PSERN
PUGET SOUND EMERGENCY RADIO NETWORK

Meeting of the PSERN Board of Directors

(Monthly Meeting)

Location: To be conducted virtually: Microsoft Teams Meeting

Date: Thursday, March 24, 2022

Time: 4:00 p.m. – 5:00 p.m.

Teams Call: Members of the public are invited to participate in the virtual meeting by telephone or video by using the following phone number and meeting ID: 1-425-653-6586 Meeting ID: 607 105 419#

Directors: Lora Ueland (Chair), Harold Scoggins, Kurt Triplett, Dwight Dively, Chris Elwell, Dan Yourkoski

Alternates: Brad Miyake, Kristin Meitzler, Mark Schmidt, Matt Morris, Shawn Hayes (King County does not have an alternate at present.)

Agenda Details:

1. Call to Order – Lora Ueland 4:00 p.m.
2. Roll Call – Erin Clarke 4:01 – 4:03 p.m.
3. Approve the Minutes – Lora Ueland 4:04 – 4:05 p.m.

   (Decision: Motion to approve the minutes from the 02-24-22 Monthly Meeting of the PSERN Board of Directors)
4. Public Comment – Lora Ueland 4:06 – 4:10 p.m.

   Board Chairperson to open floor for public comment. Members of the public are invited to address the Board of Directors for a period of time not to exceed three minutes.
5. Executive Director Report – Mike Webb 4:10 – 4:20 p.m.

   (Discussion)
6. Startup Spending Update – Mike Webb 4:21 – 4:30 p.m.

   (Discussion)
7. Technical Operational Staffing Plan – Mike Webb 4:30 – 4:45 p.m.

   (Discussion)
8. Subleases at PSERN Radio Sites – Mike Webb 4:46 – 4:50 p.m.

   (Discussion)

9. PSERN Board of Directors Officer Report – Board Officers 4:51 – 4:54 p.m.

(Discussion)

10. Review Action Items – Lora Ueland 4:55 – 5:00 p.m.

Next Meeting: April 28, 2022

Meeting of the PSERN Board of Directors – Meeting Minutes

Location: Microsoft Teams Meeting

Date: Thursday, February 24, 2022

Time: 4:00 p.m. – 5:00 p.m.

Teams Call: Members of the public were invited to participate in the virtual meeting by telephone or video by using the following phone number and meeting ID: 1-425-653-6586 Meeting ID: 607 105 419#

Attendees:

- **Directors:** Harold Scoggins (Vice Chair), Kurt Triplett, Dwight Dively, Chris Elwell, Dan Yourkoski
- **Alternates:** Kristin Meitzler, Mark Schmidt, (King County does not have an alternate at present)
- **Directors Absent:** Lora Ueland
- **Other Attendees:** Tom Bloomingdale, Erin Clarke, Sean Douglas, Armand Eichhorn, Adrian Englet, Hank Krajewski, David Mendel, Kimberly Nuber, Joel Thornton, Michael Webb, Ellen Whitely, Thomas Wood

Meeting Minutes:

1. Call to Order – Board Vice Chairperson 4:00 p.m.
   - The Chair called the meeting to order at 4:01.

2. Roll Call – All 4:01 – 4:03 p.m.
   - Quorum was noted.

3. Approve the Minutes – Board Vice Chairperson 4:04 – 4:05 p.m.

   (Decision: Motion to approve the minutes from the 01-27-22 Annual Meeting of the PSERN Board of Directors)

   - **MOTION:** A motion was made to approve the minutes of the meeting held on 27th January 2022 by Kurt Triplett. It was seconded by Kristin Meitzler. The Board members unanimously approved the motion.

4. Public Comment – Board Vice Chairperson 4:06 – 4:08 p.m.
   - There were no public comments.

5. Executive Director Report – Mike Webb 4:08 – 4:13 p.m.
   - Mike Webb presented a report that summarizes the activities of the PSERN Operator since the last meeting of the Board in January.
     - Staffing update to include status of recruitment of Finance Manager and Technical Operations Manager
     - Staffing and transition plan for technical/operational staff to be presented in March BoD meeting.

- Financial Advisory kickoff was held February 18th with Clarke Nuber PS.
- BoD workplan update on completed items.

6. Startup Spending Plan Report – Mike Webb 4:14 – 4:16 p.m.
   - Mike Webb presented the report which details a revised updated forecast of start-up expenditures for the Operator.

7. PSERN Board of Directors Officer Report – Board Officers 4:16 – 4:17 p.m.
   - Nothing to report.

8. Review Action Items – Board Vice Chairperson 4:17 – 4:18 p.m.
   - No action items noted.

Next Meeting: March 24, 2022

Adjourn 4:18 p.m.

PSERN Board of Directors Staff Report
Agenda Item #5

Title: Executive Director Report – March 2022
Meeting Date: March 24, 2022
PSERN Staff Contact: Michael Webb, Executive Director
Action: Discussion

SUMMARY:

This report provides a summary of the activities of the PSERN Operator since the last report to the Board at the February 2022 meeting.

ANALYSIS:

Stakeholder Engagement

- On March 9th, David Mendel, Kimberly Nuber and I attended the King County Fire Commissioners Association membership meeting and provided an update on the PSERN Project and the establishment of the PSERN Operator.
- A new Twitter account for the PSERN Operator (@PSERN_Operator) is now active.

PSERN Project to Operator Transition

- A transition plan has been developed and was discussed and reviewed with Project staff on March 4th:
    - An agreement for asset and lease assignment is being drafted and will need to get into the pipeline for approval by King County Council by June of this year.
    - The PSERN Operator Board will have to consider and ultimately approve this agreement after King County approval.
    - The timing for availability of a draft agreement for PSERN Operator review is not yet known.
- Discussions among the PSERN Project, King County RCS and City of Seattle Radio Shop regarding the operational transition to the PSERN Operator have begun.

Staffing/Hiring

- The Finance Manager position was posted on March 7th and will close on March 28th
    - It has been posted on several websites and external job boards, including King County, Governmentjobs.com, Diversityjobs.com, Linked-In and the Washington Financial Officers Association.
    - 4 interview panelists have been identified (plus myself), which is sufficient for 2 panels of 3, although 1 or 2 more volunteers are being sought to ensure diversity and representation of all PSERN stakeholder groups.
    - Interviews will likely occur during the 2nd or 3rd weeks of April.
- A staffing requisition for the Technical Operations Manager hiring has been created and is currently being processed by KCIT HR.

    - The job posting will be made by the end of March, with interviews likely to start in May.
    - A list of prospective interview panelists needs to be developed.
- A staffing and transition plan for technical and operational staff is being discussed at the March meeting.

Financial Advisory Phase 1 Project

- Clark Nuber PS has begun work on this project and a variety of background documents and other financial and governance information has been provided to them.
- Board members and other key stakeholders will be invited to participate in the project to gather input in several areas, including financial policy, internal controls, reporting and asset transferal.
- Clark Nuber will be identifying schedules and participants for interviews in the next week.

Operating Budget Development

- Minimal work on the 2023 (post FSA) operating budget has taken place this month, but it will be an area of focus in April and May.
    - Several requests for estimates of 2023 and 2024 PSERN service fees have been received.
    - A discussion paper on 2023 budget and service fee development will be prepared for discussion in an upcoming meeting.
- Discussions expanding PSERN's insurance coverage have been extended to include WCIA (Washington Cities Insurance Authority) in addition to the Operator's existing provider, Enduris.
- Work is continuing by PSERN Project staff to review and summarize radio site leases to support the Operator's budget development, including identification of ongoing lease costs and insurance requirements.

Records Management

- Pacifica Law Group are working on a proposal for support in developing a records management plan/policy for the Operator
    - This work will start in late March.
- Documents pertaining to Operator are being saved on SharePoint subsite in anticipation of a permanent records storage solution.

PSERN Radio Site Subleasing

- A detailed report on this topic has been provided for discussion at the March meeting.

BoD Workplan Updates

- The following workplan items have been completed:
    - (15) Seattle Business License has been obtained.
    - A null year-end report has been submitted to the State Auditor.

Workspace

- PSERN Operator staff are continuing to work remotely:

    - No arrangement for access to workspace at KCIT facilities has been made yet.
- Discussions with King County Facilities Management regarding the facility being used by the Project for radio deployment have occurred and the following updated information provided:
    - The building is under lease by King County until the end of 2022.
    - The County has an option to extend to end 2024.
    - If interested in leasing from January 2023 onwards, the PSERN Operator will need to work directly with the landlord.
- Although this facility is currently available and could potentially meet the Operator's short-term needs, a broader assessment of available properties in the region will be undertaken:
    - A statement of requirements (floor space, type, timing, location, etc.) will be developed prior to any discussions with landlords or agents/brokers.
- A facility should be identified, and a lease approved, by June 2022, with occupancy to occur in the fall.

<u>Upcoming Board Meeting Topics</u>

- Topics expected to be brought forward over the next 3 board meetings include the following:
    - April 2022:
        - Operational startup funding requirement (Pre-FSA).
        - Discussion paper on 2023 budget and service fee development
    - May 2022:
        - Approval of operational startup and hiring/staffing plans.
        - Update on 2023 budget and service fee development
    - June 2022:
        - Update and approval on facility acquisition
- The timing of several of these items is based on an objective of issuing initial job offers to transitioning staff in the July-August 2022 timeframe.
- These topics are in addition to the regular standing items, including Executive Director's report and Spending Update.

CONCLUSION:

This report has provided a summary of the work undertaken by the PSERN Operator since the previous report in February.

SUPPORTING DOCUMENTATION:

None

PSERN Operator Board of Directors
Staff Report - Agenda Item #6

Title:	Administrative Startup Spending Update – March 2022
Meeting Date:	March 24, 2022
Staff Contact:	Michael Webb, Executive Director
Action:	Discussion

SUMMARY:

This report provides an update on PSERN Operator administrative start-up expenditures to the end of February 2022, and a forecast of expenditures to Full System Acceptance in March 2023.

BACKGROUND:

As discussed in the January 2022 report to the Board (Start-up Staffing and Spending Plan), in the absence of a financial management system and supporting policy and processes for PSERN, the Executive Director will provide monthly status reports/updates at each Board meeting that describe:

- Year-To-Date spending against the baseline spending plan (for administrative start-up).
- Revisions to expenditure forecasts, including cost estimates and timing.

Currently, all PSERN Operator expenditures are being recorded against a specific expense code within the broader PSERN Project accounts/funds in the King County financial system (Oracle). Reports can be run on demand to show expenditures/transactions coded against the Operator.

At the point the PSERN Operator has its own financial management system later in 2022, standardized or pro forma financial reports will be provided on a regular basis to be determined by the Board.

ANALYSIS:

Appendix A provides a summary of the Year-to-Date spending of the PSERN Operator as of the end of February 2022. Spending to date is currently on-track and/or below the estimates provided in the baseline spending plan.

The following notes apply:

- The 2023 forecast is for 3 months, as FSA is assumed to occur at the end of March 2023.
- Staffing spending is shown as tracking to forecast although it is expected that the Finance Manager on-boarding will likely occur no earlier than May 1st (budget is based on April 1st).
- The majority of expenditures to date are staffing and benefits, with small expenditures for legal services, King County IT services and miscellaneous administrative expenses (e.g. business license fees).

CONCLUSION:

This report provided an updated on administrative start-up expenditures through to the end of February 2022 and a revised forecast of expenditures to Full System Acceptance in March 2023. Spending to date is on-track or below the estimates provided in the baseline spending plan.

SUPPORTING DOCUMENTATION:

Appendix A: PSERN Operator Spending (Year-to-Date and Forecast) – February 2022

A summary of expenditures to end of February 2022 and forecasted expenditures during PSERN's startup phase in 2021, 2022 and 2023 (prior to FSA), are provided in the table below.

This only covers the administrative staffing and initiatives discussed in the January 2022 report as reflected in the approved baseline expenditure plan indicated in the table.

Item	2021 (actual)	2021 (baseline)	Feb-22 (actual)	2022 (YTD)	2022 (forecast)	2022 (baseline)	2022 (variance)	2023 (baseline)	Total Startup (forecast)	TOTAL Startup (baseline)
Salary & Benefits	$ 46,308	$ 39,724	$ 30,579	$ 54,275	$ 661,000	$ 667,800	$ (6,800)	$ 342,000	$ 1,049,308	$ 1,049,500
Insurance	$ 3,488	$ 3,488	$ -	$ -	$ 5,000	$ 5,000	$ -	$ 1,500	$ 9,988	$ 10,000
King County Services										
HR, IT Support, Office Lease	$ 7,506	$ 7,355	$ 1,061	$ 1,456	$ 54,200	$ 54,200	$ -	$ 29,900	$ 91,606	$ 91,500
Consulting Services										
Legal Services	$ 6,766	$ 6,766		$ 5,206	$ 86,400	$ 86,400	$ -	$ 28,800	$ 121,966	$ 122,000
Financial Advisory				$ -	$ 60,000	$ 60,000	$ -	$ 30,000	$ 90,000	$ 90,000
Security/ Other Consulting				$ -	$ 50,000	$ 50,000	$ -	$ 30,000	$ 80,000	$ 80,000
Office/Administrative Expenses			$ 238	$ 238	$ 12,900	$ 12,900	$ -	$ 8,100	$ 21,000	$ 21,000
Transportation Expenses				$ -	$ 6,500	$ 6,500	$ -	$ 3,300	$ 9,800	$ 9,800
PSERN-Specific IT Systems										
Financial/Accounting				$ -	$ 37,700	$ 37,700	$ -	$ 16,500	$ 54,200	$ 54,200
Asset Management				$ -	$ 54,300	$ 54,300	$ -	$ 16,000	$ 70,300	$ 70,300
Service Management				$ -	$ 6,000	$ 6,000	$ -	$ 9,000	$ 15,000	$ 15,000
IT Equipment (all staff)								$ 79,400	$ 79,400	$ 79,400
Vehicle Fit-Out								$ 142,000	$ 142,000	$ 142,000
Technician Tools/Equipment								$ 12,800	$ 12,800	$ 12,800
TOTAL	$ 64,067	$ 57,333	$ 31,877	$ 61,175	$ 1,034,000	$ 1,040,800	$ (6,800)	$ 749,300	$ 1,847,367	$ 1,847,500
TOTAL Startup by Year		**$ 57,333**				**$ 1,040,800**		**$ 749,300**	**$ 1,847,367**	**$ 1,847,500**

PSERN Operator Board of Directors
Staff Report - Agenda Item #7

Title:	Technical and Operational Staffing Plan
Meeting Date:	March 24, 2022
Staff Contact:	Michael Webb, Executive Director
Action:	Discussion

SUMMARY:

This report provides a plan for hiring and staffing technical and operational positions with the PSERN Operator organization. It identifies the quantity and type of staff required, their desired start dates and reporting structure.

A Technical Operations team of approximately 19 staff will be required at the point the PSERN Operater assumes responsibility for operating the network, currently assumed to be at Full System Acceptance (FSA) in March 2023. In the period leading up to FSA, a hybrid operational model involving King County RCS, the City of Seattle Radio Shop, the PSERN Project and the PSERN Operator will be implemented.

Start dates for some technical staff should occur prior to FSA – in the October 2022 timeframe – in order to ensure the PSERN Operator is properly prepared to assume operational responsibility at FSA. The PSERN Operator's ability to recruit and hire a full complement of technical staff by FSA represents a significant risk and uncertainty for the organization which can be best mitigated by starting the process as early as possible.

Staffing requirements have been determined based on an assessment of the functions and activities the PSERN Operator must undertake in order to fulfill its mandate for operating and maintaining the PSERN network and providing service and support to its users. There is some uncertainty associated with the headcount requirements as the workload and methods of resource deployment and utilization needs to be further assessed as the PSERN network transitions into operational use and the PSERN Operator is established.

This plan also discusses the transition of existing KCERCS staff to the Operator pursuant to the ILA. It indicates that up to five positions that may transition from the King County RCS group to the PSERN Operator. The remaining positions will be filled using normal recruiting methods with the support of King County IT (KCIT) Human Resources. It is expected that a significant number of PSERN Project technical staff will be qualified and will seek employment with the PSERN Operator.

The Board is requested to review and endorse the staffing plan in this report to establish a basis for operational transition planning and hiring activities that will be undertaken in the months leading up to FSA. The required funding and potential sources of funding to enable technical/operational staff to start work prior to FSA will be presented and discussed at the April meeting.

BACKGROUND:

Approved Funding, Staffing and Spending Plans

At its January 2022 meeting, the Board approved a staffing and spending plan for the administrative startup of the PSERN Operator organization. That plan covers administrative and management staff (a total of 7 positions) and administrative expenses prior to Full System Acceptance (FSA), along with specific one-time start-up costs that are not included in the PSERN project scope. Funding of $1.85 M has been allocated from the project budget to cover these expenses in 2021, 2022 and 2023.

It is currently assumed that at FSA, KCERCS service fees will terminate and new PSERN Operator service fees will commence. FSA is currently forecast to occur at the end of March 2023, although this milestone is subject to delay as will discussed later in this report.

The previously-approved administrative startup staffing and spending plan does not include any network operating expenses that need to be incurred prior to FSA and commencement of PSERN service fee collection. These expenses are to be funded by the PSERN project.

Furthermore, no funding is currently allocated for hiring or transition of technical/operational staff prior to FSA. However, there are significant benefits from putting such staff in place prior to FSA for a variety of reasons that will be discussed in this report.

Technical Staff Transition Obligations

The PSERN Operator ILA contains provisions applicable to current regular employees working on KCERCS infrastructure whose job duties will be assumed by the PSERN Operator after FSA[1]. The ILA specifies that these employees will have the option of working for the PSERN Operator and the County and the Operator will work cooperatively to transition them.

Beyond the transitioning positions defined in the ILA, additional technical/operational positions with the PSERN Operator are defined in this staffing plan and will need to be recruited and hired.

Current KCERCS/PSERN Operational Support Model

The existing KCERCS system consists of radio site infrastructure owned and operated by the four partners in PSERN – King County, City of Seattle, EPSCA and Valleycom. The majority of KCERCS infrastructure support and maintenance is currently being performed by staff from King County Radio Communications Services (RCS) and the City of Seattle Radio Shop.

The PSERN network core and dispatch sites are already operational and integrated with legacy KCERCS radio sites and new PSERN (P25) radio sites. Maintenance, operational and technical support involves a coordinated effort among staff from the PSERN Project, Motorola Solutions, City of Seattle, King County RCS, EPSCA and Valleycom.

As radio user agencies transition to PSERN throughout 2022, the full PSERN network (core, dispatch and radio sites) will become operational prior to the FSA milestone, with KCERCS radio site infrastructure also continuing to operate. Resources within the PSERN Project, City of Seattle Radio Shop and KC RCS will be stretched to support the combined network during the transition period prior to FSA. In addition, some PSERN Project staff are scheduled to roll-off prior to FSA (project funding will cease).

For this reason, availability and deployment of technical resources to support both networks prior to FSA is a risk that will require careful coordination between the PSERN Project, the King County and City of Seattle Radio Shops and the PSERN Operator. This risk can be reduced if the PSERN Operator begins to ramp up its resourcing and assume certain operational responsibilities in advance of FSA.

Transition and FSA Timing

User radio deployment and transition from KCERCS to PSERN is planned to occur in four "Waves", the first of which is already underway. Wave 1 transition is planned to occur in March 2022 and at that point, the majority of PSERN radio sites will be operational. The current schedule shows the last transition occurring in December 2022, approximately three months prior to FSA. However, there is some uncertainty associated

[1] The ILA specifies up to 11 positions meeting this criteria – 8 at the King County RCS and 3 at the City of Seattle. Based on input from management at those organizations, it is currently understood there are now 5 staff at King County RCS and none at the City of Seattle meeting this criteria.

with this schedule and a possibility that transitions will delay into 2023.

ISSUES:

To endorse a proposed technical/operational staffing plan, which will define the positions required and start dates, the Board should consider and address the following issues:

Issue #1: How will the current operational support model pre-FSA (involving the PSERN Project, Seattle, KC RCS) transition to the PSERN Operator?

Issue #2: What will the PSERN Operator need to do to support, operate and maintain the network before and after FSA?

Issue #3: What is the recommended staffing model/plan and organizational structure?

Issue #4: What uncertainties exist with our understanding of the required staffing plan?

ANALYSIS:

The following analysis and discussion addresses the issues identified in the previous section.

Issue #1: How will the current operational support model pre-FSA (involving the Project, Seattle, KC RCS) transition to the PSERN Operator?

An interim or "Hybrid" support/operating model, involving KC RCS, Seattle Radio Shop, PSERN Project staff, contracted service providers (e.g. Motorola) and eventually, PSERN Operator staff, is required until the point that the PSERN Operator is fully responsible for the PSERN network and KCERCS is fully decommissioned. During this period, responsibilities will be assigned as follows:

- PSERN Project technical staff will provide first level operational support for PSERN site infrastructure and overall maintenance/operational oversight and coordination.
- KC RCS staff will support the user/dispatch agencies they currently support on KCERCS and will continue to support, operate and maintain KCERCS-specific infrastructure.
- Seattle Radio Shop staff will support the user/dispatch agencies they currently support on KCERCS and will continue to support, operate and maintain KCERCS-specific infrastructure.
- All three groups will invoke technical support services provided by Motorola Solutions for the radio network equipment.

PSERN Operator staff, as they are hired and transition, will take over operational responsibility on a gradual and phased basis prior to FSA. A list of the functions and activities that should be undertaken by the PSERN Operator prior to FSA is described later in this report. The goal is to have the PSERN Operator be resourced to assume full operational responsibility, consistent with end user SLAs, at the point that the network is transferred to the Operator.

There should be no discontinuity at FSA, which means the operation and support of the network should seamlessly transition to the PSERN Operator. As the Operator acquires permanent technical and operational staff, efforts will be made to continually improve, enhance and evolve service support processes.

The final stage of the transition to PSERN will involve decommissioning of KCERCS-specific infrastructure. As this will occur after FSA, PSERN Operator staff will support and participate in this work.

Issue #2: What will the PSERN Operator need to do to support, operate and maintain the network before and after FSA?

As defined in the PSERN Operator ILA, the fundamental responsibility of the PSERN Operator is "to undertake the ownership, operations, maintenance, management and on-going upgrading/replacing of the PSERN System".

Appendix A provides additional detail regarding one-time (start-up) and ongoing operational and technical activities the PSERN must undertake to fulfill its mandate. The appendix provides extracts from two agreements and/or documents that describe or reference these activities and responsibilities:

1. The Radio and Dispatch End User Service Level Agreements, which have been executed by PSERN and all agencies that will be using the PSERN network.
2. The Technical Operations Manager job description, which was presented at the January Board meeting and will be used as the basis for hiring that position.

Hiring the Technical Operations Manager will enable the recruiting and hiring of the Technical Operations team that will perform these activities. This team will establish and/or enhance the operational support policies, practices, processes and tools requried to maintain the PSERN network and support its users.

In many cases, this will be an evolution of capabilities currently in place to support the combined KCERCS/PSERN system, although as described in the SLA documents, a PSERN-specific Maintenance and Operations Plan and associated operational policies need to be developed and approved.

The scope of responsibilities for the Technical Operations team can be summarized into the following major categories – [*] denotes activities that should start prior to FSA:

- Radio and Dispatch end user support, including notifications, scheduling of maintenance activities, etc.
- Incident response and resolution, which will require a 24X7 on-call rotation for technical staff
- Radio network maintenance and repair, which is provided by Motorola
- Management, scheduling and oversight of radio site infrastructure maintenance contractors (non-Motorola)
- Ongoing network and radio equipment administration (i.e. fleetmap/template updating)
- Encryption key management
- Management, coordination and implementation of system changes, upgrades and other operational activities
- Network surveillance and monitoring, including security monitoring
- [*] Service level management and operational reporting, including establishment of an IT Service Management (ticketing) system and related processes
- [*] Security management – technical and facility/physical
- [*] Business continuity planning
- [*] Asset management, including spares and repair management/tracking
- [*] Preparing and maintaining a variety of documentation, including standard operating procedures, technical guidelines, network design and maintenance standards
- [*] Ongoing management of spectrum licensing and agreements related to shared channels and

talkgroups

- [*] DAS agreement administration, design reviews, approvals and validation testing

The team will also be required to provide general IT support for all PSERN Operator staff.

It is important to note that some of these responsibilities will not be performed by the predecessor organizations prior to FSA. The PSERN Operator will need to acquire the necessary resources prior to FSA in order to assume these responsibilities at FSA.

Issue #3: What is the recommended staffing model/plan and organizational structure?

There are three primary issues to be considered and determined:

- What positions are required and what are the associated skillsets?
- What is the reporting structure?
- When are they required?

Positions Required and Skillsets

Appendix B provides a description of the roles and position types that will be required by the PSERN Operator on an ongoing basis to perform its operational and technical responsibilities. This is based on earlier work done by Project staff, supported by benchmark comparisons to other organizations operating similar radio networks.

Complete job descriptions for these roles have not been developed yet, although similar roles exist in KCIT and can provide a starting point for these job descriptions and classifications, with updates to job duties, qualifications and skills to be added to better reflect PSERN's needs.

An initial determination of the quantity required of each position and has been made, along with start dates (see Table 1 below – 19 total). These quantities are based on the following assumptions:

- A minimum of two positions are required for technically-specialized disciplines (e.g RF Systems Engineer, Network Engineer) is required to ensure continuity and backup.
- The number of Radio and Facility technicians required has been determined by assessing the volume of maintenance and 24X7 operational support work to be done, including on-call rotation requirements and SLA objectives related to service support; an initial estimate of 11 has been developed.
- The work of Radio and Facility technicians will be supported by in-house engineering resources and outourced maintenance contractors, including Motorola Solutions and others.
- Backup to the Systems Administrator role will have to be provided by one of the other staff (either Radio Technician or Network Engineer).

Some of these positions will be filled by staff transitioning from the King County RCS. The remainder will be recruited/posted and will be available to Project staff and any external applicants. It is expected that a significant number of PSERN Project technical staff will be qualified for these roles and will seek employment with the PSERN Operator.

Table 1 – Steady State Staffing Requirements (Post-FSA Technical/Operational Roles)

Position/Role	Quantity	Start Date of First Hire[2] (assumes FSA at end March 2023)
Engineering Supervisor	1	January 2023
RF Systems Engineer	2	October 2022
Network Engineer	2	December 2022
Radio Operations Supervisor	1	December 2022
Radio Technician	9	October 2022
Facilities Technician	2	December 2022
System Administrator	1	October 2022
Security Analyst	1	October 2022
Total	19	

Reporting Relationships

Based on a review of the functions discussed in Issue #2 above, the Technical Operations team should be organized into two main groups – Operations and Engineering – with an explicit distinction between two categories of functions and activities:

- Operations – maintain and operate the network, deliver service to users, track and report on service metrics, respond to incidents via a 24X7 on-call rotation, etc.
- Engineering – establish and maintain technical standards and documentation, provide a second/higher level of technical and design support, oversee network design and any future project and implementation activities.

Each of these groups should be led by a supervisor who would report to the Technical Operations Manager:

- Radio and Facility Technicians will report to Radio Operations Supervisor.
- RF System Engineers and Network Engineers will report to Engineering Supervisor.

The System Admininistrator should report directly to the Technical Operations Manager as this role will support the overall PSERN organization, as well as the Tech Ops team.

The reporting of the Security Analyst needs to be further assessed as part of determining how to provide security management functions for the PSERN Operator[3]. For now, it is assumed that this position should not report to the Tech Ops Manager because it will have organization-wide responsibilities and an appropriate separation of duties with respect to securing the radio network and other IT systems is required.

[2] Recruiting and hiring activities, including drafting of job descriptions, need to begin several months before this date.

[3] The PSERN Operator will need a "Security Officer" or equivalent role that is responsible for all matters relating to Physical, Technical and Personnel Security. The most effective approach to fulfilling this role has not been determined and could include outsourcing specific security functions, in which case the Executive Director would maintain direct oversight of outsourced functions. A consulting activity to develop requirements for the security functions for the PSERN Operator is planned for later in 2022.

Refer to Appendix C for an organizational chart that shows the proposed structure.

When Required

The labor market for specialized technical resources in King County is very challenging. To maximize the probability of having sufficient resources and skillsets in place when it assumes operational responsibility, the PSERN Operator should:

- Commence recruiting for critical roles once the Technical Operations Manager is in place, and be ready to hire and on-board staff as soon as suitable candidates are identified.
- Confirm job offers for transitioning staff as soon as possible and in a timeline that enables, supports and benefits the pre-FSA operational support model discussed above.

PSERN's operational risk pre-FSA can be significantly reduced if the PSERN Operator can ramp up its resourcing and begin to assume certain operational responsibilities in advance of FSA as discussed above. New and transitioning staff will need time to adjust, become familiar with new responsibilities, tools and support processes, in addition to acquiring additional training and familiarization with the new radio system and associated infrastructure.

Certain resources will be required prior to FSA, both to support the operational transition of the network and more general ramp-up of the PSERN Operational organization. Specific activities that will drive needs for early resource availability are:

- Operational planning, including development of the policies, procedures and processes described in the end user SLA documents, along with the tools and systems required to support their execution (asset management, service management systems).
- Tracking of network and service performance, including reporting to users and other stakeholders.
- The set-up and outfitting of a facility/workspace and supporting IT systems for the PSERN Operator should be complete by the end of 2022:
    - A System Administrator should start no later than October 2022.
- The PSERN Operator needs to establish a Cybersecurity program and baseline security controls and management processes for technical systems in time to implement them at or before FSA:
    - A Security Analyst should start no later than October 2022 to coordinate security-related activities identified during the security consulting project.
- Approval of new PSERN DAS installations approvals is needed on an ongoing basis after Wave 2 transition:
    - The first of two RF Systems Engineers should start no later than October 2022.
- The PSERN Operator should be in a position to transition PSERN Project technical staff at the point that funding for key positions ends in order to ensure those resources do not go elsewhere:
    - On-boarding of Radio and Facilities Technicians should commence in December 2022.
- Supervisory positions should be in-place at or prior to the point the respective groups ramp-up
    - Supervisors should be on-boarded no later than December 2022.

A summary of a staffing ramp-up plan that meets these requirements is provided in Appendix C.

Issue #4: What uncertainties exist with our understanding of the required staffing plan and our ability to

implement it?

The following uncertainties, affecting this staffing plan, have been identified:

1. Ability to recruit and hire qualified staff and timeliness of on-boarding:
    - It is assumed that KCIT HR will support PSERN's recruiting and on-boarding efforts.
    - King County Council will have to approve additional FTE positions as shown in Appendix C[4].
    - For resources that are not transitioning from predecessor roles, the time to recruit and the level of experience, skillset and capability that can be recruited, is unclear.
2. Who will transition pursuant to the Operator ILA?:
    - Currently it is assumed that five (5) existing staff from King County RCS will transition, and none from Seattle. This needs to be confirmed.
    - A significant number of PSERN Project technical staff are expected to seek employment with PSERN Operator but these staff will not transition pursuant to the ILA.
3. A detailed understanding of the ongoing operational and engineering workload and method of resource deployment and utilization:
    - This will affect the number of Radio and Facility Technicians required and the mix of classifications.
    - Among other issues, the amount of DAS design approval and testing effort will impact the number of RF System Engineers required.
4. Wave transition schedule and FSA timing:
    - Wave transition dates and FSA may delay from their current targets, which could have the effect of extending the period of time in which the "Hybrid" operational support model is required.
    - Wave transition delays should not delay staffing and ramp-up of the PSERN Operator due to uncertainty with hiring timelines and the risk of not having sufficient staff in place.
5. Will additional administrative, stakeholder engagement or business analysis support will be needed for the Technical Operations group?
    - This would support service management, operational reporting and process development.
    - No resource of this type is currently included in the staffing plan as it is assumed technical staff will perform these functions.
6. Effort and timing involved in decommissioning KCERCS:
    - Some existing KCERCS technical resources will be needed to decommission KCERCS infrastructure after FSA, which could delay transition of those staff or require the PSERN Operator to make provision for those activities to be performed by its staff.
7. Need for Project Management and other project-driven resource(s):
    - The amount and timing of new/future projects and initiatives to be undertaken by the PSERN

[4] Currently only 6 PSERN Operator positions are authorized. An additional 20 must be authorized prior to October 2022 to support this staffing plan.

Operator is not known.

- Additional tower collocation/sublease arrangements are one specific initiative that will likely drive resource needs.
- In general, new projects or initiatives should bring new funding and resourcing.

As a significant number of uncertainties currently exist, the staffing plan presented in this report should be viewed as preliminary, subject to revision as assumptions change and our understanding of what it will take to operate PSERN as it develops and evolves.

RECOMMENDATIONS:

As a result of the analysis presented, it is recommended that the Board:

1. Endorse the preliminary staffing plan in this report and its appendices, including positions, timelines and reporting structure. This will establish a baseline plan that can be used for:
    - Planning operational transition activities, including arrangements for the interim (pre-FSA) operational support model for the combined PSERN/KCERCS infrastructure.
    - Determine the additional funding requirements for PSERN Operator start-up that will be presented at the April meeting.
    - Planning recruiting, hiring and on-boarding activities jointly with KCIT HR.
2. Consider fixing the date at which the PSERN Operator assumes operational responsibility for the network. This will ensure that the staffing/hiring plan does not becoming a moving target if Wave transition dates slip. This may require detaching the "Operator Go-Live" date from the FSA milestone in the Motorola contract. The legal and financial implications of doing this will be discussed in the funding report to be presented in April.

Both of these recommendations are based on the belief that to enable an efficient operational transition and avoid risk, the PSERN Operator should be hiring certain operational and technical positions several months in advance of the point at which it becomes operationally responsible for the network.

CONCLUSION:

This report has provided a plan for hiring and staffing technical and operational positions with the PSERN Operator organization. It has made two recommendations with respect to staffing of the Technical Operations team within the PSERN Operator organization.

A Technical Operations team of approximately 19 staff will be required at the point the PSERN Operater assumes responsibility for operating the network, currently assumed to be at Full System Acceptance (FSA). However, a subset of those positions should be funded and hired in advance of FSA to address PSERN operational risk, support PSERN Operator start-up activities and enable newly-hired staff to become familiarized with the PSERN network prior to assuming full operational responsibility.

The Board has been requested to endorse the staffing plan in this report to establish a basis for operational transition planning activities that will be undertaken in the months leading up to FSA, including recruiting and hiring. The required funding and potential sources of funding to enable technical/operational staff to start work prior to FSA will be presented and discussed at the April meeting.

The Board is also being asked to consider fixing the date at which the PSERN Operator assumes operational responsibility for the network to ensure that the staffing plan does not becoming a "moving target" if Wave

transition dates slip further.

SUPPORTING DOCUMENTATION:

Appendix A: PSERN Operator Technical and Operational Activities and Processes

The technical and operational processes, functions, activities and responsibilities of the PSERN Operator are described at a high level in two existing agreements/documents:

1. The Radio and Dispatch End User Service Level Agreements
2. The Technical Operations Manager job description

Extracts from these documents, along with the mapping of each item to technical or operational processes or categories are provided in the tables below. This shows which group or position within the Technical Operations group will be primarily responsible for each process or category of activity.

If the responsibility is indicated as "Tech Ops Manager", then the responsibility will either be shared across multiple groups/positions or will be primarily the responsibility of the Technical Operations Manager (e.g. management of vendor contractual relationships).

Table 2. Extract from Radio and Dispatch End User SLA

Item	Process/Category	Responsibility
Upon execution of the Operations Period ILA and formation of the PSERN Operator, whichever is later, the PSERN Operator shall:		
1. Develop and adopt a maintenance & operations plan that includes:		
• Talkgroup prioritization levels and site authorizations	System Standards	Engineering
• Authorized template configuration changes by Radio Shops	Radio Config/Admin	Operations
• System maintenance standards	System Standards	Engineering
• Technician/System manager administrative rights	Security Management	System Administrator
• Training requirements for technical staff	Resource Management	Tech Ops Manager
• Distribution, management, and archiving of regional and End User Agency encryption keys	Key Management	Operations
• System key management and distribution	System Standards	Engineering
• OTAP/OTAR roles and responsibilities	System Standards	Engineering
• Issue resolution reporting procedures including system status, repairs made, impacted area, etc.	Incident Management	Operations
• Continuity of operations procedures	Business Continuity	Operations
• Procedures for End User agencies to add radios to their inventory at their own cost	Service Catalog	Tech Ops Mgr
• Talkgroup sharing agreement requirements	System Standards	Engineering
• Conventional channel sharing agreements	License Authorization	Engineering

Item	Process/Category	Responsibility
2. Adopt policies governing the replacement, removal, and addition of Equipment under its control	Asset Management	Tech Ops Mgr
3. Adopt policies related to the access of PSERN for mutual aid and/or interoperability purposes	System Standards	Tech Ops Mgr
4. Adopt policies defining the approved Equipment and Subscriber Radios authorized for use in PSERN	System Standards	Engineering
5. Adopt and implement information assurance controls, policies, procedures and processes	Security Management	Security Officer
6. Adopt policies governing the change management program	Change Control	Tech Ops Manager
7. Work in partnership with the End User Agencies to develop and regularly report on performance and operating metrics indicating system performance as well as the PSERN Operator's ability to meet the End User Agencies service requirements	Operational Reporting	Operations
8. Upon request by End User Agencies, provide reports of system usage and equipment inventories.	Operational Reporting	Operations
9. Upon request of the Dispatch Center, provide monthly reports in a mutually agreeable format on system usage statistics including: • Push to talk statistics • Talk time statistics • Radio emergency button activations • Active radio reports	Operational Reporting	Operations

Table 3. Extract from Technical Operations Manager Job Description

Item	Process/Category	Responsibility
<u>Operational Management</u>		
1. Oversee and direct the delivery of the PSERN radio network services, including the design, development, implementation, operation and maintenance of the radio network and infrastructure in support of public safety and public service users.	Service Delivery	Tech Ops Mgr
2. Oversee the development and implementation of operational policies, procedures and processes to maintain and support the PSERN radio system, including documentation, service management systems and training materials.	Service Delivery	Operations
3. Ensure the radio network is operated and maintained in compliance with PSERN performance standards and operational policies, procedures and processes.	System Maintenance	Operations

Item	Process/Category	Responsibility
4. Oversee the development of plan(s) to mobilize resources to respond to system failures or threats caused by external sources, including natural and man-made hazards.	Incident Management	Operations
5. Oversee the development, planning and implementation of disaster recovery, business continuity and cyber incident response plans for the PSERN radio network and infrastructure.	Business Continuity	Tech Ops Mgr
6. Oversee and direct the resolution of complex technical and/or operational issues and incidents related to the radio network and infrastructure.	Incident Management	Operations
7. Ensure action and escalation plans are developed and implemented on a proactive basis in support of incident resolution and remediation.	Incident Management	Operations
8. Develop and maintain agreements, service/support plans and effective working relationships with PSERN technical and support vendors at all organizational levels.	Service Delivery	Tech Ops Mgr
9. Ensure all routine and ongoing maintenance on systems and infrastructure is completed in accordance with schedules recommended by equipment vendors or PSERN operational policy/practice.	System Maintenance	Operations
10. Direct and monitor service and support activities to ensure that customer service standards are met and customer service, agency transition and operational support issues are appropriately resolved.	Service Delivery	Operations
11. Be available on-call and reachable via work cell phone 24/7 in the event of an emergency affecting the radio network.	Incident Management	Tech Ops Mgr
<u>Service Standards and Performance</u>		
12. Oversee the development and implementation of technical standards for the PSERN radio system.	System Standards	Engineering
13. Ensure performance standards for the radio network, infrastructure, systems and services are established and regularly reviewed.	System Standards	Engineering
14. Ensure service management processes are developed and implemented in compliance with industry best practices such as ITIL.	Service Delivery	Tech Ops Mgr
<u>Customer Service Delivery & Relationship Management</u>		
15. Plan, organize, direct and manage service delivery and support of the PSERN radio network and related technical services for the benefit of PSERN customers in accordance with applicable Service Level Agreements.	Service Delivery	Tech Ops Mgr
16. Develop and maintain effective working relationships with PSERN customer and user agency personnel and other PSERN stakeholders at all organizational levels.	Service Delivery	Tech Ops Mgr

Item	Process/Category	Responsibility
17. Support the development of service agreements with customers and coordinate implementation of such agreements with other PSERN departments, vendors and suppliers.	Service Delivery	Tech Ops Mgr
18. Support the development of service proposals for existing and new or prospective customers.	Service Delivery	Tech Ops Mgr
19. Liaise, consult, and negotiate with customers on ongoing service delivery management matters, including service levels, service requirements, support processes, scheduling, incident management, operational risks and financial implications.	Service Delivery	Tech Ops Mgr
20. Liaise with current and potential customers to define financial, technical, functional, performance and operational requirements related to service improvement, enhancement, and expansion initiatives.	Service Delivery	Tech Ops Mgr
<u>System and Service Development</u>		
21. Oversee and direct the development, implementation and integration of new or modified equipment, systems and services within the PSERN radio network and infrastructure as part of PSERN capital improvement, construction or service enhancement projects.	Implementation/PM	Tech Ops Mgr
22. Oversee and direct the development of preferred technical solutions and associated implementation and transition strategies.	System Standards	Engineering
23. Oversee and direct the specification and acquisition of infrastructure, equipment, software, services, and vendor, contractor and staff resources.	System Standards	Engineering
24. Plan, develop, negotiate and implement agreements with vendors, service providers, suppliers and consultants in collaboration with other PSERN departments and stakeholders.	System Standards	Engineering
25. Oversee and direct the development and implementation of network and service management systems and applications within the PSERN technical operations area.	System Standards	Tech Ops Mgr
26. Provide technical advice as part of the development and approval of business cases and business plans for new or enhanced services, equipment or infrastructure.	Service Delivery	Tech Ops Mgr
27. Assess service enhancement requirements and opportunities; evaluate risk, projected costs and benefits and prepare recommendations.	Service Delivery	Tech Ops Mgr
28. Analyze and assess future technology and service requirements driven by evolving customer and stakeholder needs, including those associated with evolving legislation, regulation and governmental policy.	System Standards	Engineering

Item	Process/Category	Responsibility
Project Management		
29. Oversee network, infrastructure and service development projects of varying levels of complexity; define and recommend project milestones and budgets.	Implementation/PM	Engineering
30. Apply appropriate project management policies, processes and procedures for the initiation, approval and prioritization and projects.	Implementation/PM	Tech Ops Mgr
31. Provide guidance and direction to staff in applying project management processes and procedures.	Implementation/PM	Tech Ops Mgr
32. Address and/or escalate significant project issues as necessary to ensure successful project execution.	Implementation/PM	Tech Ops Mgr

Appendix B: Summary of PSERN Operator Technical & Operational Roles

Engineering Supervisor

- Lead engineering and technical resource and system/network design authority
- Mentor and supervise RF Systems and Network Engineers
- Coordinate and oversee engineering functions, including:
    - System coverage design and validation
    - System configuration standards (e.g. roaming parameters)
    - Technical design and development of new services
    - Spectrum licensing, compliance and administration
    - DAS/BDA design review and authorization process
    - User equipment standards
    - Radio configuration (template) standards
    - System maintenance standards
    - Network design standards
    - Technical documentation standards
    - System upgrade planning
    - Technical support for radio site collocation agreements and activities
- Oversee contracted design and engineering resources
    - RF coverage and capacity design
    - Infrastructure design
    - Electrical & HVAC design
    - Structural design

RF Systems Engineer

- RF coverage design, validation and testing
- System configuration design, validation and testing
- Develop and support system validation and testing processes/methodologies
- System security design, including encryption and key management planning
- DAS UL validation and testing methodology development support
- New service design and implementation
- Technical/design support (RF/system – 2nd level) resource for Operations
- Project management, design and risk assessment for significant system upgrade activities
- Spectrum license application and administration

Network Engineer

- MPLS and IP network design, implementation and maintenance support
- Develop and implement security controls, firewall and network configurations
- Risk assessment for significant network changes
- Develop, implement and update network routing rules and protocol configurations
- Technical/design support (network – 2nd level) resource for Operations
- Oversee significant network implementation and upgrade activities
- Administrative network (LAN/WAN) design and implementation

Operations Supervisor

- Senior operational resource
- Liaise with PSERN radio users and clients regarding operational planning, incident response/resolution
- Prepare and distribute operational notifications for planned maintenance activities
- Mentor and supervise Radio and Facilities Technicians
- Schedule and coordinate operations and maintenance activities and maintain staff deployment plan
- Manage achievement of operational service levels, including tracking of service requests, incidents and problems
- Prepare and disseminate operational reports
- Support incident response escalation
- Manage vendor performance

Radio Technician

- Radio network and site infrastructure monitoring and surveillance
- On-call for incident response
- Network and radio equipment installation, maintenance, testing, troubleshooting and repair, including vendor supervision
- Radio site infrastructure maintenance, testing, troubleshooting and repair, including vendor supervision
- Radio system configuration and administration
- DAS UL validation and testing
- Interference identification and tracking
- Contribute to and participate in network Change Approval processes

Facilities Technician

- Support field activities of other Technical Operations staff
- Supervise contractors performing radio site maintenance/repair work
- Radio site infrastructure maintenance, testing, troubleshooting and repair, including vendor supervision
- Maintain PSERN facilities, including radio sites, data centres, warehouse and storage facilities
- Coordinate usage, storage, maintenance and repair of vehicles and other mobile/deployable equipment

System Administrator (IT)

- Radio system workstation and server administration
- Server backups, maintenance and upgrades
- Administration of all radio system and administrative access rights
- Cloud (SaaS) applications administration
- Technical and administrative network and workstation acquisition, implementation and support
- Administration of cell phones

Security Analyst

- Establish technical and Cyber security program according to industry best practices
- Implement and operate security monitoring tools/systems
- Support security incident response and investigate impact and root cause

- Coordinate Cyber security training programs for all staff
- Develop technical security policies, guidelines and control profiles for all PSERN systems and applications

Appendix C: Summary Staffing Plan and Timeline (Technical/Operational)

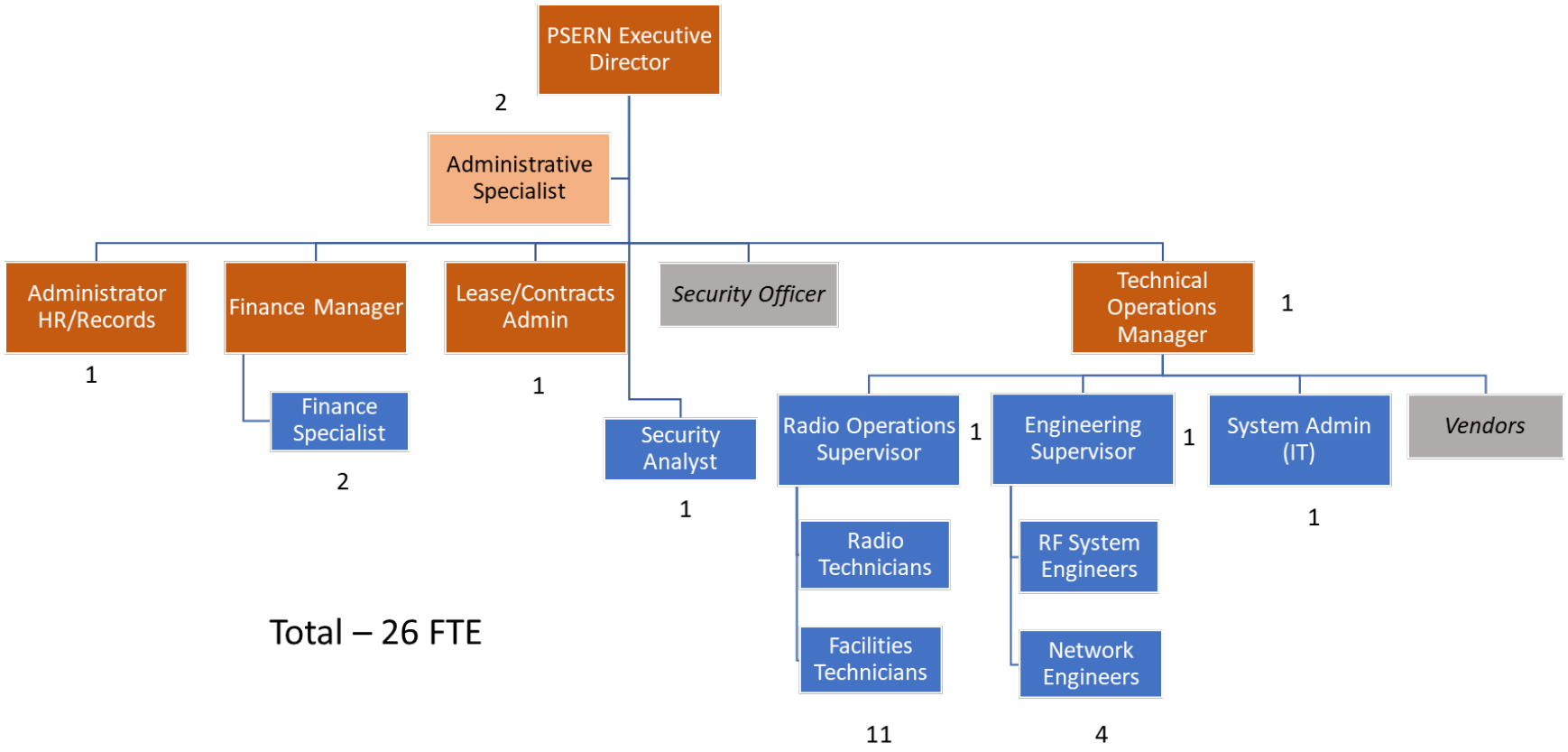
Table 4 – Summary Staffing Plan and Timeline (Technical/Operational)

PSERN Operator - DRAFT Staffing Plan	28-Feb-22														FSA			
PSERN Position	**Jan-22**	**Feb-22**	**Mar-22**	**Apr-22**	**May-22**	**Jun-22**	**Jul-22**	**Aug-22**	**Sep-22**	**Oct-22**	**Nov-22**	**Dec-22**	**Jan-23**	**Feb-23**	**Mar-23**	**Apr-23**	**May-23**	**Jun-23**
								Green: Funded (prior to FSA)			Yellow: Funding Gap (prior to FSA) - $700K (est.)						
Management/Administration																		
Executive Director (TLT)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Administrative Staff (FTE)	1	1	1	2	2	2	3	3	3	3	3	3	6	6	6	6	6	6
Total Administrative Staff (incl. ED)	2	2	2	3	3	3	4	4	4	4	4	4	7	7	7	7	7	7
PSERN "Authorized" (1 TLT, 5 FTE)	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Technical/Operational																		
Security Analyst										1	1	1	1	1	1	1	1	1
System Administrator										1	1	1	1	1	1	1	1	1
Engineering Supervisor													1	1	1	1	1	1
RF Systems Engineer										1	1	1	1	1	1	2	2	2
Network Engineer												1	1	1	1	2	2	2
Radio Operations Supervisor												1	1	1	1	1	1	1
Radio Technician (from KC RCS)									2	2	2	3	3	3	3	5	5	5
Radio Technician (Additional)												4	4	4	4	4	4	4
Facilities Technician												1	1	1	1	2	2	2
Total Technical Staff									2	5	5	13	14	14	14	19	19	19
PSERN "Authorized"	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL PSERN FTE	**2**	**2**	**2**	**3**	**3**	**3**	**4**	**4**	**6**	**9**	**9**	**17**	**21**	**21**	**21**	**26**	**26**	**26**
PSERN "Authorization" Gap									0	3	3	11	15	15	15	20	20	20
Existing/Transferring Staff																		
King County RCS Transition (ECS)	These positions are transferred to PSERN (shown above)								2	2	2	3	3	3	3	5	5	5
PSERN Project Transition (ECS)	These positions may be transferred to PSERN (although not required by ILA)											4	4	4	4	4	4	4
King County RCS Funded (ECS)	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0	0	0
PSERN Project Funded (ECS/ECT)	10	10	10	10	10	10	10	10	10	10	10	4	4	4	4	0	0	0

Notes:

1. Management/Administration roles are those that are included in the Administrative Startup Staffing/Spending Plan approved by the PSERN Operator Board in January 2022.
2. Timing of RCS staff transition prior to FSA needs to be further assessed. RCS staff will be needed after FSA to support KCERCS decommissioning.
3. Transition of PSERN Project staff is dependent on Project timelines and budget.
4. PSERN "Authorization" Gap refers to the additional positions (FTEs) that will need to be authorized by King County Council.

Appendix D: Draft PSERN Operator Organization Chart at FSA



Notes:

1. *Positions/functions shown in grey are assumed to be outsourced or provided by contractors.*
2. *Administrative roles are subject to further assessment, including completion of the Phase 1 Financial Startup Advisory project.*

PSERN Operator Board of Directors
Staff Report - Agenda Item #8

Title:	Subleases at PSERN Radio Sites
Meeting Date:	March 24, 2022
Staff Contact:	Michael Webb, Executive Director
Action:	Discussion

SUMMARY:

This report discusses the opportunity for the PSERN Operator to enter into sublease agreements with wireless network operators to provide access to its towers and other facilities at its radio sites. A recent request has been made by T-Mobile for subleasing at PSERN sites in the near-term and PSERN needs to determine how to respond to this and future requests.

The PSERN Project has already established over 30 subleases at PSERN radio sites that will be assigned to the PSERN Operator at Full System Acceptance (FSA). Establishing new or additional sublease arrangements is outside of the PSERN Project scope, so the PSERN Operator needs to determine if, when and how it wishes to address any new opportunities. Resources and funding will be required to support the development of new agreements, although these costs have not been estimated yet.

The Board is requested to consider this opportunity and provide feedback and guidance regarding whether and when the PSERN Operator should pursue it.

BACKGROUND:

PSERN's rights to its emergency radio communication sites are through leasehold rights it has with the site owners, i.e. the PSERN Operator will not own the land it occupies at these sites. Also, both the leasehold rights and the PSERN infrastructure at these sites varies from site to site, which impacts the sublease opportunities available.

It is common practice in the wireless industry for a wireless network operator[1] to lease access to a portion of another network operator's physical radio site infrastructure. In the context of PSERN, this can mean any combination of the following:

- PSERN enters into sublease to allow a wireless network provider to attach its antennas and related equipment to PSERN towers.
- PSERN subleases ground space at its radio sites for the installation of wireless network provider equipment.
- PSERN provides other services (e.g. electrical power, generator access, connectivity) to a wireless network provider

King County, as the builder and current owner of the PSERN infrastructure, already has over 30 sublease arrangements in place with wireless network operators, both public[2] and private/commercial[3] organizations. Many of these subleases are associated with existing KCERCS sites that will be assigned to the PSERN

[1] The term "wireless network operator" is being used broadly to describe any organization that owns and operates wireless communications equipment that is subject to FCC spectrum licensing and related regulations.
[2] For example, WS DOT, Valleycom, NORCOM, SNO911, other Fire/Rescue services, WA State Patrol, City of Seattle, etc.
[3] For example, Verizon, T-Mobile, AT&T, Sprint, etc.

Operator. Subleases were also executed at some of the new PSERN sites, primarily with partner and other public service organizations or where 3rd party rights were needed as part of enabling the PSERN project to complete the site. The PSERN Operator will have to commit resources to the management of this sublease portfolio[4] on an ongoing basis after it assumes ownership of the network at FSA.

The new PSERN sites provide additional opportunities for the PSERN Operator to generate revenue to offset its ongoing operating expenses, which will result in reduced service fees. Potential organizations that would sublease from the PSERN Operator include those that are currently leasing space from King County at KCERCS sites, such as Verizon, T-Mobile and AT&T, along with smaller, regional wireless and/or broadband service providers and other public safety/public service organizations.

Recently, PSERN received an inquiry from T-Mobile regarding subleasing at two of the new PSERN sites as soon as possible. Entering into such an arrangement prior to FSA, while King County is still the owner of the PSERN network, has been investigated and determined to not be feasible or recommended for the following reasons:

- This would be an increase in project scope that may conflict with other project activities/priorities.
- The time required to obtain approval of the resulting agreements by King County Council will likely not result in implementation in 2022.

As a result, the preferred approach is to have the PSERN Operator take the lead with the objective of executing subleases that would become effective upon the transfer of network assets, which would lead to implementation in the spring of 2023. T-Mobile have been advised of these challenges and have indicated they wish to pursue agreements with the Operator according to that timeline.

Beyond the specific request from T-Mobile, establishment of a broader policy or set of policies related to subleasing at PSERN radio sites is an existing item on the Board's workplan, with a target completion of Q2/2022.

ISSUES:

To decide how to proceed in address radio site sub-leasing opportunities and associated policy development, the Board needs to consider and address the following issues:

Issue #1: Why would we want to do this and when? How big is the opportunity?

Issue #2: What policy matters for the PSERN Operator need to be considered?

Issue #3: What will the impact be on the PSERN Project and PSERN Operator?

Issue #4: What should be done to move this forward?

ANALYSIS:

The following analysis and discussion addresses the issues identified in the previous section.

Issue #1: Why would we want to do this and when? How big is the opportunity?

[4] The existing sublease portfolio is in excess of $500K annual revenue that will be assigned to the PSERN Operator.

The magnitude of the opportunity overall (how many sites, net revenue per site, etc.) is difficult to predict. Sublease revenue per site will vary, depending on the number and size of antennas and what else is included in the agreement (ground space, etc.).

Most national wireless companies are well down the path of designing and implementing their national 5G networks, particularly in urban areas. Moreover, PSERN's towers are mainly suitable as "macro" sites, which means they are high (150' and higher) and support large coverage areas, whereas 5G networks will generally be designed for small (micro) cells with relatively low antenna heights.

However, PSERN's towers can be attractive to commercial wireless network operators in specific situations, such as:

- When a network operator wishes to expand its coverage (4G and 5G) in previously unserved areas and PSERN's tower is the only structure in a specific area (e.g. PSERN's highway sites).
- When a network operator requires a macro (high) site for use as a microwave "hub".
- When a network operator is in the business of providing fixed (line-of-sight) broadband services, particularly if the site also has fiber connections.

There will also be additional demand from other public safety/public service agencies that are not part of PSERN. This will include some of the agencies that are currently collocated on the existing KCERCS sites and additional agencies due to the expanded footprint.

Sublease revenue from new commercial tenants in the range of $50,000 per year per site would not be unusual. A conservative estimate is that the PSERN Operator could generate an additional $500,000 per year within a 2-3 year period after assuming ownership of the network. The upside could be considerable because a site that is attractive to one network operator may also be attractive to its competitors, resulting in multiple sublease agreements at the same site.

There are several reasons why developing overarching policy and pursuing new sublease agreements should commence now (or sooner rather than later):

- It can take many months or even years to negotiate a new sublease and obtain the necessary permits for construction.
- National wireless network operators are already well into their planning and construction activities for construction of 5G networks, so that window of opportunity will start to close in the coming years.
- More generally, the rate of technological change in the wireless industry is high and so the longer PSERN holds off participation in this marketplace, the more PSERN will miss emerging opportunities.
- As the existing (KCERCS) sublease agreements get assigned to the Operator and their terms expire, PSERN will have to negotiate extensions and/or replacement agreements, which should be based on a consistent and up-to-date template.

As discussed above, the PSERN Operator will need to start work in 2022 on negotiating new agreements in order for those agreements to come into effect in early 2023, when the assets are transferred.

Issue #2: What policy matters for the PSERN Operator need to be considered?

There are several matters of policy that need to be considered and addressed.

1. *Are there any legal or regulatory impediments to pursuing new sublease agreements?*

There are no general legal or regulatory impediments. The Federal Communications Commission (FCC), which licenses radio spectrum and radio towers above a certain size, encourages collocation of antennas where technically and economically feasible[5].

However, because PSERN is a lessee at most of its radio sites (ground lease), PSERN must ensure that any sublease agreement it executes considers the terms of the agreement with its landlord. In some cases, explicit landlord consent may be required or there are provisions related to sublease that involve additional lease cost. For example, at publicly owned sites such as US Forest Service sites, subleasing to commercial service providers may trigger ineligibility for rental fee waivers.

2. How does PSERN determine who to enter into sublease agreements with?

The PSERN Operator is not currently subject to specific rules regarding how it establishes sublease agreements or with whom. For example, it is not required to publicly announce availability of radio site facilities or conduct any kind of open/public competition to award access.

However, certain constraints should be placed on who it considers as radio site tenants. Some or all of the following requirements should be established:

- Tenants must have a bona fide reason for wanting to sublease that is consistent with PSERN's operations.
- Tenants must be able to meet PSERN's technical and operational requirements.
- Tenants must not pose an operational or financial risk to PSERN.
- Tenants must be qualified and authorized to locate antennas on PSERN towers – typically this will mean they are a licensee of spectrum and regulated by the FCC.

It is not likely that contention between prospective tenants would require PSERN to have to decide between multiple tenants at a given site. If this does occur, for example, because of capacity or space limitations, common practice in the wireless industry involves a "first-come first-served" approach. In these situations, priority should be given to tenants that provide services in support of public safety or public service.

3. How will sublease fees/rates be determined?

Sublease fees/rates are typically based on market conditions and are negotiated between lessor and lessee for the initial term of an agreement. For antenna attachment, fees will be a function of the number, type, size, weight and location of antennas and related equipment. Fees for sublease of ground space will depend on the amount of space required.

PSERN should establish standard per-antenna attachment rates/fees and update those yearly based on market conditions and PSERN's costs.

4. How much capacity can PSERN commit to subleasing tenants?

[5] *Second Amendment to Nationwide Programmatic Agreement for the Collocation of Wireless Antennas* (Collocation NPA) to facilitate the collocation of wireless facilities on existing towers under Section 106 of the National Historic Preservation Act (NHPA). https://www.federalregister.gov/documents/2020/08/20/2020-16542/second-amendment-to-collocation-agreement

This needs to be assessed on a site-by-site basis. Most PSERN towers have a significant amount of excess structural capacity[6] but this can vary by site. PSERN will need to ensure that its future capacity needs are considered when entering into new subleases, particularly those involving antenna/feedline attachment and ground space.

The assessment of the capacity (tower loading, ground space) impacts from a proposed sublease will require work by technical resources on behalf of PSERN to ensure its interests are protected.

Issue #3: What will the impact be on the PSERN Project and PSERN Operator?

The impact of starting work on developing overarching policy and guidance for subleasing at radio sites and responding to the immediate request from T-Mobile is as follows:

- Work should be undertaken by King County Facilities Management Division (FMD), supported by Busch Law Firm PLLC to support the development of a template agreement for commercial wireless network providers.
- Support will be required from the PSERN Project to consider and assess the technical impact of T-Mobile's proposed installation at the first two sites they have identified.

A template agreement should be used as a starting point for the agreements at each site. It will contain standard (boilerplate) legal, business, technical and operational language that would be modified to suit the specific situation at each site. Because specific requirements can vary significantly between sites, it is not feasible to draft a "master agreement" that would apply to multiple sites.

Normally the owner of radio site assets would pay its share of the legal and technical work required to establish a sublease. With the PSERN Operator not yet operational and generating revenue, an arrangement may have to be agreed with T-Mobile to have them assume some or all of these costs for these initial agreements.

In the longer term, as radio site subleasing becomes an ongoing service offering for PSERN, resources and budgets will have to be allocated to this work and funded out of sublease revenues. This includes the management of the existing sublease portfolio discussed above.

A long-term impact of subleasing at PSERN radio sites will be the utilization of tower (structural) and possibly ground space and electrical capacity. This must be assessed for each site and technical guidance developed regarding the maximum capacity should PSERN allocate to any given tenant.

Issue #4: What should be done to move this forward?

With respect to the T-Mobile opportunity, the next step would be for the PSERN Operator to indicate to T-Mobile it wishes to start the process of negotiating subleases for the two sites they have requested.

This will require resources and support from King County FMD, Busch Law Firm and the PSERN Project as discussed above. Assuming it is to proceed, the costs associated with this work need to be estimated and sources of funding identified. The PSERN Operator would also have to execute an engagement letter agreement with Busch Law Firm.

As part of negotiating these initial agreements, a template sublease for commercial subtenants would be

[6] All new PSERN towers were constructed with 200% excess structural capacity to account for future growth in PSERN's needs and to enable tenants to be accomodated.

developed that can be used with additional sublease tenants. As this work progresses, the policy questions listed above would get addressed in more detail and the Board will be updated on progress as it is made.

CONCLUSION:

This report has discussed the opportunity for the PSERN Operator to enter into new sublease agreements with wireless network operators to provide access to its towers and other radio site facilities. A specific sublease request has been received from T-Mobile that needs to be responded to.

It is important to recognize that the PSERN Operator will have to manage an existing portfolio of 30+ subleases once it assumes ownership of the network in 2023. The questions to be answered at this point are if, when and how the PSERN Operator should address new sublease opportunities.

The Board is requested to consider this opportunity and provide feedback and guidance regarding whether and when the PSERN Operator should pursue it. Resources and possibly funding will be required in the near-term to support the development of new agreements.

SUPPORTING DOCUMENTATION:

N/A