Water Quality of River Ganga and Yamuna At Allahabad (UP) during Maghmela (Ardh Kumbha) 2007

23.01.2007

| Location | рН | Colour | Cond | COD | DO | CI | BOD | тс | FC |
|--|-----|---------|----------|--------|--|--------|--------|---------------|---|
| | | (hazen) | (µs/cm) | (mg/l) | (mg/l) 8:00 am 12:00 pm 4:00 pm | (mg/l) | (mg/l) | MPN/ 100ml | MPN/ 100ml 8:00 am 12:00 pm 4:00 pm |
| Yamuna at Naini Bridge (U/s Sangam) | 8.2 | 15 | 456 | | 8.9 8.5 8.9 | 38.7 | 1.9 | | 5x10 ³ 7x10 ³ 1.7 x10 ³ |
| Ganga at Shstri Bridge (U/s sangam) | 8.7 | 35 | 315 | | 10.4 9.7 9.9 | 16.9 | 5.5 | | 5x10 ³ 3 x 10 ³ 2.2 x10 ³ |
| Sangam | 8.8 | 25 | 311 | | 9.9 11.5 11.5 | 17.9 | 5.3 | | 3 x10 ³ 2.2 x10 ³ 3 x10 ³ |
| Yamuna at Karella bagh | 8.3 | 15 | 464 | | 8.7 8.7 9.1 | 38.7 | 2.2 | | 7 x10 ³ 3 x10 ³ 2.3 x10 ³ |
| Ganga at Phaphamau u/s Sangam | 8.6 | 35 | 310 | | 10.6 11.0 11.6 | 16.9 | 7 | | 1.7x10 ³ 2.2 x10 ³ 1.3 x10 ³ |
| Ganga at Diha Ghat d/s Allahabad | 8.4 | 20 | 412 | | 9.7 9.9 9.6 | 30.1 | 4.2 | | 5 x10 ³ 2.7 x10 ³ 2.2 x10 ³ |

| Location | рН | Colour (hazen) | Cond (µs/cm) | COD (mg/l) | DO (mg/l) | CI (mg/I) | BOD (mg/l) | TC MPN/ 100ml | FC MPN/ 100ml |
|---|-----|-------------------|-----------------|---------------|--------------|--------------|---------------|----------------------|---------------------|
| Yamuna at Naini Bridge (U/s Sangam) | 8.6 | 15 | 459 | 12 | 9.5 | 43.9 | | 1.7 x10 ⁴ | 5.0x10 ³ |
| Ganga at Shstri Bridge (U/s Sangam) | 8.5 | 35 | 319 | 19 | 11.4 | 16.4 | | 7 x10 ³ | 2.1x10 ³ |

| | | | | | | | 1 2 | 1 |
|---------|-----|----|-----|----|------|----|-------------------|---------------------|
| Sangam | 87 | 25 | 325 | 21 | 10.3 | 21 | $ 3 \times 10^3$ | 1.7x10 ³ |
| Cangain | 0.7 | | 525 | ' | 10.5 | ' | 0 10 | 1.77.10 |

| Location | рН | Colour (hazen) | Cond (µs/cm) | COD (mg/l) | DO (mg/l) 8:00 am 12:00 pm 4:00 pm | CI (mg/I) | BOD (mg/l) | TC MPN/ 100ml 8:00 am 12:00 pm 4:00 pm | FC MPN/ 100ml 8:00 am 12:00 pm 4:00 pm |
|---|------|-------------------|-----------------|---------------|---|--------------|---------------|--|---|
| Yamuna at Naini Bridge (U/s Sangam) | 8.7 | 15 | 469 | 18 | 9.26 9.99 9.95 | 47 | 1.3 | 1.7 x10 ⁴ 2.2 x10 ⁴ 8 x10 ³ | 7 x10 ³ 1.1x10 ⁴ 8 x10 ³ |
| Ganga at Shstri Bridge (U/s sangam) | 8.9 | 35 | 305 | 34 | 11.2 11.2 11.1 | 17 | 6.8 | 5 x10 ⁴ 2.4 x10 ⁴ 3 x10 ⁴ | 1.7 x10 ⁴ 8 x10 ³ 1.3x10 ⁴ |
| Sangam | 8.98 | 25 | 303 | 23 | 10.1 9.4 11 | 16 | 6.2 | 1.1 x10 ⁴ 2.2 x10 ⁴ 2.8 x10 ⁴ | 5x10 ³ 1.1x10 ⁴ 1.4x10 ⁴ |
| Yamuna at Karella bagh | 8.5 | 15 | 445 | 22 | 9.23 9.44 9.47 | 49 | 1.2 | 3 x10 ⁴ 1.7 x10 ⁴ 2.8 x10 ⁴ | 1.3 x10 ⁴ 8 x10 ³ 1.1x10 ⁴ |
| Ganga at Phaphamau u/s Sangam | 8.9 | 35 | 306 | 33 | 11.6 11.8 10.7 | 18 | 7.1 | 3 x10 ³ 1.1 x10 ⁴ 1.3 x10 ⁴ | 1.3 x10 ³ 5 x10 ³ 3 x10 ³ |
| Ganga at Diha Ghat d/s Allahabad | 8.9 | 20 | 422 | 16 | 10. 2 10. 3 10 .4 | 39 | 3.7 | 2.4 x10 ⁴ 5 x10 ⁴ 2.8 x10 ⁴ | 5 x10 ³ 1.7 x10 ⁴ 8 x10 ³ |

| Location | рН | Colour (hazen) | Cond (µs/cm) | COD (mg/l) | DO (mg/l) | CI (mg/I) | BOD (mg/l) | TC MPN/ 100ml | FC MPN/ 100ml |
|--|-----|-------------------|-----------------|---------------|--------------|--------------|---------------|----------------------|---------------------|
| Yamuna at Naini Bridge (U/s Sangam) | 8.5 | 15 | 546 | 9.6 | 10.2 | 48.1 | 1.0 | 1.4 x10 ⁴ | 7 x10 ³ |
| Ganga at Shstri Bridge (U/s Sangam) | 8.7 | 35 | 350 | 38.1 | 12.0 | 17.0 | 4.8 | 2.2 x10 ³ | 1.3x10 ³ |
| Sangam | 8.7 | 20 | 484 | 16.4 | 10.9 | 37.0 | 2.7 | 2.3 x10 ³ | 8.0x10 ² |

| Location | рН | Colour | Cond | DO | CI | COD | BOD | тс | FC |
|--|-----|---------|---------|--------|--------|------|--------|----------------------|--------------------|
| | | (hazen) | (µs/cm) | (mg/l) | (mg/l) | Mg/I | (mg/l) | MNP/ 100ml | MNP/ 100ml |
| Yamuna at Naini Bridge (U/s Sangam) | 8.4 | 10 | 517 | 9.7 | 45 | 3.7 | 1.1 | 8 x10 ³ | 3 x10 ³ |
| Ganga at Shastri Bridge (U/s sangam) | 8.8 | 35 | 335 | 12.0 | 18 | 30.8 | 7.6 | 8 x10 ² | 4 x10 ² |
| Sangam | 8.7 | 20 | 405 | 11.3 | 28 | 14.6 | 3.0 | 1.7 x10 ³ | 8 x10 ² |

| Location | рН | Colour (hazen) | Cond (µs/cm) | COD (mg/l) | DO (mg/l) | CI (mg/l) | BOD (mg/l) | TC MPN/ 100ml | FC MPN/ 100ml |
|---|-----|-------------------|-----------------|---------------|--------------|--------------|---------------|---------------------|---------------------|
| Yamuna at Naini Bridge (U/s Sangam) | 8.5 | 15 | 554 | 11 | 9.3 | 49 | 1.1 | 1.1x10 ⁴ | 3.3x10 ³ |
| Ganga at Shstri Bridge (U/s Sangam) | 8.9 | 35 | 372 | 32 | 10.7 | 22 | 5.5 | 5.0x10 ³ | 2.2x10 ³ |
| Sangam | 8.7 | 20 | 475 | 21 | 9.9 | 36 | 3.0 | 3.3x10 ³ | 2.6x10 ³ |

| Location | PH | Colour | Cond | COD | DO | CI | BOD | тс | FC |
|--|-----|---------|---------|--------|--------|--------|--------|---------------------|-----------------------|
| | | (hazen) | (µs/cm) | (mg/l) | (mg/l) | (mg/l) | (mg/l) | MPN/ 100ml | MPN/ 100ml |
| Yamuna at Naini Bridge (U/s Sangam) | 8.6 | 15 | 560 | 11 | 9 | 49 | 2.1 | 1.7x10 ⁴ | 5 x 10 ³ |
| Ganga at Shstri Bridge (U/s sangam) | 8.8 | 35 | 360 | 33 | 11.2 | 26 | 5.9 | 2.8x10 ⁴ | 3.3 x 10 ³ |
| Sangam | 8.7 | 20 | 452 | 23 | 9.2 | 37 | 5.3 | 1.1x10 ⁴ | 2.3 x 10 ³ |

| Location | PH | Colour | Cond | COD | DO | CI | BOD | тс | FC |
|--|-----|---------|---------|--------|--------|--------|--------|---------------------|-----------------------|
| | | (hazen) | (µs/cm) | (mg/l) | (mg/l) | (mg/l) | (mg/l) | MPN/ 100ml | MPN/ 100ml |
| Yamuna at Naini Bridge (U/s Sangam) | | 15 | 560 | 11 | 9 | 49 | 2.1 | 1.7x10 ⁴ | 5 x 10 ³ |
| Ganga at Shstri Bridge(U/s sangam) | 8.8 | 35 | 360 | 33 | 11.2 | 26 | 5.9 | 2.8x10 ⁴ | 3.3 x 10 ³ |
| Sangam | 8.7 | 20 | 452 | 23 | 9.2 | 37 | 5.3 | 1.1x10 ⁴ | 2.3 x 10 ³ |

| Locati on | p H | Colo ur | Con d | CO D | (| DO mg/l) | | CI | BO D | 1 | C MNF 100ml | 9/ | 1 | C MNF 100ml | 9/ |
|---|---------|-------------|-------------|------------|------------|----------------|------------|------------|------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| | | (haz en) | (µs/c m) | (m g/l) | 8.00 AM | 12 No on | 4.00 PM | (m g/l) | (m g/l) | 8.00 AM | 12 Noo n | 4.00 PM | 8.00 AM | 12 Noo n | 4.00 PM |
| Yamun a at Naini Bridge (U/s Sanga m) | 8. 5 | 15 | 565 | 9.9 | 9.5 | 9.2 | 9.2 | 47. 2 | 1.8 | 2.2x 10 ⁴ | 1.4x 10 ⁴ | 1.4x 10 ⁴ | 9.0x 10 ³ | 7.0x 10 ³ | 5.0x 10 ³ |
| Ganga at Shstri Bridge (U/s sanga m) | 8. | 35 | 375 | 40. 8 | 10.5 | 11. 6 | 12.4 | 28. 7 | 5.9 | 3.0x 10 ⁴ | 2.2x 10 ⁴ | 2.4x 10 ⁴ | 1.1x 10 ⁴ | 9.0x 10 ³ | 8.0x 10 ³ |
| Sanga m | 8. 6 | 25 | 440 | 25. 8 | 10.1 | 10. 2 | 9.8 | 32. 4 | 5.2 | 8.0x 10 ³ | 1.3x 10 ⁴ | 1.4x 10 ⁴ | 5.0x 10 ³ | 5.0x 10 ³ | 7.0x 10 ³ |
| Yamun a at Karella bagh | 8. 4 | 15 | 559 | 12. 9 | 9.4 | 9.6 | 8.9 | 49. 1 | 1.9 | 2.4x 10 ⁴ | 1.7x 10 ⁴ | 1.7x 10 ⁴ | 2.7x 10 ³ | 8.0x 10 ³ | 7.0x 10 ³ |
| Ganga at Phapha mau u/s Sanga m | 8. 9 | 35 | 557 | 36. 5 | 11.0 | 12. | 12.0 | 20. | 5 | 5.0x 10 ³ | 8.0x 10 ³ | 9.0x 10 ³ | 5.0x 10 ³ | 2.7x 10 ³ | 3.0x 10 ³ |
| Ganga | 8. | 20 | 490 | 21. | 9.2 | 10. | 11.1 | 39. | 5 | 1.3x | 3.0x | 2.6x | 8.0x | 1.3x | 1.3x |

| at Diha Ghat | 5 | | 3 | 7 | 8 | 10 ⁴ | 10 ⁴ | 10 ⁴ | 10 ³ | 10 ⁴ | 10 ⁴ |
|-----------------|---|--|---|---|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| d/s | | | | | | | | | | | |
| Allahab ad | | | | | | | | | | | |

| Location | рН | Colour | Cond | COD | DO | CI | BOD | тс | FC |
|--|-----|---------|---------|--------|--------|--------|--------|---------------------|---------------------|
| | | (hazen) | (µs/cm) | (mg/l) | (mg/l) | (mg/l) | (mg/l) | MNP/ 100ml | MNP/ 100ml |
| Yamuna at Naini Bridge (U/s Sangam) | 8.3 | 15 | 580 | 12 | 8.9 | 53 | 2.5 | 1.1x10 ⁴ | 5.0x10 ³ |
| Ganga at Shstri Bridge (U/s sangam) | 8.7 | 35 | 385 | 31 | 11.4 | 19 | 5.0 | 9.0x10 ³ | 5.0x10 ³ |
| Sangam | 8.6 | 20 | 527 | 18 | 9.6 | 38 | 4.1 | 7.0x10 ³ | 2.3x10 ³ |

12.01.2007

| Location | рН | Colour | Cond | COD | DO | CI | BOD | TC | FC |
|--|-----|---------|---------|--------|--------|--------|--------|---------------------|---------------|
| | | (hazen) | (µs/cm) | (mg/l) | (mg/l) | (mg/l) | (mg/l) | MNP/ 100ml | MNP/ 100ml |
| Yamuna at Naini Bridge (U/s Sangam) | 8.3 | 15 | 555 | 11 | 9 | 53 | 1.8 | 5.0x10 ³ | - |
| Ganga at Shstri Bridge (U/s sangam) | 8.7 | 40 | 390 | 31 | 11.2 | 19 | 5.8 | 2.3x10 ³ | - |
| Sangam | 8.4 | 20 | 516 | 16 | 9.6 | 42 | 3.5 | 3.0x10 ³ | - |

| S. No. | Location | рН | Colour (hazen) | Cond (µs/cm) | COD (mg/l) | DO (mg/l) | CL (mg/l) | BOD (mg/l) | TC MNP /100ml | FC MNP /100ml |
|--------|--|----|-------------------|-----------------|---------------|--------------|--------------|---------------|---------------------|---------------------|
| 1. | Yamuna at Naini Bridge (U/s Sangam) | | 15 | 565 | 12 | 8.6 | 51 | 1.0 | 8.0x10 ³ | 5.0x10 ³ |

| 2. | Ganga at Shastri Bridge (U/s Sangam) | | 40 | 426 | 35 | 11.2 | 22 | 5.6 | 7.0x10 ³ | 5.0x10 ³ |
|----|---|-----|----|-----|----|------|----|-----|---------------------|---------------------|
| 3. | Sangam | 8.8 | 25 | 523 | 17 | 8.9 | 40 | 3.2 | 5.0x10 ³ | 2.2x10 ³ |

| S. No. | Location | рН | Colour | Cond | COD | DO | CL | BOD (mg/l) | TC | FC |
|--------|---|-----|---------|---------|--------|--------|--------|---------------|---------------------|---------------------|
| | | | (hazen) | (µs/cm) | (mg/l) | (mg/l) | (mg/l) | | MNP /100ml | MNP /100ml |
| 1. | Yamuna at Naini Bridge (U/s Sangam) | 8.2 | 15 | 530 | 12 | 9.4 | 49 | 1.8 | 2.6x10 ⁴ | 1.7x10 ⁴ |
| 2. | Ganga at Shastri Bridge (U/s Sangam) | 8.7 | 40 | 412 | 34 | 11.6 | 20 | 5.2 | 2.2x10 ⁴ | 1.3x10 ⁴ |
| 3. | Sangam | 8.6 | 25 | 480 | 18 | 10.2 | 39 | 3.2 | 1.1x10 ⁴ | 7.0x10 ³ |

09.01.2007

| S. No. | Location | рН | Colour | Cond | COD | DO | CL | BOD (mg/l) | TC MNP | FC MNP |
|-----------|---|-----|---------|---------|--------|--------|--------|---------------|---------------------|---------------------|
| | | | (hazen) | (µs/cm) | (mg/l) | (mg/l) | (mg/l) | | /100ml | /100ml |
| 1. | Yamuna at Naini Bridge (U/s Sangam) | 8.5 | 15 | 516 | 12 | 9.2 | 51 | 1.6 | 9.0x10 ⁴ | 5.0x10 ⁴ |
| 2. | Ganga at Shastri Bridge (U/s Sangam) | 8.9 | 40 | 420 | 36 | 10.7 | 19 | 5.2 | 1.1x10 ⁴ | 7.0x10 ³ |
| 3. | Sangam | 8.8 | 25 | 460 | 26 | 8.9 | 30 | 4.0 | 1.3x10 ⁴ | 3.4x10 ³ |

| S. No. | Location | рН | Colour (hazen) | Cond (µs/cm) | COD (mg/l) | DO (mg/l) | CL (mg/l) | BOD (mg/l) | TC MNP /100ml | FC MNP /100ml |
|-----------|---|-----|-------------------|-----------------|---------------|--------------|--------------|---------------|---------------------|---------------------|
| 1. | Yamuna at Naini Bridge (U/s Sangam) | 8.3 | 15 | 534 | 12 | 9.4 | 49 | 1.5 | 5.0x10 ⁴ | 1.7x10 ⁴ |
| 2. | Ganga at Shastri | 8.8 | 40 | 420 | 37 | 11.9 | 19 | 5.4 | 1.1x10 ⁴ | 5.0x10 ³ |

| | Bridge (U/s Sangam) | | | | | | | | | |
|----|------------------------|-----|----|-----|----|------|----|-----|---------------------|---------------------|
| 3. | Sangam | 8.7 | 35 | 470 | 24 | 10.1 | 32 | 3.7 | 1.7x10 ³ | 8.0x10 ² |

| S. | Location | рН | Colour (hazen) | Cond (µs/cm) | COD (mg/l) | DO (mg/l) | CL (mg/l) | BOD | TC MNP | FC MNP |
|-----|---|-----|-------------------|-----------------|---------------|--------------|--------------|--------|---------------------|---------------------|
| No. | | | | | | | | (mg/l) | /100ml | /100ml |
| 1. | Yamuna at Naini Bridge (U/s Sangam) | 8.2 | 15 | 530 | 12 | 8.1 | 48 | 2.9 | 5.0x10 ⁴ | 2.2x10 ⁴ |
| 2. | Ganga at Shastri Bridge (U/s Sangam) | 8.9 | 40 | 398 | 38 | 9 | 22 | 5.1 | 2.2x10 ⁴ | 1.7x10 ⁴ |
| 3. | Sangam | 8.7 | 35 | 444 | 29 | 9.6 | 30 | 4.9 | 8.0x10 ³ | 8.0x10 ³ |