**REPLY BY THE PRESIDENT OF**
**THE STATES' TRADING SUPERVISORY BOARD**
**TO QUESTIONS ASKED PURSUANT TO RULE 14 OF THE**
**RULES OF PROCEDURE BY DEPUTY MARK HELYAR**

**Question 1**

Please provide the monthly total raw water storage values (in megalitres), by month, between January 1990 and March 2025.

**Answer**

Table 1 shows the recorded volume of water stored at month end, from 1990 to present. This is the total reserves within all raw water storage reservoirs, calculated based on level of fill (measured by observation) and the assumed capacity of each reservoir. Recent records are more accurate following bathymetry surveys carried out on some of the larger reservoirs, which resulted in some minor changes to storage volumes in 2022.

Total storage capacity has changed since 1990 due to the addition of new reservoirs, such as St Andrew's and Saltpans, and loss of others, such as Vale Mill and Irene & Robin.

There are constraints, such as risk of flooding to adjacent areas, which limit the volume that can be stored in certain reservoirs. They are managed according to operationally appropriate levels, which may be slightly below their absolute maximum storage capacity. Currently, storage reservoirs are considered to be operationally full at a capacity of 4,360 megalitres.

In a typical year, storage volumes will be lowest in the summer months, which normally have least rainfall. Reservoirs will then be replenished by the "winter recharge" period, typically between October and April. In a typical year, reservoirs reach what is effectively maximum storage capacity by January/February. This restricts further water capture, irrespective of rainfall levels in the remaining recharge period.

In 31 of the last 36 years (1990 to 2025), storage volumes have achieved the level where all reservoirs were operationally at full capacity.

Water at the bottom of reservoirs would be very challenging to use even in drought conditions, and is classed as "dead" storage. This is due to poor water quality or being inaccessible due to pumping limitations. A planning assumption of 10% dead storage has been applied, consistent with water resources and drought management planning guidance.

That guidance also specifies that in assessing reliable reservoir supplies, water companies should not plan to use an "emergency storage" volume. This is a contingency to mitigate the risk of a future drought being more severe than planned. For Guernsey Water, an emergency storage allowance of 425 million litres, equivalent to 30 days of water supply to customers in dry weather conditions, has been applied.

Given these constraints 3,499 megalitres is available for water resource planning, equivalent to 264 days' supply given consumption in a dry year. This is expected to reduce to 234 days by 2040, primarily as a result of assumed population growth.

*Table 1 - Month end recorded raw water storage volume 1990-2025, in megalitres*

| 1990 | |
|---|---|
| Jan | 2381 |
| Feb | 3506 |
| Mar | 3588 |
| Apr | 3558 |
| May | 3271 |
| Jun | 3059 |
| Jul | 2711 |
| Aug | 2262 |
| Sep | 1906 |
| Oct | 1658 |
| Nov | 1655 |
| Dec | 1849 |

| 1991 | |
|---|---|
| Jan | 2633 |
| Feb | 2891 |
| Mar | 3417 |
| Apr | 3562 |
| May | 3462 |
| Jun | 3406 |
| Jul | 3173 |
| Aug | 2774 |
| Sep | 2470 |
| Oct | 2327 |
| Nov | 2548 |
| Dec | 2552 |

| 1992 | |
|---|---|
| Jan | 2470 |
| Feb | 2561 |
| Mar | 2525 |
| Apr | 2707 |
| May | 2603 |
| Jun | 2361 |
| Jul | 2201 |
| Aug | 2067 |
| Sep | 2116 |
| Oct | 2224 |
| Nov | 3073 |
| Dec | 3699 |

| 1993 | |
|---|---|
| Jan | 3757 |
| Feb | 3742 |
| Mar | 3757 |
| Apr | 3757 |
| May | 3688 |
| Jun | 3649 |
| Jul | 3476 |
| Aug | 3323 |
| Sep | 3517 |
| Oct | 3692 |
| Nov | 3757 |
| Dec | 3757 |

| 1994 | |
|---|---|
| Jan | 3757 |
| Feb | 3757 |
| Mar | 3757 |
| Apr | 3757 |
| May | 3757 |
| Jun | 3720 |
| Jul | 3513 |
| Aug | 3440 |
| Sep | 3366 |
| Oct | 3339 |
| Nov | 3621 |
| Dec | 3757 |

| 1995 | |
|---|---|
| Jan | 3757 |
| Feb | 3757 |
| Mar | 3757 |
| Apr | 3757 |
| May | 3747 |
| Jun | 3491 |
| Jul | 3229 |
| Aug | 2900 |
| Sep | 2802 |
| Oct | 2650 |
| Nov | 2677 |
| Dec | 3016 |

| 1996 | |
|---|---|
| Jan | 3146 |
| Feb | 3409 |
| Mar | 3553 |
| Apr | 3559 |
| May | 3599 |
| Jun | 3270 |
| Jul | 2874 |
| Aug | 2513 |
| Sep | 2207 |
| Oct | 2059 |
| Nov | 2236 |
| Dec | 2452 |

| 1997 | |
|---|---|
| Jan | 2482 |
| Feb | 2836 |
| Mar | 3057 |
| Apr | 2947 |
| May | 2791 |
| Jun | 2753 |
| Jul | 2537 |
| Aug | 2269 |
| Sep | 2001 |
| Oct | 1989 |
| Nov | 2672 |
| Dec | 3436 |

| 1998 | |
|---|---|
| Jan | 3835 |
| Feb | 2842 |
| Mar | 3777 |
| Apr | 4000 |
| May | 3867 |
| Jun | 3843 |
| Jul | 3698 |
| Aug | 3450 |
| Sep | 3397 |
| Oct | 3573 |
| Nov | 3854 |
| Dec | 3979 |

| 1999 | |
|---|---|
| Jan | 4000 |
| Feb | 4000 |
| Mar | 3968 |
| Apr | 3969 |
| May | 3905 |
| Jun | 3842 |
| Jul | 3529 |
| Aug | 3406 |
| Sep | 3277 |
| Oct | 3202 |
| Nov | 3241 |
| Dec | 3982 |

| 2000 | |
|---|---|
| Jan | 3966 |
| Feb | 4000 |
| Mar | 4000 |
| Apr | 4000 |
| May | 4000 |
| Jun | 3947 |
| Jul | 3808 |
| Aug | 3560 |
| Sep | 3392 |
| Oct | 3656 |
| Nov | 4000 |
| Dec | 4000 |

| 2001 | |
|---|---|
| Jan | 4000 |
| Feb | 4000 |
| Mar | 3986 |
| Apr | 3986 |
| May | 3961 |
| Jun | 3840 |
| Jul | 3664 |
| Aug | 3522 |
| Sep | 3322 |
| Oct | 3331 |
| Nov | 3343 |
| Dec | 3313 |

| 2002 | |
|---|---|
| Jan | 3477 |
| Feb | 3900 |
| Mar | 3990 |
| Apr | 3934 |
| May | 3895 |
| Jun | 3404 |
| Jul | 3538 |
| Aug | 3223 |
| Sep | 2956 |
| Oct | 2959 |
| Nov | 3509 |
| Dec | 3877 |

| 2003 | |
|---|---|
| Jan | 4000 |
| Feb | 4000 |
| Mar | 4000 |
| Apr | 3975 |
| May | 3920 |
| Jun | 3679 |
| Jul | 3384 |
| Aug | 3040 |
| Sep | 2697 |
| Oct | 2601 |
| Nov | 2932 |
| Dec | 3620 |

| 2004 | |
|---|---|
| Jan | 4135 |
| Feb | 4366 |
| Mar | 4295 |
| Apr | 4441 |
| May | 4301 |
| Jun | 4023 |
| Jul | 3845 |
| Aug | 3789 |
| Sep | 3343 |
| Oct | 3640 |
| Nov | 3764 |
| Dec | 3916 |

| 2005 | |
|---|---|
| Jan | 4115 |
| Feb | 4263 |
| Mar | 4356 |
| Apr | 4367 |
| May | 4336 |
| Jun | 4213 |
| Jul | 3990 |
| Aug | 3727 |
| Sep | 3478 |
| Oct | 3413 |
| Nov | 3454 |
| Dec | 3724 |

| 2006 | |
|---|---|
| Jan | 3911 |
| Feb | 4352 |
| Mar | 4397 |
| Apr | 4390 |
| May | 4368 |
| Jun | 4166 |
| Jul | 3902 |
| Aug | 3634 |
| Sep | 3411 |
| Oct | 3320 |
| Nov | 3402 |
| Dec | 4147 |

| 2007 | |
|---|---|
| Jan | 4395 |
| Feb | 4411 |
| Mar | 4415 |
| Apr | 4394 |
| May | 4266 |
| Jun | 4216 |
| Jul | 4135 |
| Aug | 4153 |
| Sep | 3984 |
| Oct | 3859 |
| Nov | 3910 |
| Dec | 4310 |

| 2008 | |
|---|---|
| Jan | 4413 |
| Feb | 4528 |
| Mar | 4532 |
| Apr | 4514 |
| May | 4528 |
| Jun | 4448 |
| Jul | 4275 |
| Aug | 4230 |
| Sep | 4176 |
| Oct | 4171 |
| Nov | 4350 |
| Dec | 4402 |

| 2009 | |
|---|---|
| Jan | 4525 |
| Feb | 4516 |
| Mar | 4516 |
| Apr | 4430 |
| May | 4285 |
| Jun | 4103 |
| Jul | 3955 |
| Aug | 3689 |
| Sep | 3439 |
| Oct | 3289 |
| Nov | 4030 |
| Dec | 4527 |

| 2010 | |
|---|---|
| Jan | 4535 |
| Feb | 4535 |
| Mar | 4482 |
| Apr | 4321 |
| May | 4266 |
| Jun | 4169 |
| Jul | 3929 |
| Aug | 3796 |
| Sep | 3546 |
| Oct | 3494 |
| Nov | 4012 |
| Dec | 4407 |

| 2011 | |
|---|---|
| Jan | 4519 |
| Feb | 4535 |
| Mar | 4519 |
| Apr | 4469 |
| May | 4321 |
| Jun | 4228 |
| Jul | 3991 |
| Aug | 3810 |
| Sep | 3653 |
| Oct | 3444 |
| Nov | 3294 |
| Dec | 3866 |

| 2012 | |
|---|---|
| Jan | 3978 |
| Feb | 4080 |
| Mar | 4119 |
| Apr | 4330 |
| May | 4464 |
| Jun | 4512 |
| Jul | 4439 |
| Aug | 4287 |
| Sep | 4198 |
| Oct | 4435 |
| Nov | 4473 |
| Dec | 4526 |

| 2013 | |
|---|---|
| Jan | 4532 |
| Feb | 4516 |
| Mar | 4519 |
| Apr | 4498 |
| May | 4335 |
| Jun | 4178 |
| Jul | 3928 |
| Aug | 3700 |
| Sep | 3528 |
| Oct | 3573 |
| Nov | 3987 |
| Dec | 4476 |

| 2014 | |
|---|---|
| Jan | 4535 |
| Feb | 4521 |
| Mar | 4535 |
| Apr | 4535 |
| May | 4535 |
| Jun | 4435 |
| Jul | 4228 |
| Aug | 4096 |
| Sep | 3928 |
| Oct | 4119 |
| Nov | 4480 |
| Dec | 4502 |

| 2015 | |
|---|---|
| Jan | 4496 |
| Feb | 4507 |
| Mar | 4528 |
| Apr | 4487 |
| May | 4451 |
| Jun | 4287 |
| Jul | 4075 |
| Aug | 4032 |
| Sep | 3894 |
| Oct | 3894 |
| Nov | 3855 |
| Dec | 4139 |

| 2016 | |
|---|---|
| Jan | 4516 |
| Feb | 4528 |
| Mar | 4530 |
| Apr | 4532 |
| May | 4469 |
| Jun | 4355 |
| Jul | 4119 |
| Aug | 3953 |
| Sep | 3746 |
| Oct | 3746 |
| Nov | 3675 |
| Dec | 3605 |

| 2017 | |
|---|---|
| Jan | 3712 |
| Feb | 4198 |
| Mar | 4414 |
| Apr | 4304 |
| May | 4306 |
| Jun | 4143 |
| Jul | 3981 |
| Aug | 3946 |
| Sep | 3908 |
| Oct | 3908 |
| Nov | 4043 |
| Dec | 4268 |

| 2018 | |
|---|---|
| Jan | 4290 |
| Feb | 4374 |
| Mar | 4385 |
| Apr | 4290 |
| May | 4233 |
| Jun | 4093 |
| Jul | 3843 |
| Aug | 3609 |
| Sep | 3372 |
| Oct | 3372 |
| Nov | 3471 |
| Dec | 4097 |

| 2019 | |
|---|---|
| Jan | 4141 |
| Feb | 4281 |
| Mar | 4335 |
| Apr | 4354 |
| May | 4273 |
| Jun | 4134 |
| Jul | 3826 |
| Aug | 3610 |
| Sep | 3402 |
| Oct | 3402 |
| Nov | 4259 |
| Dec | 4385 |

| 2020 | |
|---|---|
| Jan | 4352 |
| Feb | 4352 |
| Mar | 4340 |
| Apr | 4375 |
| May | 4280 |
| Jun | 4248 |
| Jul | 4082 |
| Aug | 3826 |
| Sep | 3635 |
| Oct | 3635 |
| Nov | 4152 |
| Dec | 4356 |

| 2021 | |
|---|---|
| Jan | 4320 |
| Feb | 4330 |
| Mar | 4330 |
| Apr | 4247 |
| May | 4263 |
| Jun | 4156 |
| Jul | 4156 |
| Aug | 3784 |
| Sep | 3532 |
| Oct | 3532 |
| Nov | 3481 |
| Dec | 3849 |

| 2022 | |
|---|---|
| Jan | 4075 |
| Feb | 4212 |
| Mar | 4219 |
| Apr | 4203 |
| May | 3988 |
| Jun | 3788 |
| Jul | 3461 |
| Aug | 3111 |
| Sep | 3115 |
| Oct | 3115 |
| Nov | 3406 |
| Dec | 4084 |

| 2023 | |
|---|---|
| Jan | 4304 |
| Feb | 4352 |
| Mar | 4374 |
| Apr | 4368 |
| May | 4272 |
| Jun | 4050 |
| Jul | 3811 |
| Aug | 3740 |
| Sep | 3745 |
| Oct | 3745 |
| Nov | 4052 |
| Dec | 4367 |

| 2024 | |
|---|---|
| Jan | 4359 |
| Feb | 4296 |
| Mar | 4278 |
| Apr | 4249 |
| May | 4148 |
| Jun | 4055 |
| Jul | 3989 |
| Aug | 3760 |
| Sep | 3536 |
| Oct | 3536 |
| Nov | 3801 |
| Dec | 4037 |

| 2025 | |
|---|---|
| Jan | 4359 |
| Feb | 4360 |
| Mar | 4273 |

**Question 2**

Please provide the monthly treated water supplied values (in megalitres), by month, between January 1990 and March 2025.

*Table 2 - Monthly treated water supplied 1990 to 2025, in megalitres*

| 1990 | |
|---|---|
| Jan | 376 |
| Feb | 342 |
| Mar | 418 |
| Apr | 425 |
| May | 520 |
| Jun | 436 |
| Jul | 498 |
| Aug | 493 |
| Sep | 440 |
| Oct | 404 |
| Nov | 356 |
| Dec | 362 |

| 1991 | |
|---|---|
| Jan | 369 |
| Feb | 382 |
| Mar | 411 |
| Apr | 411 |
| May | 474 |
| Jun | 448 |
| Jul | 492 |
| Aug | 549 |
| Sep | 456 |
| Oct | 397 |
| Nov | 361 |
| Dec | 376 |

| 1992 | |
|---|---|
| Jan | 373 |
| Feb | 354 |
| Mar | 389 |
| Apr | 391 |
| May | 434 |
| Jun | 438 |
| Jul | 438 |
| Aug | 431 |
| Sep | 381 |
| Oct | 372 |
| Nov | 350 |
| Dec | 358 |

| 1993 | |
|---|---|
| Jan | 366 |
| Feb | 334 |
| Mar | 393 |
| Apr | 381 |
| May | 426 |
| Jun | 436 |
| Jul | 447 |
| Aug | 464 |
| Sep | 392 |
| Oct | 373 |
| Nov | 345 |
| Dec | 352 |

| 1994 | |
|---|---|
| Jan | 350 |
| Feb | 323 |
| Mar | 372 |
| Apr | 391 |
| May | 408 |
| Jun | 468 |
| Jul | 510 |
| Aug | 432 |
| Sep | 390 |
| Oct | 380 |
| Nov | 346 |
| Dec | 346 |

| 1995 | |
|---|---|
| Jan | 348 |
| Feb | 319 |
| Mar | 370 |
| Apr | 384 |
| May | 451 |
| Jun | 494 |
| Jul | 526 |
| Aug | 422 |
| Sep | 404 |
| Oct | 394 |
| Nov | 362 |
| Dec | 364 |

| 1996 | |
|---|---|
| Jan | 364 |
| Feb | 345 |
| Mar | 380 |
| Apr | 394 |
| May | 418 |
| Jun | 511 |
| Jul | 541 |
| Aug | 504 |
| Sep | 444 |
| Oct | 386 |
| Nov | 358 |
| Dec | 366 |

| 1997 | |
|---|---|
| Jan | 406 |
| Feb | 351 |
| Mar | 404 |
| Apr | 450 |
| May | 427 |
| Jun | 411 |
| Jul | 463 |
| Aug | 444 |
| Sep | 401 |
| Oct | 362 |
| Nov | 335 |
| Dec | 349 |

| 1998 | |
|---|---|
| Jan | 354 |
| Feb | 324 |
| Mar | 375 |
| Apr | 370 |
| May | 450 |
| Jun | 428 |
| Jul | 445 |
| Aug | 491 |
| Sep | 387 |
| Oct | 372 |
| Nov | 363 |
| Dec | 367 |

| 1999 | |
|---|---|
| Jan | 370 |
| Feb | 332 |
| Mar | 386 |
| Apr | 375 |
| May | 440 |
| Jun | 454 |
| Jul | 531 |
| Aug | 448 |
| Sep | 414 |
| Oct | 385 |
| Nov | 360 |
| Dec | 373 |

| 2000 | |
|---|---|
| Jan | 374 |
| Feb | 353 |
| Mar | 384 |
| Apr | 395 |
| May | 423 |
| Jun | 455 |
| Jul | 476 |
| Aug | 496 |
| Sep | 428 |
| Oct | 387 |
| Nov | 367 |
| Dec | 364 |

| 2001 | |
|---|---|
| Jan | 367 |
| Feb | 332 |
| Mar | 372 |
| Apr | 376 |
| May | 437 |
| Jun | 488 |
| Jul | 506 |
| Aug | 452 |
| Sep | 426 |
| Oct | 382 |
| Nov | 358 |
| Dec | 375 |

| 2002 | |
|---|---|
| Jan | 370 |
| Feb | 351 |
| Mar | 405 |
| Apr | 432 |
| May | 459 |
| Jun | 476 |
| Jul | 557 |
| Aug | 535 |
| Sep | 431 |
| Oct | 399 |
| Nov | 383 |
| Dec | 400 |

| 2003 | |
|---|---|
| Jan | 412 |
| Feb | 377 |
| Mar | 421 |
| Apr | 437 |
| May | 454 |
| Jun | 508 |
| Jul | 557 |
| Aug | 538 |
| Sep | 479 |
| Oct | 430 |
| Nov | 404 |
| Dec | 410 |

| 2004 | |
|---|---|
| Jan | 409 |
| Feb | 385 |
| Mar | 415 |
| Apr | 408 |
| May | 464 |
| Jun | 494 |
| Jul | 470 |
| Aug | 446 |
| Sep | 411 |
| Oct | 396 |
| Nov | 375 |
| Dec | 384 |

| 2005 | |
|---|---|
| Jan | 391 |
| Feb | 362 |
| Mar | 412 |
| Apr | 406 |
| May | 451 |
| Jun | 472 |
| Jul | 480 |
| Aug | 465 |
| Sep | 413 |
| Oct | 402 |
| Nov | 383 |
| Dec | 397 |

| 2006 | |
|---|---|
| Jan | 382 |
| Feb | 336 |
| Mar | 373 |
| Apr | 389 |
| May | 406 |
| Jun | 455 |
| Jul | 487 |
| Aug | 455 |
| Sep | 395 |
| Oct | 391 |
| Nov | 364 |
| Dec | 372 |

| 2007 | |
|---|---|
| Jan | 376 |
| Feb | 322 |
| Mar | 367 |
| Apr | 386 |
| May | 386 |
| Jun | 389 |
| Jul | 409 |
| Aug | 414 |
| Sep | 385 |
| Oct | 375 |
| Nov | 347 |
| Dec | 354 |

| 2008 | |
|---|---|
| Jan | 352 |
| Feb | 333 |
| Mar | 359 |
| Apr | 353 |
| May | 380 |
| Jun | 412 |
| Jul | 438 |
| Aug | 391 |
| Sep | 365 |
| Oct | 370 |
| Nov | 352 |
| Dec | 355 |

| 2009 | |
|---|---|
| Jan | 373 |
| Feb | 335 |
| Mar | 384 |
| Apr | 369 |
| May | 390 |
| Jun | 429 |
| Jul | 434 |
| Aug | 423 |
| Sep | 392 |
| Oct | 370 |
| Nov | 344 |
| Dec | 366 |

| 2010 | |
|---|---|
| Jan | 375 |
| Feb | 340 |
| Mar | 379 |
| Apr | 379 |
| May | 424 |
| Jun | 422 |
| Jul | 461 |
| Aug | 406 |
| Sep | 383 |
| Oct | 366 |
| Nov | 358 |
| Dec | 384 |

| 2011 | |
|---|---|
| Jan | 381 |
| Feb | 341 |
| Mar | 396 |
| Apr | 400 |
| May | 429 |
| Jun | 422 |
| Jul | 437 |
| Aug | 417 |
| Sep | 380 |
| Oct | 383 |
| Nov | 354 |
| Dec | 372 |

| 2012 | |
|---|---|
| Jan | 375 |
| Feb | 362 |
| Mar | 393 |
| Apr | 371 |
| May | 418 |
| Jun | 398 |
| Jul | 429 |
| Aug | 429 |
| Sep | 403 |
| Oct | 378 |
| Nov | 365 |
| Dec | 362 |

| 2013 | |
|---|---|
| Jan | 368 |
| Feb | 339 |
| Mar | 380 |
| Apr | 383 |
| May | 397 |
| Jun | 404 |
| Jul | 460 |
| Aug | 426 |
| Sep | 382 |
| Oct | 387 |
| Nov | 357 |
| Dec | 359 |

| 2014 | |
|---|---|
| Jan | 369 |
| Feb | 318 |
| Mar | 362 |
| Apr | 362 |
| May | 379 |
| Jun | 405 |
| Jul | 430 |
| Aug | 389 |
| Sep | 371 |
| Oct | 365 |
| Nov | 343 |
| Dec | 349 |

| 2015 | |
|---|---|
| Jan | 364 |
| Feb | 334 |
| Mar | 376 |
| Apr | 376 |
| May | 389 |
| Jun | 410 |
| Jul | 422 |
| Aug | 394 |
| Sep | 373 |
| Oct | 373 |
| Nov | 351 |
| Dec | 366 |

| 2016 | |
|---|---|
| Jan | 373 |
| Feb | 345 |
| Mar | 384 |
| Apr | 372 |
| May | 399 |
| Jun | 398 |
| Jul | 435 |
| Aug | 417 |
| Sep | 374 |
| Oct | 374 |
| Nov | 347 |
| Dec | 353 |

| 2017 | |
|---|---|
| Jan | 352 |
| Feb | 333 |
| Mar | 365 |
| Apr | 383 |
| May | 403 |
| Jun | 419 |
| Jul | 424 |
| Aug | 412 |
| Sep | 368 |
| Oct | 368 |
| Nov | 349 |
| Dec | 370 |

| 2018 | |
|---|---|
| Jan | 360 |
| Feb | 323 |
| Mar | 384 |
| Apr | 365 |
| May | 388 |
| Jun | 393 |
| Jul | 461 |
| Aug | 398 |
| Sep | 374 |
| Oct | 374 |
| Nov | 350 |
| Dec | 358 |

| 2019 | |
|---|---|
| Jan | 368 |
| Feb | 346 |
| Mar | 395 |
| Apr | 389 |
| May | 415 |
| Jun | 405 |
| Jul | 499 |
| Aug | 445 |
| Sep | 370 |
| Oct | 370 |
| Nov | 343 |
| Dec | 353 |

| 2020 | |
|---|---|
| Jan | 357 |
| Feb | 341 |
| Mar | 370 |
| Apr | 365 |
| May | 408 |
| Jun | 390 |
| Jul | 409 |
| Aug | 411 |
| Sep | 374 |
| Oct | 374 |
| Nov | 352 |
| Dec | 366 |

| 2021 | |
|---|---|
| Jan | 373 |
| Feb | 319 |
| Mar | 359 |
| Apr | 375 |
| May | 380 |
| Jun | 384 |
| Jul | 405 |
| Aug | 403 |
| Sep | 374 |
| Oct | 374 |
| Nov | 335 |
| Dec | 355 |

| 2022 | |
|---|---|
| Jan | 354 |
| Feb | 324 |
| Mar | 357 |
| Apr | 360 |
| May | 405 |
| Jun | 398 |
| Jul | 459 |
| Aug | 414 |
| Sep | 352 |
| Oct | 352 |
| Nov | 333 |
| Dec | 344 |

| 2023 | |
|---|---|
| Jan | 358 |
| Feb | 319 |
| Mar | 352 |
| Apr | 349 |
| May | 388 |
| Jun | 420 |
| Jul | 408 |
| Aug | 380 |
| Sep | 356 |
| Oct | 356 |
| Nov | 344 |
| Dec | 348 |

| 2024 | |
|---|---|
| Jan | 354 |
| Feb | 335 |
| Mar | 362 |
| Apr | 364 |
| May | 388 |
| Jun | 403 |
| Jul | 389 |
| Aug | 390 |
| Sep | 353 |
| Oct | 353 |
| Nov | 347 |
| Dec | 358 |

| 2025 | |
|---|---|
| Jan | 362 |
| Feb | 327 |
| Mar | 354 |

**Question 3**

Please provide the pumping capacity of the pumps (in Litres per hour) at the Marais pumping station (situated off the Rue du Marais) and the Mare de Carteret pumping stations in relation to the collection of raw water for transfer into storage or going to waste through outfall. If this has changed over time between 1990 and 2025, please provide the dates of changes and the related change in pumping capacity.

**Answer**

The pumping capacity of the Marais pumping station is 126,000 litres per hour. This has not changed significantly since 1990. Flows collected from here are transferred to one of the island's raw water storage reservoirs.

The pumping capacity of the Mare de Carteret pumping station is 5,400,000 litres per hour. This has not changed significantly since 1990.

Any flows from sources that feed the Marais pumping station which are not captured there will flow on to the Mare de Carteret pumping station. That also collects rainwater from the surrounding surface water drainage catchment (including Les Genats Estate, La Mare de Carteret School, and groundwater from field drains beneath the school playing field). There are also two sewer overflows that discharge wastewater during heavy rainfall via this pumping station to prevent sewer flooding. Water from the Mare de Carteret pumping station is therefore not transferred to storage, but discharged to sea due to the risk of sewage contamination. However most reliable raw water flows that could pass through the Mare de Carteret pumping station would be collected upstream at the Marais pumping station and transferred to raw water storage.

**Question 4**

Please provide the pumping hour totals per month of the Marais pumping Station and the Mare de Carteret station in relation to raw water (not sewerage) by month between 1990 and 2025.

**Answer**

Pumping hours are not recorded for Marais pumping station. A manual reading taken on 15 April 2025 indicates that since 2009, they have run for 170 hours per month on average. However, during a typical year the pumps are not run in the winter months because reservoirs are full (31 out of 36 years between 1990 and 2025).

Annual (not monthly) total pumping hours are recorded for the Mare de Carteret pumping station, and are shown in Table 3. It is not possible to provide a raw water only (not sewage) figure as the flows are mixed before reaching the pumping station. Data is not available prior to 2012.

*Table 3 - Annual total pumping hours La Mare de Carteret*

| Pump | Capacity (Ml/h) | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 0.72 | 185 | 236 | 397 | 238 | 186 | 261 | 277 | 99 | 378 | 249 | 99 | 631 | 335 |
| **2** | 0.72 | 0 | 0 | 0 | 0 | 193 | 120 | 364 | 184 | 262 | 187 | 147 | 551 | 342 |
| **3** | 0.72 | 368 | 645 | 522 | 22 | 213 | 114 | 193 | 150 | 165 | 192 | 80 | 276 | 219 |
| **4** | 5.4 | 3 | 3 | 48 | 23 | 0 | 27 | 0 | 25 | 68 | 20 | 4 | 11 | 4 |

**Question 5**

Does Guernsey Water have a professional flood hydrograph for the Guernsey water catchment area which would enable it to accurately estimate volumes of runoff which is going to waste from weather events?

**Answer**

Guernsey Water has a water catchment model that can produce a hydrograph to estimate runoff that is not collected from streams and returned to sea. Guernsey Water also has a sewerage model that can estimate volumes of runoff that return to sea during heavy rainfall.

**Question 6**

Does Guernsey Water record the volumes of raw water from the catchment area which is running to waste in the sea (by weir or other hydrographic methods) from Guernsey?

**Answer**

Guernsey Water uses pump hours run and pump capacity to estimate the volumes of raw water pumped to sea to prevent flooding. It does not record how much water flows into the sea in streams when not collected, but has a water catchment model that can produce a hydrograph to estimate this runoff.

**Question 7**

Does Guernsey Water conduct any estimate of volumes of water going to waste in the sea as a result of lack of pumping capacity at its various pumping stations? If so, please provide details over the period 1990-2025.

**Answer**

Guernsey Water does not routinely estimate volumes of water allowed to return to sea, but a catchment model can be used to produce a hydrograph that estimates runoff that was not collected from streams and allowed to return to sea. This was last conducted using data for 1990 to 2015, as shown in Figure 1. This shows that water is allowed to return to sea during most years (31 out of the 36 years between 1990 and 2025) because reservoirs are full, rather than lack of pumping capacity. During drought years, particularly those with dry winters (e.g. 1991/92), little water returns to sea due to low flows in streams and available capacity in reservoirs.

Taking 2009 as typical year of rainfall the catchment model suggests 2,700 million litres of water returned to sea between January and March (when storage reservoirs are normally at or close to capacity) and around 3,750 million litres between November and December (when storage reservoirs have normally begun recharging). Reservoirs were full by the end of December 2009, several months before the end of the winter recharge period.

The catchment model does not account for operational outages such as pump failure for example, or water that is not collected due to drinking water compliance risks. These issues will increase the amount of water that returns to sea and decrease the amount of water that is collected.

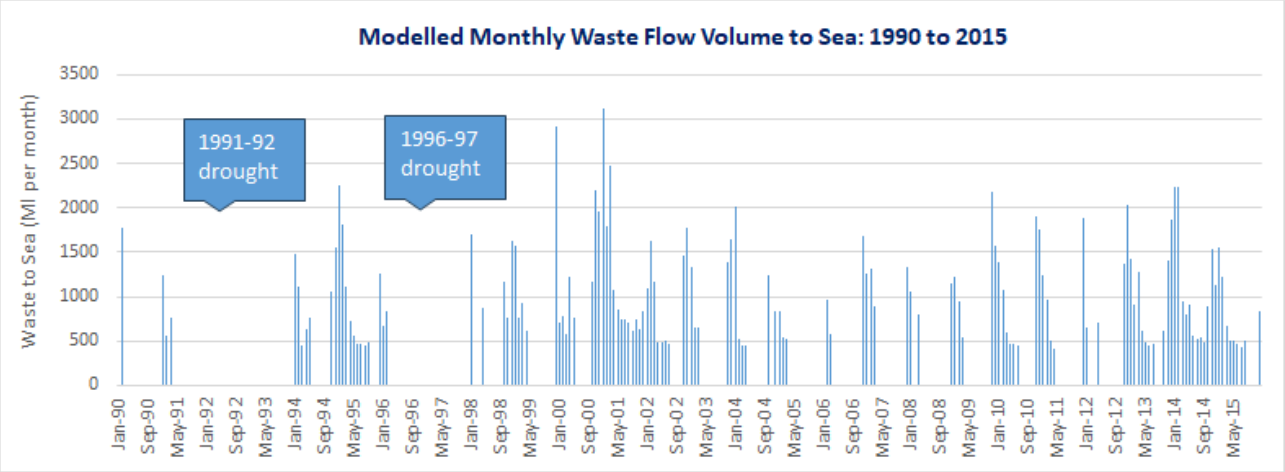


*Figure 1 - Modelled monthly waste flow volume to sea, 1990 to 2015*

**Date of Receipt of the Question:** **10 April 2025**
**Date of Reply:** **25 April 2025**