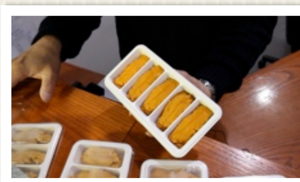
AUGUST 5TH, 2022 VOLUME #22 ISSUE #2

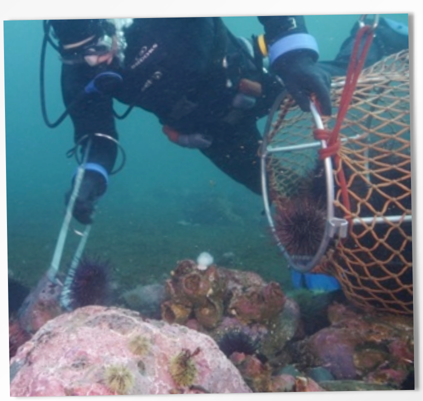
PUHA NEWSLETTER

Presidents Report

Mike Featherstone

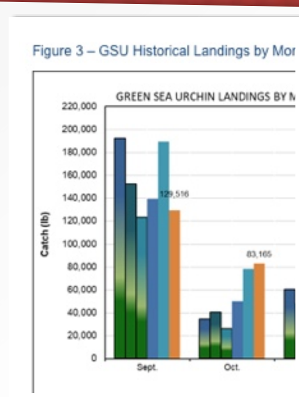
With the 2021-22 season completed it is time to reflect on this past fishing year and look forward to the 2022 – 23 season.The green urchin fishery continued to have strong landings (99.6% of quota) and increased pricing 2021-22. The stocks are healthy, and PUHA has continued its collaboration with DFO and stakeholders to increase the quotas. Good news is quotas will increase again for the 2022 -23 season. The market outlook is positive, and we expect to see growing increase in market demand from both Japan and China. The new IQ for 2022-23 is 13,900lbs up from 13,200, (although the new IFMP has not be released at this time).





PRESIDENTS REPORT

MARKETING REPORT



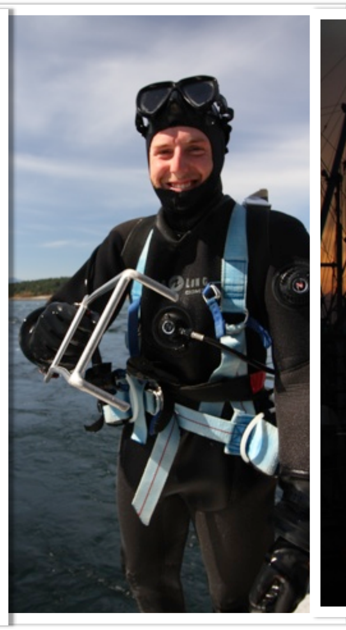
D&D PACIFIC REPORT

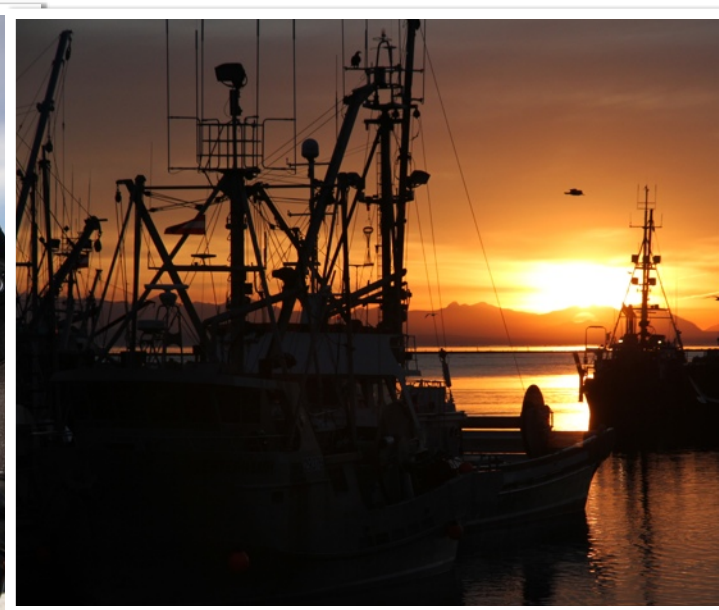
Presidents Report /Mike Featherstone Page 2

Going forward, PUHA is developing options to expand the green fishery in the north. If any fishermen can provide information on areas in the north with strong stocks and green urchin populations, please forward to PUHA or D&D. Once PUHA identifies candidate areas, we will work with DFO to consult with the local First Nations to explore the fishing opportunities.

The red fishery in 21/22 was really a tale of two fisheries. In the south the quotas increased slightly, and the quality and landings overall have improved (over 80% of quota). The tweaks to the management plan prior to the season paid off well with new areas and decent product. The south was the good news story this past season.

The north however was a challenge for most of year. From the start in September to the end of the season, quality was challenging to find. Areas such as Banks Island, Tree Knobs and Dundas just did not turn on, as they have in past seasons. As a result, only 38% of the total north coast quota was landed.





The lack of quality is a real concern and a conundrum for fishermen and industry. The ocean temperatures were initially blamed for the lack of kelp, but the ocean has cooled, and the kelp is coming back. The management to allow fishermen to move areas, to find quality, is in place to facilitate those opportunities. Some suggest the fishermen are not giving the effort required and only go for the low hanging fruit and run to port as soon as the fishing is difficult, or the weather looks bad. There was a lot of effort put into the areas close to Prince Rupert, unfortunately quality is not related to the closeness to Prince Rupert, and those areas were very poor, no matter how many times the fishermen returned to try.

Perhaps it is a combination of many factors - areas need to be fished to groom the stocks and allow the kelp to grow, fishermen need to work the areas sometimes 2 or 3 times a season as was done in the old days – taking the feed lines and feed holes – then moving on to the next area to let the urchins to fatten up over the next months. Hopefully, the new season will be better, it certainly can't be worse. You can't catch fish tied up in Rupert and with the cost of fuel running back and forth is not an practical option.

Presidents Report /Mike Featherstone

The new Red season is now officially under way. There was a new area selection for this year with the south coast quota dropping to 40,868 lbs and the north has increased to 146,333 lbs. Due the quota changes and the increased costs for D&D the validations have changed and increased slightly. The new red sea urchin registration form can be found at https://puha.org/wp-content/uploads/2022/07/2022-2023-RSU-Registration-.pdf

As we all know, soaring fuel prices have increased 48% in the past year and grocery bills have increased 9.7%. Statistics Canada reported that overall, inflation in Canada hit 7.7% on June 22nd. In BC specifically, inflation was 8.1% year over year in May. The D&D increases are less than the inflation rate but increases in fuel and labour have contributed to the validation costs increases. Unfortunately, some of the increases in our fees, are a result of some of PUHA members own doing.

It is a Condition of licence that all harvest logs must be submitted within 30 days of fishing. There are some (many are repeat offenders) who seem oblivious to this requirement. Not only is it a chargeable offense but it adds a significant burden for D&D to chase these missing harvest logs and then more costs to enter the data at a late date. Now DFO is looking at tightening the monitoring of this Condition and charging offenders. Processors and licence holders who have had licences unable to issue due to missing logs are considering holding back some final payment until submission is confirmed. It is a sad situation when rules and charges must be put in place to ensure compliance to Licence Conditions. PUHA encourages all fishermen to ensure the harvest logs are submitted within the 30-day requirement.

DFO has also added further financial burden on D&D by mandating a switch to Electronic Logbooks by 2024. It would be prudent to develop a universal logbook application with all the service providers however DFO has simply instructed each service provider to develop an e-log separately. In the long run PUHA supports e-logs and hopes they will simplify the data recording for the fishermen, also at a lesser cost. The Government could have managed the upfront costs better.

Geoff has provided his market report and some comments and insight into the current global situation with on going Covid restrictions and challenges. Hopefully the trade shows will proceed this year as planned and transportation and supply chain issues will normalize.

The PUHA AGM will be held September 6th, again by Zoom. We have held off an in-person meeting as there are still uncertainties with Covid. Our Zoom meetings have had good turn outs and we are all getting used to seeing each other on our computer screens. We will be sending out the invitation and agenda in early August. Please check out our social media - Face Book, Instagram and website. Ron is doing a great job updating the content and he is looking forward to getting out on the fishing grounds to see all you fishers and divers and building more content. Join PUHA at any of our social media sites and provide your pictures and comments.

Good luck to all in the new season and enjoy the summer! WORDS OF WISDOM "Change may not always bring growth, but there is no growth without change." ROY T. BENNETT

https://www.seafoodnews.com/Story/1222942/Japans-Russian-Seafood-Imports-10-percent-of-Total-Imports-May-Disappear

https://www.seafoodnews.com/Story/1225300/Six-Alaska-Fishery-Disasters-Now-Allocated-Funds-the-How-and-To-Who-is-Next-in-the-Process

https://www.seafoodnews.com/Story/1226369/Nootka-Sound-Watershed-Society-Receives-Funding-to-Evaluate-Salmon-Habitat

https://www.seafoodnews.com/Story/1225474/Diesel-Prices-Climb-to-Fresh-Record-High

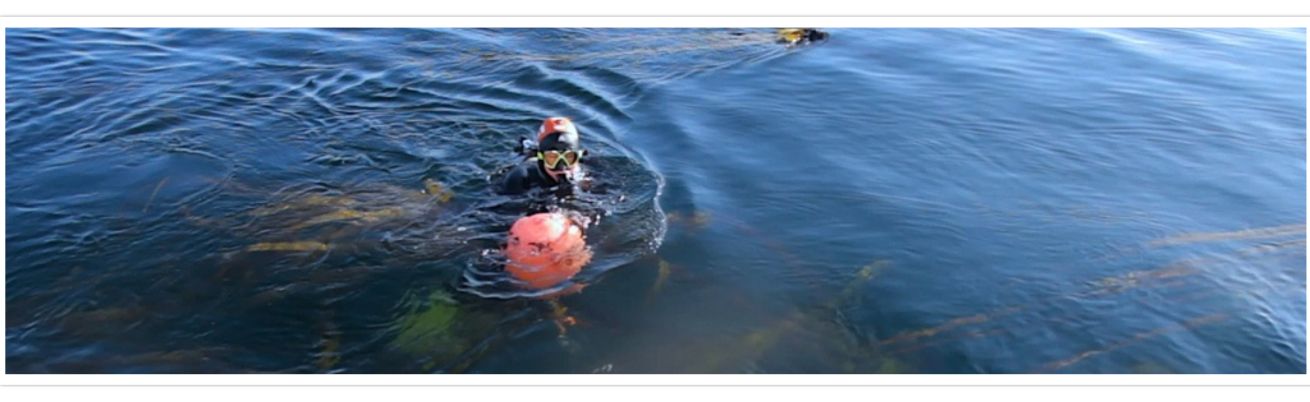
Marketing Report/Geoff Krause

Just when we thought everything was starting to settle down a bit, we had the winter of 2021-22 blow through. Not only have disruptions from that pandemic we all know so well carried on, but impatience with measures prescribed to limit those disruptions, and doubts about their effectiveness and even of the motives of those we were looking to for relief if not guidance, have continued to stir things up so it is hard to find agreement on just about any level these days - anywhere. There is not a lot of point looking at current trends too critically but it is hard to disagree with the observation that things going badly and perhaps irretrievably off the rails is looking more, rather than less, likely unless we can get past our current divisions. Murphy's Law(s) still rules and while I think we are at or coming up to a pivotal place in our story, transformational even, it would have been nice if we could have sidestepped the bad to worse timing of it happening all at once.

I remain an optimist but am afraid that seeing international and trade relations at just about every level going back to the way they were even just a few short years is no longer in the cards. I am not going to go more deeply into the cascade of confusion we are surrounded by these days, other than to include some links to them at the end of this report, but will wrap this part up by reiterating my belief that our only realistic way forward is to keep doing what we do as best we can in the belief that it will be recognized, and rewarded and help with a positive general recovery when we are all through it.

So with all that being said, I was just checking out the D&D tables and see the combined harvest from North and South did not quite break through the 50% mark, largely because of the lousy weather on the North Coast over the winter and spring season. The markets were fairly strong. The average sale price of fresh processed product actually looks like it set a record in 2021, beating out the 2019 record price of $66.06/kg by some $0.22 (@ $66.28). It is impossible to draw firm conclusions for 2022 from just a few months of data but that same trend remains more or less apparent through the end of May at least.

It strikes me that it is reflecting anticipation for relief from the pandemic seen just about everywhere, and a restart to people getting out and about again so they can exercise their social muscles. We saw it in Boston as reported in the last newsletter, and we saw it as well in Barcelona at the 2022 edition of the Seafood Expo Global (SEG), which we attended in April. Geoff Krause and Fraser Rieche scouted the city and the show out for the urchins and cukes while Katie Lindsay, Jamie Austen and Grant Dovey were checking it out for the ducks. It was a smallish delegation but there was still some doubt even 5 weeks out that it still might not happen so it did not seem right to push hard to get others to take the plunge and commit to coming along. While we were not expecting a huge turn out at the show, we did feel it would be important to possibly critically important to establish a presence at this show simply as a way to touch base with international customers and players. Access to the other big show in China that we have taken part in over the years is quite possibly going to remain limited over the next few years because of residual effects from the pandemic. There are also worries about still rising geopolitical tensions that have a lot of westerners on edge when it comes to possible visits there.



This was the first time the SEG was held in Barcelona, so it also made sense to scout things out a bit for future delegation(s) from BC. There was not a lot of doubt about what the show itself was gong to be like- the organizers ran it for 27 years in Brussels so we were expecting all the pieces would be in place even if the crowds were not quite ready to show up. We were pretty much on the money on both counts- the venue is great and crowds were kind of underwhelming. The show is now being held at the Barcelona Grande Fira, a facility that looks to have the potential to probably almost double the size of the show. There are lots of hotels, restaurants and other visitor service resources in the city and - on the upside and quite simply- the chances of running into good to great weather there in April is more dependable than in Brussels.

The report has been submitted to get up on the PUHA website, but as a quick summary, we collected contact information from about 19 visitors, including 6, 2 and 1 potential customers from the EU, the US and Japan respectively. There were not a lot of Asians at thee show, though Japan, South Korea and Taiwan had pavilions with companies at the show.

As mentioned there were some doubts about the show proceeding as scheduled right up to within about a month beforehand so preparations for the booth were kind of rushed. To be fair, in the case of the BC booth this was complicated by a change of personnel taking care of the arrangements as retirements around the beginning of the pandemic left some key responsibilities open. The folks who were eventually assigned to put the booth together were sort of dropped into the deep end just prior to the show and it kind of showed. The booth was pretty basic: there was no display cooler to showcase products nor any sampling or food preparation capacity, both of which are really powerful tools to draw people in. The graphics around the booth were limited to “static” pictures which, while nice, have limited attraction for passing eyes. There was a strong consensus around the booth that it is important for BC to be at the show but also that we would like to see some changes going forward. We hope the folks putting together booth facilities for future shows will take time to approach participants on what they would like to see at the booth.

So next up on the show circuit we the Seafood Expo Asia (SEA) in mid-September. There is no guarantee on how this trip is likely to turn out, and I have to admit it is striking me as a bit of a worry what with the uptick of omicron outbreaks and all. The timing is also compromised as another major show, Food and Hotel Asia (FHA) is happening in Singapore the week prior to the SEA. This may kind of drain the pool of visitors to the SEA, but we are already committed. The booth is paid for, as are all the amenities for it - including furniture, TV, display chiller, etc. and is in the same entry location as when the show was held in Hong Kong.

As with the Barcelona show, this is also the first time this show is being held in Singapore. It was moved there after the demonstrations in Hong Kong in 2019 led to its cancellation and then growing doubts about the intentions of the Chinese government on the independence of Hong Kong’s “One country Two systems” governance model kind of sealed the deal. I was hoping they would schedule the show for November if only6 because of the weather but for whatever reason the organizers settled on mid-September. I am not sure about the formalities of getting product to the show for sampling and display etc, but will be researching that more carefully in very short order. We probably need to get going on flights and hotel arrangements etc within the first couple weeks of August.

Marketing Report/Geoff Krause Page 6

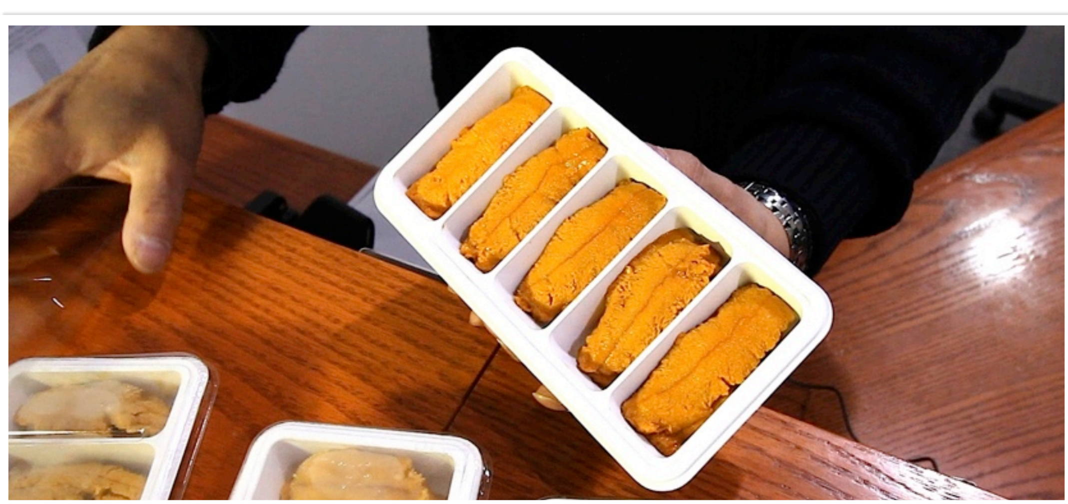
We are hoping to include a couple of side trips to Japan and South Korea as part of this mission. We have not been to Japan for a very long time and there has been some interest form buyers there, and exporters here at home, to get us back over there to touch base. Stopping in South Korea is recommended not just because it is a fast growing market for us, it is now our 3rd largest export market, but also because we have not sent a delegation there other than for the Busan seafood Show in 2016. We have about $20 K in the budget, with a 50% contribution from the AMP program for the Singapore and Japan portions and about $5K (2.5 people for 4 days) for the Korean leg. The PSCHA is also part of our delegation and they similarly have Singapore South Korea, though not Japan, on the approved destinations list for the year. We are also hoping the UHA will participate but, as above, we are still waiting and watching though we know we have to pull the trigger within the next couple of weeks and are hoping to get expressions of interest and commitments to participate from members and buyers in short order.

We are also plannign to return to Boston for the 2023 Seafood Expo North America. That is the last activity on our 2022-23 project so we are going to be needing a new proposal to carry on back to Barcelona and etc beyond that point. The last program funding envelope included the 5 years up to 2023 so while I am confident that we can again be successful in that, I am also still waiting on confirmation that the program will indeed be funded for another 5 years. I expect we will be hearing in the near future. Assuming it goes forward, I would be looking to get it submitted by early December to improve our chances of hearing something back by end of fiscal (March 31) though we would likely be going on spec to the SEG in Barcelona again in April- assuming of course the majority vote in the association(s) is to support said effort.

Links to some interesting reads

2022_01_12- PhysOrg: New tiny sensor makes the invisible visible (hyperspectral inspection)
2022_03_31- Seafood News: Singapore Positioning at the Forefront of Aquaculture Innovation
2022_04_06- PhysOrg: IUU Update - global sitrep
2022_04_06- PhysOrg: Kelp forest mapping
2022_04_14- PhysOrg: Researchers find declining nitrogen availability in a nitrogen rich world
2022_04_14- Practical Sailor: Keel Bolt Inspection and Repair - Practical Sailor
2022_04_16- Politico: The One Way History Shows Trump's Personality Cult Will End

2022_04_29: NBC News: Sea urchins are mysteriously dying off across the Caribbean
2022_04_30- PhysOrg: Underwater power cables make lobsters bad swimmers
2022_04_30- ABS-CBN News: The extraordinary sea urchin
2022_05_01- The Economist: 'Xi's incubator state'
2022_05_03- Nikkei Asia: Hong Kong economy shrinks 4% in Q1 as COVID surge bites
2022_05_06- NYT: Has Shanghai Been Xinjianged?
2022_05_11- The Conversation: An Asian perspective on science and other forms of knowledge
2022_05_12- The Economist: Locked down in Shanghai, a glimpsed techno-dystopian future
2022_05_16- NYT: Everything You Thought You Knew, and Why You're Wrong
2022_05_19- Nikkei Asia: Premier Li is back, and so is 'Likonomics'
2022_05_23- Nikkei Asia: Airlines hesitate to revive Hong Kong flights
2022_05_26- G&M: As the U.S. unravels, innocent bystander Canada can't escape the fallout
2022_05_29- The Economist: Empty promises
2022_05_29- The Economist: The ties that bind
2022_06_01- CleanTechnica: New tech for increasing vessel efficiencies
2022_06_01- Nikkei Asia: Climate refugees: The world's silent crisis
2022_06_01- The Economist: Trouble at the top and bottom of China's financial sector
2022_06_06- PhysOrg: Kelp mitigates ocean acidification
2022_06_12- G&M: On World Oceans Day, ask: What if we could do it differently?
2022_06_14- SCMP: How consumer confidence has tanked in China
2022_06_24- Nikkei Asia: Inside Shanghai's COVID lockdown nightmare
2022_06_25- Interesting Engineering: Water based battery
2022_06_25- NYT: Reality Defeats All Empires
2022_06_26- NYT: An Invisible Cage: How China Is Policing the Future
2022_06_26- Nikkei Asia: Rewiring global capitalism to save the planet
2022_06_27- The Economist: China's mental-health crisis is getting worse
2022_06_29- BBC News: Why business is still optimistic about Hong Kong
2022_06_30- NYT: The World Can't Keep Fishing Like This
2022_06_30- G&M: Global stagflation is looming, but we can reduce the risk
2022_07_03- The Economist: Costly food and energy are fostering global unrest
2022_07_03- Nikkei Asia: Hong Kong's narrow path going forward in the next 25 years
2022_07_04- The Atlantic: Why the Past 10 Years of American Life Have Been Uniquely Stupid
2022_07_07- Washington Post: What expert opinion says about political extremists in the US
2022_07_11- Nikkei Asia: How the ancient Greeks can help China and the U.S. avoid war
2022_07_11- Washington Post: Political Violence- worse yet to come
2022_07_13- G&M: China's exports bounce back but global risks darken trade outlook
2022_07_14- Nikkei Asia: China's college grads despair over worst job market in decades
2022_07_15- Washington Post: China's economic growth slows to 0.4%, weakest in two years
2022_07_16- NYT: World Economy Is Imperiled by a Force Hiding in Plain Sight
2022_07_19- Nikkie Asia: China's debt bomb looks ready to explode
2022_07_19- The Economist: What to read to understand Singapore
2022_07_20- Nikkie Asia: Endemic corruption and policy impasses are holding Vietnam back
2022_07_21- The Guardian: Revealed: oil sector's $3bn-a-day profits for last 50 years
2022_07_25- NYT: Endemic Covid-19 Looks Pretty Brutal
2022_07_25- G&M: The evolution of U.S. TV news: from optimism to an evil storm
2022_07_26- NYT: Ukraine Is the Next Act in Putin's Empire of Humiliation
2022_07_26- Nikkie Asia: The crushing of Hong Kong's civil society will be felt by all
2022_07_26- Nikkie Asia: Hong Kong exodus hits Japanese business in financial hub



RED SEA URCHIN FISHERY – To July 15th, 2022

North Coast Fleet

- Harvest levels are well below average in March. The lowest on record
    - Weather playing a huge role in the lack of harvest
    - Quality was lower than average, producing lower recoveries in all QMAs
- The protocol is not working as anticipated
    - The fleet still struggling with boundary QMAS of multiple blocks
    - Revisions approved will see a
        - Central coast block
        - A North Coast block
        - A Haida Gwaii block
- Only one block at a time. This should resolve the remaining issues
- The Kelp Restoration Project started on the 27th of March with Parks Canada, the Haida Nation, and PUHA – program went well
- The regular Haida Gwaii fishery commenced after the Kelp Project
- The delay in March Haida Gwaii fishing resulted in an increase in landed product for the month of April. Similar to the previous season
- Harvest continued in to May with the highest landings since the 1998/99 season
- June was small in landings, but July exceeded the last 4 seasons
- Only 38.5% of the NC TAC has been landed

South Coast Fleet

- Vessels were active steadily into January and into February
- March had 40k out of the water
- April and May saw the live market program in Steveston become more active
- The live market program is active into July
- Commercial landings out of Campbell River was attempted but quality was poor
- Over 81% of the SC TAC has been landed

General

- Undersize is noticed more coast wide
    - Bent rakes and new divers the main issue, but
    - Harvest bags are no longer dumped and sorted on deck of the dive vessels. They are being used directly for transport bags to the dock
    - Rocks and undersize is not being returned to the ocean floor. Buyer and processor complaints on the rise
- Harvest charts outstanding – an increase in late charts noticed and D&D will be into February of 2023 trying to finish this season's late chart submission – very hard on a fixed budget
- Figure 1 – RSU Landings by Season to Date - 6-Year Trend to July 15th, 2022

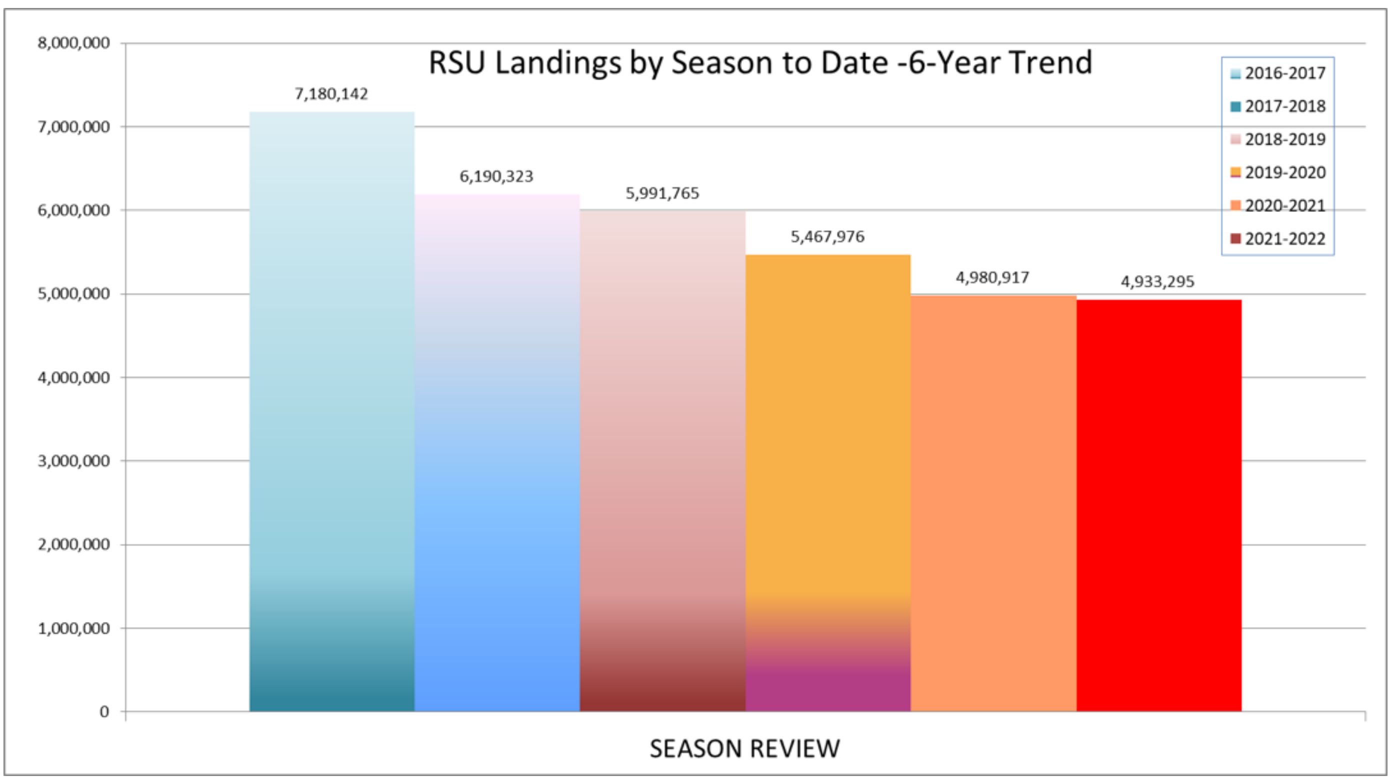
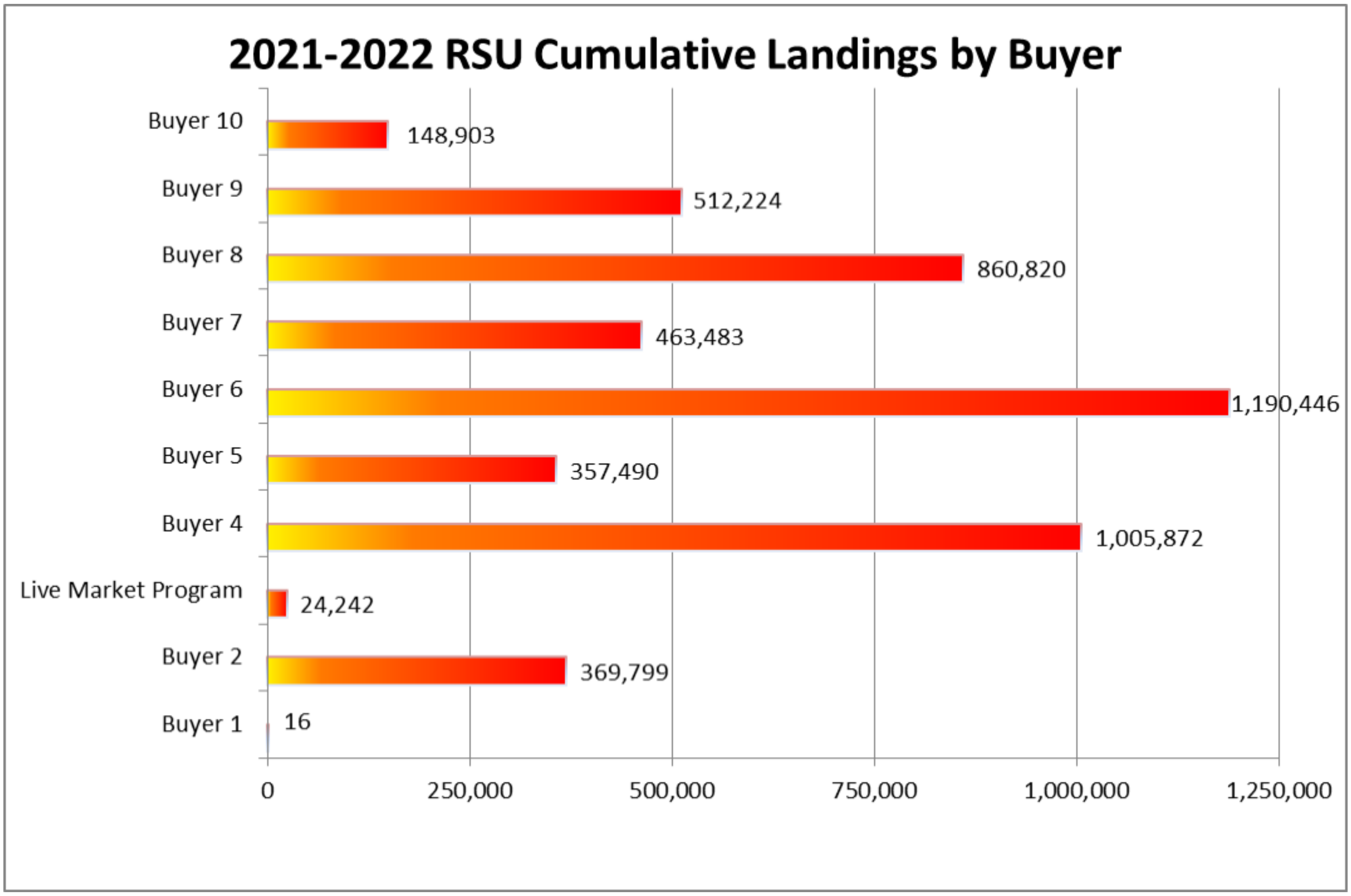


Figure 2 – RSU Cumulative Landings by Buyer July 15th, 2022

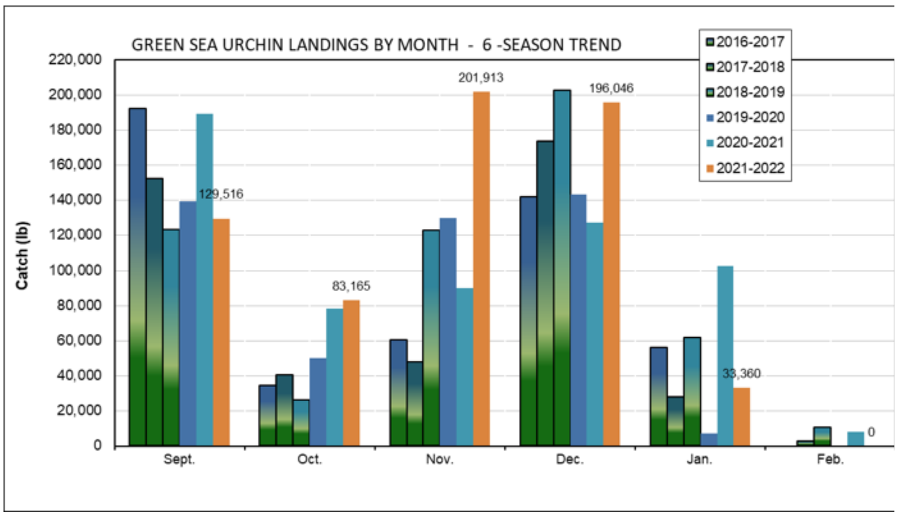


2021-22 GSU FISHERY- to July 15th, 2022

- The 2021-22 GSU season started quiet in September compared to the past few seasons
- Harvest out of the Victoria QMAs did not happen in September due to quality
  - The final pounds of the fishery are in the Victoria / Sooke QMAs
- Comox was an exploratory QMA and showed promise of increasing the TAC
- Sunshine Coast had one vessel scouting the exploratory QMA 16
  - A small landing occurred and more surveying is required
- Campbell River and Kelsey Bay commenced harvest and continued until the quota was achieved
  - Large biomass of GSU in all QMAs noticed
  - Cape Mudge RSU being overrun by GSU
- Adherence to Conditions of Licence overall good

- The break-up of QMA 12 into 12a – West and 12b – East seems to be working as expected
    - Large biomass of greens as the otters clean out the rsu population in the Port McNeill region
- Harvest continued and picked up steam in November and into December
    - Dropping sharply by the end of January
- Harvest levels exceed previous seasons
- No landings since January

Figure 3 – GSU Historical Landings by Month 6-SeasonTrend to March 1st 2022



The PUHA fleet harvested 99.6% of the TAC

Figure 4 – GSU Landings by Buyer to March 1st 2022