A Sanitation (or Shit) Flow Diagram presents a clear picture of how excreta flows are managed within the city. The diagram clearly depicts how excreta flows from user interface to the final disposal. It has the following stages:

Containment
- Total population within municipality is dependent on onsite sanitation systems
- The containment systems in Buxar mainly comprise of septic tanks and pits
- There are 4 main types of containment systems found in Buxar
  - Septic tank connected to open drains is attributed to be from 48% population
    - Lined pit with semi permeable walls and open bottom with no outlet is attributed to be from 18% population
    - User interface discharging directly into the Open drain – 4%
  - Open defecation is still in practice and it is attributed to be from 30% of the population
  - Septic tank is generally constructed with 2-3 chambers majorly oversized in capacity, while near the ghat (riparian) of river Ganga twin pits are mostly observed

Emptying
- Emptying service in the city is performed by vacuum truck owned by the Nagar Palika
- An application form is to be submitted at the ULB to the Kajpalak (Sanitary supervisor).
After approval the application is forwarded to the Safai Karamchari (Sanitary workers) to whom the requisite amount is submitted and a receipt is received.

- As per the city’s officials, two findings came to light during field based study:
  - Emptying / desludging machine available with the Nagar Parishad is used once in a month, this is due to low demand for the service and the narrowness of the roads.
  - Narrowness of the roads is the reason why manual emptying is being practised to empty containment systems. Kerosene oil is poured into these systems before emptying to reduce odour.
  - No personal protective equipment is used by emptiers while emptying service.
  - Manual emptying is done by specific communities of people by using thela gaadi (cart).
  - Due to no standardization in the size of the septic tanks, they have been made large enough to contain fecal sludge, the general perception is of emptying the septic tanks only after an interval of 15-20 years.
➢ Cost of emptying service is ₹ 1300 per trip. Emptying service by the ULB is only limited to within the municipal boundary
➢ FS contained- emptied is attributed to 22% population who use septic tank connected to open drain.
➢ FS contained - not emptied is attributed to 2% population which is the FS which remains in the septic tank and is never emptied
➢ FS not contained – emptied is attributed to 8% population who use lined pit with semi permeable walls and an open bottom
➢ FS not contained – not emptied is attributed to 10% population (1% FS remains & is never emptied and 9% infiltrate from lined pit with semi permeable walls and open bottom)

**Transportation**
➢ Supernatant (SN) generated from onsite systems is attributed to be from 24% population using septic tanks connected to open drains
➢ Household’s discharge wastewater (WW) directly to the open drains without any containment systems is attributed to be from 4% population
➢ Tractor mounted vacuum tanker is used for transportation of faecal sludge and septage in Buxar as shown in figure 4. Capacity of the vacuum tanker is 3500 liters
A generator run motor is used for suction installed in between the tractor and tanker having a head capacity of 65ft.

Average distance covered per trip is 7km.

Disposal and Treatment

- Sludge collected by vacuum tankers is disposed at various points in the city and its outskirts.
- Sludge disposal points mostly consist of low lying land as shown in figure 5 above or in Sone Canal. The canal meets river Ganga at Ramrekha Ghat.
- There is no treatment of sewage and septage generated in the city.
- In total, FS of 98% population is unsafely managed and 2% population is safely managed.

Figure 7: Ramrekha Ghat, point of Sone Canal meeting River Ganga

Figure 8: Quality of water entering River Ganga