



In brief:

- 2018 AGM: 27 December
- Update on access through Pezula
- Fire special: resilience and regrowth at Noetzie
- Rainfall and tide tables
- Community news

Chairman's Chat

Robby Robertson

As we approach the end of another year, it is time to remind you that we have an NCOA AGM planned for 27 December to be held at Julie Gosling's rebuilt house on the headland. Please all diarise. This is an important event, both from a preservation of Noetzie viewpoint, and as an opportunity to again connect with each other face to face.

My term as chairman can technically run for one more year, but we will be losing two committee members who must be replaced. Of the eight

Four NCOA committee members recently met with the acting Municipal Manager for Knysna, Mr Johnny Douglas ... and we came away with a definite sense of achievement.

committee members seven have indicated a willingness to continue for another year, but this is up to you.

Julie Gosling will be leaving the committee as she has now completed her six years. She has been an incredible asset to Noetzie, and been the eyes and ears, the driver, the motivator, and while she will now be taking a forced break, I am sure she will still be keeping the in-coming committee on its toes by keeping all informed of what is happening, and impacting on Noetzie. Despite losing her home during the

2017 fires, she has managed to salvage many of the Noetzie records which she stored for the NCOA.

Margi Dane will also be taking leave of the committee after serving five of the six years the constitution allows. She reluctantly took on the Treasurer portfolio, has performed a remarkable job, and will be leaving the finance and member records in a healthy state. She will be sorely missed, but now wishes to pursue other personal interests. Thank you Julie & Margi for a job well done.

Four NCOA committee members recently met with the acting Municipal Manager for Knysna, Mr Johnny Douglas (his three-month contract has been extended for a further three months while the municipality advertises for a suitable

permanent MM) and we came away with a definite sense of achievement. This is largely due, I believe, to the use of a quality slide presentation prepared by Richard Moultrie. With the AGM's indulgence, I intend taking you through the presentation, as I believe it beautifully summarises the numerous issues & challenges facing Noetzie and the in-coming 2019 NCOA committee.

While I will not dwell on these issues for now, I am sure that the NCOA municipal portfolio representative will update you in this newsletter in respect of the access through Pezula & other matters. The next high priority issue relates to the old favourite, access & parking, particularly for the river community. The NCOA committee has been requested to play a bigger role in this matter. But more about all of this on the 27th.

Looking forward to seeing you all at the AGM.

Municipal Matters

Melanie Gosling



There is movement at last on the issue of public access on the Rexford Road through Pezula Private Estate.

At a meeting between the NCOA and the Knysna municipality in October the acting municipal manager Johnny Douglas said it was "critical" that the matter be finalised. The municipality will approach the Knysna Council to ask for approval to take the matter to court.

This has been put on the agenda for February 2019 – the earliest it could come before the relevant committee because their agenda for this year had already closed.

The proposed legal action is to find a permanent solution to the road access issue.

However, NCOA chairman Robby Robertson asked that the public be allowed through Pezula on the Rexford Road in emergencies as an

interim measure. The municipality's legal head Melony Paulsen undertook to remind Pezula of the existing agreement regarding emergency access via this road.

The NCOA asked that two discs be issued to each Noetzie household to be used for access through Pezula in emergencies. We are still waiting to hear the outcome of this request.

The road access issue through Pezula has been on the table for four years, so it is good to see some concrete action.

NCOA secretary
Richard Moultrie had

prepared a slide presentation for the meeting with the municipality, which nicely pulled together the issues on the NCOA agenda and made it easier for the officials to see at a glance.

Another issue raised concerned vehicle access and parking for the river homeowners. This is an outstanding matter that has been discussed for years,

but not resolved.

Hennie Smit, municipal manager of town planning and building control, said it had been agreed two years ago that the Noetzie residents concerned would come up with a proposed solution and then come back to the municipality.

The residents concerned have asked the NCOA to help in resolving this matter, which it has agreed to do.

An important matter raised concerned Noetzie and the urban edge.

There had been a council decision in 2009 that put Noetzie outside the urban edge, but various maps and documents had not been altered to reflect this. The NCOA asked that this be corrected.

An important piece of information that came out of the meeting was that all the thoroughfares and passages marked on the general plan are public streets, and as such the ownership is vested in the municipality.

However, Hennie Smit said the municipality was in the process of drawing up a new spatial development framework that would nullify the 2009 council resolution. One of the issues that the proposed framework would address was where Knysna's urban edge would be. The public will be invited to make input. The committee will make comments when the time comes, but residents can also do so in their personal capacities.

The urban edge may seem a small issue, but it has major implications for Noetzie, as there are substantial differences in the nature and extent of development that can take place inside or outside the urban edge.

The NCOA asked whether the municipality had drawn up a coastal management plan, as required by the Integrated Coastal Management Act, which would include securing public access to the beach. The municipality will come back to the NCOA on this matter.

It will also come back to us on the question of the Osaer permits – permits issued for certain activities for properties that fall inside the Outeniqua Sensitive Coastal Area Extension Regulations.

Noetzie falls into this Outeniqua Sensitive Coastal Area, where a permit is required before one may legally carry out a whole range of activities, such as digging, moving soil and rock, cutting vegetation, dredging in a river or wetland, and others.

The NCOA said some Noetzie residents were under the impression that the Osaer permit granted in 2013 by the municipality as part of the NCOA Duty of Care Document gave “blanket approval” for such activities. Both the municipal manager and the head of legal services said their understanding was that this was not the case, that each listed activity

proposed by property owners would require a fresh application for an Osaer permit. They undertook to get clarity on the matter and give us a written response.

Another issue the municipality undertook to look at was that some public places at Noetzie were not on the municipal asset register, including the Old Wagon Road and the path to the public steps.

An important piece of information that came out of the meeting was that all the thoroughfares and passages marked on the general plan are public streets, and as such the ownership is vested in the municipality. There had been questions from some residents regarding the ownership of these thoroughfares, so that has been settled.

There were several other issues raised, including the condition of the Noetzie road and the need to manage the stormwater, public lavatories which have been vandalised, rubbish removal and the over-flowing bins in the car park which attracted monkeys, the need for monkey-proof bins on the beach, and security in the car park.

The municipal manager said he had asked the relevant director to look at all public amenities before the start of the season, so the loos should be in proper condition before then.

The municipality was also in discussion with SANParks and others on the issue of baboons and monkeys, and was considering the possibility of introducing baboon monitors. This has worked well areas in Cape Town, where people are employed by

the local authority to keep primates out of the urban areas.

Sad news is that Xolile Meshakie Wana, who worked the boom at the car park for years, died in hospital in early November. His family was told he died of heart failure.

This was soon after Julie Gosling and Wendy Dewberry had managed to get Xolile approved as a car guard by the municipality, and he had been issued with the official red bib.

The municipality has now put two car guards on duty over the weekends in November, and every day from December 1 for the rest of the season.

On other matters, Knysna mayor Mark Willemse appealed against his suspension by the DA, and the DA Federal Legal Commission found him not guilty of misconduct and the matter was overturned.

“But it hasn’t ended there,” Willemse said. “The DA Federal Council is going to take that decision to court. So it is a strange situation of the DA taking itself to court.”

Until that court outcome, Willemse remains Knysna’s mayor.

Willemse confirmed that the three-month contract of acting municipal manager Johnny Douglas had been extended by another three months, ending on February 6.

An acting municipal manager is allowed only two terms of three months.

“We were not successful in finding a municipal manager is the first round of adverts, so have advertised again,” Willemse said.

A problem with attracting a permanent person is that there is a limited time that a municipal manager can continue to serve in that position after a municipal election.

Willemse said as the next municipal election was in 2021, the municipal manager’s term of employment would have to end in 2022, instead of continuing for the normal five-year period.

“So that makes it difficult to fill this critical position,” Willemse said.

Fire resilience at Noetzie

Wendy Dewberry



The fires that came to the Garden Route in October 2018 were four times the extent of the 2017 fires which ravaged Noetzie. Sitting in our newly rebuilt home knowing that our fate once again remained at the mercy of the combined elements was shocking. It has been 16 months since the fires and I was no more prepared, despite having read that fires are with us forever, in keeping with all the warnings about climate change.

Africa is in a new cycle where dryness and fires will increase. Mark Dixon explained in his forest and fires talk in Knysna that while Europe is attempting to mitigate a two degree increase in temperature with all manners of carbon control, scientists have discovered that parts of Africa could potentially reach a four degree increase which would have

We can learn from forests and perhaps employ those mechanisms to our areas that should not burn – our homes and gardens.

effects on urbanisation, food security and extreme weather events. However this may turn out down the line, it spells more fires, intense winds and floods.

Noetzie-ites have firsthand experience that the notion that indigenous forests do not burn is not wholly true. However, there are various mechanisms in forests which are fire retardant, since forests do not like to burn as fynbos does. We can learn from forests and perhaps employ those mechanisms to our areas that should not burn – our homes and gardens.

Taking the principles of nature as outlined by the complexity theory Biomimicry, we can learn from forests and employ these principles which have shown success for all the time that the earth has existed.

Resilience is a principle that is supported by the principles of self-organisation, diversity and feedback loops. Self-organisation with respect to fire resilience for Noetzie is going to be key. For too long I had the misconception that at a time of fire, we could phone the department for a truck and maybe a helicopter. That ain't gonna happen. We need our own infrastructure and plan to go with it. Access to huge amounts of water and pumps to get it to where we need it should be an NCOA priority.

Forests employ the principle of diversity. Indigenous forests have a multiplicity of methods for warding off fires. Some trees have developed thick wet bark and highly flammable leaves which burn out fast and acts as a backburn in the case of fire. Trees and shrubs which contain lots of water act as good fire breaks around homes. Canopies act as a shield against sweeping fires. Trees are connected underground through organisms called mycelium which act as a sharing organ for resources of sun, air and water. These are the largest and oldest living organisms on earth and provide a service to humans that we would do well to understand and protect. Forests maintain a patchwork of varying age, height type and density which acts as a fire calmer. For instance, when huge Ironwoods fall, they take out a great big swathe of trees. This allows for the light and rain to enter the forest and germinate seedlings and

provide a wet spongy area. Our conservancy would do well to employ multiple methods of fire-resistant principles and actions – a management plan, protection of resources, infra structure, access, understanding of the benefit of naturally occurring service functions like wetlands, planting fire-retardant trees such as Milkwoods, protecting forest floors and a robust communication system are a few that come to mind.

Feedback loops is another principle of the natural world that allows for adaptation. Using information and wisdom from the ever-growing body of fire-science will be important in maintaining and adapting fire resilience. Communicating with the Southern Cape Fire Protection Association on ideas and alerts will help our fire resilience. Discovering the ideas and information of our neighbours and assisting in maintaining land is helpful. For example, our neighbours kept an open fire break on our North West border as is required by law. However, there is no gate access in case of fire, and even worse, all the cut debris was piled high, only 10 metres from our house ... a bonfire just waiting, and of course ... it did ! Cut biomass should be removed or chipped. Ollies Chipper 0780201144 comes with a team, a chainsaw and a chipper and for R600 per hour will chip a mountain of stuff which can be used for compost, mulch or pathways. A minimum of three hours ensures that it is worth his while.

After the fire: regrowth at Noetzie

Melanie Gosling



It is 18 months since the devastating Garden Route fires raged through the Noetzie area in June 2017 and it is heartening to see the resurgence of plants on some of the scorched areas.

It is also heartening that the even bigger Garden Route fire in October this year did not affect Noetzie.

One species that has popped up in abundance after the 2017 fire is the keurboom (Virgilia divaricate). There are plenty of them sprouting on the burned areas near the car park and adjacent to the Old Wagon Road.

... keurbooms are a fire pioneer species and are among the first plants to grow on burned areas.

I was surprised to see so many keurbooms in areas where they had not been in abundance before, but according to Johan Baard, a scientist who works for SANParks' Garden Route Park, this is quite normal.

The reason is that keurbooms are a fire pioneer species and are among the first plants to grow on burned areas.

This is a good thing, as keurbooms provide nitrogen to the soil, and importantly, provide shade for forest species to grow.

“Forest species don't like direct sunlight. They need

shade to grow in,” Beard said.

The thick stands of keurbooms that we see developing now will live for between 25 to 30 years and once they die the burned area they colonised will convert either to forest, or to fynbos. Time will tell.

But the recovery of the burned areas of the Noetzie forest is a different story.

Most of the Noetzie forest falls into the Sinclair Nature

Reserve, under Sanparks’ jurisdiction, and extends east to the Harkerville area.

Looking at the forest from the top of the hill one can see large brown-grey burned areas among the green trees, where some fires burned for as long as two weeks.

I was hoping that with good rainfall over the next 10 years these scars would be replaced by new growth.

I was wrong. I will not live long enough to see the burn scars disappear from the Noetzie forest – and neither will any of us reading this.

“In the bigger scheme of things, the 2017 fire in the Sinclair/Harkerville area was not catastrophic for the natural environment,” Beard said, “but on a smaller scale it was bad, because this forest is not

something that will come back in 10 or 15 years. It will take 100 years before the forest resembles mature forest so that you don’t see the burns. You

will see those fire scars for a very long time.”

The Noetzie forest is home to a variety of birds and animals, from the splendid fish eagles and forest buzzards to the brilliant loeries and kingfishers; from

bushbuck and bushpig to otters, caracal, leopard – and aardvark.

Would they have survived the 2017 firestorm?

“We believe the larger animals did escape the fire, as there are enough unburned patches close by. But the smaller animals, like

lizards and so on, many of them probably didn’t make it,” Beard said.

The Noetzie forest grows on

ancient sand dunes, and is classified as Southern Afrotemperate Forest.

Although much of the fynbos area that burned is green again, Beard says he is a little concerned because the species diversity of the plants coming back seems low.

“In the Harkerville/Sinclair area it seems as if the fire burned extremely hot, and I am worried that some of the topsoil may have burned and blown away. It does seem that it has gone in some places,” Beard said.

If it has, it can reduce plant diversity in two ways: the seeds in the topsoil could have blown away, or there is not enough top soil left to support regrowth. “But it is early days still. We have not had really good rains since the 2017 fire. What

we need is a year of above average rainfall, but not concentrated rainfall as this could create erosion.”

Beard and colleagues have used



A thick stand of keurbooms, a fire pioneer species, growing on the burned areas at Noetzie, 18 months after the 2017 fire.

Pic: Julie Gosling



NEW LIFE: A young keurboom that started sprouting at Noetzie in December 2017, six months after the fire.

Pic: Wendy Dewberry



The cross-hatched areas show the extent of fynbos and forest that burned around Noetzie in the 2017 fires.
Graphic: Johan Baard

satellite data to show the extent the burned areas in the Noetzie area (see above) which brings home just how much was destroyed.

“If it were pine trees coming up, you could leave it longer, but with wattle you need to get in early before they sow seed.”

One of the post-fire problems in the Garden Route and indeed all over South Africa is the spread of alien vegetation.

The fire burned 15000ha of vegetation, destroyed more than 800 buildings, many of them formal houses in Knysna suburbs, destroyed more than 5000ha of commercial plantations and left seven people dead.

Baard and colleagues have written a paper on the 2017 Garden Route fires, published this year in the journal *Fire Ecology*.

Baard said on the coastal side of the forest some aliens had come up, mostly eucalyptus, a few pines, blackwoods and black wattles.

Some of the facts are astonishing. The fire burned 15000ha of vegetation, destroyed more than 800 buildings, many of them formal houses in Knysna suburbs, destroyed more than 5000ha of commercial plantations and left

“But not many, less that in the Karatara burned areas. Mostly what has come up are keurbome and other indigenous fynbos and some forest species,” he said.

seven people dead.

The good thing is that these aliens can be nipped in the bud as Sinclair Nature Reserve is on the list for alien clearing in 2019/20.

Baard explains that the severity of the Knysna fires was exacerbated by very high fire danger conditions, including gale force berg winds, preceded by years of an “unprecedented drought”.

What was particularly interesting was the role of alien trees. More than half of the 15000ha that burned were either plantations of invasive alien trees like pines, or

areas where alien trees had invaded the indigenous fynbos.

These aliens had worsened the fire.

Another problem was that over the years, natural fires had been suppressed, which meant there was more fuel to burn resulting in a fiercer fire.

The spread of urban development meant there was residential development inside or next to fire-prone areas, which had increased the risk to residents.

“Our results support calls to control invasive alien plants, to reduce commercial planting of invasive alien trees,

strictly regulate development in areas of high fire risk, and maintain awareness of the need for fire-wise practices,” Baard wrote in the paper.

But as he points out, once the fire is gone, people can quickly lose interest in fire-wise practices.

Perhaps the much bigger fire in October, which killed eight people, will make the southern Cape authorities and residents realise the severity of the risk and take action.

An obvious start would be to tackle the alien vegetation.

Community news



This year a number of Noetzie properties have been bought and sold.

The same group that bought Lyndsay Castle has also purchased Jim Parkes’ two properties and Noetzie Castle.

Sean Henderson and his family are the new owners of the lagoonside property that was formerly owned by Chris Everett. Sean is no stranger to Noetzie.

A warm welcome to all the new members of the Noetzie community

North Cottage was recently purchased by the Hunt family. Sandi and Simon have a 4-year-old son, Rafferty, and in Sandi’s words are “Over the moon about the cottage and very much look forward to lots of happy and fun times spent there”.

A warm welcome to all the new members of the Noetzie community.

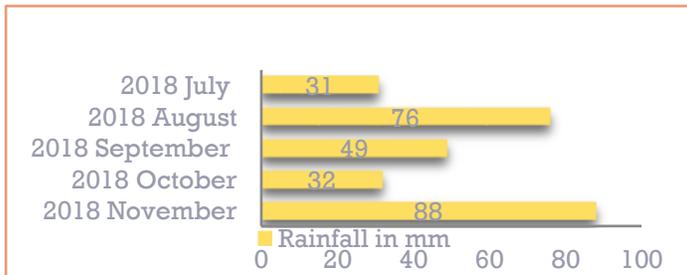
Obituary: Xolile Meshakie Wana

Xolile Meshakie Wana died on 6 November from heart failure after having been admitted to hospital a week earlier for breathing problems.

In Julie's words: "Xolile has been part of Noetzie since the early 2000s when he worked at Lindsay

Castle and then as a self appointed car guard. We worked on many projects together including clearing the Outdoor Classroom of alien vegetation and stabilising the beach access road. RIP ou tjommie."

Rainfall for the last four months



Tide table December 2018

Spring Tide:
23 Dec 2018 @ 16:17 (2.03 m)

Lowest Tide:
23 Dec 2018 @ 22:23 (0.29 m)

1	2	3	4	5	6	7 NEW	8
SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR
Sunrise 05:09 Sunset 19:24	Sunrise 05:09 Sunset 19:25	Sunrise 05:09 Sunset 19:26	Sunrise 05:09 Sunset 19:27	Sunrise 05:09 Sunset 19:27	Sunrise 05:09 Sunset 19:28	Sunrise 05:09 Sunset 19:29	Sunrise 05:09 Sunset 19:30
LUNAR	LUNAR	LUNAR	LUNAR	LUNAR	LUNAR	LUNAR	LUNAR
Moonrise 01:01 Overhead 07:34 Moonset 13:32 Underfoot 19:59	Moonrise 02:18 Overhead 08:23 Moonset 14:35 Underfoot 20:47	Moonrise 02:52 Overhead 09:11 Moonset 15:37 Underfoot 21:35	Moonrise 03:26 Overhead 09:59 Moonset 16:39 Underfoot 22:23	Moonrise 04:02 Overhead 10:48 Moonset 17:40 Underfoot 23:12	Moonrise 04:39 Overhead 11:37 Moonset 18:40 Underfoot ---:---	Underfoot 00:02 Moonrise 05:20 Overhead 12:27 Moonset 19:38	Underfoot 00:52 Moonrise 06:04 Overhead 13:17 Moonset 20:33
TIDE TIMES	TIDE TIMES	TIDE TIMES					
Low 04:47 High 11:16 Low 17:48 High 00:02	Low 05:59 High 12:24 Low 18:48 High 01:04	Low 06:57 High 13:18 Low 19:37 High 01:53	Low 07:44 High 14:03 Low 20:18 High 02:00	High 02:34 Low 08:25 High 14:43 Low 20:53	High 03:12 Low 09:02 High 15:19 Low 21:26	High 03:47 Low 09:36 High 15:53 Low 21:57	High 04:20 Low 10:09 High 16:26 Low 22:27
BEST FISHING	BEST FISHING	BEST FISHING					
18:20 to 19:22	19:20 to 20:22	06:25 to 07:29	07:12 to 08:16	07:53 to 08:57	08:30 to 09:34	15:21 to 16:25	15:54 to 16:58

9	10	11	12	13	14	15 1stQ
SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR
Sunrise 05:09 Sunset 19:31	Sunrise 05:09 Sunset 19:31	Sunrise 05:09 Sunset 19:32	Sunrise 05:09 Sunset 19:33	Sunrise 05:10 Sunset 19:34	Sunrise 05:10 Sunset 19:34	Sunrise 05:10 Sunset 19:35
LUNAR	LUNAR	LUNAR	LUNAR	LUNAR	LUNAR	LUNAR
Underfoot 00:48 Moonrise 06:52 Overhead 14:08 Moonset 21:24	Underfoot 02:33 Moonrise 07:43 Overhead 14:57 Moonset 22:10	Underfoot 03:21 Moonrise 08:36 Overhead 15:45 Moonset 22:51	Underfoot 04:08 Moonrise 09:29 Overhead 16:31 Moonset 23:29	Underfoot 04:54 Moonrise 10:24 Overhead 17:16 Moonset ---:--	Moonset 00:03 Underfoot 05:38 Moonrise 11:18 Overhead 18:00	Moonset 00:35 Underfoot 06:21 Moonrise 12:13 Overhead 18:42
TIDE TIMES	TIDE TIMES	TIDE TIMES				
High 04:53 Low 10:42 High 16:59 Low 22:58	High 05:27 Low 11:15 High 17:31 Low 23:29	High 06:02 Low 11:51 High 18:06 Low 00:03	High 06:39 Low 12:31 High 18:43 Low 00:41	High 07:21 Low 13:20 High 19:29 Low 01:27	High 08:11 Low 14:23 High 20:28 Low 02:00	Low 02:27 High 09:13 Low 15:40 High 21:45
BEST FISHING	BEST FISHING	BEST FISHING				
10:10 to 11:14	10:43 to 11:47	11:19 to 12:23	11:59 to 13:03	12:48 to 13:52	12:49 to 13:51	14:06 to 15:08

16	17	18	19	20	21	22 FULL
SOLAR						
Sunrise 05:10 Sunset 19:36	Sunrise 05:11 Sunset 19:36	Sunrise 05:11 Sunset 19:37	Sunrise 05:12 Sunset 19:37	Sunrise 05:12 Sunset 19:38	Sunrise 05:13 Sunset 19:38	Sunrise 05:13 Sunset 19:39
LUNAR						
Moonset 00:30 Underfoot 07:04 Moonrise 13:09 Overhead 19:25	Moonset 01:01 Underfoot 07:47 Moonrise 14:06 Overhead 20:10	Moonset 02:07 Underfoot 08:33 Moonrise 15:05 Overhead 20:56	Moonset 02:41 Underfoot 09:20 Moonrise 16:07 Overhead 21:45	Moonset 03:18 Underfoot 10:12 Moonrise 17:12 Overhead 22:38	Moonset 04:01 Underfoot 11:07 Moonrise 18:19 Overhead 23:36	Moonset 04:51 Underfoot 12:07 Moonrise 19:26 Overhead ---:--
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Low 03:43 High 10:25 Low 16:57 High 23:09	Low 05:00 High 11:33 Low 17:59 High 00:17	Low 06:03 High 12:31 Low 18:50 High 01:11	Low 06:57 High 13:20 Low 19:35 High 01:57	Low 07:44 High 14:05 Low 20:18 High 02:00	High 02:40 Low 08:29 High 14:49 Low 20:59	High 03:22 Low 09:14 High 15:33 Low 21:41
BEST FISHING						
15:23 to 16:25	16:25 to 17:27	01:43 to 02:45	02:29 to 03:31	14:37 to 15:39	14:17 to 15:21	15:01 to 16:05

23	24	25	26	27	28	29 3rdQ
SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR
Sunrise 05:14 Sunset 19:39	Sunrise 05:14 Sunset 19:40	Sunrise 05:15 Sunset 19:40	Sunrise 05:15 Sunset 19:41	Sunrise 05:16 Sunset 19:41	Sunrise 05:16 Sunset 19:41	Sunrise 05:17 Sunset 19:41
LUNAR	LUNAR	LUNAR	LUNAR	LUNAR	LUNAR	LUNAR
Overhead 00:37 Moonset 05:48 Underfoot 13:09 Moonrise 20:30	Overhead 00:33 Moonset 06:52 Underfoot 14:11 Moonrise 21:28	Overhead 02:42 Moonset 08:00 Underfoot 15:12 Moonrise 22:20	Overhead 03:42 Moonset 09:09 Underfoot 16:10 Moonrise 23:05	Overhead 04:38 Moonset 10:18 Underfoot 17:05 Moonrise 23:44	Overhead 05:31 Moonset 11:24 Underfoot 17:56 Moonrise ---:---	Moonrise 00:20 Overhead 06:21 Moonset 12:29 Underfoot 18:45
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High 04:05 Low 09:59 High 16:17 Low 22:23	High 04:49 Low 10:45 High 17:02 Low 23:07	High 05:34 Low 11:33 High 17:50 Low 23:53	High 06:22 Low 12:26 High 18:40 Low 00:43	High 07:14 Low 13:24 High 19:37 Low 01:39	High 08:12 Low 14:33 High 20:42 Low 02:00	Low 02:45 High 09:20 Low 15:52 High 22:00
						BEST FISHING
						16:24 to 17:26

30	31
SOLAR	SOLAR
Sunrise 05:18 Sunset 19:42	Sunrise 05:19 Sunset 19:42
LUNAR	LUNAR
Moonrise 00:55 Overhead 07:09 Moonset 13:31 Underfoot 19:33	Moonrise 00:50 Overhead 07:57 Moonset 14:32 Underfoot 20:20
TIDE TIMES	TIDE TIMES
Low 04:03 High 10:36 Low 17:12 High 23:24	Low 05:23 High 11:51 Low 18:22 High 00:38
BEST FISHING	BEST FISHING
17:44 to 18:46	18:54 to 19:56