MINUTES
Meeting of the KHHR Communities Network Committee (CNC)
7/21/2022
Hawthorne Memorial Center

Board Members:

Present: Olivia Valentine (Hawthorne Councilmember), Beatriz Fernandez (JetCenter/Advanced Air/ HA LLC), Melvin Wagner (Holly Park Neighborhood Association), Laurelia Walker (North Hawthorne Community Association), Julie DeCoste (Hollyglen Neighborhood Association), Pamela Thornton (Harbor Gateway North Neighborhood Council), and Robert E. Smith (Hawthorne Planning & Zoning).

Quorum present? NO

Others Present:
Guido Fernandez (Secretary) and Faviola Garcia (FAA).

Proceedings:
Meeting began by Ms. Beatriz Fernandez at 6:07 pm.

The minutes of the April 21, 2022 meeting were approved.

Oral Communications:

Sean Ryan: Mr. Sean Ryan stated that he lives at 5441 Wiseburn St. and he expressed concerns of increased noise. He said that he heard rumors that maybe the increased flights in Hawthorne are because there is a decrease in flights flying out of Santa Monica. He also asked about the eligibility for windows and acoustic suppression. He wanted to know if there have been any changes in flight patterns and in planes flying higher especially jets from Hawthorne Airport. He now sees more jets. Does every plane take the same flight pattern? Planes always seem to go south. Can planes go in another direction? What are the standards for flight patterns? How much does it affect the appreciation value of homes? Does it negatively affect it? He appreciated the opportunity to address the panel and thanked everyone.

Agenda Item #2: Electrical Vertical Take-Off and Landing Aircraft (EVTOL) Presentation by Ed Story

Beatriz Fernandez We have Mr. Ed Story as our speaker. He is a member of the Southern California Airspace Users Working Group (SCAUWG). He will be discussing Electrical Vertical Take-Off and Landing Aircraft. We will have time for questions and answers after his presentation. Thank you for coming Mr. Story. Can you please introduce yourself to the CNC.

Ed Story Thank you all for being here. I have instrument commercial multi-engine, sea plane, and helicopter licenses. I have been flying in the greater LA area for 40 years or so.
More recently I have been involved with the Eco Aviation Foundation which is promoting and discussing and explaining electric aircraft.

I have a shorter version and a slightly longer version of the presentation. Unfortunately we were not able to connect to the screen because I had a number of great pictures for you as well as noise videos but we will try to get those out to you by email later on. Imagine working at downtown LA but you live in Riverside because the houses cost less out there or you work in downtown New York but you live in Montauk which is way down at the end of the island and you bicycle to a vertiport which is another name for an airport but just smaller and you take an air taxi to the Staples Center in LA or Pier 6 in New York. It's almost silent, not quite but almost, no one on the ground objects to the noise, it costs about 40 to 50 bucks each way and saves you 2 to 3 hours a day in your family activity. It's green with almost zero pollution anywhere in the supply chain. It's based on different energy or different energy transformation. There are no explosions. It's based on magnetism. Not combustion but electrons.

This is a nascent industry, call it electric aviation. It has captured the attention of venture capital people who have invested literally billions of dollars into it. It's practical. It is based on certain aeronautical science which is still developing. One of the elements is called distributive propulsion. Has incredibly fewer moving parts. The green constituencies are generally for it. Home ownership and real estate are generally for it.

There are a lot of entrepreneurs mostly in the US, some in Europe, and a few in China. Probably 200 to 250 companies. There are 10 to 15 to 20 that are at the top of the heap but there are quite a few people trying to develop these. Think of this as the early 1900s for those of you that have looked at how automobiles developed in the early 1900s. There were believe it or not about 200 companies out there. Mr. Olds had the Oldsmobile. Ford had come along but he had not consolidated yet. You had all sorts of names that you don't hear today unless you look in the history books. You had oats energy switching to combustion energy. IE everyone was using horses, now they are starting to use combustion engines. Things that make a lot of noise and scare the horses but it was a change in the type of fuel, in the type of propulsion. The question is why aren't we there yet.

One of the companies that is actually prominent has been at this for about 10 years. Others have been at this for about 5 to 7 years. A few of them just started just a few years ago. One of the main reasons is what batteries can provide on an energy density basis which means how much energy you get for how much weight is in the battery. They are only one fifth to one sixth of what you get out of petroleum. In other words petroleum provides jet fuel or 100 low lead the fuel used in airplanes and helicopters and jets. That fuel provides five to six times the amount of energy for pound of weight. That's what energy density is all about. The other thing has to do with refueling time but that is much less an issue. So what we have is a situation in

which the endurance of these aircraft is at least at the present time much less than what you can get with petroleum fuel jets or small planes or helicopters.

One thing that is talked about is autonomy. I'm a pilot and I'm not worried about it. I don't think that you are going to find too many robotic passenger carrying aircraft for at least 10 years or longer.

There are winged and unwinged aircraft. The eVTOL which stands for electric vertical take off and landing. The aircraft that we are talking about with one exception generally has to be able to take off like this and then go like that. So it doesn't require a whole lot of runway. But some of them in order to counteract the energy density have developed wings as well are rotor blades that get them up.

There is a consolidation going in the industry already.

There are eVTOLs and there are eSTOLs. An eVTOL takes off this way and goes that way. An eSTOL is a short take off and landing and it actually requires a bit of runway but not a lot. They can usually take off in less than a hundred feet or maybe a couple of hundred feet. But they do need to have a forward motion to get altitude and begin flying. The eSTOLs have wings of some sort. The eVTOLs might or might not. Then we have combinations of these things.

Now back to propulsion again and changing from oats to petroleum. Now we are in the early stages of changing from petroleum to electricity. If you have just an electric motor alone then that is one way that they propel these things. You can also have a hybrid electric with combustion engine. Let me give you an example. Because of the people and population around here. You could have it take off totally electric, very little noise, get some altitude, and then when it gets some altitude it turns on a combustion engine and the combustion engine takes it further and then when it comes in to Detroit or San Francisco or wherever it is going to, it goes back to total electric so that it will be quieter and so forth. So that is one way of getting past the issue of how long your battery is going to last because you really don't have to use it that much and you can charge the battery from the combustion engine while you are at altitude. So there is one combination that we are talking about.

You can also combine with a turbine engine as an example. In combustion engines be they either piston engines or turbine engines there is a concentrated amount of power because the engine is usually in one place and then you have twin engine planes which have 2 of these things. In an electric situation because the electric motors weigh so much less than combustion or turbine engines you can have what is called distributed power. So you can have a bunch of different electric motors around all with their own little rotor blades or the rotor blades can turn down this way and pull it forward. The net effect is what is not really so available today for turbine or combustion engines. Now the exception to that is for those of you who have heard the President go by or someone of high station in our country. They usually have a V22 Osprey which is what the Marines have taken over. They usually send a couple of those along with one or two helicopters that the President is in. Now those have stubby little wings that don't really

do too much but they have turbine engine that is pointed up like this with rotor blades on the top that pulls it up and then the whole engine comes down and pulls it forward. That of course is not electric but it gives you an idea of how the propulsion works in that case.

Now on to fuel and we have already been talking about it a little bit. The battery has stored electricity but there is also another way to make electricity and that is with hydrogen. You can take a hydrogen fuel cell. Toyota has some hydrogen fuel cell cars. They have a few models. They actually have reasonable range. That can actually produce the electricity which then can run electric motors or it can be used just to replenish the battery. Or you can have a turbine type that looks like a jet inside but it uses H2 meaning hydrogen as the propulsion fuel as opposed to JetA or one of the regular fuels. You can put hybrid electricity with combustion turbine or with piston engine.

Let's talk a little bit about the mechanics. Combustion versus electric. The small plane that lands here at Hawthorne, that engine has probably close to a thousand moving parts to it believe or not. Get to an electric and you have about 2 or 3 moving parts. That's one of the reason is makes less noise but it is not the only reason because the propeller has a lot to do with it. Then if you go from turbine to electric. Turbines which are turbo props and turbine jet engines have about 100 moving parts versus 2 or 3 moving parts. So you are going to a lot fewer moving parts which means that they last longer and the maintenance is a lot less and the reliability goes up because there are fewer things to break down. Combustion engines today with all the development that has gone on are modestly reliable. I've never had an engine fail on me even though I have practiced it many times. Turbines are very reliable compared to piston engines. Electric are super reliable. They just don't break.

Now let's talk about noise since I know that most of you are interested in noise. Depending on who you are talking to electrics are somewhere between 50 to 100 times quieter than a regular helicopter especially a turbine helicopter. Let's put all of this into context. Just in this room at the moment with the ambient noise that is about 20 db. At somewhere at around 40 db we would start noticing it if something fell off the table. If a couple of you and I were talking in a conversation we would be at 60 db. An eVTOL is somewhere depending on altitude and a number of other factors is at about 65 db say at 1,000 feet, certainly at 2,000 feet. If you've had long haul trucks pass you at an intersection they are at about 90 db. Helicopters are at about 93 db. Your very own lawnmower is probably at 95 db and jet engines depending on whether it is on the ground or in the air are somewhere up to 140 dbs. Now I don't want to scare you too much on the jet engines because a lot depends on how much power is put in and how high it is off the ground. It is a logarithmic function for altitude so the amount of noise you hear goes down very substantially by altitude. If you are sitting on the runway and some jet is warming up you are going to hear a lot of noise. If it is going by at 5,000 feet you are probably not going hear a whole lot.

I do have a noise video which I was quite proud to get on the presentation. We will have to send it to you later so you would actually hear the difference between all of these.

In terms of pollution, the jet has relative high level of pollution compared to other aircraft. Combustion engines the same. Electric, hardly at all. That is hardly at all directly. If the electricity is produced in Utah and is shipped out here and it is produced in a coal fire plant then there is going to be some indirect pollution but in terms of local pollution from the engine or motor itself it is almost nil.

Endurance, the issue for all the players is how long can this thing go. If I wanted to fly one of these that was certified, which none of them are by the way, from Hawthorne to Riverside and there were no wings involved I probably would be able to make that trip. If wings were involved I could probably get up to Bakersfield or Modesto or maybe even San Francisco depending on all the combinations and factors.

The certification process changed just in the last, literally in the last month or so. The FAA was going to have them certified under the same processes as what is called Part 23 of the Federal Codes. It's now been changed to a special class of Power Lift which is roughly the same as what the Harrier, the military aircraft. The Harrier is one of the few jet fighters that will actually take off straight up. The F35 Bravo version which the Marines got can also take off and land straight up and down. That is called power lift. Under that they are going to be certifying them. The process of certification involves a bunch of different things but figuring out the basis, the means of compliance, the demonstration of compliance, and the verification of compliance and believe me given the newness of all of this stuff. My friend here, Favi, from the FAA probably knows this better than I do but there's a lot of people scratching their heads in Washington DC trying to figure out exactly how to do this because the number of different designs of airframes, there's a big number. There's a lot of them. So you will see projections of certification for 2022, for 2023. My guess and Favi and the other people that might have a better connection with the FAA might take me to task on this but I don't think it is going to happen till 2024, 2025. Somewhere in that vicinity. I'm not optimistic that it's going to be tomorrow at all. Despite that some of these have been developing them for 10 years.

One of the other key factors in all of this is the billions of dollars that are going into it. I like to equate it to a dance and there's a lot of partners switching like square dancing and switching partners from time to time. There is groupings, there is the question of who you are going home with and if you saw Flash Dancing or Dirty Dancing or any of those and there are a bunch of very good and capable wall flowers that just haven't come along yet. Think of those as the 150 to 200 dancers or players that are out there in the world today. That is not unlike the auto manufacturers around 1900, 1910, 1915. It's a bit also like the Oklahoma land rush. They are all trying to get there and why is that, because Morgan Stanley estimates that the industry of electric flying machines is going to be by 2040 will be somewhere between 1.5 and 3 trillion in size.

Air traffic control and I know that Guido asked me to say something about air traffic control. Honestly, I think that we are behind the eight ball on that with all respect to Favi and the organization that she works with. It's going to be difficult. My guess is that the first area of initiation will be unmanned aerial systems such as what Amazon is talking about doing or the

package delivery people are talking about and freight and so forth. Well before we get to passenger carrying because the liability involved with passenger carrying is much more. You drop a package, ok, you have the package to pay for again. You drop a person, it's a totally different situation. Then we have the issue of over populated areas.

Years ago and Favi may have been in this meeting. We had a meeting with one of the folks from the FAA that was down from Seattle and we were talking about helicopter noise and all sorts of factors in the greater area of LA airspace. Clark Desing said just passing along in his talk that by the way the Los Angeles airspace is the most complex on the planet. I raised my hand and I said "Clark, did you say on the planet?" And he said, yes, in the planet. That means that it is more complex that Charles de Gaulle, or what you have in New York, or Seattle, Tacoma, or Oneida or anything else. It is the most complex airspace in the planet. That was then and that was only about 5 years ago so it is probably the same thing.

Interesting enough, that actually means that the commercial use of eVTOLs or eSTOLs may actually come to LA before it comes to some of the other large cities. Uber which has gone though some gyrations but it started a division which it has now sold off to another company. Uber had selected 2 parts of the country for the testing, the commercial testing of electric aircraft. One was Dallas, Fort Worth, and the other was LA. If you go to Dallas Fort Worth, and I've been there many times. Dallas, Fort Worth has long spread out areas so getting around is a big deal but you can get around pretty well by car. Los Angeles is different. It has large spread out areas but you can't get around by car so easily or at least certainly in some times in the day. Los Angeles airspace may become sort of an acid test for this kind of flying. In that process the liability is connected to the Airports, the adapted areas, the vertiports, the cost per passenger mile and there are a lots of if, then, and but in that.

I mentioned earlier autonomy. I don't really expect it. There was about 5 years ago a whole bunch of techies that we were saying we'll have these things flying without a pilot. I know that I'm a pilot so I'm prejudice in part but by the same token I really don't expect that to happen for about 10 to 15 years. That is not to say that we have AI operated, artificial intelligence operated aircraft. The military has a whole bunch of them. You probably heard of the one that flew all the way from Australia to the United States. There is a whole slew of them that are operating in the Ukraine today but not passenger carrying again for the liability issues.

Who are the top competitors at the moment? Here's a quick list.

In the winged electric area: Beta, Joby, Wisk, Archer, Lilium, Kittyhawk. All of those are semi-winged with rotor blades that take them up and forward.

Non-winged electric: EHang, which is actually a Chinese company. A company from Germany called Volocopter.

Winged with electric and very small and no vertical element to it. Bye aerospace.

Winged Electric Regional. The Israeli company called Eviation. They have a plane which they called amusingly, Alice.

Then there's Heart Aerospace and Wright Electric which don't have planes yet but they are talking about doing this in a regional basis.

Another company that decided that there was too much competition in this area so they are sticking with stole craft aiming mostly at carrying freight and so forth is Airflow which just bought recently by Electra.

So what is the projected timeframe? All of them are still in development. The testing is probably going to keep going on for the top 20 or 30 of them easily through 2023 probably 2027. Certification I don't think will occur before 2024 or 2025. Commercial viability I think the earliest that could possibly occur would be 2026. But these are all guesses. Your guess could be almost as good as mine.

Quick few comments about Hawthorne airport. I think Hawthorne airport is situated very well. It is also a very stable airport. It has a lot of support despite every now and then someone is concerned about noise and so forth but generally speaking it is supported by the community. Especially if you compare it to some of the other airports in the area like Santa Monica which I used to fly out of a good deal and Whiteman. So what would you want to look for out of Hawthorne airport if you wanted eVTOLs to use the airport and by the way if the FAA certifies them they can use a regular airport, they don't have to wait for permission but if you wanted to attract them, then you would want to look at the safety testing. You would want to look at their commercial viability which is partly a function of their business model and how well they integrate with air traffic control. If I were in Guido's position I would say start looking and maybe that's why he invited me today. Start looking at this area. Monitor the companies. Reach out to them. Those that you find might be interesting. Do a few studies on what routes they might use both into and out of Hawthorne. Assuming that we are talking about either freight or passenger carrying. Consider them to be running at somewhere between 80 and 150 miles per hour and the high end of that would probably not be that frequent but could be. See what kind of terminal changes you might want to make and I know that you already have a good terminal and what electric recharging facilities you might look into in the future so you are prepared when they do become a reality.

There we are. That's it. I'm sorry about the pictures but you will get them eventually. Are there any questions?

Olivia Valentine I want to ask who is pushing this? You said there are billions of dollars. Who is doing this? How did this happen? Why are they all of sudden doing this? Is the government backing this? There must be some reason why all these companies are deciding that it is to their financial advantage to get into this industry and I was just wondering

Ed Story That is a good question. I would guess that a lot has to do with the green movement and concern about noise in and around an airport and since electrics don't provide hardly any pollution at all, in fact, almost none, and they are so much quieter. People starting putting 2 and 3 together and came up with 5 and they said you know we ought to look into this. I think that you have a look of folks trying to figure how we are going to reduce carbon emissions and this is one way to do that. That's probably not all the reasons my friend but it's certainly some of them.

Sean Ryan I have a question about eVTOLs. Before I came here, I took a quick look at what are the most common complaints about airplane noise around an airport. When you brought up the different decibel levels and when I looked it's not just the noise from the jet engine it's the air passing over the frame of aircraft which is also a huge reason why there's a lot of noise. So I'm just curious with the eVTOLs which sound clearly, going back to what I said, why are they flying over my house or neighborhood and not taking a direct straight shot down 120th St. My question would be what is the standard from a vertical take off. Can you literally start moving forward from any elevation because if air traffic control there is nothing about you then you can go up 1,000 feet and then start to.

Ed Story There are 2 or 3 questions in what you said so far so let me take 2 before I forget them. The first is an area that I hadn't really talked about and that is that propellers or rotors. One of the things that you have with helicopters that you generally have less of with small planes is the rotor tip speed. The rotor tip speed is really very very fast. You can approach in some experimental helicopters essentially the speed of sound with the tip speed. That makes a fair amount of noise even when you are not that fast.

Now to your second part. One of the advantages of the eVTOLs is that presumably it can land in a very small space and it can take off from a very small space. So you don't need a long runway for it. Now I'm not advocating that Hawthorne get away from its runway because it is going to need that for its regular aircraft for decades into the future. The aircraft can take off straight up. If you have an eVTOL that has no wings in it. EHang is one of those, the Chinese one. It actually does something much like a helicopter. It goes sort of like this so that their props are pushing it forward as opposed to lifting it. Whereas if you have an aircraft that is somewhat like the V22 Osprey in terms of having a bit of wing, having some sort of engine that goes this way, or the engine stays the same and something goes this way, then they can take off straight up and move forward. Now is that the most efficient or the safest way to take off.

From a helicopter standpoint I can say as a helicopter pilot that although the popular view of helicopters is that oh they just go straight up and they go straight down. You probably will not see too many of them doing exactly that. If you are out in between a couple of mountains and you don't have any quote runway you are going to go up like this and keep going but by and large if you are flying a helicopter out of Hawthorne I would get up about 2 or 3 feet off the ground and do what is called air taxiing. I taxi to a point where I speak with air traffic control, the tower, and I tell them who I was and where I want to go and they tell what I already know which is what is the departure procedure. If I did that I would pull up on the collective a bit, I

would push the cyclic slightly forward which would tilt like this and I start moving forward. I would get to what is called transitional speed which is a safer speed then I would probably go up faster but all the time I would be moving forward.

So the actual way that helicopters fly is a little different from popular conception although the popular conception is totally doable, it's just that if I took off with a small helicopter and I was still under 400 feet and the engine went out it would be a little difficult to put it back on the ground safely. If I'm going forward there are all sorts of different things I can do to make sure that it lands safely. So there's an altitude for every helicopter out there at which you can recover from an engine failure.

Now let's go to the electrics for a second. Let's say you have 6 or 8 different motors in there. One of them goes out, you still have 6 or 7 of them. If you look at the configuration of some of these they will have 2 motors. One on top of the other. One has a prop that pulls up and the other has a prop that pushes. So again, one of those could go out and it probably wouldn't change the speed very much, depending on the pilot might want to sit down and find out what went wrong. But with six or seven other distributed propulsion motors out there I'm much better off. Now if you have a single engine, we have single engine planes, the engine goes out, you have to find a place to put it down real fast depending on what altitude you are at. If you have a twin engine plane, and I memorized this a long ago, power up, clean up, identify, verify, take care of the good one and trim, that's the procedure you go through. You don't go look for the checklist, you just do it and the plane keeps flying on one engine but it doesn't have 50% of the power. It has probably 30% of the power because the bad engine is circulating and actually acting as drag. I hope that's responsive to your question.

Sean Ryan Just another quick question. If you need to go somewhere, pilots typically, most of us are used to oh I need to go to the store, get from A to B, we just hop in our car and we don't need to radio air traffic control. Is there a timeline or procedure?

Ed Story Yes, the short answer is that it would be into the National Airspace, NAS it's called. The traffic in the National Airspace is all controlled by the Federal Aviation Administration. That's why we have control towers. Now, at Airports, and there's many Airports that don't have a control tower, then you have a preset set of procedures and you are also talking to by radio to anybody else that happens to be in the area or at least you should be, you're supposed to be. There's a preset pattern that you use to land and so on, there's a whole slew of things that you need to know but fundamentally we have about 1,000 commercial airports and about 5,000 total airports. On the commercial airports and there are big ones and there are little ones, LAX is obviously a big one. Van Nuys would be a very significant one that is not little and then you get to airports like Hawthorne and Santa Monica and Torrance and so forth. They all have control towers. I forgot the hours at Hawthorne but you may not be able to start your engine say before 7 am or something like that. Some airports are set up that way. You can always land anytime because can't keep you from landing.

Sean Ryan Real quickly. If an airplane is on the ground, it's the responsibility of the Airport and once it's in the air it is FAA. Is that correct?

Ed Story Well, from the standpoint. You have various factors. You have the individual, you have the insurance company, you have the FAA, and you have the Airport. And as Guido would probably tell you if you are interested, there's all sort of special regulations at Hawthorne which are unique to Hawthorne versus any other airport. The FAA has a bunch of regulations that we all had to memorize or learn when we were becoming pilots. The insurance company is someone else that you are responsible for but most of the time you don't talk to them. If you rented the plane from a flight school then you are responsible to the flight school. There's a lot of people that you are responsible to. How you taxi is layed out pretty much by that airport but there's also some FAA regulations that relate to that. And once you get into the air you're responsible to all of these people.

Sean Ryan So there is a natural noise ordinance.

Guido Fernandez I think that we are getting off topic. I will follow up with Sean but I believe there is a question in the back.

Paulette Francis My name is Paulette Francis and I live in the City of Gardena. The electric engines make a different kind of noise. Has there been any conversation about what to do to quiet down the noise of electric engines when they land or take off.

Ed Story The motor itself in the case of electrics is almost hard to hear. The propeller or rotor blade whichever it happens to be or both has a tip speed issue and that tip will tend to be much faster than you think and that creates a certain amount of noise. For instance, one of the reasons why they have multiple electric motors with rotors going slower but a lot of lift from multiple motors is to cut down on the noise. That's a quick response for you.

Agenda Item #3: Status of City's current projects:

Beatriz Fernandez Thank you for this information. Mr. Secretary can we now have the status of current city projects?

Guido Fernandez At this time the only project we are focusing on is we are doing some rehab work on the north taxiway between Foxtrot and Golf. You can't hear me? I will speak louder. So currently we are doing rehab work on the north taxiway between Foxtrot and Golf. That is the only active project at this time. We are planning next year to do an upgrade of our lighting system, our sign and lighting system but we are in the very planning stages now. We are barely beginning to plan that project and it is also based on FAA funding, receiving an FAA grant. That's all I have to report at this time.

Beatriz Fernandez Are there any committee members that wish to make any closing comments at this time. As a reminder please speak into the microphone.

Agenda Item #5: Comments/Discussion:

Melvin Wagner I'm Melvin Wagner with Holly Park. Are the Airport Towers open for how long?

Guido Fernandez I can answer that. It is open every day of the year from 6 am to 10 pm.

Melvin Wagner The reason why I'm ask this question is because I deal with a lot of the super jets. They do come in low because I'm up on the hill and I guess when we have jets that are not used to landing in Hawthorne they are coming between the 105 and 120th St. but they seem to be moving all over the place. I was curious is there some, ok you are supposed to be set here at Hawthorne Airport. You are coming in from the east but you are in the north side and you do a hard turn to get to the Airport. Is there something there that is telling these pilots that I'm off, is there something in place for them.

Ed Story The short answer is yes. The slightly longer answer is that if it is not Instrument Flight circumstances or they haven't been told specifically by Air Traffic Control to do something different, they can wonder a bit without upsetting any of the regulations. But if it's Instrument Flight conditions and there are 2 types of flying at least. There's VFR which is visual flight rules in which you have to see and be seen and there's a whole slew of rules. There's also Instrument Flight Rules which is when you can't see outside and the other people presumably cannot see outside either. If the jets are primo they should have all the instruments they need and they should be coming in straight to the runway depending upon at what point they got into the air traffic or at what point if they came up from San Diego they were allowed to turn, there are a lot of factors there but fundamentally they have the instrumentation to do it and they should not be wondering too much.

Melvin Wagner There's quite a few that are wondering coming in. It's getting really bad. I see the planes coming in to LAX and they know exactly where they are going. I see the ones coming to Hawthorne and they are all over the place. Some of them are coming in hot, real hot. Somewhere along the line I don't want nothing to happen. I come from a background that it will happen. I would hate to see that happen.

Ed Story One of the things that you can do if you want to if that you can go to FlightAware and you can probably identify the aircraft. There are some exceptions to that but mostly you can identify the aircraft. Now in most cases, and again forgive me Favi, you are probably not going get much surcease from the FAA as they have their hands full but you can make a note of it and you can make a complain and you can identify probably the N number. You can submit that information and in most cases and I can tell you this from my own experience with the process that I just discussed, in most cases if there is a significant danger that was created you may get a response. If there was not a danger created and it did not go against any of the FAA federal regulations even if it was wondering a little bit you probably will not get a response.

Melvin Wagner Right, 99% of the time and by the time that it gets to the people that are actually responsible for it how many other complaints probably on that plane and a thousand other planes doing the same. By the time you get there it's in a plane graveyard. There's more than one complain coming in and I know they are trying to handle as much as they can because of the presentations that you gave on how the complaints and everything work and how they narrowed everything down.

Ed Story I will give you one example that Favi will probably identify with and that is that. What is the system that was just put in?

Faviola Garcia It's the Noise Complaint Initiative and we talked about it before, we talked about it here, and I know that folks forget that it is there. It is much more efficient now. If you do have a complaint you can go ahead and submit it in the system and you will get a response. Typically we are doing a lot better. The first time I reported on it the system was just being instituted maybe 2 years ago but now you can expect a response between 30 to 45 days. We're supposed to respond within 30 but realistically we sometimes miss that cut off but it's very close. The other thing is that if there are no violations you will get a response that there were no violations and there's nothing we can do. Please submit the information, the aircraft number, the time, date. Whatever information you have. It is a fillable form. If you don't know what to capture you can go in and familiarize yourself with the form so you know what to capture when you see that aircraft that you believe may be in violation and that can be hard a real challenge with some of the lower flying aircraft. Guido can you give them the NCI?

Guido Fernandez Yes, I believe that I did but Mr. Wagner I can send it to you. Yes, I can send it to you. We have a fact sheet and we actually have the new link there.

Julie DeCoste I have a question. Julie DeCoste Hollyglen neighborhood association. I know we have attended many meetings and we have been told exactly what you just told him about running outside and try to get the flight number, all that information. Why is this our job? Isn't there just data analytics. Shouldn't it be someone else's job and not our job to go running outside during the middle of our work day and just figure out what is going on. Why is this our job? Is this not the FAA's job? Isn't there some data analytics where you can go and say this plane at this time he flew too low or something. That's a question.

Faviola Garcia When there is a violation those are usually report to us by individuals.

Julie DeCoste So you have no way of know if we don't complain?

Faviola Garcia If it's a lower aircraft we don't know.

Ed Story That is the point this gentleman brought up and that is FlightAware. You don't have to go outside and try to find the N Number by looking at it. You can look it up in FlightAware and you can probably find it and 95% of the time you will get the information you need and you can do that at your desk or kitchen table.

Julie DeCoste But I guess isn't that somebody else's job? Who is monitoring?

Faviola Garcia It depends on the operation. Not all of them are monitored by us. Some are reported.

Guido Fernandez Can I mention something. One thing to keep in mind too is that when planes are landing and when they are taking off there are no minimums. They are just trying to follow whatever procedure they can to do it safely. Once they are flying steady now that's a different story. Now we are talking 1,000 feet.

Julie DeCoste So the altitude might be monitored by data analytics but what he is talking about there's really no one watching that. Just us. We have to report it.

Guido Fernandez Melvin, you are talking about landings, right? And that's what I mean that when they are landing there are no minimums because they are just trying to land safely and they are aligning themselves with the runway. You understand what I'm saying? And the same thing when they are taking off. Now when they are flying steady, now that's a different story. Now it is 1,000 feet over populated areas and as long as they are not endangering. Am I correct?

Ed Story Exactly. Now by the same token if this is the runway and a normal flight path into it is this way and they come down and go along like this and drag it in that's not a good idea, that's not good flying. There is a about a 3 degree glide slope, in most cases, it ranges between 2 ½ and 3 depending on the circumstances around it and it essentially looks like this. Now if they start doing that earlier and creating it a lot of noise and just dragging it in here that is basically not good flying and you ought to report it whether they are outside the regulations or not.

Melvin Wagner There's a palm tree and I've been living over 25, 30 years. There's a palm tree on Van Ness and 120th St. Every jet that comes in comes over that palm tree and I can see everything from my back yard. If I get a jet come in and he is off and maybe he wants to land it real quick he will come over right over the top of those and I have seen quite a few that come in and they have their wheels down and they clip that tree. I don't want nothing to happen. I see this often.

Guido Fernandez But that is something you can report.

Ed Story There is one other issue that is not directly related to that which I expected Favi might mention it and that is that about 3 years ago with NextGen. Ok, it was six years ago? There were a number of Airports, say that's an airport, and flights were coming in from this direction

and from this direction straight and from this direction. So if there were multiple flights, say 50 flights a day or something like that, and the people underneath here and the people underneath here and the people underneath here, all got sort of a distributed amount of the noise and we have say 17 flights that came over roughly speaking but now the FAA wanted to get everything straighten out and wanted everybody going the same direction and so they all come over the same area, not low, I'm not talking about that, but all 50 of them, this is just an example.

Faviola Garcia And if I could just characterize it differently. We are modernizing the airspace. We are enabling aircraft with GPS to speak to satellites just like we use Google Maps so it's the same idea that's what we are talking about, that's what we had to do for the airspace. Before people were taking not necessarily a straighter path, before you got lost here or there, but now with GPS we get to our destination pretty quickly, effortlessly. So with aircraft they already have satellites, the aircraft if equipped, they're talking and they just go straight in once they hit that point in the sky. The highways in the sky.

Julie DeCoste I just had one last and I'll make it quick. I think we talked about this before. We have policemen on the ground to make sure that everyone is doing what they are supposed to be doing. Is there some sort of airport police other than what you are saying like where he lives nobody is monitoring. If it's 50 flights a day like you said, could that be one person watching or 2 people a day. Just visually watching. That way they know that they have eyes on them and they are less likely to take out his tree.

Faviola Garcia We have the investigators and flight inspection all in the flight standards organization. So they are the ones.

Ed Story Some airports do have noise monitors out at various places. Sometimes right on the airport and sometimes back in the community a bit and they are not going to keep a palm tree from being clipped. They can keep some track, some digital track of what is going on.

Julie DeCoste Good to know. Thank you.

Beatriz Fernandez Any other comments. No. Thank you all for joining. This meeting is adjourned at 7:28 pm.

- Meeting ended at 7:28 pm.
- Minutes were recorded by City of Hawthorne.
- Minutes were reviewed and submitted by the Secretary, Guido Fernandez.