
138	Vishunpur	Minor	VRB	7.300	30.03.13	08.10.20	90
139	Bahadurpur	Distributary	VRB	0.450	30.03.13	22.04.20	84
140	Bahadurpur	Distributary	VRB	1.100	30.03.13	22.04.20	84
141	Bahadurpur	Distributary	VRB	1.700	30.03.13	22.04.20	84
142	Bahadurpur	Distributary	VRB	2.000	30.03.13	30.01.15	21
143	Bahadurpur	Distributary	VRB cum fall	2.450	30.03.13	17.01.15	21
144	Bahadurpur	Distributary	HR cum fall	2.900	30.03.13	05.10.20	90
145	Bahadurpur	Distributary	VRB	3.200	30.03.13	22.04.20	84
146	Bahadurpur	Distributary	VRB cum fall	3.650	30.03.13	17.01.15	21
147	Bahadurpur	Distributary	Drainage Syphon	4.100	30.03.13	22.04.20	84
148	Bahadurpur	Distributary	Drainage Syphon	4.400	30.03.13	18.12.20	92
149	Bahadurpur	Distributary	Fall	5.000	30.03.13	17.01.15	21
150	Bahadurpur	Distributary	Drainage Syphon	5.400	30.03.13	18.12.20	92
151	Bahadurpur	Distributary	VRB	5.450	30.03.13	22.04.20	84
152	Bahadurpur	Distributary	VRB	6.200	30.03.13	22.04.20	84
153	Bahadurpur	Distributary	DRB cum fall	6.900	30.03.13	10.06.20	86
154	Bankatwa	Minor	VRB	0.660	30.03.13	07.05.15	25
155	Bankatwa	Minor	VRB	1.090	30.03.13	06.08.15	28
156	Bankatwa	Minor	Drainage crossing (D-xing)	1.450	30.03.13	10.11.20	91
157	Bankatwa	Minor	DRB cum fall	1.720	30.03.13	11.11.20	91
158	Bankatwa	Minor	VRB	2.710	30.03.13	24.02.21	94
159	Bankatwa	Minor	VRB	3.580	30.03.13	06.08.15	28
160	Bankatwa	Minor	DRB cum fall	4.250	30.03.13	10.11.20	91
161	Bankatwa	Minor	VRB	7.110	30.03.13	06.08.15	28
162	Bankatwa	Minor	DRB cum fall	7.980	30.03.13	07.11.20	91
163	Pure Prasad	Minor	VRB	0.700	30.03.13	17.06.14	14
164	Pure Prasad	Minor	Fall	1.430	30.03.13	17.11.14	19
165	Pure Prasad	Minor	DRB	1.690	30.03.13	17.06.14	14
166	Pure Prasad	Minor	VRB	2.425	30.03.13	17.06.14	14
167	Pure Prasad	Minor	VRB	3.300	30.03.13	17.06.14	14
Chainage of RMC: KM 35.000 to 42.100							
168	Rapti Main Canal	Main	VRB	35.350	15.04.13	07.01.16	33
169	Rapti Main Canal	Main	Syphon	35.950	15.04.13	04.03.15	23
170	Rapti Main Canal	Main	HR	36.040	15.04.13	05.12.14	20
171	Rapti Main Canal	Main	PRB	37.100	15.04.13	25.11.13	7
172	Rapti Main Canal	Main	VRB	37.500	15.04.13	25.11.13	7
173	Rapti Main Canal	Main	HR	37.800	15.04.13	05.12.14	20
174	Rapti Main Canal	Main	PRB	38.616	15.04.13	25.11.13	7
175	Rapti Main Canal	Main	Syphon	39.200	15.04.13	04.03.15	23
176	Rapti Main Canal	Main	Cross Regulator (XR)	39.400	15.04.13	04.01.19	69
177	Rapti Main Canal	Main	Escape HR	39.400	15.04.13	23.01.16	33
178	Rapti Main Canal	Main	Syphon	39.700	15.04.13	04.03.15	23
179	Rapti Main Canal	Main	VRB	40.100	15.04.13	07.01.16	33
180	Rapti Main Canal	Main	HR	40.200	15.04.13	05.12.14	20
181	Rapti Main Canal	Main	Syphon	41.650	15.04.13	12.01.19	69
182	Rapti Main Canal	Main	HR	42.100	15.04.13	05.12.14	20
183	Parsia	Minor	VRB	0.585	15.04.13	21.07.14	15

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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
184	Parsia	Minor	VRB	0.810	15.04.13	21.07.14	15
185	Parsia	Minor	VRB	1.350	15.04.13	21.07.14	15
186	Parsia	Minor	VRB	1.650	15.04.13	21.07.14	15
187	Parsia	Minor	Fall	1.750	15.04.13	21.07.14	15
188	Parsia	Minor	VRB	2.236	15.04.13	21.07.14	15
189	Parsia	Minor	VRB cum fall	2.830	15.04.13	21.07.14	15
190	Parsia	Minor	VRB	3.130	15.04.13	21.07.14	15
191	Parsia	Minor	VRB	4.000	15.04.13	21.07.14	15
192	Parsia	Minor	DRB cum fall	4.672	15.04.13	21.07.14	15
193	Parsia	Minor	Fall	5.800	15.04.13	21.07.14	15
194	Parsia	Minor	VRB	6.750	15.04.13	21.07.14	15
195	Ganwaria	Minor	VRB	1.150	15.04.13	24.07.14	15
196	Ganwaria	Minor	DRB	1.600	15.04.13	24.07.14	15
197	Ganwaria	Minor	VRB	2.500	15.04.13	24.07.14	15
198	Ganwaria	Minor	VRB cum fall	2.900	15.04.13	24.07.14	15
199	Ganwaria	Minor	VRB cum fall	3.400	15.04.13	24.07.14	15
200	Ganwaria	Minor	VRB	3.700	15.04.13	18.10.19	78
201	Ganwaria	Minor	DRB	4.100	15.04.13	25.08.14	16
202	Ganwaria	Minor	VRB cum fall	4.500	15.04.13	01.10.19	78
203	Ganwaria	Minor	VRB cum fall	4.900	15.04.13	25.08.14	16
204	Ganwaria	Minor	VRB	10.500	15.04.13	24.07.14	15
205	Ganwaria	Minor	Tail fall	11.400	15.04.13	15.10.14	18
206	Sahjana	Minor	VRB	0.200	15.04.13	14.01.15	21
207	Sahjana	Minor	DRB	1.000	15.04.13	14.01.15	21
208	Sahjana	Minor	VRB cum fall	2.200	15.04.13	14.01.15	21
209	Khairmaan	Distributary	VRB cum fall	1.550	15.04.13	26.07.14	15
210	Khairmaan	Distributary	DRB	1.850	15.04.13	30.04.14	12
211	Khairmaan	Distributary	Syphon	2.100	15.04.13	12.01.19	69
212	Khairmaan	Distributary	Syphon cum DRB	2.300	15.04.13	29.10.20	90
213	Khairmaan	Distributary	VRB	2.900	15.04.13	30.04.14	12
214	Khairmaan	Distributary	DRB cum fall	3.600	15.04.13	25.08.14	16
215	Khairmaan	Distributary	DRB	5.620	15.04.13	26.07.14	15
216	Khairmaan	Distributary	DRB	6.850	15.04.13	23.09.19	77
217	Khairmaan	Distributary	VRB cum fall	11.250	15.04.13	12.09.19	77
218	Khairmaan	Distributary	Tail Wall	12.200	15.04.13	08.10.20	90
219	Singhpur	Minor	Fall	0.400	15.04.13	25.08.14	16
220	Singhpur	Minor	VRB cum fall	0.700	15.04.13	13.08.20	88
221	Singhpur	Minor	Syphon	1.715	15.04.13	05.08.20	88
222	Singhpur	Minor	VRB	2.500	15.04.13	06.07.14	15
223	Singhpur	Minor	DRB	2.900	15.04.13	26.07.14	15
224	Singhpur	Minor	Fall	3.900	15.04.13	04.03.20	83
225	Singhpur	Minor	Syphon	4.050	15.04.13	05.08.20	88
226	Singhpur	Minor	DRB	4.100	15.04.13	26.07.14	15
227	Singhpur	Minor	DRB	5.500/5.550	15.04.13	26.07.14	15
228	Singhpur	Minor	VRB	6.700	15.04.13	26.07.14	15
229	Singhpur	Minor	VRB cum fall	7.300	15.04.13	04.03.20	83
230	Lalia	Minor	DRB	1.200/1.400	15.04.13	06.01.15	21
231	Lalia	Minor	Syphon	2.200	15.04.13	15.10.19	78
232	Lalia	Minor	VRB	2.600/2.700	15.04.13	19.01.15	21

S/N	Name of canal	Category of canal	Name of structure	Chainage of construction	Date of award of contract	Date of approval of drawing	Delay in sanction of drawing from date of award of contract (in months)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
233	Lalia	Minor	Tail wall	3.000	15.04.13	10.09.20	89
234	Kanhara	Minor	Fall	0.600/0.700	15.04.13	14.01.15	21
235	Kanhara	Minor	VRB cum fall	1.050	15.04.13	24.06.20	86
236	Kanhara	Minor	VRB cum fall	2.050	15.04.13	02.07.20	87
237	Kanhara	Minor	VRB	2.835	15.04.13	15.10.19	78
238	Kanhara	Minor	VRB	3.500	15.04.13	15.10.19	78
239	Kanhara	Minor	DRB	4.850	15.04.13	15.10.19	78
240	Kanhara	Minor	VRB cum fall	5.625	15.04.13	02.07.20	87
241	Kanhara	Minor	VRB cum fall	6.375	15.04.13	08.07.20	87
242	Kanhara	Minor	DRB cum fall	7.350	15.04.13	08.07.20	87
Chainage of RMC: KM 42.100 to 50.000							
243	Rapti Main Canal	Main	VRB	42.662	15.04.13	17.10.13	6
244	Rapti Main Canal	Main	VRB	43.450	15.04.13	17.10.13	6
245	Rapti Main Canal	Main	DRB	45.166	15.04.13	17.10.13	6
246	Rapti Main Canal	Main	VRB	47.950	15.04.13	17.10.13	6
247	Rapti Main Canal	Main	VRB	49.850	15.04.13	17.10.13	6
248	Rapti Main Canal	Main	HR	45.600	15.04.13	28.01.14	9
249	Rapti Main Canal	Main	HR	47.600	15.04.13	28.01.14	9
250	Rapti Main Canal	Main	Syphon	49.500	15.04.13	06.02.15	22
251	Rapti Main Canal	Main	Syphon	42.500	15.04.13	06.02.15	22
252	Rapti Main Canal	Main	Syphon	47.100	15.04.13	24.02.15	22
253	Rapti Main Canal	Main	Syphon	43.900	15.04.13	09.04.15	24
254	Rapti Main Canal	Main	DRB	42.200	15.04.13	20.05.16	37
255	Motipur	Distributary	HR	0.180	15.04.13	04.12.18	68
256	Motipur	Distributary	VRB	0.280	15.04.13	26.04.14	12
257	Motipur	Distributary	DRB	0.800	15.04.13	26.04.14	12
258	Motipur	Distributary	D-xing	0.930	15.04.13	26.04.14	12
259	Motipur	Distributary	DRB cum fall	1.740	15.04.13	26.04.14	12
260	Motipur	Distributary	VRB	2.270	15.04.13	26.04.14	12
261	Motipur	Distributary	Fall	3.000	15.04.13	26.04.14	12
262	Motipur	Distributary	Syphon	3.200	15.04.13	21.06.14	14
263	Motipur	Distributary	D-xing	3.570	15.04.13	26.04.14	12
264	Motipur	Distributary	VRB cum fall	3.900	15.04.13	26.04.14	12
265	Motipur	Distributary	D-xing	4.350	15.04.13	26.04.14	12
266	Motipur	Distributary	VRB cum fall	4.600	15.04.13	26.04.14	12
267	Motipur	Distributary	D-xing	4.870	15.04.13	26.04.14	12
268	Motipur	Distributary	VRB cum fall	5.750	15.04.13	21.06.14	14
269	Motipur	Distributary	Syphon	5.960	15.04.13	26.04.14	12
270	Motipur	Distributary	Syphon	6.160	15.04.13	06.08.14	16
271	Motipur	Distributary	VRB	7.020	15.04.13	28.04.14	12
272	Motipur	Distributary	Fall	7.550	15.04.13	28.04.14	12
273	Motipur	Distributary	DRB	7.790	15.04.13	28.04.14	12
274	Motipur	Distributary	Syphon	8.050	15.04.13	28.04.14	12
275	Motipur	Distributary	DRB	8.410	15.04.13	28.04.14	12
276	Motipur	Distributary	Fall	8.860	15.04.13	21.06.14	14
277	Motipur	Distributary	Syphon	9.200	15.04.13	28.04.14	12
278	Motipur	Distributary	DRB cum fall	9.900	15.04.13	21.06.14	14
279	Motipur	Distributary	VRB	10.450	15.04.13	28.04.14	12
280	Motipur	Distributary	Syphon	10.700	15.04.13	28.04.14	12

S/N	Name of canal	Category of canal	Name of structure	Chainage of construction	Date of award of contract	Date of approval of drawing	Delay in sanction of drawing from date of award of contract (in months)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
281	Motipur	Distributary	VRB	10.750	15.04.13	28.04.14	12
282	Motipur	Distributary	DRB	11.100	15.04.13	28.04.14	12
283	Amwa	Minor	Syphon	0.675	15.04.13	21.06.14	14
284	Amwa	Minor	VRB	0.800	15.04.13	28.04.14	12
285	Amwa	Minor	VRB	1.100	15.04.13	28.04.14	12
286	Amwa	Minor	DRB	1.350	15.04.13	21.06.14	14
287	Amwa	Minor	VRB	1.790	15.04.13	28.04.14	12
288	Amwa	Minor	Fall	2.400	15.04.13	30.07.14	15
289	Amwa	Minor	VRB	2.630	15.04.13	28.04.14	12
290	Amwa	Minor	Syphon	2.800	15.04.13	21.06.14	14
291	Amwa	Minor	Syphon	3.250	15.04.13	21.06.14	14
292	Amwa	Minor	DRB cum fall	3.290	15.04.13	18.07.14	15
293	Amwa	Minor	Syphon	3.550	15.04.13	21.06.14	14
294	Amwa	Minor	VRB	4.150	15.04.13	28.04.14	12
295	Amwa	Minor	Fall	4.600	15.04.13	21.06.14	14
296	Amwa	Minor	VRB	5.200	15.04.13	26.04.14	12
297	Amwa	Minor	VRB cum fall	5.450	15.04.13	21.06.14	14
298	Amwa	Minor	Syphon	5.900	15.04.13	26.04.14	12
299	Amwa	Minor	VRB	6.150	15.04.13	26.04.14	12
300	Amwa	Minor	VRB cum fall	6.550	15.04.13	21.06.14	14
301	Amwa	Minor	Syphon	7.200	15.04.13	26.04.14	12
302	Amwa	Minor	VRB	7.500	15.04.13	26.04.14	12
303	Amwa	Minor	Tail wall	8.325	15.04.13	26.04.14	12
304	Sikri	Minor	VRB	0.245	15.04.13	27.08.14	16
305	Sikri	Minor	VRB	1.060	15.04.13	27.08.14	16
306	Sikri	Minor	VRB	1.545	15.04.13	27.08.14	16
307	Sikri	Minor	VRB	2.150	15.04.13	27.08.14	16
308	Sikri	Minor	DRB	2.820	15.04.13	27.08.14	16
309	Sikri	Minor	Fall	3.300	15.04.13	19.12.14	19
310	Sikri	Minor	VRB	3.715	15.04.13	27.08.14	16
311	Sikri	Minor	VRB cum fall	4.160	15.04.13	19.12.14	19
312	Sikri	Minor	Syphon	4.250	15.04.13	06.09.14	17
313	Sikri	Minor	Syphon	4.350	15.04.13	06.09.14	17
314	Sikri	Minor	VRB cum fall	4.740	15.04.13	19.12.14	19
315	Sikri	Minor	DRB cum fall	5.610	15.04.13	19.12.14	19
316	Sikri	Minor	VRB	6.000	15.04.13	19.12.14	19
Chainage of RMC: KM 50.000 to 60.000							
317	Rapti Main Canal	Main	VRB	50.200	08.04.13	22.08.14	16
318	Rapti Main Canal	Main	HR	51.290	08.04.13	20.09.14	17
319	Rapti Main Canal	Main	DRB	51.350	08.04.13	28.02.14	10
320	Rapti Main Canal	Main	PRB	52.110	08.04.13	14.03.14	11
321	Rapti Main Canal	Main	D-xing	52.740	08.04.13	15.12.14	20
322	Rapti Main Canal	Main	Syphon	53.610	08.04.13	10.10.14	18
323	Rapti Main Canal	Main	DRB	53.670	08.04.13	28.02.14	10
324	Rapti Main Canal	Main	HR	54.226	08.04.13	12.01.15	21
325	Rapti Main Canal	Main	DRB	54.240	08.04.13	17.02.14	10
326	Rapti Main Canal	Main	C X-ing	54.940	08.04.13	05.12.14	20
327	Rapti Main Canal	Main	DRB	55.190	08.04.13	17.02.14	10
328	Rapti Main Canal	Main	HR	55.800	08.04.13	19.11.14	19

S/N	Name of canal	Category of canal	Name of structure	Chainage of construction	Date of award of contract	Date of approval of drawing	Delay in sanction of drawing from date of award of contract (in months)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
329	Rapti Main Canal	Main	C X-ing	56.350	08.04.13	11.12.14	20
330	Rapti Main Canal	Main	DRB	57.740	08.04.13	14.03.14	11
331	Rapti Main Canal	Main	HR	58.200	08.04.13	29.09.14	17
332	Rapti Main Canal	Main	VRB	58.240	08.04.13	11.12.14	20
333	Rapti Main Canal	Main	D-xing	58.700	08.04.13	15.12.14	20
334	Rapti Main Canal	Main	DRB	59.160	08.04.13	14.03.14	11
335	Bhujehara	Distributary	DRB	0.052	08.04.13	29.08.14	16
336	Bhujehara	Distributary	VRB	0.240	08.04.13	29.08.14	16
337	Bhujehara	Distributary	DRB	0.380	08.04.13	29.08.14	16
338	Bhujehara	Distributary	VRB	0.545	08.04.13	29.08.14	16
339	Bhujehara	Distributary	DRB cum fall	1.250	08.04.13	22.11.14	19
340	Bhujehara	Distributary	Fall	1.280	08.04.13	11.12.14	20
341	Bhujehara	Distributary	VRB	2.005	08.04.13	20.09.14	17
342	Bhujehara	Distributary	Syphon	2.200	08.04.13	11.12.14	20
343	Bhujehara	Distributary	VRB	2.580	08.04.13	20.09.14	17
344	Bhujehara	Distributary	DRB	2.760	08.04.13	20.09.14	17
345	Bhujehara	Distributary	VRB	3.250	08.04.13	20.09.14	17
346	Bhujehara	Distributary	VRB cum fall	3.826	08.04.13	17.11.14	19
347	Bhujehara	Distributary	DRB	4.270	08.04.13	09.10.14	18
348	Bhujehara	Distributary	Syphon	4.650	08.04.13	06.05.15	25
349	Bhujehara	Distributary	VRB	5.050	08.04.13	19.06.15	26
350	Bhujehara	Distributary	VRB	5.290	08.04.13	20.09.14	17
351	Bhujehara	Distributary	VRB cum fall	5.860	08.04.13	07.10.14	18
352	Bhujehara	Distributary	VRB	6.780	08.04.13	20.09.14	17
353	Bhujehara	Distributary	VRB	7.290	08.04.13	20.09.14	17
354	Bhujehara	Distributary	HR	7.600	08.04.13	19.06.15	26
355	Bhujehara	Distributary	DRB cum fall	7.680	08.04.13	09.10.14	18
356	Bhujehara	Distributary	DRB	8.010	08.04.13	07.10.14	18
357	Bhujehara	Distributary	Syphon	8.200	08.04.13	27.12.14	20
358	Bhujehara	Distributary	VRB	8.600	08.04.13	09.10.14	18
359	Bhujehara	Distributary	Syphon	8.850	08.04.13	27.12.14	20
360	Bhujehara	Distributary	Syphon	9.400	08.04.13	27.12.14	20
361	Bhujehara	Distributary	VRB	9.530	08.04.13	27.10.14	18
362	Bhujehara	Distributary	DRB	9.852	08.04.13	09.10.14	18
363	Bhujehara	Distributary	DRB	10.050	08.04.13	07.10.14	18
364	Bhujehara	Distributary	VRB	10.780	08.04.13	07.10.14	18
365	Bhujehara	Distributary	Syphon	10.850	08.04.13	15.05.18	61
366	Bhujehara	Distributary	Fall	12.000	08.04.13	11.12.14	20
367	Bhujehara	Distributary	DRB	12.350	08.04.13	07.10.14	18
368	Bhujehara	Distributary	VRB	12.650	08.04.13	07.10.14	18
369	Bhujehara	Distributary	VRB	13.175	08.04.13	07.10.14	18
370	Bhujehara	Distributary	VRB cum fall	13.900	08.04.13	11.12.14	20
371	Bhujehara	Distributary	VRB	14.500	08.04.13	07.10.14	18
372	Bhujehara	Distributary	VRB	14.950	08.04.13	07.10.14	18
373	Bhujehara	Distributary	Tail Fall	15.300	08.04.13	11.12.14	20
374	Roopnagar	Minor	DRB	0.125	08.04.13	19.06.15	26
375	Roopnagar	Minor	VRB cum fall	1.120	08.04.13	19.06.15	26
376	Roopnagar	Minor	Syphon	1.510	08.04.13	10.01.17	45
377	Roopnagar	Minor	VRB	1.520	08.04.13	29.07.15	27

S/N	Name of canal	Category of canal	Name of structure	Chainage of construction	Date of award of contract	Date of approval of drawing	Delay in sanction of drawing from date of award of contract (in months)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
378	Roopnagar	Minor	DRB	1.820	08.04.13	29.07.15	27
379	Roopnagar	Minor	Syphon	2.450	08.04.13	10.01.17	45
380	Roopnagar	Minor	VRB cum fall	2.600	08.04.13	10.01.17	45
381	Roopnagar	Minor	VRB	3.020	08.04.13	13.02.19	70
382	Roopnagar	Minor	VRB	3.550	08.04.13	14.11.18	67
383	Roopnagar	Minor	Syphon	3.750	08.04.13	10.01.17	45
384	Roopnagar	Minor	DRB	3.860	08.04.13	29.07.15	27
385	Roopnagar	Minor	VRB	4.150	08.04.13	04.01.19	69
386	Roopnagar	Minor	VRB	4.540	08.04.13	29.07.15	27
387	Roopnagar	Minor	Syphon	4.900	08.04.13	10.01.17	45
388	Roopnagar	Minor	VRB	4.940	08.04.13	29.07.15	27
389	Roopnagar	Minor	VRB	5.310	08.04.13	13.02.19	70
390	Roopnagar	Minor	VRB	5.950	08.04.13	14.11.18	67
391	Roopnagar	Minor	VRB cum fall	6.400	08.04.13	14.11.18	67
392	Gulriha Hisampur	Distributary	Syphon	0.180	08.04.13	07.10.15	30
393	Gulriha Hisampur	Distributary	Fall	0.600	08.04.13	10.03.15	23
394	Gulriha Hisampur	Distributary	VRB cum fall	1.200	08.04.13	19.06.15	26
395	Gulriha Hisampur	Distributary	Syphon	1.548	08.04.13	15.12.16	44
396	Gulriha Hisampur	Distributary	Syphon	2.200	08.04.13	15.12.16	44
397	Gulriha Hisampur	Distributary	DRB	2.425	08.04.13	19.06.15	26
398	Gulriha Hisampur	Distributary	Fall	3.000	08.04.13	19.06.15	26
399	Gulriha Hisampur	Distributary	DRB cum fall	3.800	08.04.13	20.12.16	44
400	Gulriha Hisampur	Distributary	DRB	4.060	08.04.13	22.09.15	29
401	Gulriha Hisampur	Distributary	Fall	4.600	08.04.13	07.07.15	27
402	Gulriha Hisampur	Distributary	VRB	4.744	08.04.13	22.12.16	44
403	Gulriha Hisampur	Distributary	VRB	5.170	08.04.13	22.09.15	29
404	Gulriha Hisampur	Distributary	Fall	5.400	08.04.13	07.07.15	27
405	Gulriha Hisampur	Distributary	VRB	5.675	08.04.13	21.12.16	44
406	Gulriha Hisampur	Distributary	DRB	6.200	08.04.13	20.12.16	44
407	Gulriha Hisampur	Distributary	Syphon	6.500	08.04.13	15.12.16	44
408	Gulriha Hisampur	Distributary	Syphon	7.050	08.04.13	10.01.17	45
409	Gulriha Hisampur	Distributary	DRB	7.160	08.04.13	20.12.16	44
410	Gulriha Hisampur	Distributary	Syphon	7.170	08.04.13	10.01.17	45
411	Gulriha Hisampur	Distributary	DRB	7.770	08.04.13	26.02.19	70
412	Gulriha Hisampur	Distributary	Fall	8.000	08.04.13	20.12.16	44
413	Gulriha Hisampur	Distributary	VRB	8.070	08.04.13	21.12.16	44
414	Gulriha Hisampur	Distributary	Fall	8.200	08.04.13	20.12.16	44
415	Gulriha Hisampur	Distributary	VRB	8.470	08.04.13	21.12.16	44
416	Gulriha Hisampur	Distributary	Syphon	9.100	08.04.13	26.02.19	70
417	Gulriha Hisampur	Distributary	VRB	9.770	08.04.13	26.02.19	70
418	Hisampur	Distributary	DRB	0.300	08.04.13	07.01.15	21
419	Hisampur	Distributary	VRB cum fall	0.800	08.04.13	19.02.15	22
420	Hisampur	Distributary	Fall	0.850	08.04.13	19.02.15	22
421	Hisampur	Distributary	VRB	1.100	08.04.13	22.06.16	38
422	Hisampur	Distributary	VRB	1.540	08.04.13	07.01.15	21
423	Hisampur	Distributary	DRB cum fall	2.050	08.04.13	02.04.16	36
424	Hisampur	Distributary	VRB	2.400	08.04.13	13.01.15	21
425	Hisampur	Distributary	Fall	2.700	08.04.13	02.04.16	36
426	Hisampur	Distributary	VRB	2.800	08.04.13	22.06.16	38

S/N	Name of canal	Category of canal	Name of structure	Chainage of construction	Date of award of contract	Date of approval of drawing	Delay in sanction of drawing from date of award of contract (in months)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
427	Hisampur	Distributary	VRB	3.200	08.04.13	25.05.15	25
428	Hisampur	Distributary	Fall	3.230	08.04.13	29.07.15	27
429	Hisampur	Distributary	HR	3.560	08.04.13	15.12.16	44
430	Hisampur	Distributary	VRB	3.600	08.04.13	27.12.14	20
431	Hisampur	Distributary	VRB	3.800	08.04.13	10.01.17	45
432	Hisampur	Distributary	VRB cum fall	4.000	08.04.13	26.02.16	34
433	Hisampur	Distributary	VRB	4.720	08.04.13	15.06.15	26
434	Hisampur	Distributary	DRB	4.900	08.04.13	19.02.15	22
435	Hisampur	Distributary	Syphon	5.125	08.04.13	28.03.16	35
436	Hisampur	Distributary	Fall	5.400	08.04.13	26.02.16	34
437	Hisampur	Distributary	VRB	5.975	08.04.13	19.02.15	22
438	Hisampur	Distributary	Syphon	6.100	08.04.13	28.03.16	35
439	Hisampur	Distributary	Fall	6.200	08.04.13	26.02.16	34
440	Hisampur	Distributary	VRB	6.650	08.04.13	22.11.14	19
441	Hisampur	Distributary	VRB	6.900	08.04.13	22.11.14	19
442	Hisampur	Distributary	DRB cum fall	7.475	08.04.13	13.01.15	21
443	Hisampur	Distributary	DRB	7.885	08.04.13	22.11.14	19
444	Hisampur	Distributary	VRB	8.800	08.04.13	26.02.16	34
445	Hisampur	Distributary	Tail Fall	9.400	08.04.13	26.02.16	34
446	Gopalpur	Distributary	DRB	0.380	08.04.13	22.11.14	19
447	Gopalpur	Distributary	VRB cum fall	0.820	08.04.13	17.11.14	19
448	Gopalpur	Distributary	Fall	1.400	08.04.13	07.07.15	27
449	Gopalpur	Distributary	VRB	1.800	08.04.13	07.07.15	27
450	Gopalpur	Distributary	VRB cum fall	2.030	08.04.13	17.11.14	19
451	Gopalpur	Distributary	VRB	2.375	08.04.13	17.11.14	19
452	Gopalpur	Distributary	VRB cum fall	2.775	08.04.13	17.11.14	19
453	Gopalpur	Distributary	VRB	3.165	08.04.13	14.10.14	18
454	Gopalpur	Distributary	Syphon	3.320	08.04.13	16.03.16	35
455	Gopalpur	Distributary	VRB	3.870	08.04.13	11.12.14	20
456	Gopalpur	Distributary	DRB	4.305	08.04.13	22.11.14	19
457	Gopalpur	Distributary	VRB	4.910	08.04.13	29.12.16	44
458	Gopalpur	Distributary	HR	4.910	08.04.13	29.12.16	44
459	Gopalpur	Distributary	Fall	5.200	08.04.13	07.07.15	27
460	Gopalpur	Distributary	DRB cum fall	6.060	08.04.13	07.07.15	27
461	Gopalpur	Distributary	DRB	6.800	08.04.13	28.02.15	22
462	Gopalpur	Distributary	Fall	7.000	08.04.13	28.07.15	27
463	Gopalpur	Distributary	DRB cum fall	7.575	08.04.13	19.02.15	22
464	Gopalpur	Distributary	Syphon	7.840	08.04.13	19.02.15	22
465	Gopalpur	Distributary	VRB	8.020	08.04.13	07.10.14	18
466	Gopalpur	Distributary	Railway Xing	8.800	08.04.13	07.07.15	27
467	Gopalpur	Distributary	DRB	8.850	08.04.13	28.02.15	22
468	Gopalpur	Distributary	VRB	9.150	08.04.13	28.02.15	22
469	Gopalpur	Distributary	VRB	9.830	08.04.13	14.10.14	18
470	Gopalpur	Distributary	DRB cum fall	10.400	08.04.13	14.10.14	18
471	Gopalpur	Distributary	VRB	10.915	08.04.13	14.10.14	18
472	Gopalpur	Distributary	VRB	11.615	08.04.13	27.10.14	18
473	Gopalpur	Distributary	DRB	12.200	08.04.13	27.10.14	18
474	Gopalpur	Distributary	Syphon	12.400	08.04.13	27.10.14	18
475	Gopalpur	Distributary	PRB	13.140	08.04.13	27.10.14	18

S/N	Name of canal	Category of canal	Name of structure	Chainage of construction	Date of award of contract	Date of approval of drawing	Delay in sanction of drawing from date of award of contract (in months)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
476	Gopalpur	Distributary	VRB	13.620	08.04.13	27.10.14	18
477	Badalpur	Minor	DRB	0.050	08.04.13	12.11.14	19
478	Badalpur	Minor	DRB cum HR	0.427	08.04.13	12.11.14	19
479	Badalpur	Minor	DRB	0.563	08.04.13	12.11.14	19
480	Badalpur	Minor	Fall	0.700	08.04.13	17.11.14	19
481	Badalpur	Minor	Syphon	0.840	08.04.13	06.03.19	71
482	Badalpur	Minor	VRB	0.963	08.04.13	12.11.14	19
483	Badalpur	Minor	Fall	1.200	08.04.13	22.11.14	19
484	Badalpur	Minor	DRB	1.450	08.04.13	12.11.14	19
485	Badalpur	Minor	Syphon	1.700	08.04.13	06.03.19	71
486	Badalpur	Minor	VRB	2.050	08.04.13	12.11.14	19
487	Badalpur	Minor	DRB cum fall	2.600	08.04.13	11.12.14	20
488	Badalpur	Minor	Syphon	3.645	08.04.13	06.03.19	71
489	Badalpur	Minor	VRB	4.065	08.04.13	12.11.14	19
Chainage of RMC:: KM 60.000 to 70.000							
490	Rapti Main Canal	Main	D-xing	60.150	08.04.13	16.02.15	22
491	Rapti Main Canal	Main	PRB	61.055	08.04.13	03.03.14	11
492	Rapti Main Canal	Main	D-xing	61.340	08.04.13	10.10.14	18
493	Rapti Main Canal	Main	HR AT	63.000	08.04.13	16.02.15	22
494	Rapti Main Canal	Main	D-xing	63.470	08.04.13	10.10.14	18
495	Rapti Main Canal	Main	VRB	64.070	08.04.13	15.02.14	10
496	Rapti Main Canal	Main	D-xing	64.650	08.04.13	21.10.14	18
497	Rapti Main Canal	Main	D-xing	65.400	08.04.13	16.02.15	22
498	Rapti Main Canal	Main	D-xing	66.020	08.04.13	23.01.17	44
499	Rapti Main Canal	Main	DRB	66.200	08.04.13	15.02.14	10
500	Rapti Main Canal	Main	VRB	67.150	08.04.13	02.04.15	24
501	Rapti Main Canal	Main	Escape/ Xing	67.460	08.04.13	19.10.16	42
502	Rapti Main Canal	Main	D-xing	67.860	08.04.13	16.02.15	22
503	Rapti Main Canal	Main	R/S wing wall	67.860	08.04.13	25.01.20	81
504	Rapti Main Canal	Main	DRB	68.395	08.04.13	02.04.14	24
505	Rapti Main Canal	Main	DRB	69.245	08.04.13	03.03.14	11
506	Rapti Main Canal	Main	DRB	69.885	08.04.13	03.03.14	11
507	Mahadev	Minor	Fall	1.200	08.04.13	01.02.15	22
508	Mahadev	Minor	DRB	1.415	08.04.13	01.02.15	22
509	Mahadev	Minor	VRB/Fall	1.990	08.04.13	01.02.15	22
510	Mahadev	Minor	D-xing	2.465	08.04.13	02.03.20	83
511	Mahadev	Minor	D-xing	2.925	08.04.13	02.03.20	83
512	Mahadev	Minor	PRB	3.650	08.04.13	01.02.15	22
513	Mahadev	Minor	VRB cum fall	3.860	08.04.13	01.02.15	22
514	Mahadev	Minor	VRB	4.760	08.04.13	01.02.15	22
515	Mahadev	Minor	DRB	5.455	08.04.13	01.02.15	22
516	Mahadev	Minor	Tailfall	6.610	08.04.13	01.02.15	22
517	Bankatwa	Distributary	VRB	0.650	08.04.13	05.08.20	88
518	Bankatwa	Distributary	VRB/HR	1.000	08.04.13	05.08.20	88
519	Bankatwa	Distributary	VRB/HR	1.700	08.04.13	05.08.20	88
520	Bankatwa	Distributary	VRB/Fall	2.600	08.04.13	05.08.20	88
521	Bankatwa	Distributary	VRB/Fall	3.150	08.04.13	05.08.20	88
522	Bankatwa	Distributary	Syphon	3.400	08.04.13	05.08.20	88
523	Bankatwa	Distributary	Fall	4.600	08.04.13	05.08.20	88

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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
524	Bankatwa	Distributary	Drainage Syphon	5.350	08.04.13	05.08.20	88
525	Bankatwa	Distributary	DRB/Fall	5.525	08.04.13	18.02.19	70
526	Bankatwa	Distributary	VRB/Fall	6.125	08.04.13	05.08.20	88
527	Bankatwa	Distributary	VRB	7.600	08.04.13	05.08.20	88
528	Bankatwa	Distributary	VRB	8.050	08.04.13	02.11.20	90
529	Bankatwa	Distributary	Fall	9.000	08.04.13	23.02.19	70
530	Bankatwa	Distributary	VRB	17.700	08.04.13	08.01.19	69
531	Rapti escape	Escape	VRB	0.400	08.04.13	11.02.19	70
532	Rapti escape	Escape	Fall	0.550	08.04.13	15.05.19	73
533	Rapti escape	Escape	Tailfall	0.850	08.04.13	31.10.19	78
Chainage of RMC: KM 70.000 to 80.000							
534	Rapti Main Canal	Main	DRB	70.940	08.04.13	NMA	
535	Rapti Main Canal	Main	Drainage Syphon	71.490	08.04.13	07.02.15	22
536	Rapti Main Canal	Main	Drainage Syphon	72.300	08.04.13	07.02.15	22
537	Rapti Main Canal	Main	PRB	72.820	08.04.13	15.02.14	10
538	Rapti Main Canal	Main	Canal crossing (C Xing)	73.060	08.04.13	NMA	
539	Rapti Main Canal	Main	C Xing and VRB	74.200	08.04.13	NMA	
540	Rapti Main Canal	Main	Drainage Syphon	75.400	08.04.13	07.02.15	22
541	Rapti Main Canal	Main	Drainage Syphon	75.800	08.04.13	07.02.15	22
542	Rapti Main Canal	Main	VRB	76.700	08.04.13	NMA	
543	Rapti Main Canal	Main	DRB	77.410	08.04.13	03.03.14	11
544	Rapti Main Canal	Main	HR	77.600	08.04.13	23.09.14	17
545	Rapti Main Canal	Main	DRB	78.670	08.04.13	02.04.14	12
546	Rapti Main Canal	Main	HR	78.900	08.04.13	29.09.14	17
547	Hallaura	Distributary	VRB	0.080	08.04.13	15.02.21	94
548	Hallaura	Distributary	VRB	0.910	08.04.13	20.08.15	28
549	Hallaura	Distributary	Fall	1.500	08.04.13	15.06.15	26
550	Hallaura	Distributary	DRB cum fall	2.300	08.04.13	15.06.15	26
551	Hallaura	Distributary	Fall	2.900	08.04.13	15.06.15	26
552	Hallaura	Distributary	Fall	3.500	08.04.13	15.06.15	26
553	Hallaura	Distributary	Fall	3.608	08.04.13	20.08.15	28
554	Hallaura	Distributary	Syphon	4.035	08.04.13	20.08.15	28
555	Hallaura	Distributary	PRB cum fall	4.540	08.04.13	20.08.15	28
556	Hallaura	Distributary	Railway Xing	4.700	08.04.13	NMA	
557	Hallaura	Distributary	VRB	5.100	08.04.13	20.08.15	28
558	Hallaura	Distributary	VRB	5.850	08.04.13	20.08.15	28
559	Hallaura	Distributary	VRB cum fall	6.580	08.04.13	02.07.15	27
560	Hallaura	Distributary	VRB	7.610	08.04.13	15.06.15	26
561	Hallaura	Distributary	Fall	7.700	08.04.13	NMA	
562	Hallaura	Distributary	HR	7.800	08.04.13	15.06.15	26
563	Hallaura	Distributary	DRB	8.080	08.04.13	02.07.15	27
564	Hallaura	Distributary	VRB	9.250	08.04.13	02.07.15	27
565	Hallaura	Distributary	Fall	9.900	08.04.13	15.06.15	26
566	Hallaura	Distributary	VRB cum fall	10.450	08.04.13	02.07.15	27
567	Hallaura	Distributary	DRB	11.380	08.04.13	02.07.15	27
568	Hallaura	Distributary	VRB cum fall	11.700	08.04.13	02.07.15	27
569	Hallaura	Distributary	DRB	12.400	08.04.13	15.02.21	94
570	Hallaura	Distributary	VRB	12.905	08.04.13	20.08.15	28

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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
571	Prempur	Distributary	DRB	0.300	08.04.13	15.05.15	25
572	Prempur	Distributary	VRB	0.780	08.04.13	15.05.15	25
573	Prempur	Distributary	VRB	1.600	08.04.13	15.05.15	25
574	Prempur	Distributary	Syphon	1.620	08.04.13	17.08.15	28
575	Prempur	Distributary	DRB	2.580	08.04.13	15.05.15	25
576	Prempur	Distributary	DRB cum fall	3.050	08.04.13	17.08.15	28
577	Prempur	Distributary	DRB cum fall	3.520	08.04.13	17.08.15	28
578	Prempur	Distributary	DRB cum fall	4.000	08.04.13	15.06.15	26
579	Prempur	Distributary	PRB	4.550	08.04.13	25.08.20	88
580	Prempur	Distributary	Railway Xing	4.580	08.04.13	NMA	
581	Prempur	Distributary	Syphon	5.290	08.04.13	17.08.15	28
582	Prempur	Distributary	DRB	5.540	08.04.13	15.05.15	25
583	Prempur	Distributary	DRB cum fall	5.900	08.04.13	17.08.15	28
584	Prempur	Distributary	DRB	6.305	08.04.13	17.08.15	28
585	Prempur	Distributary	DRB cum fall	7.340	08.04.13	17.08.15	28
586	Prempur	Distributary	DRB	8.170	08.04.13	17.08.15	28
587	Prempur	Distributary	VRB cum fall	9.250	08.04.13	17.08.15	28
588	Prempur	Distributary	DRB cum fall	10.110	08.04.13	14.08.15	28
589	Prempur	Distributary	DRB	10.300	08.04.13	17.08.15	28
590	Prempur	Distributary	Fall	10.900	08.04.13	15.06.15	26
591	Prempur	Distributary	VRB cum fall	11.410	08.04.13	17.08.15	28
592	Prempur	Distributary	VRB	12.340	08.04.13	14.08.15	28
593	Prempur	Distributary	Fall	12.800	08.04.13	15.06.15	26
594	Prempur	Distributary	DRB	13.080	08.04.13	18.08.15	28
595	Bhadui	Minor	Fall	0.250	08.04.13	15.06.15	26
596	Bhadui	Minor	VRB cum fall	0.620	08.04.13	02.07.15	27
597	Bhadui	Minor	DRB	1.910	08.04.13	02.07.15	27
598	Bhadui	Minor	DRB cum fall	2.080	08.04.13	NMA	
599	Bhadui	Minor	DRB	2.500	08.04.13	NMA	
600	Bhadui	Minor	Fall	2.800	08.04.13	15.06.15	26
601	Bhadui	Minor	DRB	3.275	08.04.13	14.08.15	28
602	Bhadui	Minor	VRB	3.500	08.04.13	14.08.15	28
603	Bhadui	Minor	Fall	4.000	08.04.13	02.07.15	27
604	Bhadui	Minor	VRB	5.000	08.04.13	14.08.15	28
605	Bhadui	Minor	Syphon	5.250	08.04.13	NMA	
606	Bhadui	Minor	Tailfall	5.475	08.04.13	NMA	
Chainage of RMC: KM 80.000 to 98.000							
607	Rapti Main Canal	Main	D-xing	80.063	19.04.13	29.10.14	18
608	Rapti Main Canal	Main	DRB	80.329	19.04.13	20.04.14	12
609	Rapti Main Canal	Main	HR	80.363	19.04.13	03.11.14	19
610	Rapti Main Canal	Main	VRB	81.100	19.04.13	08.10.14	18
611	Rapti Main Canal	Main	HR	81.700	19.04.13	03.11.14	19
612	Rapti Main Canal	Main	Drainage Syphon	82.000	19.04.13	19.04.15	24
613	Rapti Main Canal	Main	Fall	82.600	19.04.13	23.01.14	9
614	Rapti Main Canal	Main	C Xing	82.581	19.04.13	29.04.14	12
615	Rapti Main Canal	Main	VRB	82.806	19.04.13	03.03.14	11
616	Rapti Main Canal	Main	DRB	83.500	19.04.13	20.02.14	10
617	Rapti Main Canal	Main	Fall	83.525	19.04.13	20.02.14	10
618	Rapti Main Canal	Main	Syphon Aqueduct	84.565	19.04.13	19.04.15	24

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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
619	Rapti Main Canal	Main	DRB	84.808	19.04.13	20.02.14	10
620	Rapti Main Canal	Main	HR	85.200	19.04.13	23.05.19	73
621	Rapti Main Canal	Main	Syphon Aqueduct	86.400	19.04.13	10.01.14	9
622	Rapti Main Canal	Main	VRB	86.760	19.04.13	29.09.14	17
623	Rapti Main Canal	Main	Drainage Syphon	86.800	19.04.13	06.04.15	24
624	Rapti Main Canal	Main	Escape	86.950	19.04.13	02.01.19	69
625	Rapti Main Canal	Main	Syphon Aqueduct	87.200	19.04.13	22.05.15	25
626	Rapti Main Canal	Main	Fall	87.400	19.04.13	23.01.14	9
627	Rapti Main Canal	Main	DRB	87.779	19.04.13	19.09.14	17
628	Rapti Main Canal	Main	C Xing	87.779	19.04.13	29.09.17	53
629	Rapti Main Canal	Main	VRB	88.200	19.04.13	21.06.14	14
630	Rapti Main Canal	Main	Syphon Aqueduct	88.500	19.04.13	29.10.14	18
631	Rapti Main Canal	Main	VRB	89.233	19.04.13	NMA	
632	Rapti Main Canal	Main	C Xing	89.898	19.04.13	29.09.14	17
633	Rapti Main Canal	Main	DRB	89.898	19.04.13	05.06.20	86
634	Rapti Main Canal	Main	Pipe Syphon	90.750	19.04.13	12.01.21	93
635	Rapti Main Canal	Main	Fall	91.000	19.04.13	12.03.14	11
636	Rapti Main Canal	Main	DRB	91.406	19.04.13	30.01.15	21
637	Rapti Main Canal	Main	VRB	91.918	19.04.13	18.01.19	69
638	Rapti Main Canal	Main	Canal Syphon	91.918	19.04.13	18.01.19	69
639	Rapti Main Canal	Main	Fall	92.300	19.04.13	03.05.14	13
640	Rapti Main Canal	Main	Pipe Syphon	92.382	19.04.13	18.10.21	102
641	Rapti Main Canal	Main	VRB	92.392	19.04.13	29.04.14	12
642	Rapti Main Canal	Main	VRB	92.851	19.04.13	28.02.14	10
643	Rapti Main Canal	Main	Fall	93.200	19.04.13	03.05.14	13
644	Rapti Main Canal	Main	Pipe Syphon	94.125	19.04.13	12.01.21	93
645	Rapti Main Canal	Main	VRB	94.150	19.04.13	12.01.21	93
646	Rapti Main Canal	Main	Fall	94.200	19.04.13	03.05.14	13
647	Rapti Main Canal	Main	DRB	95.204	19.04.13	29.07.15	27
648	Rapti Main Canal	Main	Drainage Syphon	95.565	19.04.13	04.09.14	17
649	Rapti Main Canal	Main	HR	96.169	19.04.13	20.05.19	73
650	Rapti Main Canal	Main	Drainage Syphon	96.266	19.04.13	07.02.19	70
651	Rapti Main Canal	Main	Railway xing	96.478	19.04.13	12.03.14	11
652	Rapti Main Canal	Main	PRB	96.813	19.04.13	31.08.19	76
653	Rapti Main Canal	Main	Fall	97.000	19.04.13	03.05.14	13
654	Rapti Main Canal	Main	Fall	97.300	19.04.13	03.05.14	13
Chainage of RMC: KM 98.000 to 114.000							
655	Rapti Main Canal	Main	DRB	98.362	19.04.13	22.02.14	10
656	Rapti Main Canal	Main	Fall	98.500	19.04.13	22.03.14	11
657	Rapti Main Canal	Main	HR	98.600	19.04.13	30.05.19	73
658	Rapti Main Canal	Main	VRB	99.014	19.04.13	17.10.14	18
659	Rapti Main Canal	Main	D- xing	100.000	19.04.13	10.09.15	29
660	Rapti Main Canal	Main	DRB	100.628	19.04.13	18.02.15	22
661	Rapti Main Canal	Main	HR	101.700	19.04.13	30.05.19	73
662	Rapti Main Canal	Main	HR	102.300	19.04.13	29.05.19	73
663	Rapti Main Canal	Main	D- xing	102.470	19.04.13	10.04.15	24
664	Rapti Main Canal	Main	D- xing	103.050	19.04.13	04.09.15	29
665	Rapti Main Canal	Main	DRB	103.151	19.04.13	18.02.15	22
666	Rapti Main Canal	Main	X-ing	103.770	19.04.13	10.04.15	24

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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
667	Rapti Main Canal	Main	HR	104.400	19.04.13	25.07.19	75
668	Rapti Main Canal	Main	DRB	104.681	19.04.13	20.03.14	11
669	Rapti Main Canal	Main	Fall	104.800	19.04.13	20.03.14	11
670	Rapti Main Canal	Main	DRB	105.563	19.04.13	20.03.14	11
671	Rapti Main Canal	Main	D- xing	106.000	19.04.13	10.04.15	24
672	Rapti Main Canal	Main	DRB	106.335	19.04.13	28.02.14	10
673	Rapti Main Canal	Main	D- xing	106.500	19.04.13	10.04.15	24
674	Rapti Main Canal	Main	D- xing	107.400	19.04.13	10.09.15	29
675	Rapti Main Canal	Main	DRB	108.029	19.04.13	20.02.14	10
676	Rapti Main Canal	Main	HR	108.560	19.04.13	29.09.14	17
677	Rapti Main Canal	Main	DRB	108.829	19.04.13	22.03.14	11
678	Rapti Main Canal	Main	D- xing	109.570	19.04.13	24.03.15	23
679	Rapti Main Canal	Main	PRB	109.604	19.04.13	28.02.14	10
680	Rapti Main Canal	Main	HR	109.910	19.04.13	20.09.18	65
681	Rapti Main Canal	Main	Fall	110.100	19.04.13	04.03.14	11
682	Rapti Main Canal	Main	DRB	110.388	19.04.13	14.03.14	11
683	Rapti Main Canal	Main	D- xing	111.160	19.04.13	10.04.15	24
684	Rapti Main Canal	Main	C- xing	112.130	19.04.13	04.03.14	11
685	Rapti Main Canal	Main	DRB	112.326	19.04.13	04.03.14	11
686	Rapti Main Canal	Main	D- xing	113.400	19.04.13	10.09.15	29
687	Rapti Main Canal	Main	HR	113.660	19.04.13	23.04.15	24
688	Birdpur	Distributary	VRB	0.250	19.04.13	10.11.20	91
689	Birdpur	Distributary	VRB	0.900	19.04.13	10.11.20	91
690	Birdpur	Distributary	VRB cum fall	1.233	19.04.13	10.11.20	91
691	Birdpur	Distributary	Drainage Syphon	1.600	19.04.13	10.11.20	91
692	Birdpur	Distributary	VRB	1.700	19.04.13	16.08.21	100
693	Birdpur	Distributary	Drainage Syphon	2.050	19.04.13	10.11.20	91
694	Birdpur	Distributary	DRB	2.580	19.04.13	10.08.21	100
695	Birdpur	Distributary	Drainage Syphon	2.770	19.04.13	10.08.21	100
696	Birdpur	Distributary	DRB cum fall	3.320	19.04.13	10.08.21	100
697	Birdpur	Distributary	VRB	3.850	19.04.13	10.08.21	100
698	Birdpur	Distributary	Aqueduct	4.320	19.04.13	10.08.21	100
699	Birdpur	Distributary	VRB	4.800	19.04.13	10.08.21	100
700	Birdpur	Distributary	VRB	5.250	19.04.13	17.08.21	100
701	Birdpur	Distributary	DRB cum fall	5.620	19.04.13	17.08.21	100
702	Birdpur	Distributary	VRB	5.715	19.04.13	17.08.21	100
703	Birdpur	Distributary	VRB	5.950	19.04.13	17.08.21	100
704	Birdpur	Distributary	VRB	6.290	19.04.13	17.08.21	100
705	Birdpur	Distributary	VRB	6.630	19.04.13	17.08.21	100
706	Pakdihawa	Minor	VRB	0.500	19.04.13	29.04.19	72
707	Pakdihawa	Minor	Fall	0.600	19.04.13	21.08.19	76
708	Pakdihawa	Minor	VRB	2.075	19.04.13	29.04.19	72
709	Pakdihawa	Minor	Fall	2.575	19.04.13	21.08.19	76
710	Pakdihawa	Minor	DRB	3.050	19.04.13	20.05.19	73
711	Pakdihawa	Minor	VRB	3.175	19.04.13	20.11.19	79
712	Pakdihawa	Minor	Fall	3.450	19.04.13	21.08.19	76
713	Pakdihawa	Minor	VRB	4.200	19.04.13	29.04.19	72
714	Pakdihawa	Minor	VRB	5.170	19.04.13	29.04.19	72
715	Pakdihawa	Minor	DRB	5.925	19.04.13	20.05.19	73

S/N	Name of canal	Category of canal	Name of structure	Chainage of construction	Date of award of contract	Date of approval of drawing	Delay in sanction of drawing from date of award of contract (in months)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
716	Pakdihawa	Minor	D-xing	6.350	19.04.13	20.11.19	79
717	Pakdihawa	Minor	DRB	6.875	19.04.13	20.05.19	73
718	Pakdihawa	Minor	VRB	7.365	19.04.13	20.05.19	73
719	Pakdihawa	Minor	VRB	7.765	19.04.13	20.05.19	73
720	Pakdihawa	Minor	Tail Wall	7.900	19.04.13	22.04.20	84
721	Khairi	Minor	VRB	0.135	19.04.13	28.04.19	72
722	Khairi	Minor	VRB cum fall	1.060	19.04.13	24.07.19	75
723	Khairi	Minor	Fall	1.700	19.04.13	02.09.19	77
724	Khairi	Minor	VRB	2.020	19.04.13	28.04.19	72
725	Khairi	Minor	DRB	2.700	19.04.13	22.05.19	73
726	Khairi	Minor	DRB cum fall	3.500	19.04.13	24.07.19	75
727	Khairi	Minor	VRB	3.850	19.04.13	06.05.19	73
728	Khairi	Minor	D-xing	4.780	19.04.13	02.09.19	77
729	Khairi	Minor	PRB cum fall	4.800	19.04.13	13.10.20	90
730	Khairi	Minor	D-xing	5.300	19.04.13	13.10.20	90
731	Khairi	Minor	VRB	6.620	19.04.13	22.05.19	73
732	Khairi	Minor	Fall	7.000	19.04.13	02.09.19	77
733	Khairi	Minor	Tail Wall	7.794	19.04.13	05.01.21	93
734	Talkunda	Minor	Fall	0.200	19.04.13	15.09.19	77
735	Talkunda	Minor	D-xing	0.400	19.04.13	27.04.20	84
736	Talkunda	Minor	DRB	0.685	19.04.13	09.04.15	24
737	Talkunda	Minor	D-xing	1.500	19.04.13	27.04.20	84
738	Talkunda	Minor	DRB	1.770	19.04.13	09.04.15	24
739	Talkunda	Minor	VRB	2.300	19.04.13	02.09.15	29
740	Talkunda	Minor	Fall	2.600	19.04.13	05.09.19	77
741	Talkunda	Minor	VRB	3.570	19.04.13	22.09.15	29
742	Talkunda	Minor	PRB	4.685	19.04.13	13.10.20	90
743	Talkunda	Minor	D-xing	4.710	19.04.13	27.04.20	84
744	Talkunda	Minor	Fall	5.500	19.04.13	05.09.19	77
745	Talkunda	Minor	VRB	5.750	19.04.13	22.09.15	29
746	Talkunda	Minor	VRB	6.700	19.04.13	22.05.19	73
747	Talkunda	Minor	VRB	7.210	19.04.13	22.05.19	73
748	Talkunda	Minor	Tail Wall	7.425	19.04.13	22.05.19	73
Chainage of RMC: KM 114.000 to 125.682							
749	Rapti Main Canal	Main	DRB	114.000	12.04.13	18.01.14	9
750	Rapti Main Canal	Main	Railway Xing	114.130	12.04.13	RLY	
751	Rapti Main Canal	Main	DRB	114.300	12.04.13	18.01.14	9
752	Rapti Main Canal	Main	D-xing	114.975	12.04.13	18.01.14	9
753	Rapti Main Canal	Main	H/R	114.540	12.04.13	10.10.14	18
754	Rapti Main Canal	Main	VRB	115.030	12.04.13	18.01.14	9
755	Rapti Main Canal	Main	D- xing	115.325	12.04.13	02.11.18	67
756	Rapti Main Canal	Main	VRB	115.980	12.04.13	20.02.14	10
757	Rapti Main Canal	Main	DRB	116.192	12.04.13	20.02.14	10
758	Rapti Main Canal	Main	H/R	116.400	12.04.13	10.10.14	18
759	Rapti Main Canal	Main	DRB	116.720	12.04.13	28.02.14	10
760	Rapti Main Canal	Main	D-xing	116.730	12.04.13	04.12.14	20
761	Rapti Main Canal	Main	VRB	117.090	12.04.13	28.02.14	10
762	Rapti Main Canal	Main	DRB	117.280	12.04.13	28.02.14	10
763	Rapti Main Canal	Main	D-xing	117.390	12.04.13	04.12.14	20

S/N	Name of canal	Category of canal	Name of structure	Chainage of construction	Date of award of contract	Date of approval of drawing	Delay in sanction of drawing from date of award of contract (in months)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
764	Rapti Main Canal	Main	D-xing	117.700	12.04.13	30.03.15	23
765	Rapti Main Canal	Main	DRB	118.190	12.04.13	28.02.14	10
766	Rapti Main Canal	Main	D-xing	120.080	12.04.13	04.02.15	22
767	Rapti Main Canal	Main	VRB	120.510	12.04.13	12.03.14	11
768	Rapti Main Canal	Main	H/R	121.030	12.04.13	20.09.18	65
769	Rapti Main Canal	Main	D- xing	121.575	12.04.13	02.11.18	67
770	Rapti Main Canal	Main	DRB	121.760	12.04.13	12.03.14	11
771	Rapti Main Canal	Main	VRB	122.360	12.04.13	12.03.14	11
772	Rapti Main Canal	Main	HR	122.440	12.04.13	10.10.14	18
773	Rapti Main Canal	Main	D-xing	123.685	12.04.13	30.03.15	23
774	Rapti Main Canal	Main	DRB	123.940	12.04.13	12.03.14	11
775	Rapti Main Canal	Main	D-xing	124.600	12.04.13	30.03.15	23
776	Rapti Main Canal	Main	DRB	124.560	12.04.13	12.03.14	11
777	Rapti Main Canal	Main	D-xing	125.180	12.04.13	20.12.14	20
778	Rapti Main Canal	Main	D-xing	125.280	12.04.13	18.01.14	9
779	Rapti Main Canal	Main	DRB	125.592	12.04.13	12.03.14	11
780	Rapti Main Canal	Main	Inlet	125.682	12.04.13	14.03.18	59
781	Dhanaura	Distributary	PRB	0.536	12.04.13	09.10.14	18
782	Dhanaura	Distributary	D-xing	0.640	12.04.13	17.09.20	89
783	Dhanaura	Distributary	D-xing	1.620	12.04.13	17.09.20	89
784	Dhanaura	Distributary	DRB	2.075	12.04.13	09.10.14	18
785	Dhanaura	Distributary	DRB	3.421	12.04.13	09.10.14	18
786	Dhanaura	Distributary	D-xing	3.719	12.04.13	17.09.20	89
787	Dhanaura	Distributary	DRB	3.990	12.04.13	09.10.14	18
788	Dhanaura	Distributary	Syphon	5.440	12.04.13	18.12.20	92
789	Dhanaura	Distributary	DRB	5.800	12.04.13	09.10.14	18
790	Dhanaura	Distributary	DRB	7.452	12.04.13	09.10.14	18
791	Dhanaura	Distributary	V R B	9.066	12.04.13	09.10.14	18
792	Dhanaura	Distributary	DRB	9.356	12.04.13	09.10.14	18
793	Dhanaura	Distributary	D- xing	10.220	12.04.13	17.09.20	89
794	Dhanaura	Distributary	D R B	10.220	12.04.13	17.09.20	89
795	Dhanaura	Distributary	D R B	10.330	12.04.13	17.09.20	89
796	Dhanaura	Distributary	D R B	11.313	12.04.13	09.10.14	18
797	Dhanaura	Distributary	V R B	11.446	12.04.13	09.10.14	18
798	Dhanaura	Distributary	V R B	11.860	12.04.13	17.09.20	89
799	Banchauri	Distributary	DRB	0.030	12.04.13	20.09.14	17
800	Banchauri	Distributary	HR	0.300	12.04.13	18.12.20	92
801	Banchauri	Distributary	DRB	0.650	12.04.13	20.09.14	17
802	Banchauri	Distributary	D- xing	0.800	12.04.13	16.09.20	89
803	Banchauri	Distributary	Fall	0.920	12.04.13	16.09.20	89
804	Banchauri	Distributary	VRB	1.000	12.04.13	20.09.14	17
805	Banchauri	Distributary	VRB	1.530	12.04.13	20.09.14	17
806	Banchauri	Distributary	D- xing	1.700	12.04.13	16.09.20	89
807	Banchauri	Distributary	Fall	1.920	12.04.13	18.09.20	89
808	Banchauri	Distributary	Pipe Syphon	2.190	12.04.13	16.09.20	89
809	Banchauri	Distributary	DRB	2.400	12.04.13	20.09.14	17
810	Banchauri	Distributary	D- xing	2.650	12.04.13	16.09.20	89
811	Banchauri	Distributary	Fall	2.920	12.04.13	18.09.20	89
812	Banchauri	Distributary	Pipe Syphon	2.990	12.04.13	NMA	

S/N	Name of canal	Category of canal	Name of structure	Chainage of construction	Date of award of contract	Date of approval of drawing	Delay in sanction of drawing from date of award of contract (in months)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
813	Banchauri	Distributary	VRB	3.000	12.04.13	20.09.14	17
814	Banchauri	Distributary	HR	3.350	12.04.13	18.12.20	92
815	Banchauri	Distributary	D- xing	3.450	12.04.13	16.09.20	89
816	Banchauri	Distributary	VRB	3.800	12.04.13	20.09.14	17
817	Banchauri	Distributary	HR	4.350	12.04.13	18.12.20	92
818	Banchauri	Distributary	D- xing	4.900	12.04.13	16.09.20	89
819	Banchauri	Distributary	VRB	5.200	12.04.13	20.09.14	17
820	Banchauri	Distributary	PRB	5.750	12.04.13	20.09.14	17
821	Banchauri	Distributary	D- xing	5.980	12.04.13	16.09.20	89
822	Banchauri	Distributary	DRB	6.600	12.04.13	20.09.14	17
823	Banchauri	Distributary	VRB	7.050	12.04.13	20.03.15	23
824	Banchauri	Distributary	D- xing	7.600	12.04.13	16.09.20	89
825	Banchauri	Distributary	VRB	7.800	12.04.13	20.09.14	17
826	Matiaar	Minor	VRB	0.140	12.04.13	26.03.15	23
827	Matiaar	Minor	D- xing	0.530	12.04.13	18.12.20	92
828	Matiaar	Minor	D- xing	0.926	12.04.13	18.12.20	92
829	Matiaar	Minor	PRB	1.330	12.04.13	26.03.15	23
830	Matiaar	Minor	D- xing	1.800	12.04.13	18.12.20	92
831	Matiaar	Minor	VRB	2.048	12.04.13	26.03.15	23
832	Matiaar	Minor	DRB	2.160	12.04.13	26.03.15	23
833	Matiaar	Minor	VRB	2.800	12.04.13	26.03.15	23
834	Matiaar	Minor	D- xing	3.170	12.04.13	18.12.20	92
835	Matiaar	Minor	DRB	3.520	12.04.13	26.03.15	23
836	Matiaar	Minor	VRB	3.940	12.04.13	26.03.15	23
837	Matiaar	Minor	VRB	4.490	12.04.13	26.03.15	23
838	Beninagar	Minor	D- xing	0.150	12.04.13	16.09.20	89
839	Beninagar	Minor	VRB	0.440	12.04.13	20.03.15	23
840	Beninagar	Minor	D- xing	0.590	12.04.13	16.09.20	89
841	Beninagar	Minor	D- xing	0.800	12.04.13	16.09.20	89
842	Beninagar	Minor	VRB	1.070	12.04.13	20.03.15	23
843	Beninagar	Minor	DRB	1.220	12.04.13	20.03.15	23
844	Beninagar	Minor	D- xing	1.800	12.04.13	16.09.20	89
845	Beninagar	Minor	VRB	1.850	12.04.13	20.03.15	23
846	Beninagar	Minor	D- xing	2.320	12.04.13	16.09.20	89
847	Beninagar	Minor	VRB	2.450	12.04.13	20.03.15	23
848	Beninagar	Minor	Fall	2.600	12.04.13	18.12.20	92
849	Beninagar	Minor	VRB	2.800	12.04.13	20.03.15	23
850	Pachauth	Minor	VRB	0.218	12.04.13	20.03.15	23
851	Pachauth	Minor	Fall	0.300	12.04.13	16.11.18	67
852	Pachauth	Minor	VRB	0.716	12.04.13	20.03.15	23
853	Pachauth	Minor	PRB	1.135	12.04.13	20.03.15	23
854	Pachauth	Minor	DRB	1.400	12.04.13	17.09.20	89
855	Pachauth	Minor	VRB	2.030	12.04.13	20.03.15	23
856	Parsa	Minor	PRB	0.120	12.04.13	20.03.15	23
857	Parsa	Minor	DRB	0.240	12.04.13	17.09.20	89
858	Parsa	Minor	PRB	1.350	12.04.13	20.03.15	23
859	Parsa	Minor	Fall	1.600	12.04.13	17.09.20	89
860	Parsa	Minor	VRB	1.850	12.04.13	20.03.15	23
861	Parsa	Minor	Fall	2.400	12.04.13	17.09.20	89

S/N	Name of canal	Category of canal	Name of structure	Chainage of construction	Date of award of contract	Date of approval of drawing	Delay in sanction of drawing from date of award of contract (in months)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
862	Parsa	Minor	D- xing	3.296	12.04.13	17.09.20	89
863	Parsa	Minor	VRB	3.830	12.04.13	17.09.20	89
864	Parsa	Minor	D- xing	3.830	12.04.13	17.09.20	89
865	Parsa	Minor	PRB	4.080	12.04.13	20.03.15	23
866	Gulhaura	Minor	VRB	0.820	12.04.13	20.09.14	17
867	Gulhaura	Minor	VRB	1.260	12.04.13	20.09.14	17
868	Gulhaura	Minor	D- xing	1.400	12.04.13	18.09.20	89
869	Gulhaura	Minor	VRB	1.950	12.04.13	17.09.20	89
870	Gulhaura	Minor	D- xing	1.950	12.04.13	18.09.20	89
871	Gulhaura	Minor	D- xing	2.427	12.04.13	18.09.20	89
872	Gulhaura	Minor	PRB	2.561	12.04.13	20.09.14	17
873	Gulhaura	Minor	D- xing	3.400	12.04.13	18.09.20	89
874	Gulhaura	Minor	VRB	3.854	12.04.13	20.09.14	17

(Source: Information provided by test checked divisions)
NMA-Not Made Available to Audit

Appendix 3.16
Division-wise details of tender notices of short periods

(Reference: Paragraph 3.5.4)

(₹ in lakh)

S/N	EE level selected works (contract bond)				SE level selected works (contract bond)			
	Name of Division	Number of works (contract bond)	Total (contract bond) Amount	Range	Name of Division	Number of works (contract bond)	Total (contract bond) Amount	Range
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Rapti Canal Construction Division-2, Shohratgarh, Siddharthnagar	04	63.51	10 to 16 days	Rapti Canal Construction Division-2, Shohratgarh, Siddharthnagar	03	1,115.03	11 to 15 days
2	Rapti Canal Construction Division-3, Shohratgarh, Siddharthnagar	01	7.73	16 days	Rapti Canal Construction Division-3, Shohratgarh, Siddharthnagar	06	1,479.83	08 to 17 days
3	Saryu Drainage Khand-3, Gonda	06	105.62	10 to 22 days	Saryu Drainage Khand-3, Gonda	03	2,185.97	12 to 18 days
4	Saryu Nahar Khand, Ayodhya	30	541.53	13 to 22 days	Saryu Nahar Khand-4, Bahraich	03	6,692.43	13 to 17 days
5	Saryu Nahar Khand-3, Bahraich	02	60.07	15 days	Saryu Nahar Khand-6, Shravasti	01	96.03	12 days
6	Saryu Nahar Khand-3, Gonda	22	373.46	05 to 28 days				
7	Saryu Nahar Khand-4, Bahraich	9	270.28	14 to 18 days				
8	Saryu Nahar Khand-4, Gonda	13	298.23	13 to 23 days				
	Total	**87**	**1,720.43**	**05 to 28 days**	**Total**	**16**	**11,569.29**	**08 to 18 days**

(Source: Information provided by test checked divisions)

Appendix 3.17
Excess cost of RCC/CC works in six major works of Rapti Main Canal (RMC) and its distribution system

(Reference: Paragraph 3.6.1)

S/N	Name of work (Chainage of construction of RMC and its Dys. & Minors)	Name of the Division	Construction work of	Item of work	Agreed rate	Rate in contractor bill	Cement bag per cum taken in estimate	Cement bag per cum in mix design	Difference (col. 8 – 9)	Rate of cement per bag	Amount of difference (col. 10*11)	Executed quantity as of March 2022	Cost of excess cement (col. 12*13)	Pending recovery as of June 2024 against col. 14
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	Km 0.000 to 35.000	Saryu Nahar Khand-3, Bahraich	RMC	M-15 (A40)	6930.00	6930.00	6.10	5.66	0.44	325.00	143.00	6706.71	959059.53	
2				M-15 (A20)	7020.00	7020.00	6.10	5.93	0.17	325.00	55.25	817.16	45148.09	
3				M-20 (A20)	7830.00	7830.00	7.90	6.80	1.10	325.00	357.50	7041.70	2517407.75	
4				M-25 (A20)	9090.00	9090.00	11.10	8.80	2.30	325.00	747.50	11096.21	8294416.98	
5				M-25 (A12)	9900.00	9900.00	11.10	8.80	2.30	325.00	747.50	444.92	332577.70	
6				M-30 (A20)	9889.68	9900.00	11.90	9.00	2.90	325.00	942.50	23510.28	22158438.90	
		Total										**49616.98**	**34307048.95**	**34307048.95**
7		Saryu Nahar Khand-4, Bahraich	RMC	M-15 (A40)	6930.00	6930.00	6.10	5.66	0.44	325.00	143.00	837.94	119825.42	
8				M-15 (A20)	7020.00	7020.00	6.10	5.93	0.17	325.00	55.25	672.75	37169.44	
9				M-20 (A20)	7830.00	7830.00	7.90	6.80	1.10	325.00	357.50	1891.60	676247.00	
10				M-25 (A20)	9090.00	9090.00	11.10	8.80	2.30	325.00	747.50	29678.75	22184865.63	
11				M-25 (A12)	9900.00	9900.00	11.10	8.80	2.30	325.00	747.50	77.32	57796.70	
12				M-30 (A20)	9889.68	9900.00	11.90	9.00	2.90	325.00	942.50	6046.11	5698458.68	
13			Dy & Minor	M-10 (A40)	6030.00	6030.00	4.30	4.20	0.10	325.00	32.50	70.34	2286.05	
14				M-20 (A20)	7830.00	7830.00	7.90	6.80	1.10	325.00	357.50	31.97	11429.28	
		Total										**39306.78**	**28788078.18**	**28788078.18**
15	Km 50.000 to 60.000	Saryu Nahar Khand-5, Gonda	RMC	M-10 (A40)	6300.00	6300.00	4.30	4.28	0.02	325.00	6.50	5073.27	32976.26	
16				M-15 (A20)	8100.00	8100.00	6.10	5.84	0.26	325.00	84.50	9340.91	789306.90	
17				M-25 (A20)	9405.00	9405.00	11.10	9.52	1.58	325.00	513.50	25699.69	13196790.82	
18			Dy & Minor	M-10 (A40)	6300.00	6300.00	4.30	4.28	0.02	325.00	6.50	7418.33	48219.15	
19				M-20 (A20)	8100.00	8100.00	7.90	6.92	0.98	325.00	318.50	3949.64	1257960.34	
		Total										**51481.84**	**15325253.45**	**15325253.45**

S/N	Name of work (Chainage of construction of RMC and its Dys. & Minors)	Name of the Division	Construction work of	Item of work	Agreed rate	Rate in contractor bill	Cement bag per cum taken in estimate	Cement bag per cum in mix design	Difference (col. 8 – 9)	Rate of cement per bag	Amount of difference (col. 10*11)	Executed quantity as of March 2022	Cost of excess cement (col. 12*13)	Pending recovery as of June 2024 against col. 14
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
20	Km 60.000 to 80.000	Rapti Canal Construction Division-1, Tulsipur Balrampur	RMC	M-25 (A20)	9976.80	9140.58	11.10	8.20	2.90	325.00	942.50	95546.60	90052670.50	
		Total										**95546.60**	**90052670.50**	**10154692.65**[3]
21	Km 114.000 to 125.682	Saryu Nahar Khand, Bansi Siddharthnagar	RMC	M-20 (A20)	9144.58	9144.58	7.90	7.52	0.38	325.00	123.50	26697.11	3297093.09	
22				M-25 (A20)	9998.00	9998.00	11.10	8.20	2.90	325.00	942.50	26235.06	24726544.05	
23			Campierganj	M-20 (A20)	9144.58	9144.58	7.90	7.52	0.38	325.00	123.50	4805.49	593478.02	
24				M-25 (A20)	9998.00	9998.00	11.10	8.20	2.90	325.00	942.50	24974.39	23538362.58	
25			Dy & Minor	M-20 (A20)	9144.58	9144.58	7.90	7.52	0.38	325.00	123.50	322.99	39889.27	
		Total										**83035.04**	**52195366.99**	**52195366.99**
		Grand Total										**318987.24**	**220668418.07**	**140770440.22 Say ₹ 14.08 crore**

(Source: Information provided by test checked divisions)

[3] Against the excess cost of ₹ 9.01 crore ₹ 7.99 crore had been adjusted by the division through reduction of per cum rate of the work in contractor's bill.

Appendix 3.18
Excess payment of royalty to contractors

(Reference: Paragraph 3.6.2)

(Quantity in cum and amount in ₹)

S/N	Name of work (chainage of construction of RMC and its Dys. & Minors)	Item of earthwork	Total quantity of earthwork executed as of March 2022	Quantity of earthwork executed before March 2018	Quantity of earthwork executed after March 2018 (col. 4 – 5)	Rate of royalty per cum	Amount of royalty paid to contractors (Col. 6*7)	Pending recovery as of June 2024 against col. 8
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Km 0.000 to 35.000	Cutting above spring level	3209632.36	2994330.99	215301.37	14.00	3014219.18	
2		Cutting below spring level	644228.84	608085.20	36143.64	14.00	506010.96	
3		Foundation	579433.21	573620.68	5812.53	14.00	81375.42	
4		Road diversion	17339.20	17339.20	0.00	14.00	0	
5		Making ramp	7833.00	7833.00	0.00	14.00	0	
6		Diversion drain	57207.03	15601.03	41606.00	14.00	582484	
7		Drain channel section	22322.21	22322.21	0.00	14.00	0	
8		Guide bund	47544.78	47544.78	0.00	14.00	0	
	Total						**4184089.56**	**1900677.53**
1	Km 35.000 to 50.000	Cutting above spring level	1436801.34	1390141.68	46659.65	14.00	653235.1	
2		Cutting below spring level	1071198.46	902950.37	168248.09	14.00	2355473.26	
3		Filling	388903.22	147765.88	241137.34	14.00	3375922.76	
4		Foundation	601464.03	446801.79	154662.25	14.00	2165271.5	
5		Road diversion	118402.35	29760.67	88641.68	14.00	1240983.52	
6		Making ramp	32499.21	2620.89	29878.32	14.00	418296.48	
7		Diversion drain	81454.88	66404.71	15050.17	14.00	210702.38	
8		Drain channel section	26613.00	0.00	26613.00	14.00	372582	
9		Guide bund	108686.14	0.00	108686.14	14.00	1521605.96	
	Total						**12314072.96**	**12314072.96**
1	Km 80.000 to 114.000	Cutting above spring level	1127191.88	639644.74	487547.14	14.00	6825659.96	

S/N	Name of work (chainage of construction of RMC and its Dys. & Minors)	Item of earthwork	Total quantity of earthwork executed as of March 2022	Quantity of earthwork executed before March 2018	Quantity of earthwork executed after March 2018 (col. 4 – 5)	Rate of royalty per cum	Amount of royalty paid to contractors (Col. 6*7)	Pending recovery as of June 2024 against col. 8
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2		Cutting below spring level	0.00	0.00	0.00	14.00	0	
3		Filling (105m lead)	49348.79	49348.79	0.00	14.00	0	
4		Filling (1 Km lead)	394579.25	86099.24	308480.01	14.00	4318720.14	
5		Filling (3 Km lead)	730323.08	280160.02	450163.06	14.00	6302282.84	
6		Foundation	920549.80	435424.50	485125.30	14.00	6791754.2	
7		Making diversion, ramp	266127.71	63678.85	202448.86	14.00	2834284.04	
	Total						**27072701.18**	**24561364.22**
1		Cutting above spring level	1021751.34	378218.12	643533.21	14.00	9009464.94	
2		Cutting below spring level	0.00	0.00	0.00	14.00	0	
3	Km 114.000 to 125.682	Filling (105m lead)	75317.35	70654.43	4662.92	14.00	65280.88	
4		Filling (1 Km lead)	300254.40	127170.13	173084.27	14.00	2423179.78	
5		Filling (3 Km lead)	132828.55	132828.55	0.00	14.00	0	
6		Foundation	860939.19	282823.99	578115.20	14.00	8093612.8	
7		Making diversion, ramp	213481.19	113034.18	100447.01	14.00	1406258.14	
8		Making drain diversion	9426.96	0.00	9426.96	14.00	131977.44	
	Total						**21129773.98**	**20980495.27**
	Grand total						**64700637.68**	**59756609.98 say ₹ 5.98 crore**

(Source: Information provided by test checked divisions)

Appendix 3.19
Undue advantage to contractors

(Reference: Paragraph 3.6.4)

(Amount in ₹)

S/N	Name of division	Contract number	Item of work	Executed quantity	Rate as per old contract	Amount as per old contracted rates (col. 5*6)	Rate as per new contract	Amount as per new contracts rates (col. 5*8)	Excess rate (col. 8-6)	*per cent*	Excess expenditure (col. 9-7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Saryu Nahar Khand-4, Bahraich	01/SE/2020-21	Earth work in digging foundation	61261.765	117.00	7167626.51	140.00	8576647.10	23.00	20	1409020.60
2			Laying plain cement concrete M-15 in foundation	8599.540	6930.00	59594812.20	10500.00	90295170.00	3570.00	52	30700357.80
3			Laying RCC 1:1.5:3	2645.259	7630.00	20183326.17	12500.00	33065737.50	4870.00	64	12882411.33
4			Laying RCC 1:1:2 M-25	9331.001	9090.00	84818799.09	12500.00	116637512.50	3410.00	38	31818713.41
5			Supply and laying graded filter	946.999	2700.00	2556897.30	2800.00	2651597.20	100.00	4	94699.90
6			Earth work in digging drain channel	101149.800	72.00	7282785.60	97.50	9862105.50	25.50	35	2579319.90
7			Earth work in constructing RMC channel in all type of soil including all lead, lift royalty and disposal of surplus earth to spoil banks with manual compaction and dressing to profiles with all labour T&P *etc.* below spring level	62278.180	108.00	6726043.44	120.00	7473381.60	12.00	11	747338.16
8		05/SE/2021-22	Earth work in constructing channel above 30 cumec discharge in all type of soil above spring level	14220.000	90.00	1279800.00	96.90	1377918.00	6.90	8	98118.00
9	Saryu Nahar Khand-3, Bahraich	05/SE/2021-22	E/W in constructing channel above 30 cusec Discharge in all type of soil including all lead lift royalty and disposal	466291.740	90.00	41966256.60	168.00	78337012.32	78.00	87	36370755.72

S/N	Name of division	Contract number	Item of work	Executed quantity	Rate as per old contract	Amount as per old contracted rates (col. 5*6)	Rate as per new contract	Amount as per new contracts rates (col. 5*8)	Excess rate (col. 8-6)	*per cent*	Excess expenditure (col. 9-7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
			of surplus earth to spoil banks with manual compaction and dressing to profile with all labour T&P *etc.* required for proper completion of work								
10		10/SE/2019-20	S/L graded filter including all taxes & cost of all labour and T&P etc (a) coarse sand	148.729	2700.00	401568.30	3800.00	565170.20	1100.00	41	163601.90
11			S/L graded filter including all taxes & cost of all labour and T&P etc (b) pea gravel	223.571	3600.00	804855.60	3800.00	849569.80	200.00	6	44714.20
12			S/L graded filter including all taxes & cost of all labour and T&P etc I 20 to 40 mm natural single	148.302	3600.00	533887.20	3800.00	563547.60	200.00	6	29660.40
13			Dry sand filling below foundation	1300.464	900.00	1170417.60	1700.00	2210788.80	800.00	89	1040371.20
14			Laying CC (M15) in super of bridge using 4.75 to 20 mm size stone crushed Kabrai stone grit	2266.092	6930.00	15704017.56	10200.00	23114138.40	3270.00	47	7410120.84
15		11/SE/2019-20	Dewatering of site by Generator and pump set including cost of all material labour T&P etc (Construction of Syphon at Km. 19.510 of RMC)	43502.002	36.00	1566072.07	40.00	1740080.08	4.00	11	174008.01
16			Dewatering of site by Generator and pump set including cost of all material labour T&P etc	52531.600	36.00	1891137.60	40.00	2101264.00	4.00	11	210126.40

S/N	Name of division	Contract number	Item of work	Executed quantity	Rate as per old contract	Amount as per old contracted rates (col. 5*6)	Rate as per new contract	Amount as per new contracts rates (col. 5*8)	Excess rate (col. 8-6)	*per cent*	Excess expenditure (col. 9-7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
			(Construction of Syphon at Km. 0.691 of RMC)								
17			Dewatering of site by Generator and pump set including cost of all material labour T&P etc. (Construction of Inlet at Km. 15.500 of RMC)	45655.200	36.00	1643587.20	40.00	1826208.00	4.00	11	182620.80
	Total					**255291890.04**		**381247868.60**		**04 to 89**	**125955958.56 Say ₹ 12.60 crore**

(Source: Information provided by test checked divisions)

Appendix 3.20
Quality test norms for earthwork and masonry structures

(Reference: Paragraph 3.7)

S/N	Name of Test	Frequency of Test	Purpose of test	Allowable limits
(1)	(2)	(3)	(4)	(5)
	Earthwork			
1	Grains size analysis classification and Atterberg limits	Every 3000 cum or periodically as directed by Engineer in charge	To know the classifications of soil actually put in the embankment	Not mentioned in Contract Bond
2	Field density (In place density test governed by proctor density and in place density test of cohesionless soils governed by Relative Density test)	One test for every 1500 cum of earth work and at least one test in each layer laid on embankment	To determine the placement density and moisture content	Not mentioned in Contract Bond
3	Standard Proctor test	For every 10000 cum of compacted earth or where there is change in the borrow area or change in soil texture, limited to minimum three samples and maximum 10 samples	To determine MDD and OMC of the soil and compare the results with laboratory value	Not mentioned in Contract Bond
4	Moisture content	one test in each sample	To know the moisture content of the sample	Not mentioned in Contract Bond
	Masonry Structures			
1	**CEMENT**			
	3) Chemical	For each consignment	(i) Alkalies	OPC < 0.60 PPC < 0.70
			(ii) Minor, major oxides by Calorimetry	Not mentioned in Contract Bond
			(iii) Chloride	PPC/OPC < 0.05
	b) Physical	For each consignment	(i) Fineness	Not < 2250 cm^2/gm
			(ii) Soundness (Le Chatelier)	Not > 10 mm
			(iii) Consistency	Penetration upto 5 to 7 mm from base
			(iv) Setting Time (Initial & Final)	IT-Not < 30 min FT-Not > 600 min
			(v) Compressive strength	3 days – 160 Kg/cm2 7 days – 220 Kg/cm2 28 days – 330 Kg/cm2
			(vi) Heat of hydration	PPC 7 days – 65 Cal./gm OPC 28 days – 75 Cal/gm
			(vii) Drying shrinkage	< 0.15
2	**Fine Aggregate**			
	(i) Screen analysis (Fineness modulus)	One test for every 150 cum of sand used in concrete	To know grain size and the fineness modulus of sand	2.2 to 3.2
	(ii) Unit weight and bulkage of sand	One test for every 150 cum of sand used in concrete (also once in a shift or for every consignment	To utilize the data for mix design computation	Allowable limit of bulkage of sand is 20
	(iii) Organic impurities	One test for every 150 cum of sand used in concrete (also once in a shift or for every consignment	To assess the quality of sand	As explained in sec. 4.2.2

S/N	Name of Test	Frequency of Test	Purpose of test	Allowable limits
(1)	(2)	(3)	(4)	(5)
	(iv) Soundness	One test for every 150 cum of sand used in concrete	To assess the quality of sand	Loss not then > 10 after 5 cycles of immersion in Na_2So_4
	(v) Specific gravity, moisture content and absorption	One test for every 150 cum of sand used in concrete	To utilize the data for mix design computation	Not Mentioned in Contract Bond
3	**Coarse Aggregate**			
	(i) Sieve analysis	One test for every 150 cum or less	To know gradation and percentage of various size	Not Mentioned in Contract Bond
	(ii) Soundness test (Sodium Sulphate Method)	One test for every 150 cum or less	To assess the quality of coarse aggregate	Loss not then 12 after 5 cycles of immersion in Na_2So_4
	(iii) Organic impurities (Mica content)	One test for every 150 cum or less	To assess the quality of coarse aggregate	Less than 1
	(iv) Petrographic examination	Twice in one working season	To know the deleterious constituents and silt in aggregate	Deleterious constituents plus silt shall not exceed 5
4	**Water**			
		Two samples for each source	pH value (Organic)	6 to 8 not greater than 200 mg/L
			pH value (In-organic)	Not greater than 3000 mg/L
5	**Reinforcement**	For each consignment	Weight Diameter Ultimate test Strength Yield stress Elongation	Dia ≤ 8mm ± 4 Dia ≤ 8mm ± 2.5 Dia ≤ 25mm ± 0.5
6	**Cement Mortar in Masonry and Concrete**			
	1. Cube test for concrete	3 tests specimens per 50 cum of concrete subject to a minimum of three samples per day for each grade of concrete	Compressive strength	Variation in the strength of the grade of concrete should not be more than ± 15
	2. Cube test for cement mortar in masonry	3 tests per each grade of mortar per day	Compressive strength	Not Mentioned in Contract Bond

(Source: Technical specification of contract bonds)

Appendix 3.21 (a)
Inspections by Chief Engineers

(Reference: Paragraph 3.8.2.2)

S/N	Name of Zonal Office	Year	Number of site inspections	Number of structures inspected
(1)	**(2)**	**(3)**	**(4)**	**(5)**
1	Chief Engineer, Saryu Pariyojana-I, Ayodhya	2020-21	18	53
		2021-22	02	02
2	Chief Engineer, Saryu Pariyojana - II, Gonda	2019-20	04	16
		2020-21	15	40
		2021-22	04	04
Total			**43**	**115**

(Source: Information provided by test checked divisions)

Appendix 3.21 (b)
Inspections by Superintending Engineers

(Reference: Paragraph 3.8.2.2)

S/N	Name of Circle	Year	Number of site inspections	Number of structures inspected
(1)	**(2)**	**(3)**	**(4)**	**(5)**
1	Superintending Engineer, IXth Circle, Bahraich	2019-20	04	17
		2020-21	07	45
2	Superintending Engineer, Irrigation Construction Circle, Basti	2020-21	01	10
3	Superintending Engineer, Quality Control Circle, Ayodhya	2020-21	01	01
		2021-22	02	02
4	Superintending Engineer, Rapti Canal Construction Circle 2, Basti	2020-21	10	86
		2021-22	09	72
Total			**34**	**233**

(Source: Information provided by test checked divisions)

Appendix 3.22
Delayed recovery of Mobilisation Advance (MA)

(Reference: Paragraph 3.10.3.1)

(₹ in crore)

S/N	Name of contractor	Contract bond number & date of agreement	Bonded cost	Amount of MA	Date of grant of MA	Amount equal to 80 *per cent* of agreed cost	Date upto which 80 *per cent* of work completed	Recovery of MA up to 80 *per cent* of work	Date of final recovery of MA	Payment unrecovered even after payment of 80 *per cent* of contract cost *(per cent)*	Excess period of MA amount laid with contractor
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**
1	M/s Madhucon Project Ltd.	03/SE/13-14 (15.04.2013)	296.48	14.50	13.05.13	237.18	28.12.15	2.24	23.02.19	12.26	38 months
2	M/s Progressive Construction Ltd.	02/SE/13-14 (19.04.2013)	360.89	18.04	22.04.13	288.71	23.10.19	13.17	22.12.20	4.97	14 months
	Total			**32.54**						**17.23 (53)**	

(Source: Information provided by test checked divisions)

Appendix 3.23
Non-hypothecation of machineries

(Reference: Paragraph 3.10.3.2)

S/N	Name of the contractor	Contract bond & date of agreement	Amount of machinery advance	Details of machineries	Number of machineries	Date of purchase of machinery
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	M/s Valecha Engineering Ltd.	01/SE/2013-14 (12.04.2013)	₹ 15.00 crore	Dumpers	35	09.01.2015
				Fabricated Fuel Booster	10	04.01.2015
				Batching plant	04	21.01.2015
				JCB excavator	08	07.01.2015
				JCB lift all	07	22.01.2015
				LPT 407 CAB	10	23.01.2015
2	M/s Patel Apco Joint Venture Ltd.	02/SE/2013-14 (09.04.2013)	₹ 12.00 crore	WB Tripper Diesel	50	29.12.2012
				Taraus diesel Engine	04	20.02.2013
				Volvo Excavator	01	15.02.2012
				Transit mixer	04	12.03.2013
				Electric Generator silent	01	09.12.2012
				D.Q. Incubator	02	07.03.2013
				Concrete Batch Plant	01	27.08.2013
	Total		**₹ 27.00 crore**		**137**	

(Source: Information provided by test checked divisions)

Appendix 3.24
Unadjusted miscellaneous advances

(Reference: Paragraph 3.10.4)

(₹ in lakh)

S/N	Name of division	Miscellaneous advances lying unadjusted					
		In the name of officers/officials of the department		Related to purchase of material		Others	
		Period	Amount	Period	Amount	Period	Amount
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Rapti Canal Construction Division-1, Shohratgarh, Siddharthnagar	08/2008 to 11/2018	1.00	03/2019 to 2/2021	1233.50	08/2002 to 03/2021	262.11
2	Saryu Nahar Khand-3, Gonda	01/2009 to 06/2019	7.31	01/1998 to 1/2011	36.54	06/1998 to 08/2008	16.44
3	Saryu Nahar Khand, Ayodhya	-	0.00	03/2001 to 1/2014	10.61	11/1998 to 07/2021	20.30
4	Saryu Drainage Khand 3 Gonda	10/2002 to 07/2020	32.58	08/2003 to 3/2021	3010.11	03/1999 to 06/2021	520.75
5	Rapti Canal Construction Division-1, Tulsipur, Balrampur	09/2016[4]	35.07	12/2013 to 12/2016	7.66	08/2008 to 06/2021	493.91
6	Saryu Nahar Khand-5, Gonda	12/1976 to 10/2017	28.33	03/2004 to 03/2015	242.06	02/1955 to 03/2019	39.30
7	Saryu Nahar Khand-4, Gonda	07/1981 to 03/2018	8.77	09/1998 to 01/2019	81.62	09/1978 to 03/2021	35.21
8	Saryu Nahar Khand, Bansi, Siddharthnagar	05/2019 to 01/2021	14.83	03/2001 to 1/2021	61.19	05/1999 to 07/2015	109.70
9	Rapti Canal Construction Division-3, Shohratgarh, Siddharthnagar	12/2012 to 03/2017	37.71	12/2015 to 06/2021	937.22	01/2001 to 03/2020	354.75
10	Rapti Canal Construction Division-2, Shohratgarh, Siddharthnagar	-	0.00	-	0.00	03/2003 to 03/2021	9.12
	Total		**165.60**		**5620.51**		**1861.59**
	Grand Total		**₹ 7647.70 lakh say ₹ 76.48 crore**				

(Source: Information provided by test checked divisions

[4] Out of 12 cases, date of miscellaneous advance was entered only in one case and in remaining 11 cases involving miscellaneous advance amounting to ₹ 34.07 lakh no date was mentioned.

Appendix 4.1
Release of water *vis-a-vis* demand

(Reference: Paragraph 4.5.1.1)

(Release of water in cumec)

S/N	Year	Kharif					Rabi				
		Demand of water		Release of water		Shortfall in *per cent* (number of days)	Demand of water		Release of water		Shortfall in *per cent* (number of days)
		Quantity	Days	Quantity	Days		Quantity	Days	Quantity	Days	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Imamganj Branch Canal											
1	2017-18	10 to 20	132	05 to 16	103	30-50 (35) 53-67 (32)	00	00	00	00	00 00
2	2018-19	12 to 15	98	05 to 14	60	20-47 (28) 53-67 (17)	15	14	07 to 10	11	33 (10) 53 (01)
3	2019-20	10 to 20	143	05 to 14	131	20-50 (18) 53-58 (28)	12	06	00	00	00 00
4	2020-21	05 to 10	122	03 to 10	97	10-50 (63) 60-70 (10)	08	115	02 to 7	88	13-50 (54) 63-75 (34)
5	2021-22	05 to 18	130	2.94 to 18	92	17-44 (27) 71 (02)	6 to 10	101	3 to 6.88	35	14-50 (18) 00
Basti Branch Canal											
6	2017-18	25 to 65	132	5.45 to 60.30	94	12-50 (20) 51-84 (50)	00	00	00	00	00 00
7	2018-19	40 to 52.57	98	1.36 to 55.84	77	12-50 (25) 51-97 (32)	46.18	14	44.95 to 50	13	00 00
8	2019-20	15 to 69.52	132	8.99 to 68.46	104	10-50 (38) 54-82 (08)	33.42	06	19.53 to 26.86	02	20-42 (02) 00
9	2020-21	15 to 63.85	108	1.27 to 62.50	85	10-50 (32) 54-92 (18)	16.99 to 48.98	106	1.82 to 30.54	61	11-50 (07) 51-95 (47)
10	2021-22	42 to 73.88	91	7.90 to 68.54	39	13-50 (21) 62-88 (05)	29.72 to 58.89	56	12.54 to 54.98	14	12-39 (07) 54-77 (03)
Gonda Branch Canal											
11	2017-18	28 to 50	132	4.43 to 51.96	120	11-50 (18) 54-89 (72)	00	00	00	00	00 00
12	2018-19	40 to 50	98	2.06 to 41.34	71	11-50 (37) 53-96 (28)	40	14	20.31 to 40.84	14	34-49 (13) 00
13	2019-20	25 to 46	143	8.03 to 57.40	120	10-49 (46) 52-81 (15)	00	00	00	00	00 00
14	2020-21	20 to 40	122	3.20 to 47.83	104	10-46 (25) 56-86 (07)	5 to 41	115	2.06 to 26.82	69	11-50 (12) 51-93 (50)
15	2021-22	5 to 63	144	0.81 to 62.26	49	13-50 (10) 51-98 (15)	28 to 36	29	10.15 to 33.62	17	10-36 (08) 53-64 (04)

(Source: Information provided by the SE, Irrigation Construction Circle, Bahraich)

Appendix 4.2
Creation of irrigation intensity in the test checked divisions

(Reference: Paragraph 4.6)

(Area in hectare)

S/N	Year	Details of canals		Canal operation in the test checked divisions											
				Kharif						Rabi					
		Number of canals	CCA	Number of canals	CCA	Target (81.84 *per cent*[5] of CCA)	Irrigated area	Irrigation in terms of target (*per cent*)		Number of canals	CCA	Target (42.52 *per cent*[6] of CCA)	Irrigated area	Irrigation in terms of target (*per cent*)	
								Achieve-ment	Shortfall					Achieve-ment	Shortfall
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	2017-18	336	380969	103	168349	137777	29214	21	79	69	144211	61319	8303	14	86
2	2018-19	336	380969	119	174943	143173	28574	20	80	52	102723	43678	7365	17	83
3	2019-20	336	380969	210	277493	227100	100901	44	56	111	141211	60043	27347	46	54
4	2020-21	336	380969	248	306761	251053	145088	58	42	183	243576	103569	59226	57	43
5	2021-22	336	380969	304	356404	291681	172780	59	41	249	323508	137556	92887	68	32

(Source: Information provided by the test checked divisions)

Note: After the revision of CCA taken place in 2017, from 12.00 lakh hectare to 11.29 lakh hectare, Irrigation potential 14.04 lakh hectare (Kharif: 9.24 lakh hectare and Rabi 4.80 lakh hectare) would be achieved by enhancing the irrigation intensity to 81.84 *per cent* in Kharif and 42.52 *per cent* in Rabi in the CCA of 11.29 lakh hectare. Earlier these were 77 *per cent* and 40 *per cent* in Kharif and Rabi respectively.

[5] Kharif: Earlier 9.24*100/12= 77 *per cent*, After 9.24*100/11.29= 81.84 *per cent*.
[6] Rabi: Earlier 4.80*100/12= 40 *per cent*, After 4.80*100/11.29= 42.52 *per cent*.

Appendix 4.3(a)
Year-wise allotment and expenditure in Per Drop More Crop scheme

(Reference: Paragraph 4.7.1)

(₹ in lakh)

S/N	Name of district	Allotment			Expenditure			Surrender (col. 5-8)
		Central share	State share	Total (col. 3+4)	Central share	State share	Total (col. 6+7)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Year 2017-18								
1	Gonda	28.00	49.73	77.73	13.58	21.42	35.00	42.73
2	Balrampur	35.91	63.78	99.69	32.21	55.20	87.41	12.28
3	Shravasti	13.74	24.41	38.15	13.59	24.54	38.13	0.02
4	Bahraich	40.91	72.67	113.58	17.02	29.99	47.01	66.57
5	Gorakhpur	44.60	79.21	123.81	41.14	65.67	106.81	17.00
6	Basti	28.92	51.36	80.28	7.22	11.59	18.81	61.47
7	Sant Kabir Nagar	12.77	22.68	35.45	11.36	18.76	30.12	5.33
8	Siddharthnagar	18.00	31.97	49.97	5.48	8.88	14.36	35.61
	Total	**222.85**	**395.81**	**618.66**	**141.60**	**236.05**	**377.65**	**241.01**
Year 2018-19								
9	Gonda	31.42	54.83	86.25	32.05	54.20	86.25	0.00
10	Balrampur	48.81	85.17	133.98	49.10	84.79	133.89	0.09
11	Shravasti	33.54	58.52	92.06	33.10	58.73	91.83	0.23
12	Bahraich	63.30	110.46	173.76	62.42	111.34	173.76	0.00
13	Gorakhpur	61.51	107.33	168.84	53.70	89.78	143.48	25.36
14	Basti	40.47	70.63	111.10	41.53	69.08	110.61	0.49
15	Sant Kabir Nagar	20.48	35.74	56.22	20.86	35.31	56.17	0.05
16	Siddharthnagar	55.26	96.43	151.69	56.34	95.25	151.59	0.10
	Total	**354.79**	**619.11**	**973.90**	**349.10**	**598.48**	**947.58**	**26.32**
Year 2019-20								
17	Gonda	73.22	129.89	203.11	53.20	91.22	144.42	58.69
18	Balrampur	81.08	143.84	224.92	82.16	142.76	224.92	0.00
19	Shravasti	61.18	108.52	169.70	54.02	91.83	145.85	23.85
20	Bahraich	92.58	164.23	256.81	87.80	157.28	245.08	11.73
21	Gorakhpur	101.81	180.60	282.41	100.26	173.15	273.41	9.00
22	Basti	108.39	192.28	300.67	112.43	186.25	298.68	1.99
23	Sant Kabir Nagar	48.96	86.86	135.82	49.41	86.19	135.60	0.22
24	Siddharthnagar	113.01	200.47	313.48	115.44	198.05	313.49	0.00
	Total	**680.23**	**1206.69**	**1886.92**	**654.72**	**1126.73**	**1781.45**	**105.47**
Year 2020-21								
25	Gonda	54.19	96.22	150.41	55.01	95.39	150.40	0.01
26	Balrampur	138.66	246.19	384.85	130.77	254.02	384.79	0.06
27	Shravasti	59.66	105.92	165.58	59.95	105.56	165.51	0.07
28	Bahraich	117.97	209.45	327.42	117.48	209.93	327.41	0.01
29	Gorakhpur	134.50	238.80	373.30	136.09	237.22	373.31	0.00
30	Basti	195.69	347.45	543.14	200.12	343.03	543.15	0.00
31	Sant Kabir Nagar	85.24	151.34	236.58	82.54	141.67	224.21	12.37
32	Siddharthnagar	119.34	211.88	331.22	122.17	208.07	330.24	0.98
	TOTAL	**905.25**	**1607.25**	**2512.50**	**904.13**	**1594.89**	**2499.02**	**13.48**
Year 2021-22								

S/N	Name of district	Allotment			Expenditure			Surrender (col. 5-8)
		Central share	State share	Total (col. 3+4)	Central share	State share	Total (col. 6+7)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
33	Gonda	59.22	105.06	164.28	58.60	105.55	164.15	0.13
34	Balrampur	69.62	123.50	193.12	64.22	127.62	191.84	1.28
35	Shravasti	69.34	123.01	192.35	67.59	121.39	188.98	3.37
36	Bahraich	92.86	164.72	257.58	85.82	155.36	241.18	16.40
37	Gorakhpur	91.48	162.27	253.75	91.26	162.11	253.37	0.38
38	Basti	150.35	266.71	417.06	148.75	268.23	416.98	0.08
39	Sant Kabir Nagar	51.89	90.70	142.59	51.89	90.62	142.51	0.08
40	Siddharthnagar	77.56	137.59	215.15	79.18	135.88	215.06	0.09
	Total	**662.32**	**1173.56**	**1835.88**	**647.31**	**1166.76**	**1814.07**	**21.81**

(Source: Information provided by the Director, Horticulture, Lucknow)

Appendix 4.3(b)
Year-wise physical achievement in Per Drop More Crop scheme

(Reference: Paragraph 4.7.1)

(Area in hectare)

S/N	Name of District	Physical target for the year	Target achieved at the end of year	Shortfall in achievement (col. 3-4)	Shortfall in *per cent*	Achievement in *per cent*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Year 2017-18						
1	Gonda	312	140	172	55.13	44.87
2	Balrampur	413	290	123	29.78	70.22
3	Shravasti	181	122	59	32.60	67.40
4	Bahraich	556	190	366	65.83	34.17
5	Gorakhpur	700	507	193	27.57	72.43
6	Basti	314	62	252	80.25	19.75
7	Sant Kabir Nagar	226	111	115	50.88	49.12
8	Siddharthnagar	283	59	224	79.15	20.85
Year 2018-19						
9	Gonda	607	277	330	54.37	45.63
10	Balrampur	617	617	00	0.00	100.00
11	Shravasti	475	450	25	5.26	94.74
12	Bahraich	684	474	210	30.70	69.30
13	Gorakhpur	873	642	231	26.46	73.54
14	Basti	618	377	241	39.00	61.00
15	Sant Kabir Nagar	520	203	317	60.96	39.04
16	Siddharthnagar	649	649	00	0.00	100.00
Year 2019-20						
17	Gonda	492	351	141	28.66	71.34
18	Balrampur	997	997	00	0.00	100.00
19	Shravasti	726	726	00	0.00	100.00
20	Bahraich	620	620	00	0.00	100.00
21	Gorakhpur	1076	972	104	9.67	90.33
22	Basti	909	898	11	1.21	98.79
23	Sant Kabir Nagar	504	379	125	24.80	75.20
24	Siddharthnagar	949	949	00	0.00	100.00
Year 2020-21						
25	Gonda	1760	367	1393	79.15	20.85
26	Balrampur	1768	1768	00	0.00	100.00
27	Shravasti	1220	644	576	47.21	52.79
28	Bahraich	1846	659	1187	64.30	35.70
29	Gorakhpur	2715	947	1768	65.12	34.88
30	Basti	2065	1281	784	37.97	62.03
31	Sant Kabir Nagar	1319	587	732	55.50	44.50
32	Siddharthnagar	1864	981	883	47.37	52.63
Year 2021-22						
33	Gonda	1425	207	1218	85.47	14.53
34	Balrampur	1354	859	495	36.56	63.44
35	Shravasti	878	327	551	62.76	37.24
36	Bahraich	1434	727	707	49.30	50.70
37	Gorakhpur	2128	516	1612	75.75	24.25
38	Basti	1673	971	702	41.96	58.04
39	Sant Kabir Nagar	943	261	682	72.32	27.68
40	Siddharthnagar	1660	409	1251	75.36	24.64

(Source: Information provided by the Director, Horticulture, Lucknow)

Appendix 4.4
Availability of human resources

(Reference: Paragraph 4.9)

S/N	Name of Division	Total Number of posts	Number of post with having shortage of manpower	Shortage of officers/ officials (range in *per cent*)	Shortage of *Ziledar, Seench Parvekshak & Seenchpal* (range in *per cent*)
(1)	(2)	(3)	(4)	(5)	(6)
1	Saryu Drainage Khand-3, Gonda	24	19	20-100	86
2	Saryu Nahar Khand-7, Bahraich	21	10	25-100	40-100
3	Saryu Nahar Khand-2, Gonda	22	18	11-100	33-100
4	Saryu Nahar Khand-4, Basti	21	11	17-100	33-100
5	Saryu Nahar Khand-6, Shravasti	23	16	15-100	33-100
6	Saryu Nahar Khand-5, Gonda	31	28	07-100	25-100
7	Saryu Nahar Khand-4, Bahraich	21	14	17-100	93-100
8	Rapti Canal Construction Division-1, Shohratgarh, Siddharthnagar	19	15	20-100	33-100
9	Saryu Nahar Khand-3, Bahraich	24	18	17-100	36-100
10	Saryu Nahar Khand Ayodhya	22	14	06-100	11-100
11	Saryu Nahar Khand-4, Gonda	21	15	20-100	25-100
12	Saryu Nahar Khand-3, Gonda	22	18	19-100	33-100
13	Rapti Canal Construction Division-1,Tulsipur, Balrampur	19	15	55-100	100
14	Saryu Nahar Khand Bansi, Siddharthnagar	20	17	21-100	80-100

(Source: Information provided by test checked divisions)

Abbreviations

AIBP	Accelerated Irrigation Benefits Programme
BG	Bank Guarantee
BIS	Bureau of Indian Standards
BOCW	Building and Other Construction Workers
CAD&WM	Command Area Development & Water Management
CB	Contract Bond
CBC	Campierganj Branch Canal
CC	Cement Concrete
CCA	Culturable Command Area
CCL	Cash Credit Limit
CD	Cross Drainage
CE	Chief Engineer
CVC	Central Vigilance Commission
CWC	Central Water Commission
DCL	Deposit Credit Limit
DDO	Drawing and Disbursing Officer
DPR	Detailed Project Report
DRB	District Road Bridge
Dy	Distributary
EE	Executive Engineer
E-in-C	Engineer-in-Chief
FHB	Financial Hand Book
GSSCADA	Greater Sharda Sahayak Command Area Development Authority
H/R	Head Regulator
I&WRD	Irrigation & Water Resources Department
ICC Circle	Irrigation Canal Construction Circle
IP	Irrigation Potential
IPC	Irrigation Potential Created
IRC	Indian Road Congress
IS	Indian Standard
ISBIG	Incentivisation Scheme for Bridging Irrigation Gap
LAA	Land Acquisition Act
L-Section	Longitudinal Section
MA	Mobilisation Advance
MBs	Measurement Books
McA	Machinery Advance
MoU	Memorandum of Understanding
MWA	Miscellaneous Work Advances

NABARD	National Bank for Agriculture and Rural Development
NIT	Notice Inviting Tender
OFD	On-Farm Development
PCR	Project Completion Report
PDMC	Per Drop More Crop
PMKSY	Pradhan Mantri Krishi Sinchayee Yojana
PPA	Proposed Potential Area
PRB	Provincial Road Bridge
RCC	Reinforced Cement Concrete
RCC Circle	Rapti Canal Construction Circle
RCCD	Rapti Canal Construction Division
RLC	Rapti Link Channel
RMC	Rapti Main Canal
SDK	Saryu Drainage Khand
SE	Superintending Engineer
SLC	Saryu Link Channel
SMC	Saryu Main Canal
SNK	Saryu Nahar Khand
SNP	Saryu Nahar Pariyojana
SoR	Schedule of Rates
T&P	Tools & Plants
TAC	Technical Audit Cell
TS	Technical Sanction
VRB	Village Road Bridge
WUAs	Water User Associations
X-ing	Crossing

https://cag.gov.in/ag1/uttar-pradesh