



KING COUNTY

1200 King County Courthouse
516 Third Avenue
Seattle, WA 98104

Signature Report

December 12, 2017

Motion 15016

Proposed No. 2017-0295.1

Sponsors Balducci

1 A MOTION to adopt the executive's plan for addressing
2 major technology emergencies, as requested by Motion
3 14750.

4 WHEREAS, Motion 14750 was passed by council on October 17, 2016, and

5 WHEREAS, the motion states, "The executive is requested to develop and
6 transmit a plan for addressing major technology emergencies that might occur in the
7 office of emergency management, the department of natural resources and parks and the
8 department of elections, and other departments as requested by department directors";

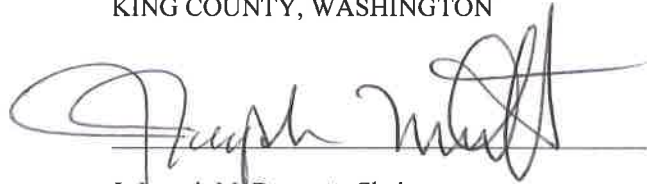
9 NOW, THEREFORE, BE IT MOVED by the Council of King County:

10 The Plan to Address Major Technology Emergencies - Response to Motion
11 14750, Attachment A to this motion, is adopted.
12

Motion 15016 was introduced on 7/17/2017 and passed by the Metropolitan King County Council on 12/11/2017, by the following vote:

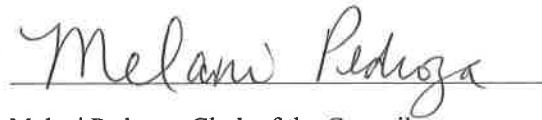
Yes: 7 - Mr. von Reichbauer, Mr. Dunn, Mr. McDermott, Mr.
Dembowski, Mr. Upthegrove, Ms. Kohl-Welles and Ms. Balducci
No: 0
Excused: 2 - Mr. Gossett and Ms. Lambert

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON



J. Joseph McDermott, Chair

ATTEST:



Melani Pedroza, Clerk of the Council



Attachments: A. Plan to Address Major Technology Emergencies

15016

Attachment A



PLAN TO ADDRESS MAJOR TECHNOLOGY EMERGENCIES

RESPONSE TO MOTION 14750

JUNE 2017

1. BACKGROUND

King County Information Technology (KCIT) is responsible for supporting the technology functions in all executive departments. When technology problems occur in a department that exceed the capacities of the IT resources assigned to that department, KCIT can assign additional resources to address the problem and resolve it more quickly. Knowing a department's critical operational times during the year could help KCIT prioritize and be prepared for any issues that emerge.

King County Motion 14750, attached as Appendix A to this report, requests the executive to develop and transmit a plan for addressing major technology emergencies that might occur in the Office of Emergency Management, the Department of Natural Resources and Parks, the Department of Elections and other departments as requested by department directors.

2. METHOD OF ALERTING AND ADVISING KCIT OF EVENTS AND ISSUES

Operational Events

The single point of contact to alert KCIT of any operational event is the KCIT Customer Support Services (CSS) team. There are three methods to contact CSS:

1. Call 206-263-4357 (206-263-HELP)
2. Email helpticket@kingcounty.gov
3. Within the King County network, log a ticket at <http://helpdesk>

Potential or Future Events and Initiating a Change Moratorium

Any technology failure that hinders the ability of a department(s) to deliver critical services to the people of King County is viewed as an emergency.

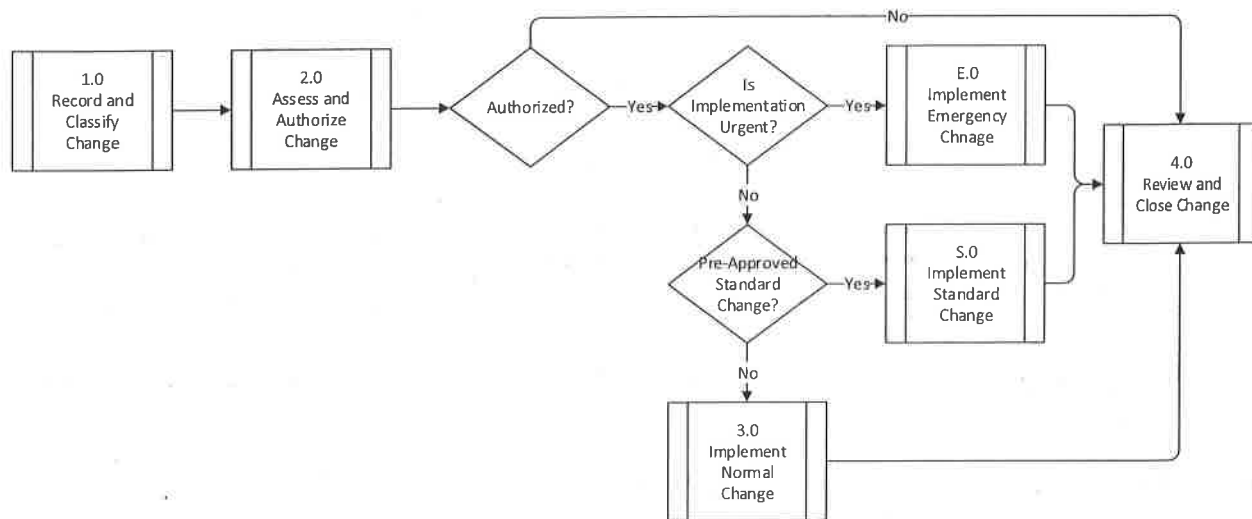
When a major event is known, planned, or unknown (such as in an emergency), a change moratorium is issued. The moratorium in this situation represents a temporary prohibition of IT changes, and the process for requesting and granting a moratorium is part of the KCIT Change Management process used for notification of future events across King County technology.

The standard general change management process is for a two week notification of a change or a moratorium; however, an emergency change process and/or moratorium may be submitted and implemented immediately as needed (e.g., flood warning). In addition to communicating a specific event, the moratorium serves as communication to KCIT and other technology groups about the heightened need for awareness and support.

The moratorium request includes the critical business processes, websites, systems, locations, and any other technology that must remain up and supported. Other technology changes may still be processed as long as they do not impact any of the

stated business processes and systems in the moratorium. For example, for an Elections moratorium, Department of Public Health may implement a change to one of their systems if there are no impacts to the Elections' system. Additionally, every moratorium has both a technology and a business contact for reviewing and approving or denying requested changes if the change requestor isn't 100 percent sure regarding the change impact.

The flowchart below provides a high-level outline of the KCIT Change Management process.



Both executive and separately elected technology organizations collaboratively utilize the Change Management process so there is one consolidated *Forward Schedule of Change* calendar. The process is led by the KCIT Change Advisory Board (CAB). CAB conducts weekly meetings with many separately elected IT staff and KCIT service owners in attendance. The KCIT Change Management activities are recorded on SharePoint, enabling it to be accessible from any browser-enabled device with a network connection:

<https://kc1.sharepoint.com/teams/ITa/ChgMgmt/SitePages/Home.aspx>.

3. 2017 – 2018 POTENTIALLY IMPACTING EVENTS:

Known Events

The Department of Elections and the Department of Executive Services, Finance and Business Operations Division – Treasury have planned, repeatable events with known dates that need change moratoriums. For Elections, the moratoriums typically start about a week or two prior to the specific event (an election) and run a few days past the event. Treasury's moratoriums are about a month in duration and start approximately

2.5 weeks prior to the event (property tax due date) and end approximately 1.5 weeks after the event. The planned, repeatable events are:

- February: second Tuesday - election
- April: fourth Tuesday - election
- April: the 30th or the first business day in May if April 30th falls on a weekend – property tax due date
- May: second Monday before Memorial Day – candidate filing
- August: first Tuesday – election
- October: the 31st or the first business day in November if October 31st falls on a weekend – property tax due date
- November: the first Tuesday after the first Monday – general elections

Unknown Events

As stated above, the moratorium process is managed within the KCIT Change Management process and any department may utilize this process. For example, KCIT and Facilities Management used the process for the power outages over several weekends in the Court House. The Department of Natural Resources and Parks utilizes the moratorium process for flood warnings or whenever the Flood Center is activated. The Office of Emergency Management utilize the moratorium process as they deemed necessary.

4. MINIMUM TIMEFRAMES FOR MORATORIUM ALERTS:

The CAB review meeting occurs every Monday at 1:00 PM and its standard practice is to review known alerts twice before the moratorium start date; yet more notices are appreciated by other teams planning for changes that may require significant coordination or actual downtime.

Unplanned or unknown event moratorium is effective upon receipt of the moratorium request and is communicated via email to technology groups throughout King County. All moratoriums are entered on the *Forward Schedule of Change* calendar.

If there is still a technology problem affecting a system, KCIT may declare a major incident depending on the type of emergency. This will immediately generate a Skype call and request for all on-call staff to engage in the call within 10 minutes. The Skype call is kept up with updates and appropriate customer liaison staff are notified so that customer impacts can be accurately communicated. Regular updates are also sent out to KCIT and customer staff to communicate the status of the problem.

5. RESOURCE ON-CALL PLAN:

The KCIT Customer Support Services (CSS) central contact number is answered 24 x 7 for initial contact in the event of a technology failure. KCIT also relies on their Continuation of Operations Plan (CoOP) to identify the essential enterprise services

(i.e., network, active directory, required to support King County and other departments' CoOPs). KCIT's business continuity plans for identified CoOP systems – both KCIT and department systems – are stored on SharePoint so this information is available from any browser-enabled device with network connectivity:

<https://kc1.sharepoint.com/teams/ita/dr/SitePages/Home.aspx>.

In addition to the measures above, the business continuity plans have contact information and the KCIT plans to support essential systems. Additionally, the moratorium request will note the required resources needed to support the system in the event of a failure.

KCIT does have on-call staff identified for various systems and emergencies for all components of the county infrastructure (phones, network, servers, and applications). These staff are ready to respond depending on the nature of the emergency.

In response to the known needs of the Department of Elections, KCIT will have multiple staff participate in the preparation for an election. For example, KCIT had multiple staff participate in stress testing the website and election results application in preparation for the November 2016 presidential election and most recently for the 2017 candidate filing application. In 2016, these staff participated in table top exercises in months leading up to the November election that included mitigation strategies to respond quickly to any technical issues on the day of the election. This was very successful and is a model that we will continue to utilize in the future for all elections and the candidate filing period. The table top documentation is included as Appendix B of this report.

6. SUMMARY

KCIT has a plan and process in place that involves executive branch departments, as well as separately elected agencies, to address major technology emergencies that may occur across the county. This is achieved through an alerting method and change management process. Through moratoriums and event preparations, KCIT staff work closely and collaboratively with departments and agencies on any events that may face technology challenges.

KING COUNTY

1200 King County Courthouse
516 Third Avenue
Seattle, WA 98104

Signature Report

October 18, 2016

Motion 14750

Proposed No. 2016-0473.1

Sponsors Lambert

1 A MOTION requesting that the executive transmit a plan for
2 addressing major technology emergencies that might occur the
3 in the office of emergency management, the department of
4 natural resources and parks and the department of elections,
5 and departments as requested by department directors.

6 WHEREAS, King County departments provide critical services to the people of
7 King County, and

8 WHEREAS, technology is essential to delivering those services, and

9 WHEREAS, technology failures can hinder the ability of departments to provide
10 services, and

11 WHEREAS, technology failures should be addressed as efficiently as possible,
12 and

13 WHEREAS, the department of information technology has experience and
14 expertise in providing assistance to departments with emergency technology issues, and

15 WHEREAS, King County is a leader in emergency preparedness planning, and

16 NOW, THEREFORE, BE IT MOVED by the Council of King County:

17 A. The executive is requested to develop and transmit a plan for addressing major
18 technology emergencies that might occur in the office of emergency management, the

Appendix A – Motion 14750

19 department of natural resources and parks and the department of elections, and other
20 departments as requested by department directors.

21 B. The plan shall include, but not be limited to:

22 1. A method for alerting and advising the department of information technology
23 to any many operational events and any potential technology issues associated with that
24 event and potential need and timeframes for a moratorium on changes to key technology
25 infrastructure;

26 2. A list of events for 2017 and 2018 where there may be increased technical
27 capacity required due to higher than normal needs or concerns about the technology
28 functioning adequately;

29 3. A method and a recommended minimum timeframes by which the office of
30 emergency management, the department of natural resources and parks and the
31 department of elections, and other relevant departments, should alert the department of
32 information technology of any emergency technology issues impacting operations; and

33 4. A resource on call plan for ensuring the office of emergency management, the
34 department of natural resources and parks and the department of elections, and other
35 relevant departments, will have the technology expertise available in the event of a
36 technology failure.

37 C. The executive shall transmit the plan, and a motion adopting the plan by April
38 3, 2017, in the form of a paper original and an electronic copy to the clerk of the council,
39 who shall retain the original and provide an electronic copy to all councilmembers, the

Appendix A – Motion 14750

40 council chief of staff, the policy staff director, and the lead staff for the committee of the
41 whole, or its successor
42

Motion 14750 was introduced on 9/26/2016 and passed by the Metropolitan King County Council on 10/17/2016, by the following vote:

Yes: 9 - Mr. von Reichbauer, Mr. Gossett, Ms. Lambert, Mr. Dunn,
Mr. McDermott, Mr. Dembowski, Mr. Upthegrove, Ms. Kohl-Welles
and Ms. Balducci
No: 0
Excused: 0

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON

J Chair

ATTEST:

Melani Pedroza, Acting Clerk the Council

Attachments: None

ELECTIONS TABLE TOP EXERCISE – NOVEMBER 2016

Preparations/Notes

- King County Elections (KCE) IT staff verify on Election Day that they have access to the FTP site for uploading the PDF, CSV and TXT files to the AQUA server.
- The web results CSV file will be uploaded when other results files are uploaded daily in the event we need to switch to the back-up.

Results postings

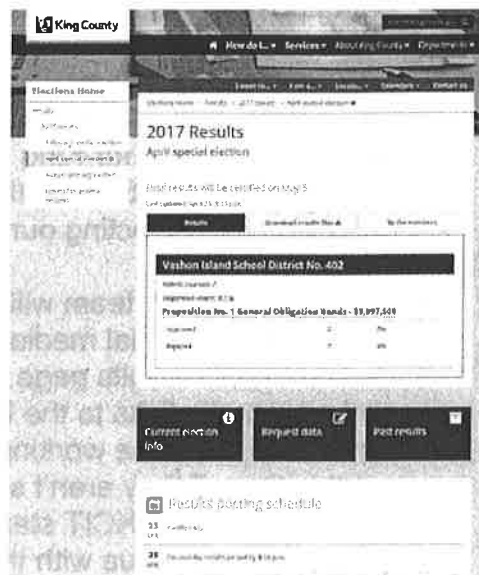
- KCE web results application:
 - <https://info.kingcounty.gov/KCElections/Results/web-results.aspx>
 - April specific link: <https://info.kingcounty.gov/kcelections/Results/web-results.aspx?eid=7>
- KCE PDF results: <http://aqua.kingcounty.gov/elections/2017/april-special/results/results.pdf>
- KCE text file results: <http://aqua.kingcounty.gov/elections/2017/april-special/results/pi.txt>
- OSOS web results: <http://results.vote.wa.gov/results/20170425/king/>

Scenarios

Scenario 1: Web results application not working (not loading results or incorrect results showing)

Option 1: Manual table in Sitecore

1. Staff posting results will report the issue to Asera, Ekachai, Janice, Kathy, Chris, Sonja and the Leadership Team.
2. Kathy will:
 - a. Remove the redirect for the web application from the results page.
 - b. Manually input the following into the “manual-table-contingency-1” add-on in Sitecore:
 - i. Ballots counted
 - ii. Approved number and percent
 - iii. Rejected number and percent
 - c. Make the add-on visible.
 - d. Show the proof of the Sitecore page to a second person for proofing.
 - e. Publish the results page with the



Appendix B – Elections Table Top Exercise / Contingency Plan

manual table showing.

3. KCE IT staff and KCIT staff will work together to determine the issue with the results application, if there is a solution and report to the Leadership Team.
4. Leadership Team will determine how we want to proceed with results postings.

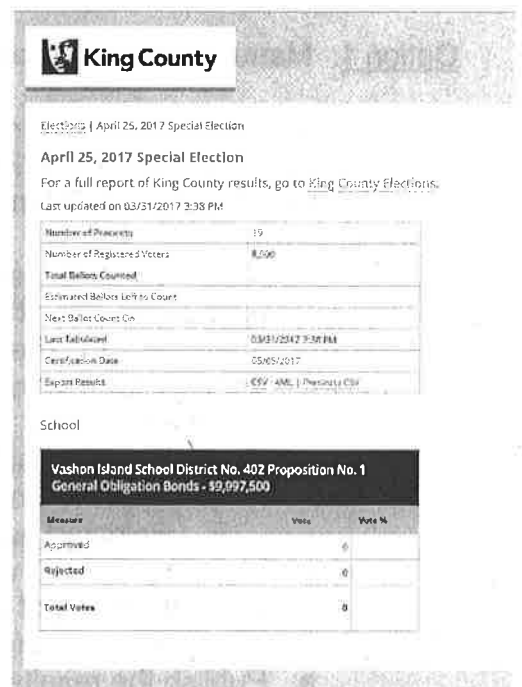
Option 2: iFrame with OSOS results for King County in Sitecore

1. Staff posting results will report the issue to Asera, Ekachai, Janice, Kathy, Chris, Sonja and the Leadership Team.
2. Kathy will:
 - a. Remove the redirect for the web application from the results page.
 - b. Manually input the following into the “OSOS-iframe-contingency-1” add-on in Sitecore:
 - i. Ballots counted
 - ii. Approved number and percent
 - iii. Rejected number and percent
 - c. Make the add-on visible.
 - d. Publish the results page with the iFrame showing.
3. KCE IT staff and KCIT staff will work together to determine the issue with the results application, if there is a solution and report to the Leadership Team.
4. Leadership Team will determine how we want to proceed with results postings.



Option 3: Redirect to the OSOS site for King County

1. Staff posting results will report the issue to Asera, Ekachai, Janice, Kathy, Chris, Sonja and the Leadership Team.
2. Kathy will redirect the results page to the OSOS web results page for King County.
3. Julie will let OSOS know that our site is down and we are redirecting our results link to their site.
4. Communications team will send out Media Advisory and social media posts linking directly to the OSOS results page. Note: The media links to media links to the PDF, CSV and TXT links should still be working on the AQUA server at this time, if they aren't see Scenario 3.
5. KCE IT staff and KCIT staff will work together to determine the issue with the results application,



Appendix B – Elections Table Top Exercise / Contingency Plan

if there is a solution and report to the Leadership Team.

6. Leadership Team will determine how we want to proceed with results postings.

Scenario 2: Sitecore sites, kingcounty.gov and kingcounty.gov/elections, not working or very slow page loading times

If the kingcounty.gov and kingcounty.gov/elections sites are not working or have very slow page loading times we will redirect the results page to the OSOS results page.

1. Staff posting results will report the issue to Asera, Ekachai, Janice, Kathy, Chris, Sonja and the Leadership Team.
2. Jimi will ask KCIT to implement a service side redirect the results to the OSOS results page.
3. Julie will let OSOS know that our site is down and we are redirecting our results link to their site.
4. Communications team will send out Media Advisory and social media posts linking directly to the OSOS results page. Note: The media links to media links to the PDF, CSV and TXT links should still be working on the AQUA server at this time, if they aren't see Scenario 3.
5. KCE IT staff and KCIT staff will work together to determine the issue with the results application, if there is a solution and report to the Leadership Team.
6. Leadership Team will determine how we want to proceed with results postings.

Scenario 3: Unable to upload downloadable results files to FTP site

If we are unable to upload the downloadable results files (PDF, CSV, TXT) to the FTP site for posting, we will post these files in the Sitecore media library.

1. Staff posting results will report the issue to Asera, Ekachai, Janice, Kathy, Chris, Sonja and the Leadership Team.
2. Chris will send the results files to Kathy.
3. Kathy will post the files notify Kafia and Kendall of the new link addresses.
4. Kathy will change the links for the downloadable files to the Sitecore links.
5. Kathy will confirm that the web page is showing correctly and that the links to the downloadable results files are working.
6. Kathy will publish the web results page.
7. Communications team will notify media.
8. Chris or Sonja and Jimi will determine the issue with the FTP, if there is a solution and report to the Leadership Team.
9. Once resolve the results will be uploaded to the FTP site and the links will be restored.
10. Communications will notify the media once the links are restored to the original location.

Scenario 4: Unable to upload downloadable results files to FTP site or Sitecore media library

Appendix B – Elections Table Top Exercise / Contingency Plan

If we are unable to upload the downloadable results files (PDF, CSV, TXT) to the FTP site or Sitecore media library for posting, we will post these files on the kcelection.com site.

1. Staff posting results will report the issue to Asera, Ekachai, Janice, Kathy, Chris, Sonja and the Leadership Team.
2. Chris will send the results files to the elections.media@kingcounty.gov account.
3. Communications team will post the files on kcelections.com and send links to Kathy for posting on Sitecore.
4. Kathy will change the links for the downloadable files to the kcelection.com address and verify that the web page is showing correctly and that the links to the downloadable results files are working.
5. Kathy will publish the web results page.
6. Chris or Sonja and Jimi will determine the issue with the FTP and Sitecore media library, if there is a solution and report to the Leadership Team.
7. Once resolve the results will be uploaded to the FTP site and the links will be restored.
8. Communications will notify the media once the links are restored to the original location.

Scenario 5: Sitecore sites, OSOS results site not working

If the kingcounty.gov, kingcounty.gov/elections and the OSOS site are not working we will use the PDF results on AQUA server.

1. Staff posting results will report the issue to Asera, Ekachai, Janice, Kathy, Chris, Sonja and the Leadership Team.
2. Jimi will ask KCIT to implement the service side redirect the results to the PDF results on the AQUA server.
3. Communications team will send out Media Advisory and social media posts linking directly to the PDF results
4. KCE IT staff and KCIT staff will work together to determine the issue with the postings, if there is a solution and report to the Leadership Team.
5. Leadership Team will determine how we want to proceed with results postings.

Points of contact

Internal

| Name | Role |
|---------------------------|-----------------------------------|
| Asera Khatun | Web results application developer |
| Chris Raver/Sonja Rowland | GEMS/PCS IT staff |
| Ekachai Tuntikanokporn | IT Supervisor |
| Janice Case | Web coordinator |
| Jimi Robinson | IT Director |

Appendix B – Elections Table Top Exercise / Contingency Plan

| Name | Role |
|---------------------------------|----------------------------|
| Kathy Gill | Web staff – Sitecore, AQUA |
| Kafia Hosh/Kendall LeVan Hodson | Communications Team |

External

KCIT: King County Web Team, webteam@kingcounty.gov