

MINUTES OF THE MEETING OF THE OVCA BOARD OF DIRECTORS
North Clubhouse, 600 North Trail, Stratford, CT 06614
October 18, 2022

Call to Order

The Meeting of the Board of Directors was held on the date, time and at the place set forth in the notice of Meeting fixing such time and place and attached to the Minutes of this Meeting. Notice of the Meeting was posted forty-eight hours prior to the Meeting. The President called the meeting to order at 7:00 pm.

Calling of the Roll

A quorum of Board of Directors was established.

There were present the following Board Members:

Officers:

President Bob Grosso
Vice President Richard Steinfeld
Treasurer Kenneth Colman
Secretary Myrna Mills Albino

District Representatives:

District 1	Catherine Violette	District 7	Marilyn Coffey (alt)
District 2	Catherine Hogan	District 8	Sherry Bearse
District 3	Dina Glantz	District 9	Absent
District 4	Bob Krakovich	District 10	Maureen Gordon (alt)
District 5	Bob McDonald	District 11	Tom Fuchs
District 6	Lee Schlafer		

Also present:

Fred Rodriguez, Executive Director

Reading of the Minutes of Previous Meeting

A motion to approve the minutes from the Board meeting of August 16, 2022 was made by Myrna Mills Albino and seconded by Maureen Gordon. The motion carried unanimously.

Report of Officers/Executive Director/Director of Maintenance Operations

The following presented the reports as attached to the Minutes of this Meeting.

OVCA President Bob Grosso

Executive Director Fred Rodriguez

- Leaf removal will be done in quadrants, vs districts, this year.
- Phase 1 of the Road Replacements Project will be complete on the North side by Nov 3. The South side will be complete before Thanksgiving.
- Pool – evaluating the use of technology that can auto-sense water quality which would save close to 20% in pool chemical costs. It would also save on labor and extend the use of the South heated pool beyond September.

OVCA Treasurer Kenneth Colman

Reports of Committees

The following reports were read:

Architecture Jim Manzolli

- Motion made by Lee Shlafer and seconded by Marilyn Coffey to approve a split common hallway at 53A and 53B Black Hawk Lane. The motion carried unanimously.
- Motion made by Catherine Hogan and seconded by Lee Shlafer to approve new or expanded decks/patios at 583B North Trail, 587B Arapaho Lane, 775B Pootatuck Lane, 731B North Trail and 531B Narraganset Lane. The motion carried unanimously.

Racquet Sports Bill Tanski
SAC Elaine Ficarra

Unfinished Business:

- Clarification was requested regarding the reallocation of maintenance expenses for recreational facilities from OVCA to OVTD. The purpose of the District, as documented in Article 1, Sect. 2 of the Tax District Charter, is: *to acquire, construct, maintain and regulate the use of recreational facilities*. The Modus Operandi, reviewed by counsel (OVCA & OVTD) and executed, only applies to the parameters as stated in the District Ordinances and under CT. General Statute 7-326 with no exceptions. The agreement signed only transferred expense allocations and nothing else. The following email from Fred Rodriguez, Executive Director, was read into the minutes:

From: Fred Rodriguez <frodriguez@oronoquevillage.com>
Date: Thu, Oct 6, 2022 at 1:23 PM
Subject: RE: Heads Up - Pickleball RSF
To: Myrna Mills Albino <mmaovca@gmail.com>, Bob Grosso <sfgiants_24@yahoo.com>
Cc: Kenneth Colman <kpcman@sbcglobal.net>, Steinfeldt Dick <steinfeldt@aol.com>

Good Afternoon All –

RSF is an OVCA responsibility – our auditor will be sending confirmation that the RSF Reserve funds collected by OVCA are to be used at the discretion of the OVCA Board of Directors – OVCA is under no obligation to “transfer” funds to TD, and OVCA can still collect the RSF Reserve for the facilities if they choose to do so. (OVCA can continue to reserve for the asset – if they choose to do so). The Tax District is responsible for maintenance and upkeep only – the Ordinance of the District States: “..to acquire, construct, maintain and regulate the use of recreational facilities..” i.e. maintaining the municipal standards for the facilities, and not changing or expanding the facilities -

So if RSF (pickleball) desires to expand/improve the facilities, they have to request the use of the reserves from the OVCA Board.

Best regards

Fred J. Rodriguez
Executive Director – CMCA, LCAM
Oronoque Village Condominium Association, Inc.
Oronoque Village Tax District

600 North Trail
Stratford, CT 06614
(203)377.5313
(203)380.6156

New Business:

- A motion was made by Myrna Mills Albino and seconded by Lee Schlafer to establish a Board practice to require that attorney guidance be provided in writing before voting on a decision influenced by attorney input. The Board can vote to waive that practice on a case-by-case basis. The motion carried unanimously.

Closing Forum

- Bill Tanski, 771A North Trail made the following statement: "As you many of you know I'm on the Tax District Board but also on the Pickleball Board serving as its Secretary, and I'm on the RSF Committee. In regards to Pickleball expansion, the evidence is overwhelming supporting the need for it. Therefore, the objective for Pickleball is the expansion to occur in the coming fiscal year. There are multiple options available to the PB Club to make this happen. Some go through OVCA, some through OVTD and some through both. The PB Board will decide which option is best for PB and the community. Thank you."
- Betty Mulholland, 273B Running Book Lane, questioned why she is not on the distribution list for agendas and other communications from the Office. She has made inquiries but has not had success in receiving them.
- John Staley, 531B Narraganset Lane, stated his concern about rumors that the greens will be closed at the Blackhawk Country Club during a period of time during the 2023 season. Mr. Staley said that was not factual and a letter to members said nothing about a plan to close at all during the 2023 season.

A motion was made by Maureen Gordon to adjourn the meeting and seconded by Bob Krakovich. The President declared the meeting adjourned at 8:00 pm.

Dated: 10/18/22

Myrna Mills Albino
Secretary

Oronoque Village Condominium Association
ARCHITECTURAL COMMITTEE
Minutes of Meeting
September 13 2022

Present: Jim Manzolli (JM), Mark Rhatigan (MR), Arnie Gans (AG), Larry Hartley (LH), Jim Ganis (JG), Ellen Hyde Phillips, (EHP)

A. Meeting opened at 9:30

B. Applications

Date	App No.	Unit No.	Name	Request	Member
8/19/22	83-22	34C	S. Curry	Replacement of 6 windows	MR
8/22/22	84-22	605B	M. Coffey	Replacement of kitchen and den windows	MR
8/26/22	85-22	311B	J. Revel	Replace three windows and sliding door	JG
8/29/22	86-22	538B	H. Anderson	Add small patio and walkway	MR
8/29/22	87-22	587B	R. Feineigle	Deck expansion	JG
9/2/22	89-22	775B	L. Nachbar	Add type TU deck	AG
9/1/22	88-22	731B	R. Graze	Deck expansion	JM
9/6/22	90-22	36B	M. Moquet	Replacement kitchen window	MR
9/7/22	92-22	53B	OVP	Split common hallway	MR
9/7/22	93-22	531B	J. Staley	Add small patio	JM
9/7/22	94-22	61A	R. Mattiaccio	Landscaping into common ground	MR
9/12/22	95-22	422A	MJ Brodsky	Replacement bathrooms and kitchen windows	JG
9/12/22	97-22	752A	D. Kanner	Kitchen vent	MR
9/12/22	96-22	115B	J. Bradley	Kitchen vent	LH
9/12/22	98-22	12B	GITSIT	Extensive remodeling	MR
9/12/22	99-22	516B	P. Keegan	Replacement sliding glass door	JG

C. New Business.

Discussion started regarding security cameras. Many questions concerning privacy, legality, also what OVCA should do.. Per regulations, anything attached to the unit exterior must be approved by the AC.

D. Old Business

None

Meeting adjourned 11:30AM

Next committee meeting will be October 11, 2022.

Submitted,
Jim Manzolli
Chairman

Distribution by e-mail: AC Members, F. Rodriguez, M. Rhatigan, Linda Avers, B. Grosso

Oronoque Village Condominium Association
ARCHITECTURAL COMMITTEE
Minutes of Meeting
August 9 2022

Present: Jim Manzolli (JM), Mark Rhatigan (MR), Arnie Gans (AG), Fred Rodriguez (FR), Jim Rappaport, OVCA
President

A. Meeting opened at 9:30

B. Applications

Date	App No.	Unit No.	Name	Request	Member
7/14/22	75-22	113B	T.Linton	Replace all windows and sliding door	JM
7/25/22	77-22	319B	K. Raucci	Furnace replacement	MR
7/27/22	80-22	262A	K. Zimmermann	Add exterior bathroom vent	MR
8/3/22	81-22	234A	R. Duffey	Expand existing deck	JM
8/9/22	82-22	157B	B. Schwartz	Replace existing deck and ad stairs	AG

C. New Business

None

D. Old Business

None

Meeting adjourned 10:30 AM

Next committee meeting will be September 13, 2022.

Submitted,
Jim Manzolli
Chairman

Distribution by e-mail:
AC Members, F. Rodriguez, M. Rhatigan, Linda Avers, Jim Rapaport

**MINUTES FOR 9/12/22 MAINTENANCE MEETING
NORTH BOARD ROOM – 4:00 P.M.**

ATTENDANCE: All districts represented. Fred Rodriguez, Executive Director, and Dennis Caffrey, OVTD Liaison, not present.

Minutes from the 8/15/22 meeting accepted as written.
Please see Mark's attached complete written report and agenda.

MARK RHATIGAN COMMENTS:

22-23 PM Program:

(75) units scheduled to receive siding replacement and painting on the South. To date, (8) buildings in the 8-9 year cycle have had carpentry completed and awaiting paint. There are (165) units remaining to complete the entire village.

2nd Paint Cycle:

All (26) units (D7) received their second coat of paint and are completed for this fiscal year.

22-23 Deck & Entry Painting Program:

(28) units of the (100) scheduled for a new coat of deck paint have been completed. Remaining units will be completed by early November. Another (104) units in the South are scheduled for Spring 2023.

Lawn Reseeding:

Since August, (30) work orders received of which (17) completed. Maintenance will continue to accept requests for reseeding until September 30. This autumn program will take place annually and the reseeding areas must be watered daily after reseeding.

Stump Removal:

Stump grinding will take place within the next 1-2 weeks. (20+) stumps identified for removal by an outside contractor to save money. Clean-up of the grindings will be done by OV Maintenance.

Tree & Shrub Replacement:

Maintenance going through list of requests. A full list of replacements and tentative install dates will be detailed at the October Maintenance meeting.

Pool Closures:

North pool closed September 6. The South lap and heated pools will remain open until chemicals are depleted or a change in weather. During the "off season" Maintenance focusing on modernizing and updating some pool features - a "real time" web-based chemical monitoring system is planned to be installed. A furniture/umbrella replacement list will be formulated, pump motors and filtration will be repaired or replaced if necessary.

UI Infrastructure Update:

UI has completed the infrastructure change over on the South side. There are (3) transformers that still need to be replaced. Due to shipping and manufacturing this will not happen until next year.

Road Replacement Project:

Tentative start date of October 31 for road milling and paving. Storm water system repairs and catch basin replacement will begin the week prior. This is broken down into (3) phases. Phase 1 includes (4) road replacements on the North side and (10) on the South side. Residents will be able to park their vehicles in the overflow parking lots and shuttle service will be provided. Phase 2 will take place Spring 2023 and Phase 3 Fall 2023. More details and communication to residents will be provided early October.

Employee Roster:

Mark provided an updated roster to the Maintenance Committee.

JACKIE FREEMAN COMMENTS:

Upcoming Election:

With the upcoming election, Jackie informed the committee Dina Glantz, Joanne Sutphen, Dima Thompson and Arline Walton are not running for re-election to the Maintenance Committee. She extended her thanks to them for their time, effort and energy to the committee and the Village.

NEW BUSINESS:

No new business.

OLD BUSINESS:

Glass Article Summary:

Mark and Arline Walton worked on the article. Since Arline was not at this meeting, Mark will contact her to provide him a copy and will forward to Jackie and the committee, as it still needs some editing. Mark said it is important this article not be biased and it stay neutral. It was suggested making it bullet points showing the pro's and con's would be easier for residents to read and all residents will receive the same information.

Maintenance Meet & Greet (Lunch):

Mark provided the date of Friday, October 21 at 11:30 a.m. in the Maintenance Dept. Jackie will extend an invitation to the outgoing members. She will meet with Mark next week to finalize details. Renee Zinn suggested name tags. Jackie will also need an RSVP from committee members.

DISTRICT COMMENTS:

District 11 – asked if tree removal still going on. Mark said yes and the birch tree is coming out. Asked Mark if he got a price on duct cleaning which he did not. Mark did say (30) residents have contacted Pro-Check for dryer vent cleaning. Asked about the piles of brush on the side of North Trail as you enter. Mark said he called OCC regarding the clean-up. They do have a new superintendent again.
District 10 – residents feel original scheduling of work orders not always adequate due to emergencies that arise. Mark said the residents can speak to Harris or himself on updating scheduling.
District 9 – no comments.

Page 3

District 8 – Road pavement – driveways on Arapaho need to be done. With the (3) UI transformers needing replacement is there a chance they will fail prior to replacement. Mark said the UI said there is no need to worry.

District 7 – Trees taken down, drainage will be added on hill just waiting for pipe to come in and steps will also be replaced. Mark said outsourcing the weed whacking to Lemos was a big benefit and cost effective. He has also been in contact with the Kennedy Center to possibly outsource leaf clean-up.

District 7 – Alternate Rep question – asked about road replacement on Cherokee - Mark said next year, District 6 - Renee asked where District 6 fits in with Phases 2 and 3 for road replacement as there are pot holes by Unit 126. Mark to look at to see if they possibly can be patched. Lawn reseeding – since problem with residents watering areas that are reseeded possibly setting up sprinklers would help. Asked if it was true residents who replaced windows on their own and are hit by golf balls it is their responsibility to pay for them. Mark said the resident pays. The association pays if they are the original windows. Renee will bring this up during the open forum at the OVCA Board Meeting.

District 5 – Pond by hole 3 on golf course. Mark said he has talked to them several times and was told by Fred they do have a plan. House Committee looking into different thermostats for the clubhouses.

District 4 – Jackie said a resident did not receive a letter from UI for infrastructure outage. Mark said there were some residents that were not to be shut off but at the last-minute UI had to shut off their power. The South side trash receptacle - residents using it for their personal use, tossing bags, animals getting in. Look into some kind of lock. Mark said it will be locked.

District 3 – Dina said there are still pink ribbons on bushes. Mark will send out an eblast. Asked when the South pools will use up the chemicals. Mark said usually the last week in September. Asked where Phase 1 of road replacement will start. Mark would like the (4) on the North be first. Reminder of the ping pong thermostats not working.

District 2 – no comments.

District 1 – no comments.

The meeting adjourned at 5:00 p.m. The next meeting is scheduled for MONDAY, OCTOBER 10, 2022 NCB Board Room at 4:00 p.m.

Respectfully submitted,

Carole Fitzgerald
Secretary

HC Minutes, 10/6/22

Meeting called to order at 10 AM by chair Cheryl Dwyer.

Members present: Barbara Stewart, Irene Keating, Barbara Minoff, Debbie Grosso, Marie Orlowe, Maria Szalontay. Fred Rodriguez, Executive Director.

1. **4 Hand held cordless microphones** - 6 microphones have been ordered which will be compatible with both North and South Clubhouse audio systems.
2. **Training of staff on sound equipment** - This training will occur on Wednesday, October 12 . HC requests that staff trainees be available for either day or evening events.
3. **Carpet and Upholstery Cleaning** - This will be scheduled over the Thanksgiving holiday. Fred investigating companies who could do this work.
4. **Calendar of Events in Villager (used to be listed as O or C)** - Fred reports that the Communications committee voted to eliminate the O and C designation. This information was not coordinated/discussed with the House Committee which has purview over the calendar.
5. **Request to start club (Maryanne Weaver)** - this request was granted with restrictions - 2 entertainment events in first year and 2 trips during the year. HC wants to avoid duplication of events held by other clubs. Cheryl to communicate with Maryanne Weaver.
6. **Request for billiards table repair and equipment replacement** - Fred R to take care of this request this month (October).
7. **Expansion of Art Gallery** - Arts Guild wants to explore expanding the art gallery in the SCB into to hallway across from the monitor's office. Rationale: artwork often has to be declined due to space limitation. Fred to check with maintenance. Ray Vermette from the AG is also checking with maintenance.
8. **Large Print donation** - An Oronoque resident has a large print to donate. She will place it in the back card room of the SCB for HC to view.
9. **Security System** - will be implemented in the SCB in the spring, before pool season begins.
10. **Roof Washing, NCB** - There is moss growing on the roof of the NCB. Fred says the roof will be washed in the spring of 2023.
11. **Sinks Clogged in Kitchens** - Fred to investigate solutions for this problem.

Meeting Adjourned at 11:15

Respectfully Submitted,
Barbara Stewart, Secretary

**Minutes of OVCA Racquet Sports Facility Meeting
August 24, 2022, NCB Board Room - 4:30 PM**

Present: Nancy Blagys, Chair; Regina Archazki, Bill Tanski, Peter Feick, Carolyn Charnin.

Also Present: Fred Rodriguez, Executive Director

The meeting was called to order at 4:30 p.m. Chairperson Nancy welcomed all guests, reminding them that they were present as observers only. Nancy also thanked the Racquet Sports Facility members for their service this year.

Minutes Motion: It was agreed that Carolyn would take the Minutes for this RSF meeting and that *both club reports would be attached to these Minutes and uploaded to the OVCA Website.*

Minutes of the July 6, 2022 meeting were previously approved.

Pickleball and Tennis Tournaments

- Pickleball's tournament is scheduled for 9 a.m. on Saturday, September 10. Club members will be arriving by 8:30 a.m.
- Tennis tournament is scheduled for 9 a.m. Saturday, September 17. Peter will let Regina know how many courts Tennis will be using.

Pickleball and Tennis Club Reports

Bill Tanski presented a PowerPoint slide show for Pickleball and Carolyn Charnin read a summary of Tennis's report (both reports attached).

Requested Court Usage Reports

- Peter Feick gave a court usage report for Tennis (attached).
- Pickleball usage report is included in the PowerPoint presentation (attached).

Motions Made and Motion Passed

- Motions by both clubs were made and seconded, with discussion following, including Regina's and Fred's discussion about the most recent innovations for playing pickleball in indoor spaces like the SCB.
- Regina will follow up to determine the degree of Pickleball interest in playing indoors.
- The following motion was unanimously agreed:
 - *The Tennis Club acknowledges that court #4 will be relinquished for the use of pickleball in the future. It is also understood that the facility will be professionally designed by qualified engineering/architectural firm with acoustical studies encompassing all the necessary state, local and town code requirements.*

Executive Director, Fred Rodriguez Recommendation

- In his remarks, Fred began by identifying the likely, substantial costs of creating 6 standard size courts from courts #4 and #5 as being approximately \$200,000.00.
- Given that financial context, Fred asked RSF to look holistically and to think carefully about the long-term needs of both amenities at OV.
- He asked that both clubs think ahead to the next 50 years and plan such that both amenities will meet these future needs.
- A resurgence of interest tennis is a distinct possibility, and Fred advised, as an example, thinking about what it might take to make tennis courts 2 and 3 more attractive.
- Lastly, Fred also cautioned that any expansion plan will mean that we will not be able to play on our courts for about a year.

Meeting adjourned at 5:45 p.m.

Respectfully submitted,

Carolyn Charnin

Attachments:

A CASE FOR

Pickleball Expansion in Oronoque Village

[Read more](#)



AUGUST 24, 2022 BY OV PICKLEBALL



Introduction

- National Overview of Pickleball
- History of OV Pickleball
- Differences of Pickleball Play in OV vs Tennis
- Membership Data
- Usage Statistics
- Noise Issue Addressed
- Why Pickleball Needs More Court Space

THE GAME OF PICKLEBALL

What is Pickleball?

INTRO TO
PICKLEBALL



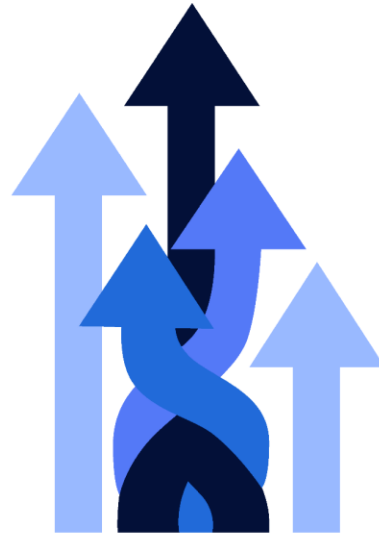
Video provided by USA Pickleball

Fastest Growing Sport in America

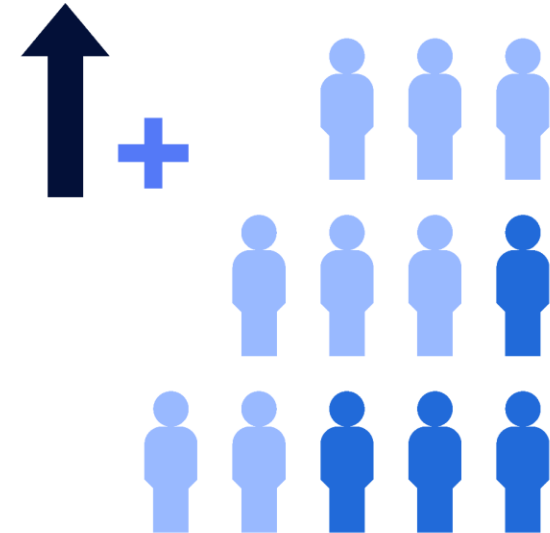


5 Million Players

43% increase in players
from 2020-2021



USA Pickleball reaches
almost 40,000 members
by the end of 2019;
a 1,000% growth rate since
the beginning of 2013.



Since its invention in 1965,
Pickleball has proven not to
be a fad. Instead, growth
has been in a constant
upward trend, especially in
the last 10 years.

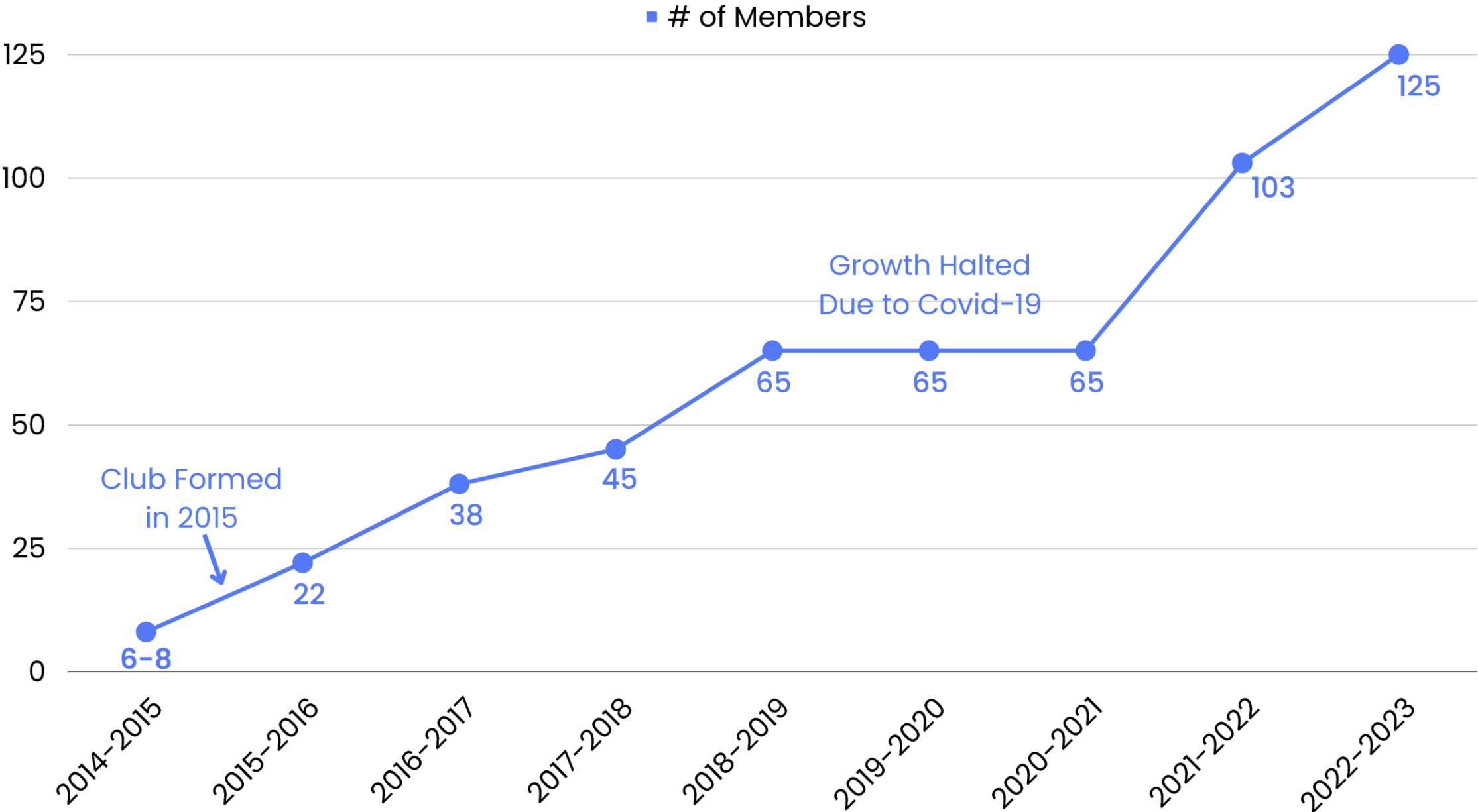
HISTORY

History of Pickleball in OV

- Play began here in 2014.
- The OV Pickleball Club was organized in 2015 with 20 members at the start of that year, using one court.
- Growth continued at such a rate that 2 dedicated Pickleball courts were created in 2015.
- Popularity continued to rise and by 2017 a third Pickleball court was added.
- Current roster at 125 members.



Pickleball Club Annual Member Growth



Pickleball vs Tennis at OV: Usage Differences



PICKLEBALL

- PB has 16 instances of club play over 7 days a week.
- Club play is morning and afternoon.
- During peak days there could be 28 resident players using the PB courts.



TENNIS

- Tennis has 6 instances of club play over 3 days.
- Play is morning only (2 separate sessions).
- Tennis allows non-resident players during club play to maintain its games. 1 resident member can host 3 non-residents during club play. Some non-residents have become regular club players for years.

Pickleball vs Tennis: Court Conditions



PICKLEBALL

- Pickleball has 3 courts.
- Two are squeezed into an area bordering on side fencing. These are "non-standard" in that they are extremely close to the fences. Players sometimes crash into the fences.
- PB roster nearly doubled since addition of 3rd court.



TENNIS

- Tennis has 4 standard courts with ample room.

Pickleball as a Significant Amenity



With Pickleball on the ascent, especially in 55+ communities, a quality PB facility will prove a major amenity here in OV.



The sport fits perfectly into labeling ourselves an "active community."



Expansion of our PB facilities is essential as we will run out of room to play in the coming years.

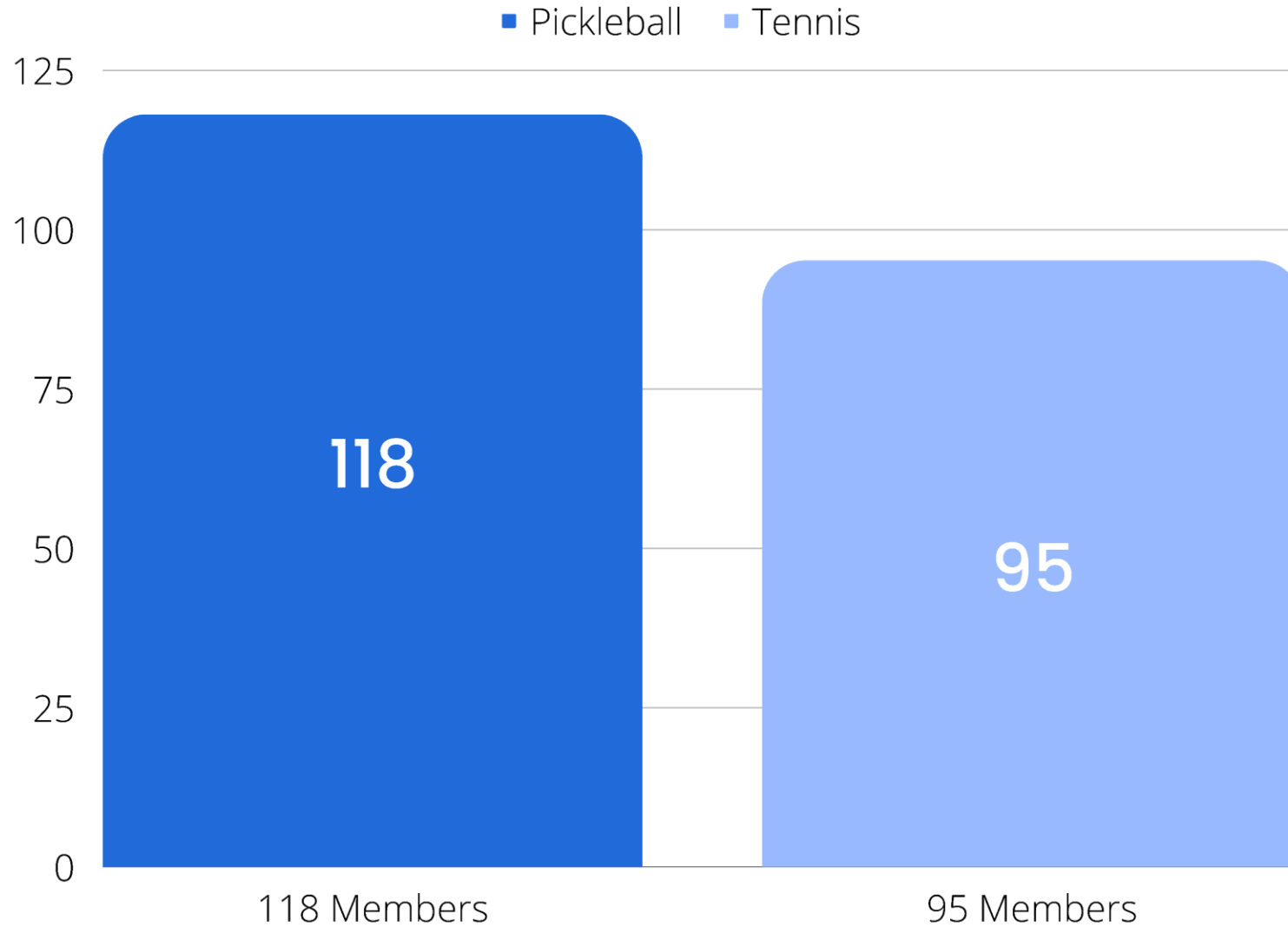


Quality PB facilities in senior communities are becoming an essential amenity vs a luxury.



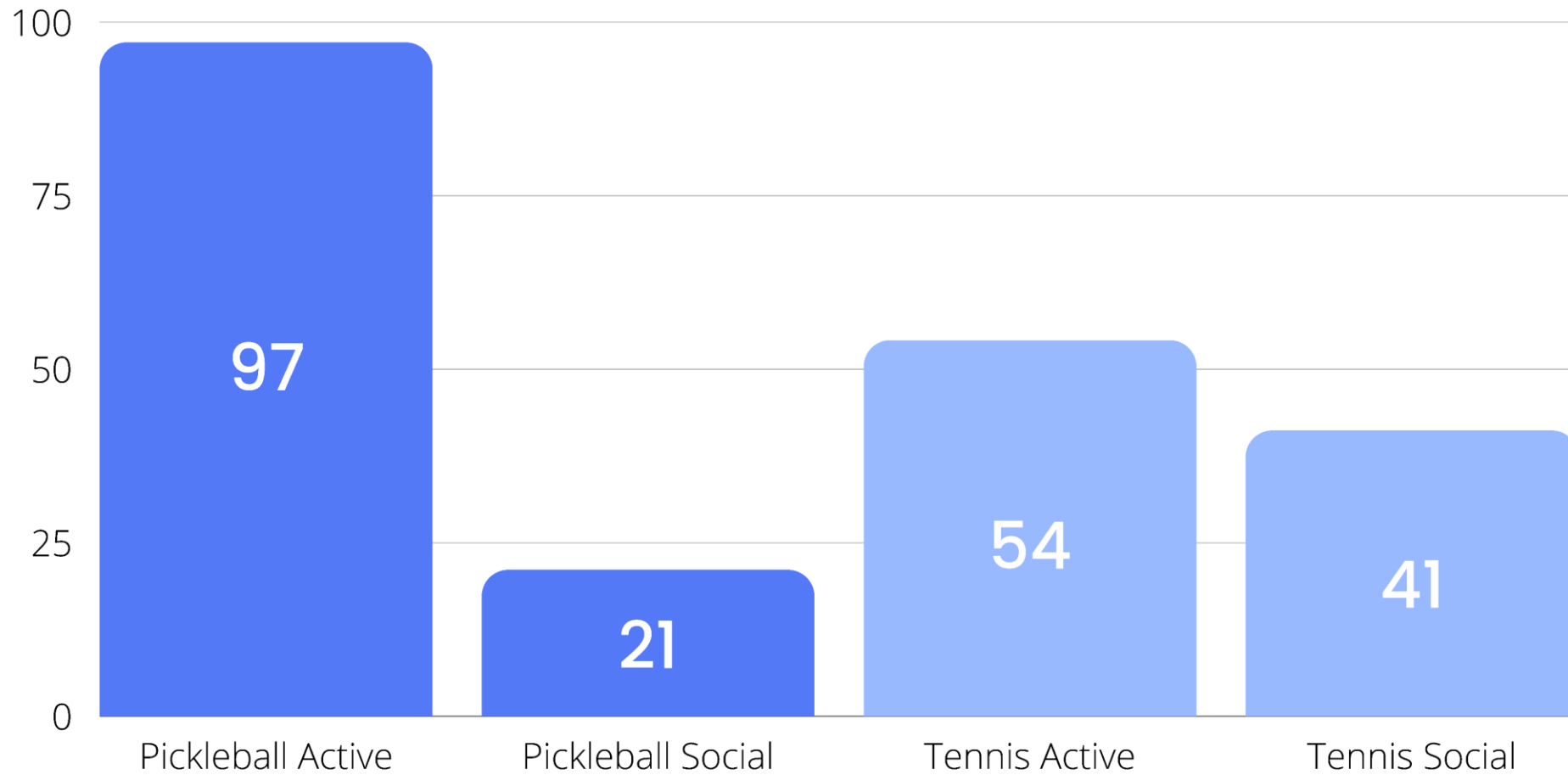
Pickleball vs Tennis

Total Roster as of 7/12/22



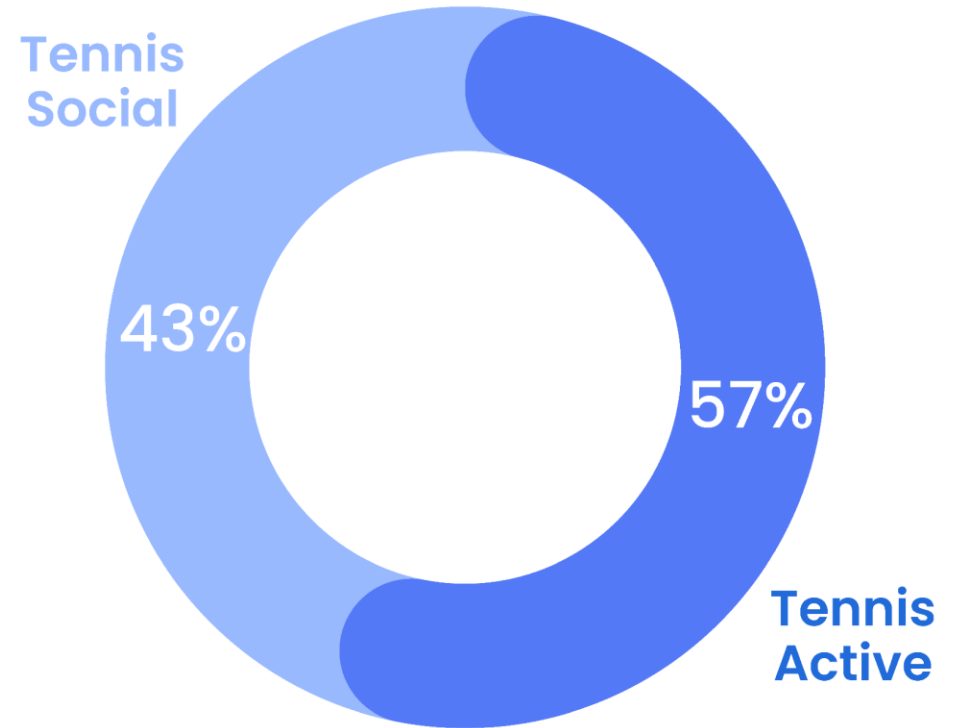
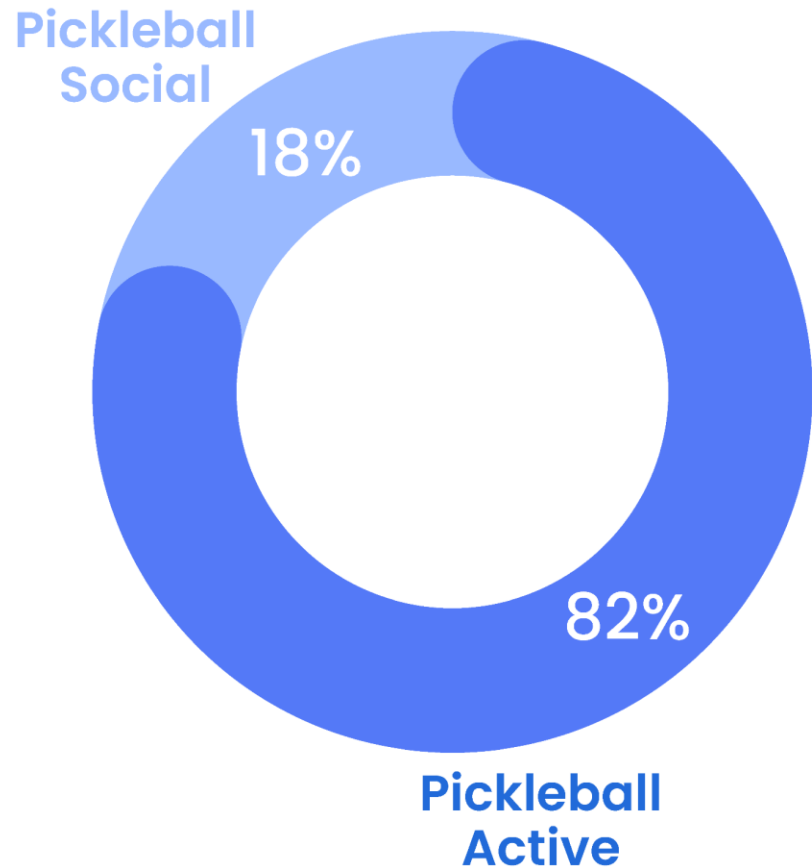
Pickleball vs Tennis

Active vs Social Members



Pickleball vs Tennis

Percentage Active vs Social Players





Saturday
10AM
July 30, 2022

Tennis Courts
Empty



**Saturday
10AM
July 30, 2022**

**Pickleball
Courts Filled**

**Members waiting
15-18 minutes
to play**

Why Pickleball Can't Be Played on Grassy Surfaces

1

For beginners, they'd learn to play on a surface which bounces unlike a regulation court.

2

Bouncing of the plastic Pickleball on grass is inconsistent with the usual asphalt.

There are no Pickleball Tournaments held on grassy surfaces.

3

Issue was addressed in 2015 by Tennis and PB.

It was determined grass surface not appropriate for PB, due to the "bounce."

The "Noise" Issue

01 Not one noise complaint since PB arrived in OV in 2015

04 5 pm Navajo Lane, average decibel range 72-74

02 Trees surrounding courts form natural sound barriers

05 Summer grass cutting starts at 7 AM!

03 Noise is everywhere, but only disturbing if above 70 decibels

06 Impact on any noise limited to 12 units; no unit ever complained

07 Per our Guidelines OV Pickleball does not allow wooden paddles, except briefly by beginners.

There is no noise issue. There is only a capacity issue.

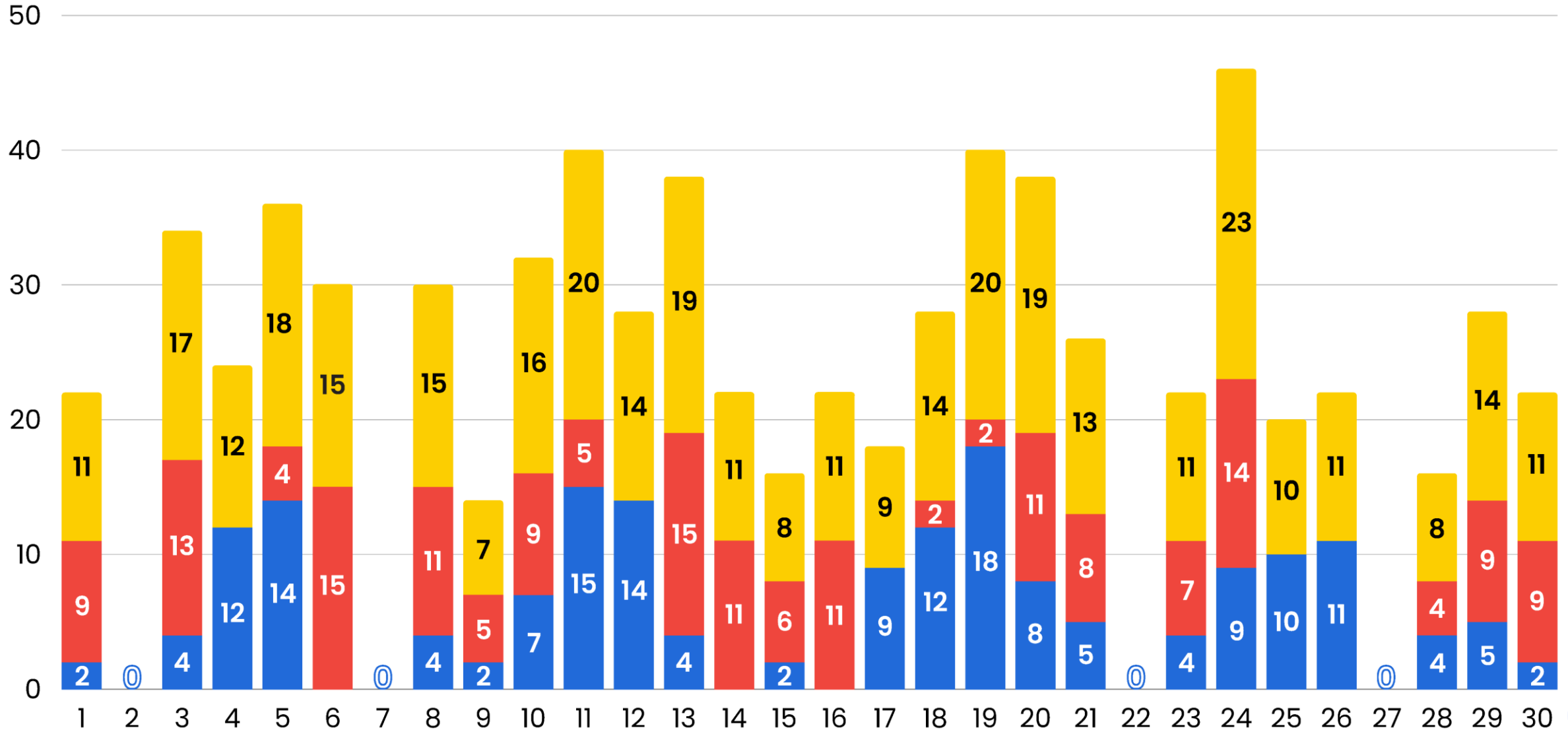
Solutions If Noise Becomes An Issue

This was the summary from the City of Punta Gorda's acoustic study after installing Acoustiblok curtains for their Gilchrist Park Pickleball courts:

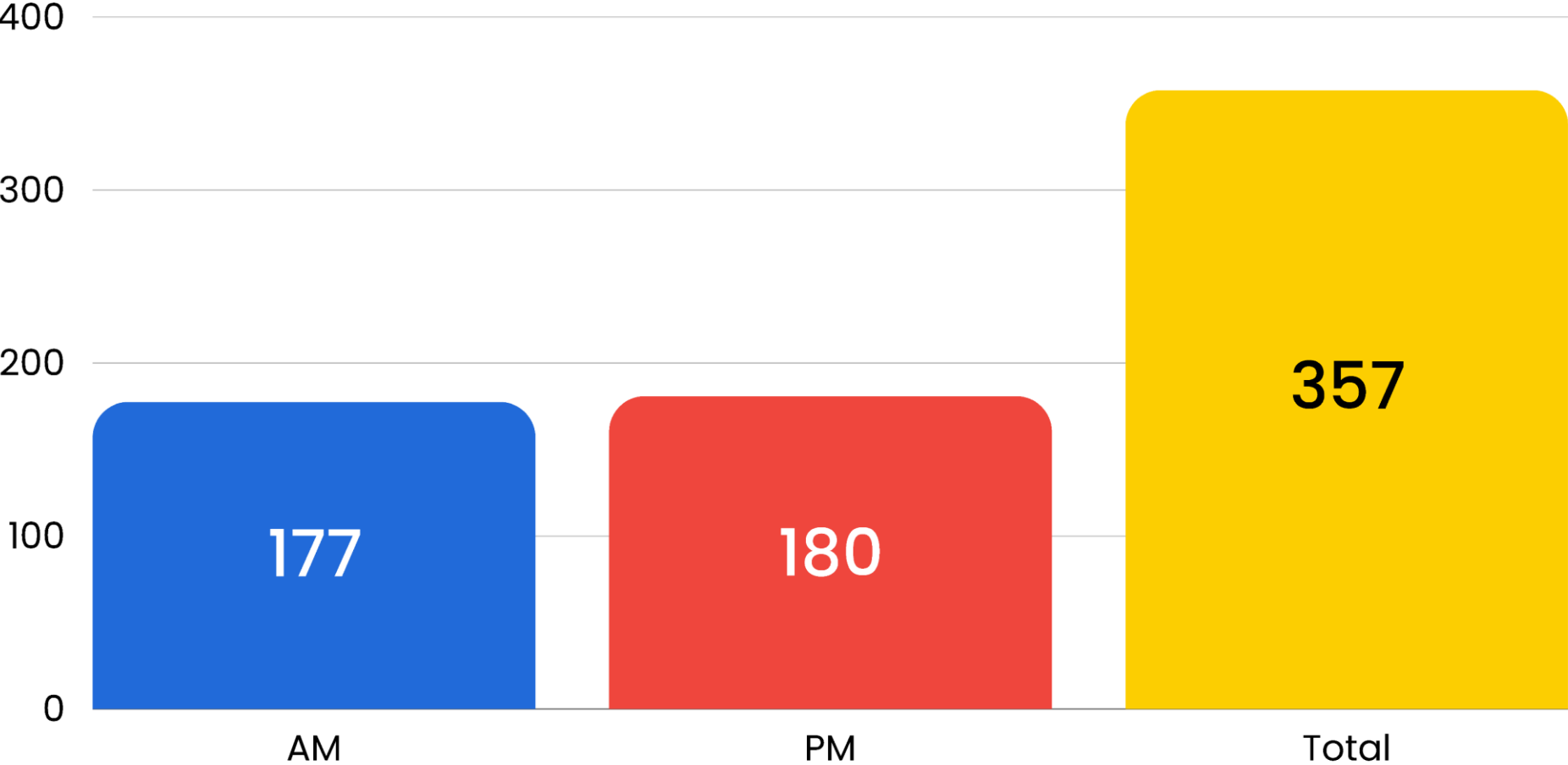


Daily Pickleball Resident Court Usage June 2022

■ AM ■ PM ■ Total



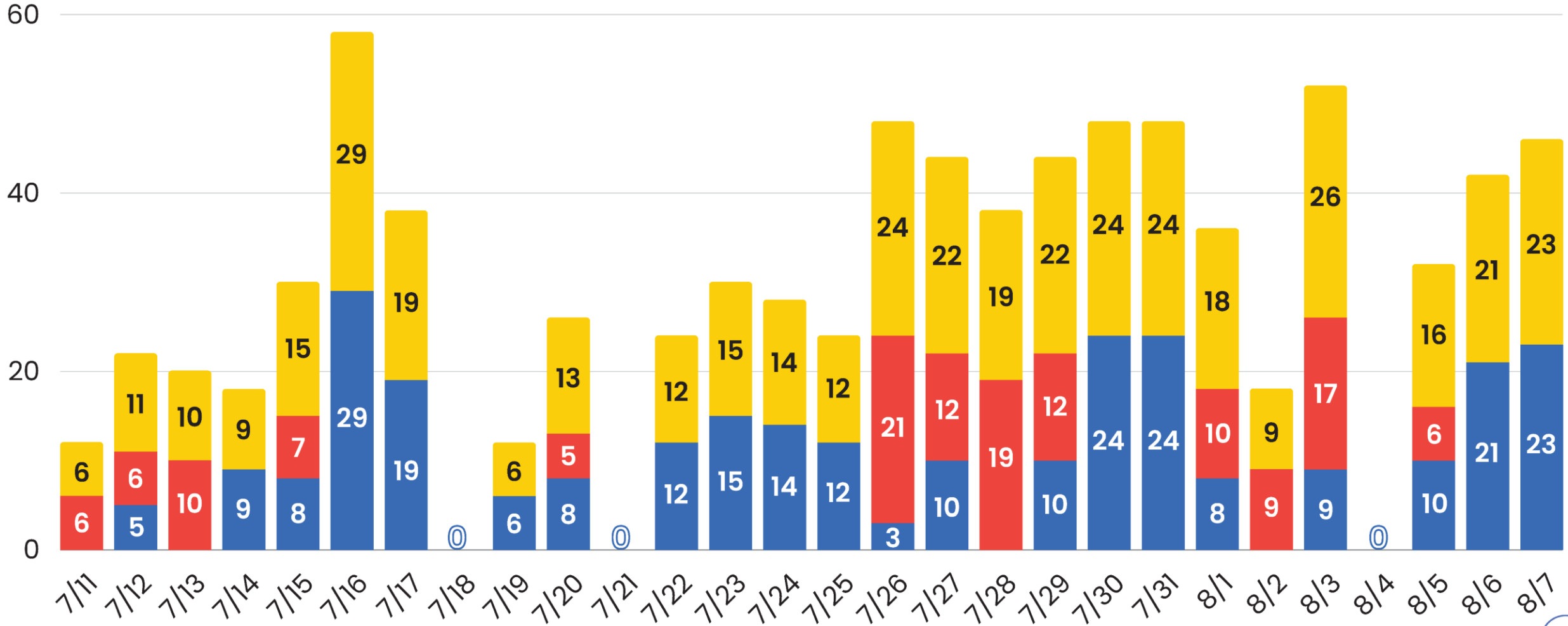
Resident Pickleball Total Instances of Play June 2022



Daily Pickleball Resident Court Usage July 11 – August 7, 2022

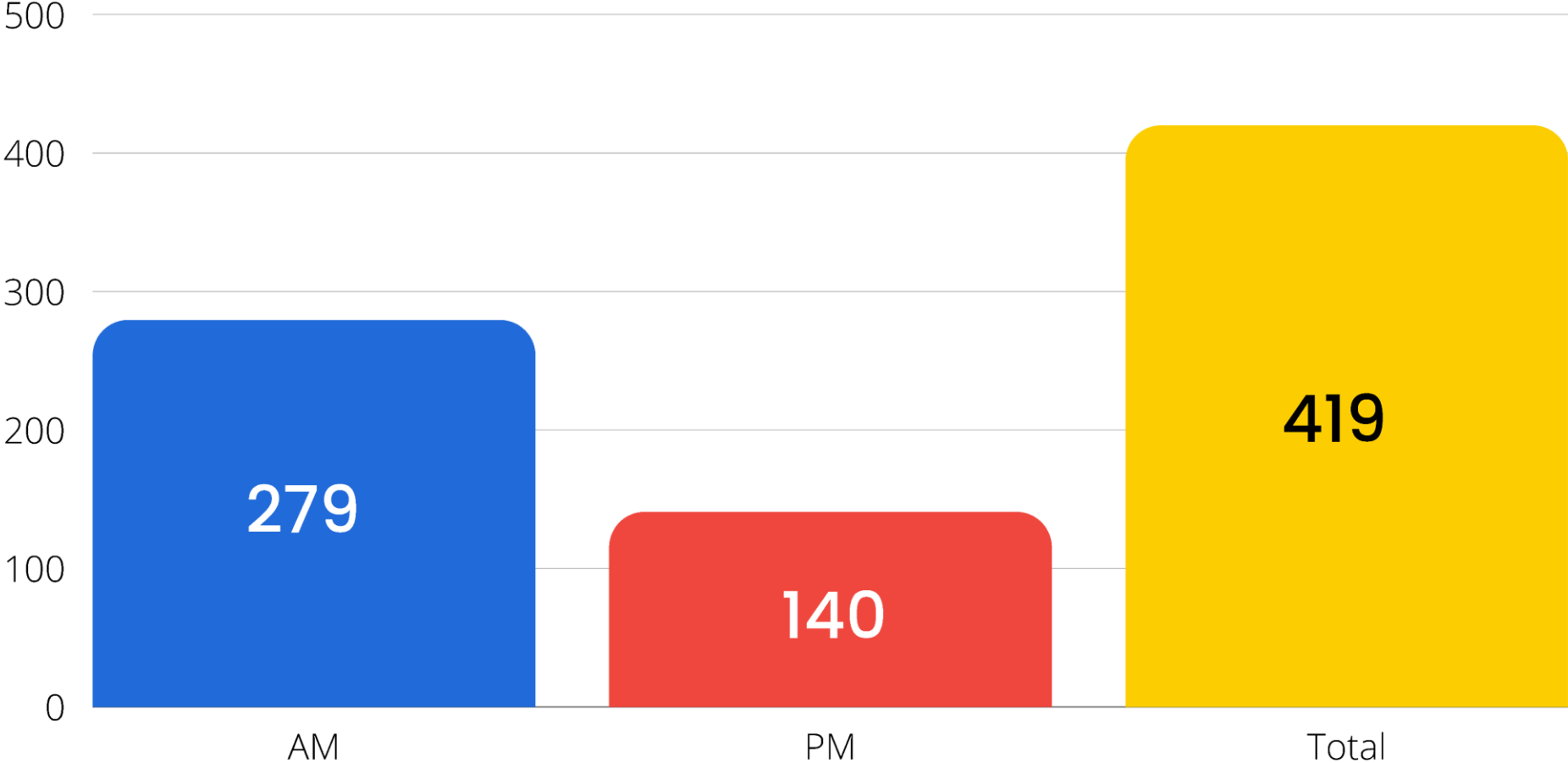
*AFTERNOON (PM) PLAY LIMITED ON 90+ DEGREE WEATHER DAYS

■ AM ■ PM ■ Total



Resident Pickleball Total Instances of Play July 11 - August 7, 2022

*AFTERNOON (PM) PLAY LIMITED ON 90+ DEGREE WEATHER DAYS



Why Pickleball Needs More Court Space

1. OV Pickleball Club has been operating with just 3 courts since 2017.
2. Roster and players have nearly doubled since court was added.
3. Growth continues upward, adding 7 members in a 30 day period this summer.
4. Higher percentage of "Active" players versus Tennis. Approx. 80% PB vs. 57% Tennis.
5. OV PB is one of, if not the, fastest growing club in Oronoque Village.
6. Court wait times can be 15-18 minutes on busy Saturdays. No wait times in Tennis.
7. Noise is a non-issue being used only because of PB's overwhelming evidence of needing more court capacity. Some folks are still upset over giving us Court #5 in 2017.

OV PICKLEBALL

Going Forward

01

RSF Committee is asked to only vote on: Tennis Court #4 can no longer remain a dedicated Tennis Court.

02

Scope of Tennis #4 will be determined by funding availability. Earliest Fiscal 2023-2024. .

03

Solution to Court #4 must be pragmatic and realistic. Budget approval always requires: Committee, Board, and Resident approval.

Date: August 24, 2022:

TO: RSF Committee (Nancy Blagys, Regina Archazki, Bill Tanski, Peter Feick, Carolyn Charnin), Fred Rodriguez, Jim Rapaport.

FROM: Peter Feick

SUBJECT: OV Tennis Club's Court Usage Study (July 11 August 8, 2022)

Background – With the growth of Pickleball at OV and the current under-utilization of the tennis courts, both clubs were asked by the RSF Committee to track their court usage via sign-ins at the courts before each day's play.

Summary – Over the total time period, including weekends, the ratio of Members to Guests was 80/20 and the % Capacity was 25%. The attached table shows the entire database while the graphs (one for % Member and one for % Capacity) plot the daily activity.

Please note that the Capacity measurement was rather harsh in that it used 32 players per day as the court Capacity. This number was based on 4 players per court, 2 time slots (8:00 – 9:30 and 9:30 to 11:00), and 4 courts. Thus, $4 \times 2 \times 4 = 32$ player/slots available.

Rain days lowered the % Capacity but that's true for both clubs. Including Saturday and Sunday lowered the % Capacity because tennis players who play M-W-F take the weekends to visit grandchildren and do shopping/errands.

Thinking about what would be a fair Capacity number for the Pickleball play, it should be higher, such as 6 or 7 players per court. With the three courts in use, that would be a total of 18-21 players; 12 playing on the courts, and 6 – 8 sitting out waiting to rotate in when the next 9-point game is finished. That's just the social aspect of PB and the reason why there are Winner and Non-Winner boards to place your paddle on when you finish a game. The ones sitting out just have to wait for 1 or 2 games to finish before they are back in playing. They enjoy the chance to rest for five minutes and a chit chat about whatever.

On a day that PB has two time slots, such as 9:00 AM and 4:00 PM, then the daily capacity is 36-42 player/slots.

In order to compare apples to apples, it would be important to analyze the Pickleball Court Usage in a similar fashion.

Respectfully submitted,

Peter S. Feick
OVTC President

OVTC Court Sign-In Sheets

Period Covered: July 11 through August 8, 2022

Shown is the number of Member/Guest players per time slot by court.

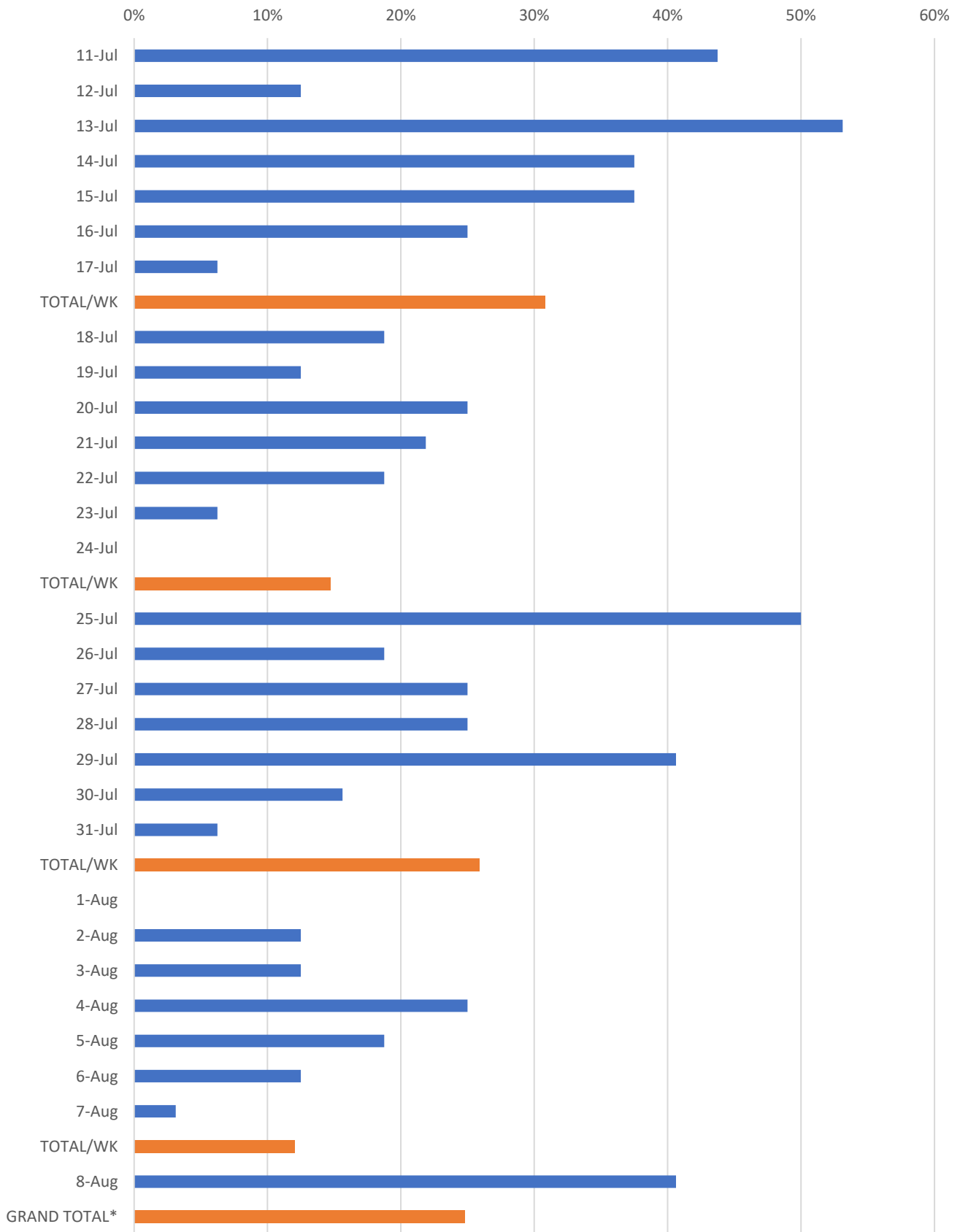
100% Capacity would be 32 slots per day (1 day x 2 slots x 4 courts x 4 players)

	COURT '#1				COURT '#2				COURT '#3				COURT '#4				TTL	% CAPACITY	% Membs.	
	8:00		9:30		8:00		9:30		8:00		9:30		8:00		9:30					
	M	G	M	G	M	G	M	G	M	G	M	G	M	G	M	G				
JULY																				
Mon 11	2		1	3										4	3	1	14	44%	71%	
Tues 12	4																4	13%	100%	
Wed 13	4		2	2			1							4	3	1	17	53%	82%	
Thur 14	4		4												3	1	12	38%	92%	
Fri 15	4													4	2	2	12	38%	83%	
Sat 16	4														3	1	8	25%	88%	
Sun 17			1												1		2	6%	100%	
TOTAL/WK	22	0	8	5	0	0	1	0	0	0	0	0	0	12	0	15	6	69	31%	84%
Mon 18	4													2			6	19%	100%	
Tues 19			4														4	13%	100%	
Wed 20	4														2	2	8	25%	75%	
Thur 21	4														3		7	22%	100%	
Fri 22	2		2	2													6	19%	67%	
Sat 23	2																2	6%	100%	
Sun 24																	0	0%		
TOTAL/WK	16	0	6	2	0	0	0	0	0	0	0	0	0	2	0	5	2	33	15%	88%
Mon 25	4		2	2			3	1						2	2		16	50%	69%	
Tues 26			4												2		6	19%	100%	
Wed 27	4		2	2													8	25%	75%	
Thur 28			4											3	1		8	25%	88%	
Fri 29			2	2	2	1								2		1	3	13	41%	54%
Sat 30	4													1			5	16%	100%	
Sun 31	2																2	6%	100%	
TOTAL/WK	14	0	14	6	2	1	3	1	0	0	0	0	0	8	3	3	3	58	26%	76%
AUGUST																				
Mon 1																	0	0%		
Tues 2	4																4	13%	100%	
Wed 3			2	2													4	13%	50%	
Thur 4	4													3	1		8	25%	88%	
Fri 5			2	2				2									6	19%	67%	
Sat 6			2	2													4	13%	50%	
Sun 7															1		1	3%	100%	
TOTAL/WK	8	0	6	6	0	0	0	0	2	0	0	0	0	3	1	1	0	27	12%	74%
Mon 8	4		3	1										1	1	3	13	41%	69%	
GRAND TOTAL*	64	0	37	20	2	1	4	1	2	0	0	0	0	26	4	25	14	200	25%	80%

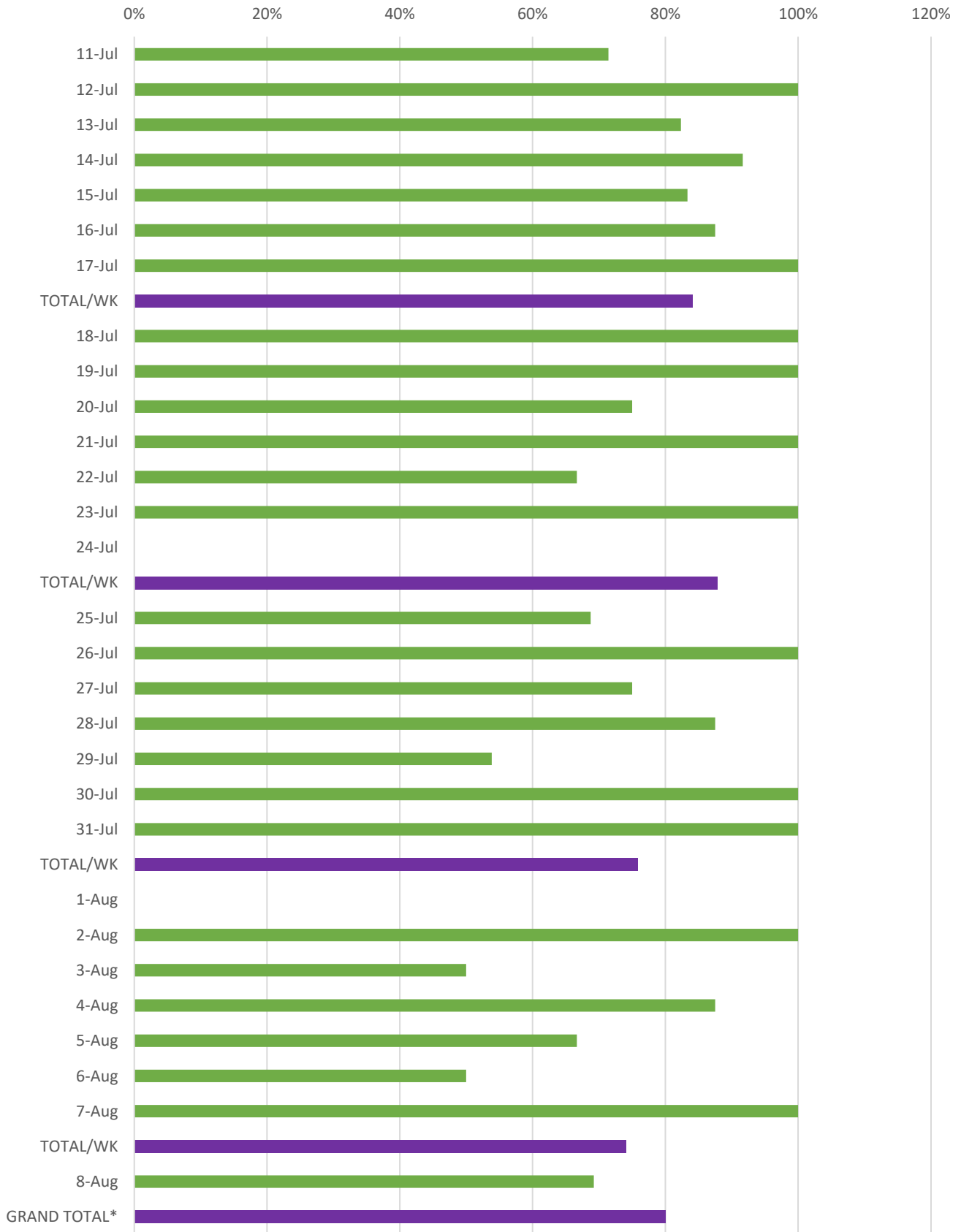
Prime time tennis court capacity calculation (Player/slots per day)

Slots/day 2
 Courts 4
 Players 4
Per day 32

OVTC % Tennis Capacity Useage During Prime Time & Weekends



OVTC Tennis Court % Member Usage



Enjoying Pickleball and Tennis at Oronoque Village

August 24, 2022

Preface

This report was not prepared to oppose the expansion of Pickleball, but rather to show the potential consequences of expansion.

I. Value and Importance of Tennis and Pickleball to Oronoque Village

A. Tennis

Oronoque Village's four recently updated, synthetic-turf tennis courts are nestled in a peaceful, quiet, residential setting and are an obvious attraction for active seniors. They also represent a significant investment in Oronoque's desirability as a retirement village. New residents who have previously played tennis can look forward to playing the sport they love, in the quiet environment of a traditional, outdoor tennis club. New residents who wish to learn to play tennis can easily do so thanks to the Tennis Club's Membership Development initiatives. The Tennis Club supports both new and experienced tennis players with clinics, round robins, tournaments and friendly weekly group games. The Tennis Club' social events from cocktails, pizza, dinners and dances promote an active social life for all members and their guests within the Village.

B. Pickleball

Pickleball is the fastest growing sport in the USA, and Oronoque Village's rapidly growing Pickleball Club attests to the popularity of this sport for retirees as well as for younger players. In 2016 Pickleball had 10 members; today the Club boasts 118 members and schedules Round Robin play from April through November. The Pickleball club offers instruction for new members who have not previously played, and also has advanced teams for experienced players. Pickleball Club at Oronoque is like a large family within the village, enriching many friendships and offering friendly competitive play at all levels. The Pickleball Club also supports an active social life off the courts.

II. Impact of Pickleball's Expansion Goal

A. Pickleball at Oronoque Village is played by an enthusiastic number of Villagers who are eager to get on the courts, and whose desire to play is currently somewhat limited by the number of available courts. Pickleball is currently played on 3 newly installed, hard-surface pickleball courts which were constructed from original tennis court # 5. These 3 new pickleball courts are therefore immediately adjacent to tennis courts 4,3,2,1. They were constructed without any sound mitigation between the 3 pickleball courts and the 4 tennis courts. The resulting accommodation for pickleball at Oronoque is less than optimal for both sports clubs. Two of Pickleball's courts are undersized, and the Tennis courts are exposed to distracting levels of noise.

B. Pickleball's current goal of repurposing tennis court # 4 would increase the current number of pickleball courts from 3 courts to 6 courts. Not only would this doubled noise factor negatively impact the remaining tennis courts, it would permanently alter the traditional tennis ambiance of the remaining 3 tennis courts.

C. Scientists have found that the sound of a pickleball paddle hitting a ball can be more than 25 decibels louder than the equivalent action in a tennis match.

D. Additionally, the unmitigated noise from 6 six pickleball courts would expose the village to liability concerns from adjacent condominium owners who might object to the noise from the 6 Pickleball courts.

E. Noise emanating from the existing pickleball courts at Oronoque is already problematic. According to an attorney from the Real Estate Practice Group of a Stamford Law firm with whom we consulted, "The addition of more courts will further degrade the quality of life for many residents already disturbed by the existing courts and expose the Board to potential lawsuits." He explained that the noise from pickleball, "...infringes on residents' legal right to the quiet enjoyment of their homes," adding, "just because no one at Oronoque has filed a legal complaint yet, doesn't mean that with the increase of the courts, there won't be complaints filed." He concluded, "They [referring to the OVCA board] are just lucky no one has come forward yet."

F. In a show of cooperation and good neighborliness, we have not, and are not at this time advocating that noise from the current pickleball courts be mitigated. However, in conducting extensive research and interviews with experts on this matter, we've ascertained that there are substantial grounds to require the current pickleball courts to do noise mitigation. Therefore, we are already making a concession by not asking for noise mitigation for the existing courts.

III. Liability Concerns

The rapid expansion of Pickleball across the US has resulted in multiple lawsuits from homeowners living in proximity to pickleball courts. The nature of these complaints includes, but is not limited to the following categories and examples.

A. Lawsuits against the Association from homeowners who feel that pickleball impinges on their legal right to the quiet enjoyment of their property. Connecticut statutes state that, "...**an owner has the right to quiet enjoyment of their property.**" The proposed expansion of Pickleball at Birchwood Country Club, Westport, Connecticut, has received numerous complaints from neighbors. See Attachment #1 letter from Aaron Hultgren. See also Attachment #2, Letter to Westport P&Z.

B. Lawsuits from condominium owners whose property value is negatively impacted by unmitigated pickleball noise. Especially critical if the courts are 100 to 300 yards away. The surrounding owners have more of a legal argument than the pickleball players.

C. Scientific studies show that noise disturbance has multiple negative health impacts. See Appendix #3.

D. According to Lance Willis, of Spendiarian & Willis Acoustic Noise Control, "Pickleball courts located within 350 feet of residential structures often require abatement and it may be necessary to consider noise abatement at buffer distances greater than 500 to 600 feet." Appendix #4

E. Professional Engineer Bob Unetich, US Pickleball Ambassador and Referee, with whom we've consulted, has written an article, "Pickleball Sound," identifying both unsafe and annoying dBA sound levels from pickleball and recommendations for noise mitigation. Appendix #5.

IV. Cost Concerns

A. Adequate and appropriate sound abatement for OV's pickleball courts which are immediately adjacent to the tennis courts will require industry-standard 10 feet high fencing with adequate strength to support sound abatement materials. See Appendix (3).

B. Effective sound abatement requires installation of **sound absorbing, not sound-reflecting**, abatement materials. Installation estimates for these resources begin around \$67,600.

Unfortunately, fencing material will not provide any ventilation and will increase the temperature within the enclosure. Also, in the case of very high wind warnings, the fence material must be totally dismantled until the threat is over and then reinstalled. The importance of using proper sound absorbing material is illustrated by the unfortunate example of Bonita Bay, Florida. Acoustifence, a less expensive material, was used in an attempt to mitigate Pickleball noise. A subsequent lawsuit proved that the sound was not sufficiently mitigated, and Bonita Bay was forced to take down the Acoustifence and install UNC-XT-1, a more expensive and effective absorptive sound curtain.

C. The total cost of pickleball's ideal 6-court construction could be in the \$150,000 - \$200,000 range. Such expenditures require careful planning with attention to both the fiscal and legal implications of implementing a repurposing of tennis court #4.

V. Decline in Property Values

A. The potential decline in property values of homes surrounding or within earshot of pickleball courts can be a serious issue. Realtors have voiced their concerns that home buyers, while they may love to play pickleball, don't want their homes within earshot of them. Therefore, the property values of the surrounding condos at Oronoque Village may decline if and when these additional courts are built. When sound mitigation is erected, the high fences and dark soundproof material are unsightly additions to the otherwise serene surroundings. Since homeowners may not want to look at that, the fences could also impact the value of surrounding properties.

B. The following are examples of declining home values when pickleball courts are built within earshot of residents:

1. One of the most successful active adult resort community developers in the United States, Developer Edward J. Robson, installed pickleball courts at The Preserve at SaddleBrooke in Tucson, Arizona. Following numerous complaints from the surrounding neighbors, it was reported that: "The pickleball courts at The Preserve were removed by Robson, not only because of the 'noise and nuisance issues,' but also "due to his concern that the pickleball courts would have a negative impact when trying to market and sell homes that he was building in a community adjacent to the courts."
2. In Green Valley, Arizona, the town was forced to scratch plans for a plan to locate pickleball courts near dozens of homes. According to news reports, "There was public outcry from the neighbors who were afraid of devaluation of their property values." Scott Chancellor, a Broker with Realty Executives echoed their concern stating, "I believe that homes overlooking the courts - that's going to negatively affect the value of those homes because of the sound."

V. Recommendations

A. The OV Tennis Club acknowledges that court #4 may be relinquished for the use of Pickleball sometime in the future. If and when that time arises, it is also understood that courts #4 and #5 will be professionally designed by a qualified engineering/architectural firm encompassing all of the necessary state, local and town code requirements including acoustical studies with total project costs to be approved by OV unit owners. It is imperative that all pickleball noise measurements, modeling and analyses be performed by a qualified acoustical Engineering firm with specific experience in Impulse Community Noise.*

- All testing and analyses be performed in a manner consistent with pertinent ANSI (American National Standards Institute), ASTM (American Society for Testing and Materials), and ISO (International Standards Organization) and community noise standards.
- All testing and measurements be performed with IEC (International Electrotechnical Commission) precision-Class 1 sound level meters (or analyzers) using the appropriate Peak Sound Pressure Level (L_{peak}) metric.
- *Impulse noise is characterized by short duration transient noise events and requires specialized metrics and analysis in order to characterize this type of noise in a way that is physically meaningful and well correlated with human hearing.

B. We consulted with William R. Thornton, Ph. O., P.E., of Thornton Acoustics & Vibrations who provides professional forensic engineering and expert witness services for sound, acoustics, noise, and vibration issues to government, municipalities, corporations, etc. Thornton said, "Pickleball noise measurements must be performed by highly qualified and proficient acoustic and vibration engineers as opposed to an acoustical consultant." He notes that, "The commonly used title 'acoustical consultant' does not require any specific education, training or credentials, whereas the title engineer does. Keep in mind that a Professional Engineer (PE) can be a consulting engineer,

but a consultant cannot be a consulting engineer." Will stated, "At least 90 percent of the acoustical reports are performed by 'snake oil salesmen' and are scientifically wrong, factually inaccurate, and totally misleading." An example of a proper acoustic study is attached and was done for the Birchwood Country Club by **Thornton Acoustics & Vibrations**, 07/18/2022. Appendix 6.

C. Oronoque Village commission a survey of opinions of village residents, especially those living in proximity to the pickleball courts.

D. Pickleball also has the option to begin playing at 8 AM. There can be an 8 AM-9:30 session and then a 9:30 AM-11:00 session as tennis does. That way not everyone has to play at 9 AM as they do now.

E. Pickleball can explore the possibility of using the SCB as indoor pickleball courts in summer and winter.

VI. Conclusion

Pickleball and Tennis are both valuable OV amenities, and both can be enjoyed in our village, provided that qualified engineering firms are used to plan and build the facilities.

VII. Appendix

1. Letter from Aaron Hultgren to Westport P&Z dated July 10, 2022.
2. Letters to Westport P&Z regarding Birchwood Country Club.
3. EPA. "Clean Air Act Title IV - Noise Pollution: Health Effects." 1990.

"Noise pollution adversely affects the lives of millions of people. Studies have shown that there are direct links between noise and health. Problems related to noise include stress related illnesses, high blood pressure, speech interference, hearing loss, sleep disruption, and lost productivity..."

4. Willis, Lance. "Why Are Your Pickleball Courts Receiving Complaints from Neighbors?"
5. Unetich, Bob. "Pickleball Sound."
6. Thornton Acoustic & Vibrations Study for Birchwood Country Club, Westport, Connecticut.

Aaron Hultgren, MD, MPH, MAT
12 Birchwood Lane
Westport, CT

July 10, 2022

Dear Westport Planning and Zoning Committee,

Re: 25 Kings Highway Pickleball Proposal

I am writing to the Westport P&Z committee to let the commission know that I object to the proposed application by 25 Kings Highway for the construction of four pickleball courts.

I am a neighbor residing at 12 Birchwood. I am also a physician with a Master of Public Health from Columbia University's Mailman School of Public Health.

I continue to have serious concerns about the site plan and sound study methodology and findings.

- Along with several neighbors have consulted with a national sound expert to have the sound study and site plan reviewed and evaluated.
- The review and rebuttal are being completed and will be submitted prior to the July 27th meeting for neighbor comment on 25 Kings Highway's application to Westport P&Z committee.

I am concerned about the potential negative impacts on the health and welfare of neighboring residents from pickle ball noise from pickleball play, players (up to 16 players at one time), and crowds (players waiting to play and others watching). This is in addition to the current noise produced from grounds maintenance, 7 tennis courts (potential of 28 players laying at once), golf, tennis, pool use, playground structure, and celebration events. The impact of all this noise negatively impacts health and unlike the current town pickle ball courts at Compo beach there are no beneficial health impact of pickle ball play for the neighboring community.

- There is clear evidence that noise has a negative effect on health.^{1,2,3,4}
- The Environment Protection Agency (EPA) identified that outdoor levels of 55 decibels have an effect on human health and welfare interfering with activities such as spoken conversation, work, recreation and sleep ([EPA 1974](#)).⁵
- Noise impacts certain populations more than others (e.g., children and elderly are vulnerable populations).⁶ Similar to many of my neighbors our household contains both children and elderly.
- Noise impacts sleep.⁷

¹ Basner M, Babisch W, Davis A, Brink M, Clark C, Janssen S, Stansfeld S. Auditory and non-auditory effects of noise on health.

² Münzel T, Sørensen M. Noise Pollution and Arterial Hypertension. *Eur Cardiol*. 2017 Aug;12(1):26-29.

³ Hume KI, Brink M, Basner M. Effects of environmental noise on sleep. *Noise Health*. 2012 Nov-Dec;14(61):297-302.

⁴ Hammer MS, Swinburn TK, Neitzel RL. 2014. Environmental noise pollution in the United States: developing an effective public health response. *Environ Health Perspect* 122:115–119;

⁵ <https://archive.epa.gov/epa/aboutepa/epa-identifies-noise-levels-affecting-health-and-welfare.html>

⁶ van Kamp I, Davies H. Noise and health in vulnerable groups: A review. *Noise Health* [serial online] 2013 [cited 2022 Jan 27]; 15:153-9. Available from: <https://www.noiseandhealth.org/text.asp?2013/15/64/153/112361>

⁷ Hume KI, Brink M, Basner M. Effects of environmental noise on sleep. *Noise Health*. 2012 Nov-Dec;14(61):297-302.

- Noise is an increasing issue in Westport, as the town saw an increase in noise complaints in 2021⁸ and many communities across Connecticut have municipal noise regulation programs to protect the health and welfare of their citizens.⁹ Due to the proximity to neighboring houses these pickleball courts will lead to a further increase in the number of noise complaints.

I am concerned about the site selection and proximity of the courts to neighborhood houses.

- Current site for pickle ball courts is significantly closer to residential houses as compared to town pickle ball courts on Compo Beach that were placed well over 900ft from any nearest residence (Figure 1).
- Selection site puts an increased noise burden on the neighboring houses that are already in proximity to many noise producing activities from 25 Kings Highway Round (grounds maintenance, 7 tennis courts, golf play, pool that has kiddie pool and playscape use, and celebration events).
- The site plan calls for the highest density of pickle ball courts (4) in the Town of Westport within proximity to residences.
- Town blended pickle ball courts (which have a very low volume of play) have significant play restrictions to decrease any noise or play impact on school children and the surrounding neighborhoods during school hours.

I am concerned about the safety of pedestrians walking along Kings Highway South due to any increased road usage or burden to the neighborhood having 4 pickle ball courts.

- From Birchwood Lane to Post Road South there are no curbs and no sidewalk adjacent to the road (Figure 2). ALL the other sections of Kings Highway South in our neighborhood contain curbs and sidewalk as well as the sidewalk restarts at the intersection of Kings Highway South and Post Road.
- I have seen several near strikes of pedestrians by cars along this section of Kings Highway South Road as along the road there can be high vegetation and steep slope requiring one to walk on the road.
- Although we are one of the closest neighborhoods to Kings Highway Elementary School, I along with neighbors are afraid to walk our elementary school children to and from school due to this dangerous section of road and lack safe areas along the adjoining road.
- There is the potential of having over 40 racquet players (pickle ball and tennis players) driving into and out of our neighborhood in a short period of time especially with any tournament play or lessons.

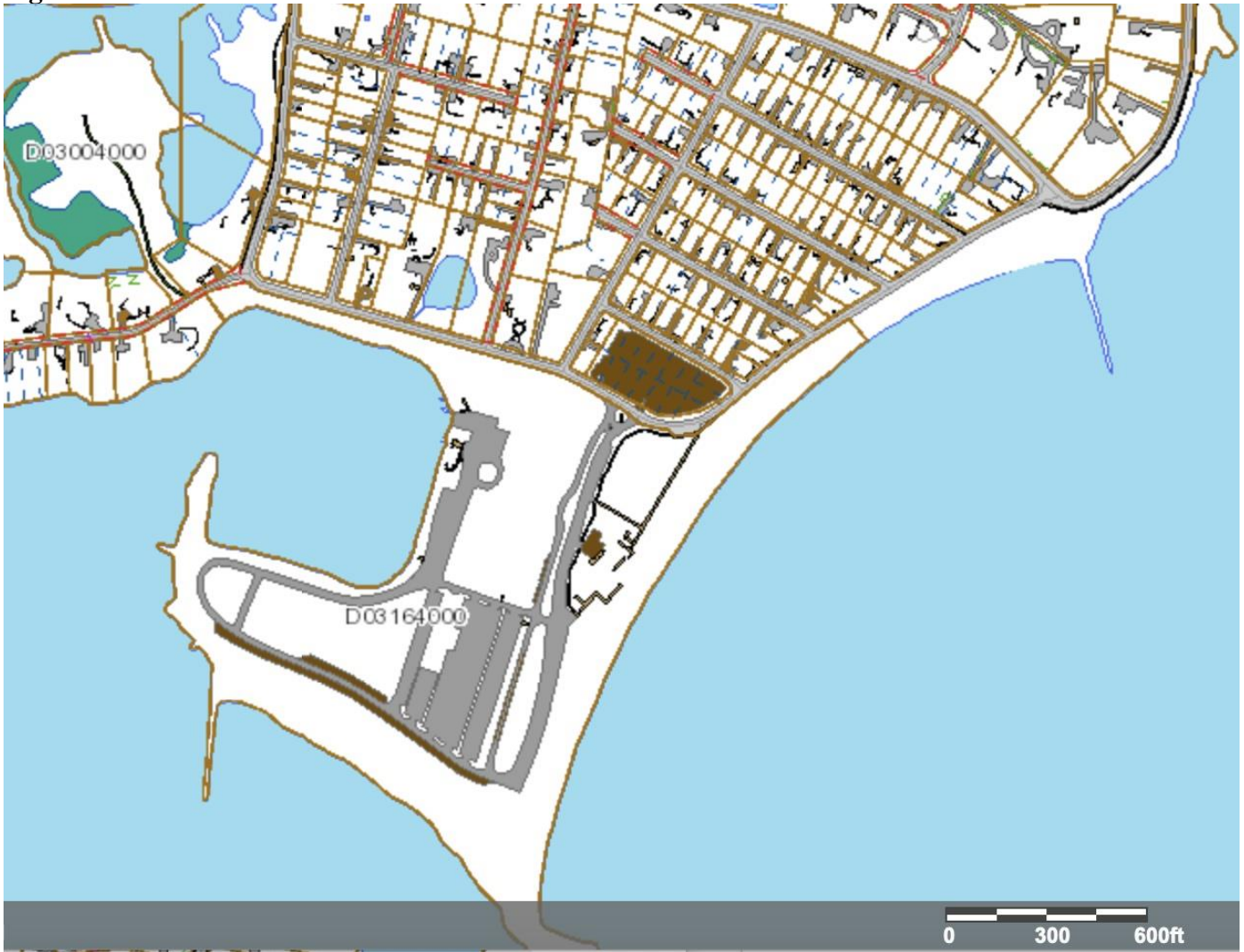
Our residential homes have had to serve not only as our homes during the COVID-19 pandemic but at times also as our children's classrooms, remote workspaces, and sanctuary. I hope you will consider these concerns and the potential impact the proposed courts have on the health and welfare of the nearby Westport community.

Respectfully,
Aaron Hultgren, MD, MPH, MAT12 Birchwood Lane

⁸ <https://www.westport-news.com/news/article/Westport-sees-slight-bump-in-noise-complaints-16353173.php>

⁹ <https://portal.ct.gov/DEEP/Air/Planning/Noise-Control>

Figure 1.



<https://www.westportct.gov/how-do-i/access-property-information/town-gis-map-system>

Map of 60 Compo Beach Road which contains Town pickle ball courts on South beach and surrounding neighborhood area that is significantly further distance from pickleball courts.

Figure 2.



<https://www.westportct.gov/how-do-i/access-property-information/town-gis-map-system>

Map showing 25 Kings Highway Area. Note areas with no sidewalk along Kings Highway from Birchwood Lane to Intersection of Post Road/Kings Highway South while other sections of Kings Highway South and Post Road have curb and sidewalk along the road.

Why Are Your Pickleball Courts Receiving Complaints from Neighbors?

by [Lance Willis](#)

Posted on [April 25, 2018](#)



Pickleball is a game played with a paddle and ball on a converted tennis court or dedicated asphalt pad. It has become very popular in retirement resort communities and other recreation centers. Unfortunately, some developers of pickleball courts have not adequately addressed the sound produced by the impact of the hard paddle and ball which creates a sharp pop. This has led to controversy between facility owners and neighbors when new pickleball courts are planned.

Here in Arizona and elsewhere we have planned and mitigated many of these sites. We have had the opportunity to work with both pickleball clubs and home owners associations. In this post we will outline the process we have developed to evaluate the noise impact of pickleball courts and to enable pickleball to coexist with the surrounding community.

Characteristics of Pickleball Sound

The sound produced by the impact between a pickleball and paddle is characterized by a sudden onset and brief duration, typically on the order of two milliseconds for the direct path sound. Figure 1 shows a time trace of a pickleball paddle impact measured near Phoenix, Arizona. The main part of the direct sound impulse can be seen to be less than two milliseconds followed a rapid decay and some later reverberant arrivals.

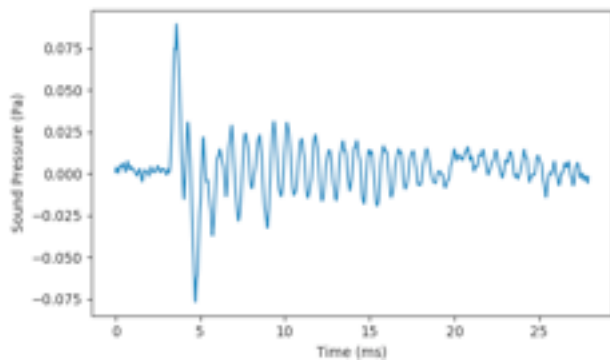
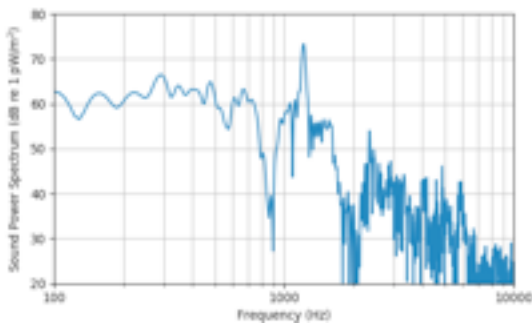


Figure 1. Paddle Impact Time Trace

The spectral content of the paddle impact is narrowband with a center frequency typically between 1,000 and 2,000 Hertz (see Figure 2). Although it does not meet most guidelines for tonal prominence such as Annex C of ANSI S12.9 Part 4 or ANSI S1.13, it does impart a vague sensation of pitch similar to a musical wood block percussion instrument. The radiation pattern of the paddle is more or less a dipole, i.e. the sound from the front and back of the paddle is of opposite polarity and cancels itself in the plane of the paddle. Therefore,

orienting the courts so that the direction of play faces away from noise sensitive areas can provide some attenuation.

Figure 2. Paddle Impact Power Spectrum
Measuring Pickleball Sound



Due to the short duration of the impact, averaging sound pressure level metrics such as equivalent level (L_{eq}) and even maximum fast exponential time weighted level (L_{max}) fail to accurately represent the perceived loudness of the impact. The fast exponential time weighting filter is a first order lowpass filter with a 125 millisecond time constant applied to the square of the acoustic pressure waveform. If a tone burst is applied to the squaring circuit and filter, after two milliseconds the filter output will only rise to a level that is 18 dB lower than the root-mean-square or

equivalent level of the input signal. Because the short impulse is being significantly attenuated by the averaging in the sound level meter, in practice it is in general not possible to distinguish pickleball paddle

impacts from the background noise when measuring L_{eq} or L_{max} using an integrating sound level meter even though the paddle impacts may be identified by a listener as the primary sound source.

The paddle impact sound pressure level is better represented by the sound exposure level (SEL). This involves windowing the measured sound pressure in time to include only the paddle impact and reflections from nearby surfaces. The equivalent sound pressure level of the windowed impact is then normalized to the length of the window giving a representation of the energy in the impact alone. Appropriate adjustments for impulsive sounds can then be applied to the impacts as described next.

Most acoustical standards for sound pressure levels with regard to compatible land use provide adjustment factors for different types of sound, e.g. impulsive, tonal, time of day, etc. Each of these categories of sound produces different levels of community impact and annoyance due to their temporal or spectral characteristics in comparison to a broadband sound that does not vary in level or frequency content with time. The purpose of the adjustment factors is to normalize these types of sound to a neutral broadband sound pressure level so that they can be reasonably compared to a defined sound pressure level limit or the background noise level.

ANSI S12.9 Part 4 gives criteria for assigning adjustment factors to a variety of impulsive sounds. Sounds produced by many impact processes are classified as 'highly impulsive' and assigned a 12 dB adjustment. Although not specifically enumerated in definition 3.4.1 of the standard, experience has shown that pickleball paddle impacts should be adjusted as highly impulsive sounds in order to set appropriate performance goals for abatement treatments. Inadequate abatement treatment may lead to ongoing complaints, strained relations with neighbors, legal action, the need for continued involvement on the part of authorities, additional retrofitting, and possibly demolition costs to improve the abatement later.

Site Planning Considerations for Pickleball

Based on our experience working with pickleball facilities, courts located within 350 feet of residential structures often require abatement. Courts located within 150 feet require careful abatement design to avoid complaints.

Abatement treatments usually consist of freestanding walls strategically placed to shield noise sensitive areas from the pickleball courts. To be effective, the walls must block the line of sight to the paddles during play. On level terrain this means a minimum wall height of eight feet above the playing surface. The cost of the walls can be reduced by lowering the courts into the ground and using the excess soil to build a berm around the courts. Placing the wall on top of the berm will lower the required height of the wall itself, reducing construction costs. The wall may be masonry or a solid fence system having sufficient mass for effective sound insulation.

For pickleball courts located in the middle of a residential area with houses on more than two sides, screen walls may be required on opposite sides of the courts. When these walls are parallel to each other, reflections between them can degrade the performance of the walls significantly. In this case, sound absorbing panels may need to be installed on one or both walls to stop multiple reflections from amplifying the sound going over the walls. This can almost double the cost of the walls and may make the site financially unfeasible.

Court orientation also plays a role. More sound propagates in the direction of play than to the sides of the pickleball court. By positioning the courts so that the line of the net runs through the most noise sensitive area, a noticeable reduction in sound pressure level can be achieved at this location.

When to Hire an Acoustical Consultant

We recommend that pickleball courts to be located within 500 to 600 feet of residential properties or other noise sensitive areas be reviewed by an acoustical engineer during the site selection phase in order to avoid choosing a site that is expensive to mitigate, results in unexpected limitations on court use, or leads to ongoing disputes with neighbors. For sites that have a water feature or golf course as part of the intervening ground between the courts and homes or for

sites located in a valley, it may be necessary to consider abatement at buffer distances greater than 500 to 600 feet due to additional refraction effects created in these situations.

The abatement plan for the site should be prepared by an acoustical engineer with experience in assessing the community impact of short duration impulsive sounds such as those produced by pickleball paddle impacts. As can be seen from procedure outlined above, properly measuring sound from pickleball courts is not a simple matter of setting up a sound level meter and logging an equivalent sound pressure level (L_{eq}). The short duration impulses produced by the paddle impacts require a detailed process of applying a metric that can accurately represent the community noise impact of the pickleball courts.

If you are in the process of planning pickleball for your site, consulting an acoustician can reveal unforeseen issues with the selected courts site or the site plan before investing tens or hundreds of thousands of dollars in design and construction. **Preparing a formal abatement plan can also ease concerns of neighbors about the community noise impact of the courts.**

If you would like us to help plan or mitigate your pickleball courts, [contacts us](#) today for more information. This entry was posted in [Noise Control](#). Bookmark the [permalink](#).

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Pickleball Sound

By Bob Unetich

Facebook Pickleball Sound Mitigation Group Admin

USA P Ambassador-at-large

USA P Certified Referee and

A Registered Professional Engineer in Pennsylvania Contact Bob at itsrmu@aol.com

Sound can be characterized in several ways but the three terms we should use when describing pickleball sound are “pitch” and “loudness” which is also known as “sound level”. The reality is that most sounds are combinations of multiple pitches and sound levels. You probably have heard of music notes such as “middle C”. When you tune a piano key to middle C it has the pitch of middle C plus components of higher pitch sounds.

Pitch is quite different from loudness or sound level. A faint middle C and a very loud middle C are both of similar pitch but different levels.

Pickleball sounds heard outside the courts are mostly the result of a ball hitting a paddle. The “pitch” we hear varies with the ball model and the paddle model but what we usually hear is near the pitch of music note C6 or two octaves above middle C. Again, this is independent of the loudness, so having an agreed upon way of measuring loudness is helpful.

To make this measurement, we need an agreed upon reference sound level and a set of units of measurement. An accepted unit of sound pressure is the Pascal but human hearing is quite sensitive so we will want to measure some pressure changes that are 1 million times weaker, which we can call a micro-pascal, which has been selected as the normal reference level for sound level measurements..

In addition to our hearing being sensitive we also has an amazing ability to hear and make sense of both very low levels, like tens or hundreds of micro-pascals, all the way up to a billion micro-pascals without incurring damage to our hearing. More on that later. Dealing with this wide range of pressures requires cumbersome arithmetic so it is usual to compare one level to another by using a base 10 logarithmic scale. Don't worry about forgetting high school math since we can just use the defined terms to easily compare any two sound levels, even if they are millions of times apart in level! The term we will use is the decibel and the selected reference for sound measurements is 1 micro-pascal which we set to equal zero decibels, or 0 dB as commonly written.

It also happens that humans perceive an increase of 10 decibels in sound level to be roughly “twice as loud”. This is quite helpful since we can then simply use a meter calibrated in decibels to take measurements and then easily estimate how the sound levels will be perceived. (You can read all about this in Wikipedia at: https://en.wikipedia.org/wiki/Sound_level_meter if you like)

A related problem pickleball faces is that humans are more “annoyed” by higher pitch sounds. A beeping sound is more annoying than a rumble sound even if those two sounds are of the same level. Tennis and some other common sport sounds are usually lower pitch than pickleball. One aspect of this reality is that paddles that vibrate a little slower, which is usually the case for thicker paddles, will produce a sound that is somewhat less annoying to the neighbors. As paddle technology evolves, it may be that more paddles become available with lower pitch sound production and these sounds should be less annoying.

So what does this all mean to us? Well, the quietest sounds some people (those with excellent hearing) can hear are about 20 decibels above the reference level of zero dB. A problem with that simplification is that human hearing sensitivity varies with “pitch” so the threshold of hearing also varies. An agreed upon adjustment to this measurement method is to use a weighted sensitivity called the A curve and our meters usually have a reading capability of decibels adjusted for the A curve. This adjusted unit of measurement level is referred to as dBA or often as dBa.

Now we are ready to use the numbers for comparison purposes. Here are some points of reference from noiseawariness.org:

**0 dBA The softest sound a person can hear with normal hearing 10 dBA normal breathing
20 whispering at 5 feet
30 soft whisper
40 quiet residential area on a calm day 50 steady rainfall
60 normal conversation
70 freeway Traffic
85 noisy Restaurant
90 shouted Conversation 100 nearby snowmobile 110 shouting into an ear 120 nearby thunder**

As you know, at some level our hearing can be damaged. It is recommended that we avoid extended periods of exposure to levels above 80 dBa and above 90 dBa is considered dangerous according to OSHA standards. Loud music fans beware!

It happens that frequent pickleball sounds are typically about 70 dBa at about 100 feet away from the strike of the ball. If homes located that close to pickleball courts are in a “quiet residential area”, they are used to 40 dBa and PB is 30 decibels louder! Remember, each time you increase sound level 10 decibels it will sound twice as loud. So, 30 decibels is 10dB+10dB+10dB or twice as loud times twice as loud times twice as loud, or 8 times a loud! It that annoying? Probably.

Making sound level measurements requires calibrated accurate equipment. Do not rely upon sound level apps downloaded to your phone except for simple relative readings. A good sound level meter, like the Sper 840015, costs about \$500 with calibration and it needs to have its calibration checked yearly or so.

What can be done to reduce complaints? First of all, courts that are expected to get lots of use should not be located close to homes! When we increase the distance to homes, things get better. Doubling the distance drops sound levels by 6 decibels in open areas and even more when there are obstructions to sound propagation like hills and shrubs. Barriers can help. A 10 ft high wall can provide about 10 decibels of reduction, cutting the perceived sound level in half. Higher barriers help even more. Using the quietest balls and paddles available can cut the sound as much as 10 more decibels or in half again, but many players will resist using other gear. Restricting play hours can also help reduce complaints.

Barriers can be absorbing or reflecting. The sound reflecting barriers (like that known as Acoustifence) are less expensive but they will send pickleball sound back towards the courts and perhaps towards other homes. Absorbing barriers (like the sound blankets made by eNoise Control) are thicker, heavier and more expensive but they may be the best choice in some cases.

The reality is that most residential neighborhoods have background sound levels (known as ambient noise) close to 50 dBa. If all homes are 200 feet away or more, the expected sound level will be about 64 dBa. If a sound barrier and quieter balls and paddles are used, we soon approach the typical sound level of average neighborhoods, under 50 dBa. To do more is difficult since sound will travel over a sound barrier. The solution to that problem could be a roof, basically making the courts an indoor facility and adding greatly to the cost.

Determining what sound level is acceptable is not simple. Local ordinances can be consulted and sometimes this will set the specific sound level limits that apply but other times an ordinance will simply state that any repetitive sound must not be “annoying”, a difficult goal to achieve. Sound level predictions and neighbor tolerance predictions should be part of designing a pickleball facility.

Summary: pickleball sound levels within 100 feet of courts will usually be around 70 dBa with no sound reduction efforts applied, as loud a freeway traffic sound. At 200 feet, (using the 6 dB drop for doubling the distance) this level will be about 64 dBa. At 400 feet it will be about 58 dBa, quieter than normal conversation levels. With limitation of paddles and ball brands, this can be below 50 dBa and usually below local background level at that distance.

Adding a 10 ft. high barrier can drop that to below 40 dBa, a level below normal library sound levels. Even at 100 feet, where the sound level would then be about 52 dBa, this may be an acceptable sound level in many neighborhoods. This means that barriers and distance are the most effective tools. It also means that sound levels can be predicted in advance of having complaints so consider your location and work with your pickleball community to make the sport a welcome addition to a neighborhood.

Bob Unetich

<http://www.thepickleballschool.com/wp-content/uploads/2021/09/Sound-Level-Tutorial.pdf>

July 18, 2022

Neighbors of 25 Kings Highway South
c/o Dr Aaron Hultgren
12 Birchwood Lane
Westport, CT 06880

Re: Birchwood Country Club Pickleball Court Development Noise Assessment

Dr. Hultgren,

Per your request, I have prepared this report summarizing my opinions relating to this issue and the factual basis for my opinions. This report includes my opinions regarding sound levels and emissions that will be created by the proposed Birchwood Pickleball Courts and the impact that this noise will have upon the surrounding properties and residents.

The opinions in this report are based on my site sound modelling and analysis and my review of the project documents and plan (including the SHAcoustics noise report). The opinions in this report are also based on my education, knowledge, training, and experience in the fields of engineering/physical acoustics, mechanical vibrations, and noise control. I have completed noise and vibrations projects (ranging from industrial noise control, environmental/community noise, product noise/sound quality, hearing conservation etc.) for approximately 400 clients located throughout North America as outlined in my attached CV.

I hold all of the opinions stated in this report and the subsequent conclusions with a reasonable degree of engineering certainty.



William Thornton, MSME

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BIRCHWOOD COUNTRY CLUB
PICKLEBALL COURT DEVELOPMENT
COMMUNITY NOISE IMPACT STUDY

July 18, 2022

Prepared for:

Neighbors of 25 Kings Highway South
c/o Dr Aaron Hultgren
12 Birchwood Lane
Westport, CT 06880

Submitted by:

Thornton Acoustics
521 Clay Run Rd.
Mill Run, PA 15464

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EXECUTIVE SUMMARY

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I hold all of the opinions stated in this report and the subsequent conclusions with a reasonable degree of engineering certainty.

I hold the following opinions in this case:

- The noise emitted by Pickleball is distinctly different from other racket sports such as tennis and is characterized by staccato, Impulse noise events with each paddle strike that emit loud tones that are highly annoying, due to the loudness and pitch, to the human ear/auditory system.
- The noise emitted by the proposed Pickleball Courts, as incident on the surrounding properties, is grossly in excess of the typical ambient sound and is incompatible with the surrounding suburban community.
- The Pickleball noise, due to the level, frequency content/pitch and temporal nature, creates a clear noise nuisance and interrupts the peace and enjoyment of the adjacent residential properties by any reasonable standards.
- Noise barriers, plantings etc., will not reduce the noise emitted by Pickleball due to fundamental physical limitations and as such are not solutions to this potential problem.

- The Pickleball courts are fundamentally incompatible, due to noise emissions, with the surrounding community.

The opinions in this report are based on my education, professional training and experience, site modelling and analysis and review of documents including (but not limited to):

1. Landtech Pickleball Site Plan Final May 2022
2. SHAcoustics Birchwood Country Club Pickleball Courts Acoustic Analysis Report April 2022

In addition to these opinions, and my foundation for forming these opinions, this report will discuss general noise modelling, measurement and analysis of sound, community and environmental noise and human sound exposure and response.

1 INTRODUCTION

Thornton Acoustics & Vibrations (TAV) performed a community noise impact study of the proposed Birchwood Country Club (BCC) Pickleball Courts noise emissions as incident on the surrounding residential properties. The purpose of the study was to model and predict the noise levels that are emitted by the Courts and to assess the impact on the affected properties. Note that as there are four proposed Courts, there may be up to sixteen (four per court) simultaneous players on these courts. The Court locations are shown in Figures 1 and 2 (a site plan and an existing aerial view respectively).

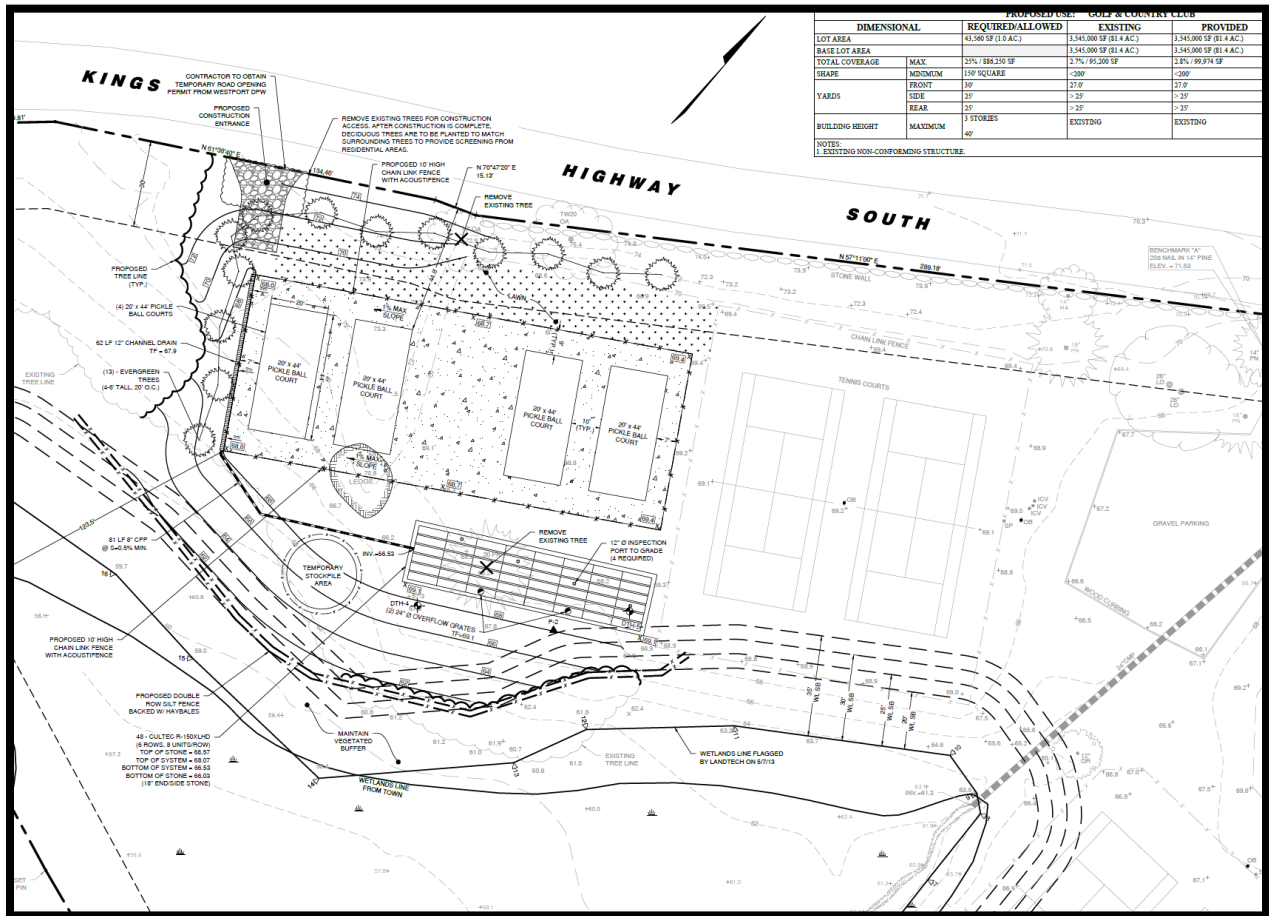


Figure 1 Pickleball Court Site Plan.



Figure 2 Proposed Pickleball Court Site Aerial View

This noise study was completed using well developed, science-based methodologies. It is a routine acoustical engineering task to model and predict the noise emissions and impact of a known noise source in a new or different (from the original source) environment. This type of modelling effort is in fact so routine that methodologies have been established and standardized by organizations such as the American National Standards Institute (ANSI) the International Standards Organization (ISO).

The predicted ambient and Pickleball noise levels were evaluated relative to accepted science-based standards and guidelines for community noise and noise impacts.

I have also reviewed the SHAcoustics Acoustic Analysis Report (April 7, 2022) and this study contains a number of oversimplifications, mischaracterizations and basic engineering errors. The net effect of these deficiencies is that this study mischaracterizes and underestimates the noise

emissions that will be created by the proposed Pickleball courts and hence underestimates the noise impact and nuisance that will be created for the surrounding residents.

1.1 PICKLEBALL

Pickleball is a racket/paddle sport, for 2 or 4 players, played on a court that is similar to badminton or tennis. Pickleball was invented in 1965 and has enjoyed exponential growth in recent years. There were 39 “places to play” (with 150 individual courts) in 2003 and these have grown to nearly 7,000 “places to play” (with 21,000 individual courts) in 2018 according to USA Pickleball (the sport’s governing body).

Due to this growth, Pickleball courts have been built in private residential neighborhoods, in public parks, private clubs and communities. It has become common for little used Tennis courts to be converted to Pickleball courts.

As Pickleball proliferates, the courts are often being developed in close proximity to residential land, homes and public spaces on/in which the occupants and users previously enjoyed relative peace and quiet. Pickleball, due to its unique noise which is louder and contains frequency content/tones in the most sensitive frequency range for human hearing compared to other racket/paddle sports, has produced noise problems across the US. As Pickleball noise is introduced into these communities and locations; disputes, conflicts and lawsuits have become commonplace. TAV has been involved with disputes and lawsuits in NY, NJ, PA, VA, TN, FL and KY and we are aware of similar issues in at least 25 other states.

Purported solutions to Pickleball Noise such as “quiet” paddles and noise barriers/walls have NOT produced a significant reduction in Pickleball noise.

Due to our involvement in these disputes, TAV, has compiled a large database of Pickleball noise measured across various sites, landscapes and locations and with players of varying athleticism and a wide range of equipment (including purported “quiet” paddles). It is this database that was used by TAV to model the predicted pickleball noise emitted by the Courts. This database has been used to produce accurate noise source (sound power) level models which

are used to model and predict the noise emissions from proposed courts according to a US/Internationally standardized environmental noise propagation model.

1.2 ACOUSTICS/NOISE PRIMER

In order to understand and interpret the noise data, analyses and discussions contained in this report it is essential to understand a number of the technical nuances related to sound, noise (unwanted sound) and the human perception of noise.

Sound is a pressure perturbation propagating through air (in this case) that can be described in terms of the level or intensity, the frequency content (tone/pitch) and temporal variation. These variables affect the perception and impact of the sound, which when unwanted is called noise by convention.

In modelling, measuring and characterizing noise; there exist numerous metrics and descriptors. The metrics/descriptors used must be carefully and correctly chosen such that they capture and accurately describe and characterize the sound or noise problem being addressed. For many of these metrics and descriptors, although they fundamentally differ in their computation, the final results are expressed in terms of decibels (dB) and this can lead to confusion and misinterpretation. The use of the wrong metric will distort the measured results leading to erroneous conclusions. For example, impulsive noises (characterized by short durations and high levels) must be measured with metrics that have sufficiently short time-averaging properties to characterize the levels in a way that can be meaningfully compared to the human perception of loudness. Accordingly, impulsive noises such as Pickleball strikes must be characterized using the Peak sound pressure level (L_{peak} , (dB)). The Peak sound pressure level is the instantaneous maximum sound level occurring over some arbitrary time interval. Note that attempts to measure impulsive noises with meters not capable of accurately measuring the Peak, by using either the Fast (1/8 second) or Slow (1 second) response time found on survey grade sound level meters will dramatically underestimate the actual sound level and resultant loudness of the Impulse noise. This is a common technical mistake when measuring impulsive noise.

The human perception of loudness is based upon an approximately 5-millisecond physiological averaging time and accordingly, the Peak sound pressure level is well correlated with the human perception of the loudness of Impulse noise. When Impulse noise events are measured with erroneously longer averaging times such as the Slow response or Fast response the resulting level grossly underestimates the actual level and loudness as the event is averaged together with the relatively quiet background noise level (producing an average that is biased low).

The Acoustical terminology, used to distinguish between these metrics is objectively standardized and defined in the **ANSI/ASA S1.1-2013 Acoustical Terminology** standard.

In order to characterize the typical ambient sound levels in a community, the sound level exceeded 90 percent of the time (L_{90} , (dB)) metric is often used by convention (in the absence of a formal standard or specific guidance in an ordinance).

The decibel scale used to measure noise is a logarithmic scale rather than a simple linear scale and this leads to misunderstanding and misinterpretation of noise data and levels. Relatively small numerical changes or differences in sound level (expressed in decibels (dB)) are actually relatively large differences in acoustical energy. In order for the reader to interpret and understand the noise data, several simplified rules-of-thumb regarding the sound level/decibel scale are useful. First, every 3-dB increase (or decrease) is a doubling (or halving) of the amount of acoustical energy and is generally considered the smallest change perceptible to an average human listener. Secondly, every 10-dB increase (or decrease) is a doubling (or halving) of the perceived loudness of a sound. For example, if the ambient sound level is increased by 10 dB, the average person would perceive this is twice as loud. An increase by 20 dB, would be perceived as roughly 4-times as loud, 30 dB as 8-times as loud and so on.

Noise may create a deleterious impact based on the absolute level of the noise and/or the level increase above some baseline or ambient condition. A sufficiently loud noise will interfere with human activity, speech, sleep etc. regardless of the ambient noise environment. However, in quiet environments (with low ambient noise levels), even relatively “quiet” sounds may

produce a negative impact and a noise nuisance to the degree that they exceed the ambient levels.

1.3 REVIEW OF SHACOUSTICS REPORT

I have reviewed the SHAcoustics report produced in support of the Pickleball Courts development and I find that there are a number of basic errors that result in a systematic underestimation of the noise and the noise impact that will be produced by the Pickleball Courts. These most serious errors include:

- Ambient noise levels – brief spot measurements rather than longer term monitoring
- Flawed Pickleball Noise Simulation
- Noise Metric Errors
- Misinterpretation of CT Noise Regulations

The ambient noise levels should be measured on the subject properties (as these are ultimately the locations that will be adversely affected) and should be measured for an extended period of time (at least 7-days) to capture a statistically significant sample.

The attempt to simulate Pickleball play used by SHAcoustics does not accurately generate, recreate or capture real-world Pickleball noise. There are a number of variables that occur in Pickleball play that affect the noise emissions that are simply not captured in this attempt, such as player athleticism/strength (and the resulting variations in strike force and speed) and the range of equipment that would occur among real-world courts and players. Furthermore, there are basic technical deficiencies in the approach; measuring in the near-field of the noise source and extrapolating to large distances presents multiple inaccuracies and error. This measurement does not accurately measure the source Sound Power Level (PWL) which is necessary for extrapolation and is subject to the effects of directivity, interference from the testers body, etc. A far more effective and accurate method would be to measure real-world Pickleball noise at various distance for extended periods of time and to develop source models from these data.

Pickleball noise should have been measured using the Peak Sound Pressure Level metric (L_{peak}). The Pickleball simulation noise levels reported by SHAcoustics are far too low to be Peak

levels. There are a number of likely explanations for this. Although the report uses the word “peak”, another metric may have been used and the terms conflated; such as maximum sound levels, “impulse” setting levels (an obsolescent metric – ironically not suitable for the measurement of impulse noise and no longer used) etc. There may have been a meter setup or calibration error. The levels reported for Pickleball strikes (if they are indeed Peak levels) are on par with those that would be generated due to conversational speech and a competent practitioner should have seen a red flag in this result. The Acoustical terminology, used to distinguish between these metrics is objectively standardized and defined in the **ANSI/ASA S1.1-2013 Acoustical Terminology** standard. The language and discussion in this report does not seem to use or conform to this industry standard.

The Connecticut Department of Environmental Protection Control of Noise Regulations provide Impulse noise limits that differ from the steady state noise limits. As Pickleball noise is a series of Impulse noise events, this limit should have been identified by SHAcoustics and addressed. The CT regulation states that:

SEC. 22A-69-3.2. IMPULSE NOISE

- (a) No person shall cause or allow the emission of impulse noise in excess of 80 dB peak sound pressure level during the nighttime to any Class A Noise Zone.
- (b) No person shall cause or allow the emission of impulse noise in excess of 100 dB peak sound pressure at any time to any Noise Zone.

Note that the CT Regulation limits impulse noise based upon the un-weighted (not A-weighted) Peak sound pressure level. The measured un-weighted sound pressure level will be greater than the A-weighted sound pressure level due to the filter effect of the A-weighting network.

2 METHODOLOGY

TAV performed a community noise impact study to model the ambient and Pickleball noise emissions over the BCC site and surrounding residential properties using well developed, science-

based engineering techniques and tools. The ambient sound levels were estimated based upon extensive databases of urban, suburban and rural noise studies and Acoustical Engineering conventions. The Pickleball noise emissions were modeled based upon TAV's database of Pickleball source noise levels using the industry standard ISO 9613 environmental noise propagation methodology.

3 RESULTS

3.1 COMMUNITY AMBIENT SOUND LEVELS

The predicted ambient sound levels for a suburban community, such as that surrounding the BCC, as characterized by the Level exceeded 90 percent of the time (L_{A90}); will typically be on the order of 30-50 dBA during the daytime (roughly 8AM until 8 PM) and will drop to approximately 20-45 dBA at night. In order to accurately establish what the actual ambient sound levels are, an array of noise monitors should be set up to monitor the levels across the affected residential properties for a period of at least 1-week.

3.2 PICKLEBALL NOISE LEVELS

The predicted A-weighted Peak sound pressure levels ($L_{A\text{Peak}}$) over the land surrounding the proposed BCC Pickleball Courts are shown in Figures 3-6 (for play on individual courts, with and without the proposed 10-foot-tall noise barrier).

The results of the noise model were validated by comparing the predicted levels to known measured levels at similar distances and topographies (within the TAV database) to confirm that the predicted levels match real-world measured levels.

Recall that for every 10 dB increase the perceived loudness doubles, such that a 30 dB increase over ambient would be perceived as roughly 8-times as loud as the ambient (for the duration of the Impulse noise).

The Pickleball noise A-weighted Peak Sound Pressure Level will be 89-95 dBA at the nearest property lines without a noise barrier and 84-88 dBA with a 10-foot noise barrier surrounding the courts.

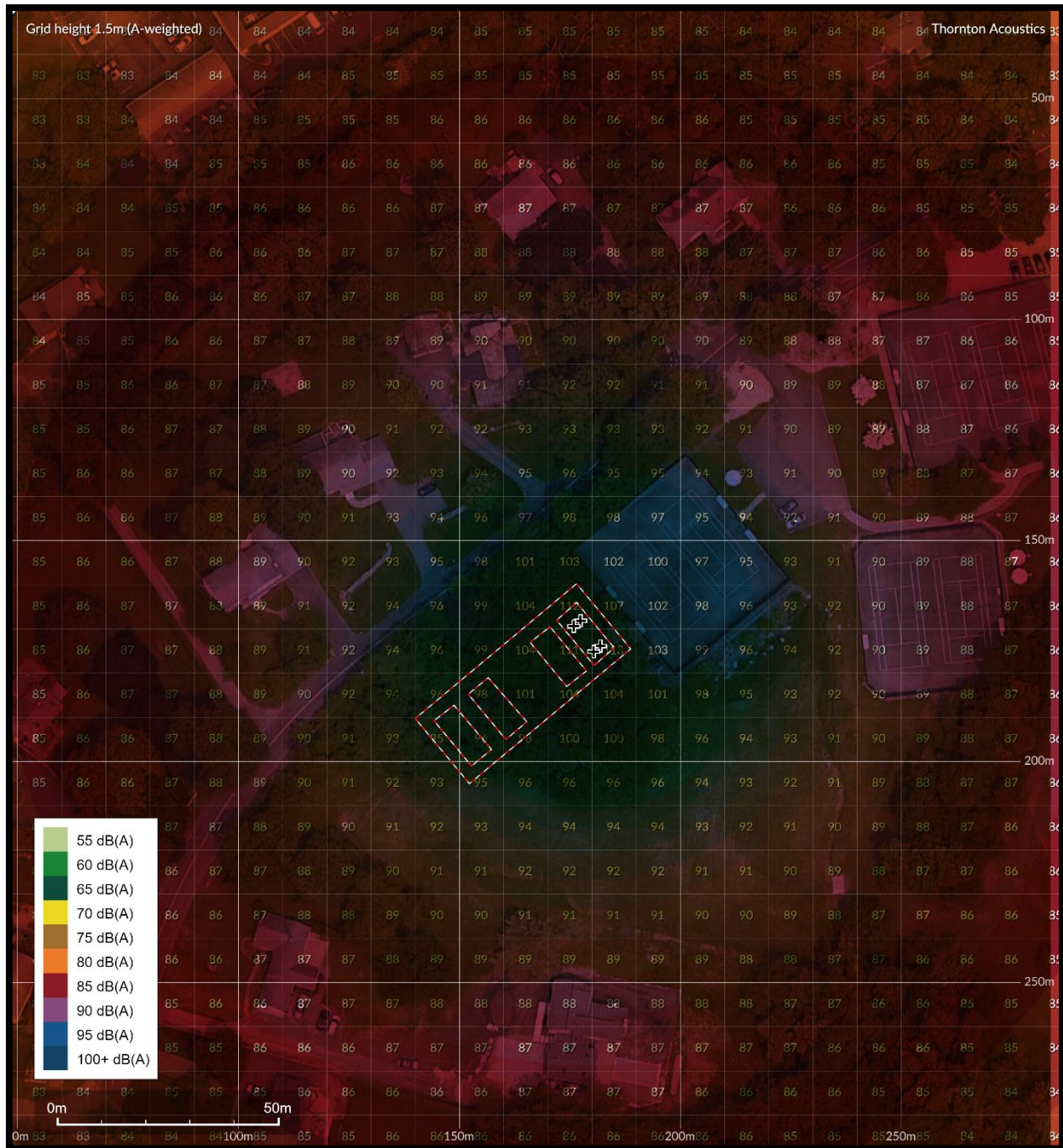


Figure 3 A-weighted Peak Sound Pressure Level contours (L_APeak) due to Pickleball noise emissions from single-court play (east most court only) with no noise barrier installed.

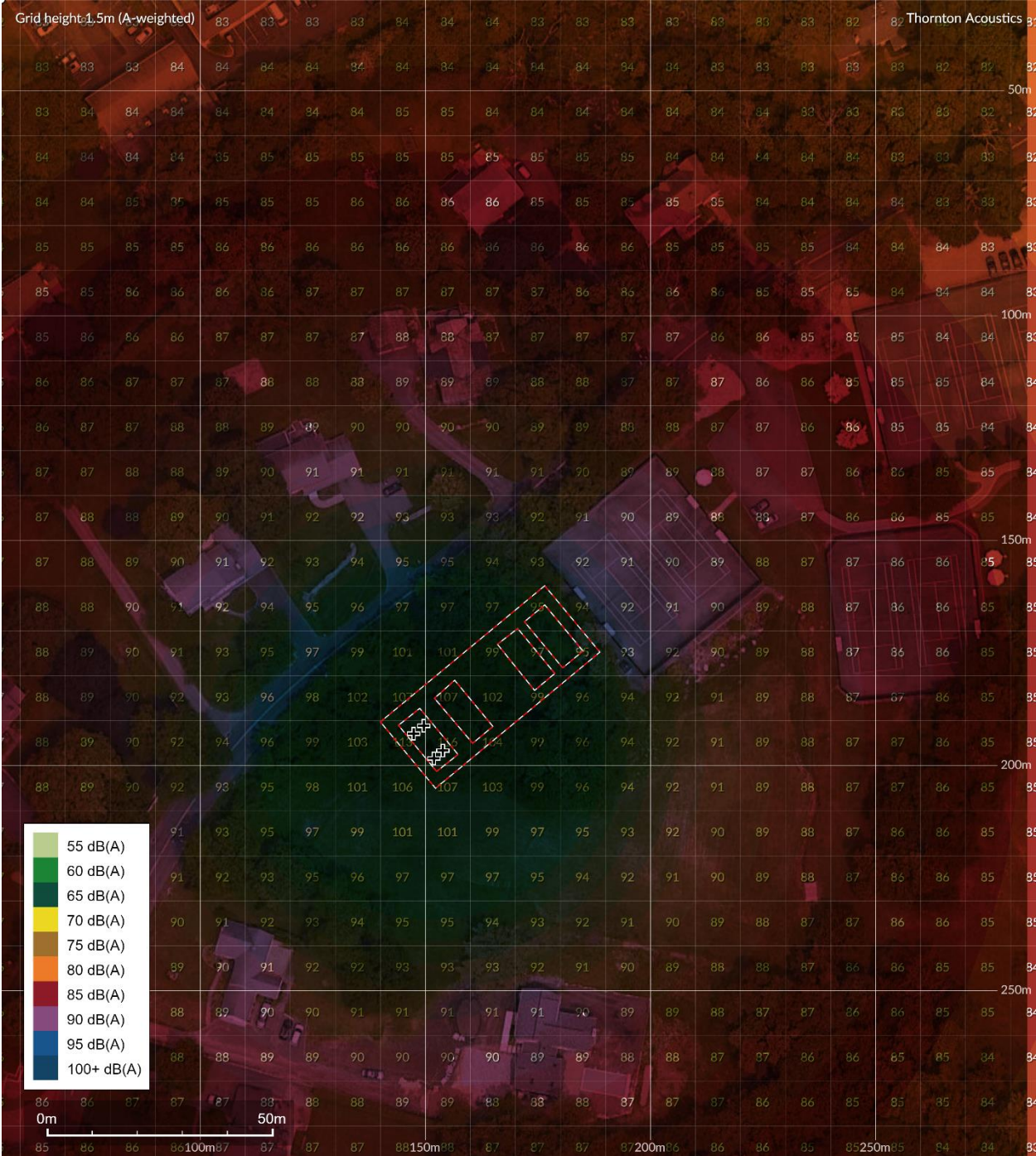


Figure 4 A-weighted Peak Sound Pressure Level contours (LA,Peak) due to Pickleball noise emissions from single-court play (west most court only) with no noise barrier installed.

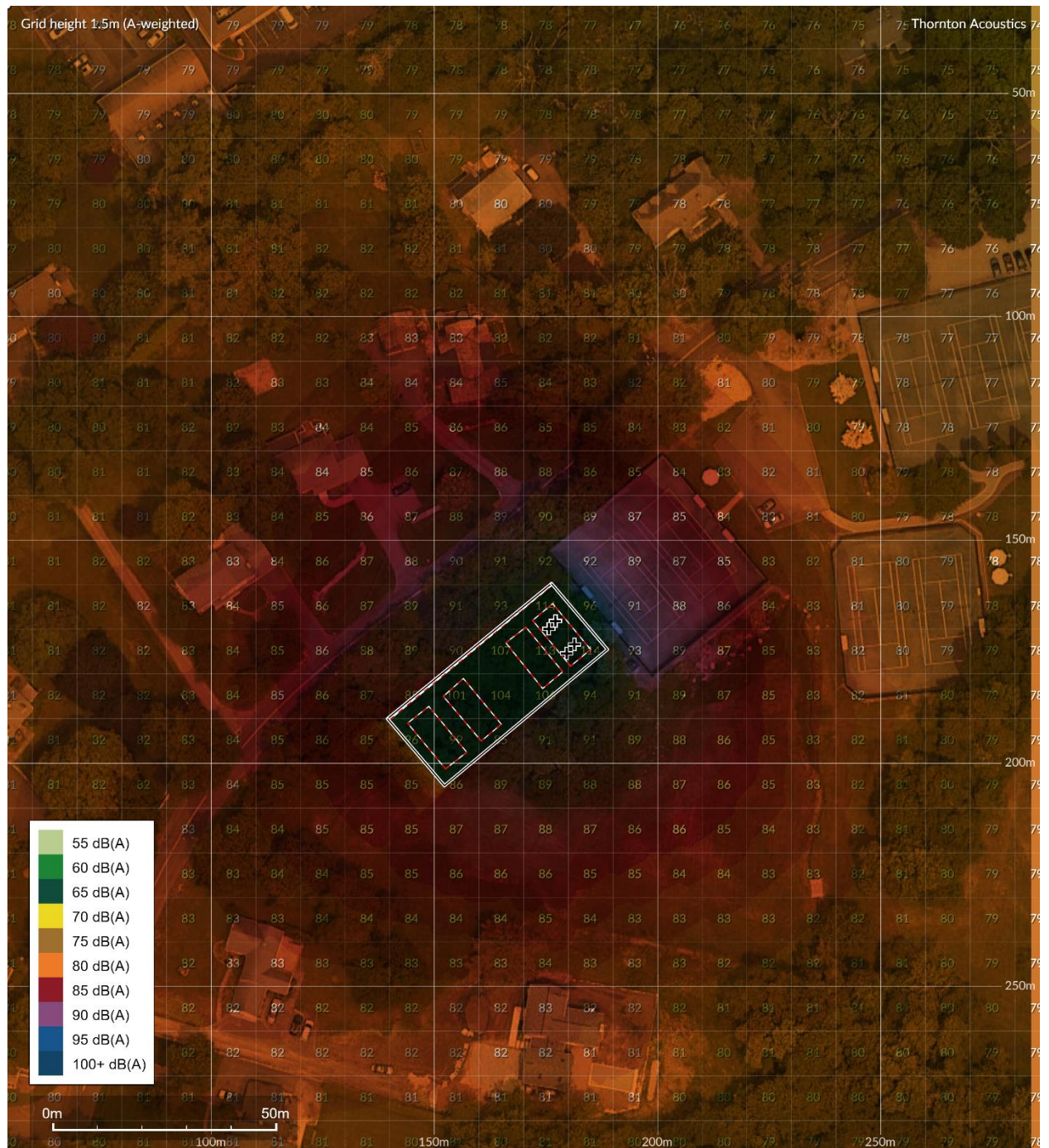


Figure 5 A-weighted Peak Sound Pressure Level contours ($L_{A_{Peak}}$) due to Pickleball noise emissions from single-court play (east most court only) with a 10-foot-tall noise barrier installed around the entire perimeter of the courts.

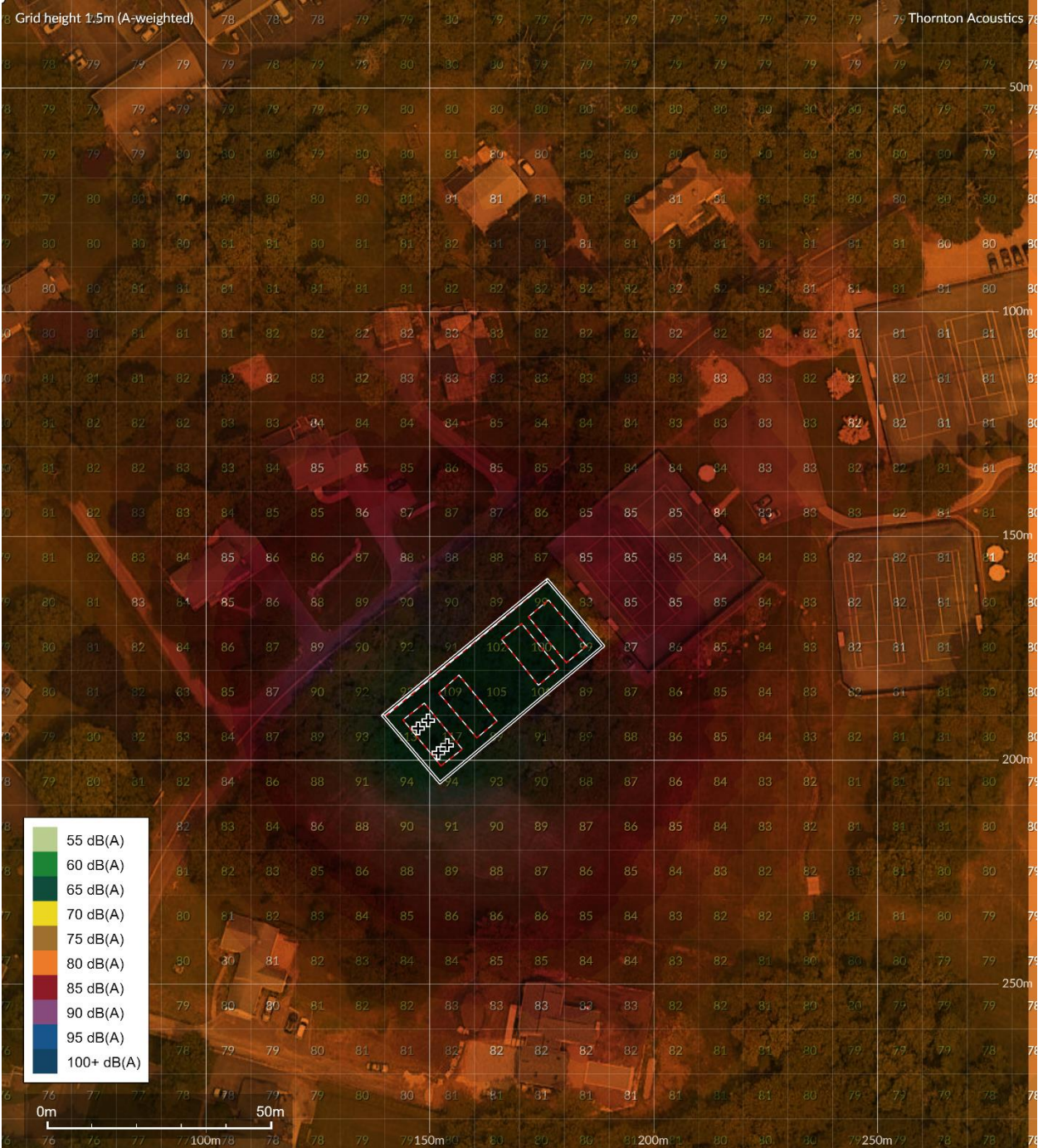


Figure 6 A-weighted Peak Sound Pressure Level contours ($L_{A_{Peak}}$) due to Pickleball noise emissions from single-court play (west most court only) with a 10-foot-tall noise barrier installed around the entire perimeter of the courts.

The A-weighted peak sound pressure levels (which will be lower than the un-weighted Peak sound pressure levels) approach the CT Impulse noise limits at the property line (daytime limit of 100 dB, L_{peak}). It is highly likely that the unweighted levels would actually exceed the limit, but we can not evaluate or confirm this as our database is limited to A-weighted data and there is no accurate means of converting between A-weighted and unweighted.

The frequency content emitted by Pickleball (perceived as pitch or tonality), falls in the center of the most sensitive frequency range of human hearing (humans are most sensitive to sound centered around the 1000 Hz range) and this causes Pickleball noise to be highly annoying and disruptive.

4 CONCLUSIONS

The noise emitted by the Pickleball courts, as incident on the surrounding properties grossly exceeds the ambient community sound levels. The Pickleball noise is sufficiently loud, above ambient levels, and in terms of absolute level, and contains tonal content (pitch) such that it is plainly, loudly audible over the entirety of the surrounding properties. Due to the level and tonality, the Pickleball noise will propagate over the property and through the walls, windows and doors of the homes and although it will be reduced on the interior, the noise will be audible. The Pickleball noise is sufficiently loud to severely detract from the peace and enjoyment of the properties.

4.1 NOISE CONTROL / NOISE BARRIERS

Due to the level and tonality emitted by Pickleball, this Pickleball Court is incompatible with the existing community. Invariably, the subject of noise control arises with this type of noise problem. The most common purported solution is a noise fence/barrier/screen/wall (these terms are used interchangeably). Unfortunately, these purported solutions are not effective, due to fundamental physics, at controlling this type of community/environmental noise problem. Although this approach appeals to erroneous conventional wisdom, which dramatically overestimates the efficacy, the actual performance of a noise barrier is highly predictable and

relatively poor for this type of site/problem. As sound is a pressure field phenomenon and does not simply propagate in a line of sight, placing a barrier between the source and receiver does not “block” the sound as it would a beam of light. Instead, sound waves, being pressure perturbations, diffuse and spread over and around barriers as they propagate. It is useful to envision smoke propagating over the landscape to help in understanding how sound propagates. The primary means by which a barrier works is simply to increase the path over which the sound travels, thereby reducing the energy due to geometric spreading. Accordingly, a barrier’s effective height is only that portion above the direct line between the noise source and the receiver. A barrier must be relatively tall and long compared to the distance between the source and receiver to provide any degree of effectiveness. While a ten-foot-tall barrier may provide a significant noise reduction when the source and receiver are separated by 20 feet, that same barrier will provide much less reduction as the separation distance is increased. As the separation grows, the effect of the barrier approaches zero. Note that despite conventional wisdom, the location of the barrier relative to the source or receiver has little effect.

In considering noise barriers, it is important to point out that the manufacturers and vendors of commercial barriers often grossly misrepresent and overestimate the barriers noise reduction performance by using incorrect and unrelated performance metrics. For example, they will often test and report the Transmission Loss (TL), Noise Reduction (NR) or Sound Transmission Class (STC) of the barrier material which are metrics used to rate the noise through the barrier. While a barrier must block sound from propagating through it as a prerequisite, these metrics do NOT represent the performance of the barrier which will be entirely dependent on geometry. For example, a barrier may be made of a material that will provide 50 dB of TL, but due to the height and separation between source and receiver, may only provide 5 dB of reduction as a barrier. Another common way of misreporting barrier performance is to test a given barrier using a closely spaced noise source and receiver and incorrectly extrapolating this performance to larger separation distances. For example, a 10-foot-tall barrier placed between a source and receiver separated by 20 feet may reduce the noise at the receiver by 15 dB, if the same source and receiver were separated by a larger distance the effectiveness of the barrier may be reduced to 0 dB.

It is also worth noting that foliage, trees, and other plants do not provide any meaningful noise barrier performance and simply planting trees along the property line will not reduce noise propagation onto the affected property.

The only means of reducing the Pickleball noise would be to enclose the Pickleball court in a well-engineered building or structure to contain the noise or to locate the Court further away from the affected properties (the levels will be reduced by approximately 6 dB for every doubling of the separation distance).

Please contact me with any questions regarding this report.

Best Regards,

A handwritten signature in black ink, appearing to read "William Thornton". The signature is written in a cursive style with a large, stylized initial "W".

William Thornton

Monthly Report SAC for Sept 20th, 2022 OVCA Board Meeting

SAC (Social Activities Committee) meets the 1st Monday of each month. We have 11 Reps & 11 Alternates attending our monthly meeting to participate in the planning and hosting of SAC events.

If a SAC Rep or Alternate cannot attend a monthly meeting, it is the responsibility of the SAC Rep to find a replacement and communicate with the SAC Chair. A full financial report from our SAC Treasurer is given at our monthly meeting.

Ongoing Activities:

It's 5 O'clock Somewhere: This past 5 O'clock Somewhere had an attendance of 78 Residents. Everyone was enjoying themselves and mingling with one another. The appetizers were plentiful and yummy. Our next SAC's 5 O'clock Somewhere is Friday, October 7th.

Come join us at SAC's 5 O'clock Somewhere every 1st Friday of the month at the NCB. BYOB with an Appetizer or Snacks to share with your fellow Residents.

SAC Events:

Saturday, August 20th was our **"HOT SUMMER NIGHT AT ORONOQUE"** This event was held at the SCB – It was a **SOLD-OUT Event with 150 in attendance. Majority of attending were more than pleased with the Caterers (Lasses) D.J. Earl Crutchfield and servings of Wine and Appetizers that just kept on coming. This Event was a "Success" even though there were minor changes then previous years. There was plenty of tables for sitting either outside or inside. The Majority attending had positive feedback.**

The Movie Club:

The Movie Club headed now by Edie Briner will be showing **Elvis, Friday Oct 14th NCB at 7:00 PM.** Elvis is played by Actor Austin Butler. Tom Hanks plays Colonel Tom Parker. Additional Showing on **Wednesday, Oct 19th at 2:00 PM at the SCB.** Come join us on the 2nd Friday of the month and the 3rd Wed of the month. Cost is only **\$1.00** with Popcorn included. SAC is a proud Supporter of The Movie Club so come join us.

Upcoming Movie in Nov: Top Gun Maverick – Starring Tom Cruise

Bus Trips:

Sonya DeBiase has started up our SAC Bus Trips. We had our 1st trip on Thursday, September 15th to **The Griswold Inn** for lunch followed by a 90-minute cruise down the **Connecticut River Valley on the RiverQuest**. This Bus Trip was **“Sold Out”** We had such a great time. The weather was perfect! We had an excellent lunch at The Griswold Inn and then walked down to the water for our cruise. Everyone had a great time and is looking forward to more Trips that Sonya will be planning in the Future.

George Zamary is still working with the Men’s Club to bring back trips to Mohegan Sun. As of now the Casinos are not offering any promos or incentives. Look for announcements for all our Events & Trips coming up that will be advertised in The Villager & on Channel 591. Thank you.

Respectfully submitted,

Mary Ann Weaver, SAC Chair

OVCA Treasurer's Report for the Three Months Ending September 30, 2022

Income

- 1) Common charges billed were \$1,352,326
- 2) Other income was \$5,503
- 3) Communications advertising income was \$6,881

Including the modest prior year surplus, total income was \$1,376,204 which was \$2,781 over budget due to favorable advertising and other revenue.

Expenses

Total first quarter expenses were \$1,502,078 leaving a \$125,875 deficit that is \$6,981 less than the budgeted deficit. Payroll and related benefits were \$4,342 below budget, as unfavorable contract labor was more than negated by reduced internal labor costs. While all other administrative and maintenance costs net out to an insignificant budget variance, I wish to note that first quarter preventive maintenance spending was some \$20K over budget. For while we refurbished 28 units compared to the full year budgeted 75, the quarter's average cost per unit was some \$700 over that budgeted.

Reserves As of September 30, total monies set aside are \$1,078,810 and are held in a checking account and two money market accounts.

Delinquencies As of September 30, there were 9 units with common charge balances over 60 days past due totaling \$55,767. Of this total, \$8,159 representing one unit was received in early October, and all other units are in various stages of litigation.

Kenneth Colman

Treasurer

10/18/22