EXHIBIT N.2

Documentation of Current Process for Assessment Results - New

Requirement Name: Assessment Results

Requirement id #: 1- 8, 15-16, 24.

Brief Description: By Sept 10 of every year OSPI must report the percent of students performing at each level of the math, English language Arts (ELA), and science assessments as well as the percent who met the standard on those three tests. These results must be reported by school and school district, broken out by student subgroups and show changes over time. In addition to these results OSPI voluntarily and separately reports, by grade level, the percent of students who met the standard for the WA-AIM assessments in math, science and ELA. WA-AIM are specialized assessments for students with the most significant cognitive disabilities. The process described below is the same for all six tests.

Finally, by December 2018 OSPI will have to report the total number and percent of students with the most significant disabilities who take an alternate assessment by grade and subject. The number has been approximated in the past but the percentage has not been reported.

BACKGROUND: Every spring students in specific grades take assessments in Math, ELA and Science. Their results are ranked into four performance levels wherein levels 3 and 4 are considered "proficient" in those content areas. Some students with Individualized Education Programs (IEPs) have been considered to have met standard at level 2 but are reported as "basic" on the state report card. All other students earning a level 1 or 2 do not meet standard. The basic level will not be used on the new Report Card. For the 2017–18 academic year the line between meeting and not meeting the standard will be between levels two and three for all students.

All assessments are currently administered by two private contracting companies, AIR and DRC. AIR administers the Smarter Balanced tests (regular math and ELA assessments), the Washington Comprehensive Assessment of Science (WCAS), and the ELPA21 (English language mastery for non-English speakers.) DRC administers the WA-AIM and Alt ELPA tests for students with significant cognitive disabilities. The ELPA tests are described in a separate document.

Requirement source: ESSA, section 1111 (h)(1)(C)(ii), section 111(1)(c)(xi) and RCW 28A. 655.090(1&2)

Business requirements

Federal requirements:

The state report card shall include information on student achievement on academic assessments [defined in subsection(b)(2)] at each level of achievement for all students and by each student subgroup including homeless, foster care, parent who is on active military duty, major racial and ethnic groups, poor and not poor, disabled and not, ESL status, gender, and migrant status .

State Requirements:

By Sept 10 of every year the superintendent shall report to the schools, districts and legislature on results of the Washington assessment of student learning and State mandated norm-referenced standardized tests. Reports shall include assessment results by schools, school districts and changes over time. Results shall be reported as percentage of students meeting the standards and percentage of students performing at each level of the assessment. Results shall be disaggregated by at least the following subgroups of students: White, Black, Hispanic, American Indian/Alaskan Native, Asian, Pacific Islander/ Hawaiian Native, low income, transitional bilingual, migrant, special education, and section 504.

(Consolidating the two the two source statutes results in requirements to: publish percent of students performing at each level of the math, ELA, science and WA-AIM statewide assessments by grade and by student subgroup for schools and school districts. Publish the percent of students meeting the standard on math and ELA assessments. Include past years' results for comparison.)

Publishing the actual number of students performing at these levels is not specifically required, although that is what OSPI has done. One exception is that WA AIM results must be published in numbers and percentages of students performing at each level, and in number of students participating overall, but percentage of students participating in testing is missing. This calculation will need to be added to future Report Cards.

CURRENT PROCESS: ***This is being provided so that we have a shared understanding of the current process and can build a new process that incorporates what is needed from the current process to meet the new requirements and new technical solution.***

Description: Contractor sends test results on a nightly basis via the Online Reporting System (OARS). The results are merged with the student data from CEDARS and published on the Assessment Review page where they are visible to districts. Districts make corrections in CEDARS and contractors send final miscellaneous scoured results. A date is designated as the deadline for making corrections and after this point the data is considered final, complete and correct. The Information Technology (IT) Department then creates the Final Score File (in SQL) which is also known as the "x-60." Student

Information Department (SI) and IT, i.e. Lucas and Doug, collaborate to send out individualized results to school districts via WAMS. Next IT and SI run parallel processes to aggregate the data, including suppression; IT uses SQL and SI uses SPSS. SI compares the numbers in order to find any errors resulting from a misapplication of business rules. Final results are in the Report Master Assessment File, a data table that lives on SQL server 3. IT loads data into multiple views including report card, and data analytics and reports Excel files.

The programming that calculates the aggregations often has to be tweaked from year to year to accommodate new rules, student subgroups or definitions.

Flow chart: see appendix A

How often does the process run? Officially**,** this process is run once a year, starting in the summer in order to meet the Sept 10 statutory deadline. In reality, it may run one to two additional times during the year in order to fix errors in the original data. There are no rules or guidelines that determine what types of data errors or circumstances require a rerun.

When is data available/ pull date: mid- summer, typically July

Inputs/data source: Current report card data sources are listed below but may need to be migrated for tableau use

1. Sandbox tables are on Dev-sql07. Assessmentanalysts
2. Production is on SQL 03
3. x95_ScoredFileAfterRR_10312015regenerated
4. x60_2016_4Spring_ScoredFile_08042016FINAL
5. x60_2017_4Spring_ScoredFileVS_830201
6. x60_2018_4Spring_ScoredFile…

Outputs/ where posted: EDS, Report card, performance indicators

The landing page of Report Card shows percent meeting standard for ELA, Math, Science and Biology for all applicable grades and includes bar charts showing the past three years' performance. Clicking on the specific grades links to a page showing performance in more detail, i.e. number and percentage of students scoring at each performance level, metrics for students who met the standard in previous tests, those who didn't test, and those who took an alternate test. Results can be filtered by district, school and student subgroup.

Sample display:

English Language Arts 5th Grade	Number	Percent
Meeting Standard including PP‡	48,408	58.6%
Meeting Standard	48,408	58.6%
Level 4	22,483	27.2%
Level 3	25,599	31.0%
Basic	326	0.3%
Not Meeting Standard	34,169	41.3%
Level 2	14,641	17.7%
Level 1	18,113	21.9%
No Score*	1,415	1.7%
Total	82,577	100.0%
Meeting Standard excluding No Score		59.6%
Alternate Assessment (see WA-AIM)	850	
WA-AIM	850	
Not included in test calculations**	3,054	
Total Enrollment	86,481	

Math 5th Grade	Number	Percent
Meeting Standard including PP‡	40,159	48.6%
Meeting Standard	40,159	48.6%
Level 4	23,785	28.8%
Level 3	16,137	19.5%
Basic	237	0.2%
Not Meeting Standard	42,417	51.3%
Level 2	20,317	24.6%
Level 1	20,683	25.0%
No Score*	1,417	1.7%
Total	82,576	100.0%
Meeting Standard excluding No Score		49.4%
Alternate Assessment (see WA-AIM)	848	
WA-AIM	848	
Not included in test calculations**	3,021	
Total Enrollment	86,445	

Code location/ ODS: X-60, Report Assessment Master, File path for aggregation code is R:\WASL\Waslfs08\Report Card\ 2018-rebuild groundwork\validation code 2017 or prior.

BUSINESS RULES

Grades to report publicly are 3–8 and 11 for years 2014-15, 2015-16, 2016–17. For years 2017–18 and beyond report grades 3–8 and 10.

Include student records that are identified with an "Accountability" flag indicating "accountability=Y"

Exclude students flagged as f-1 visa, primarily home based or primarily private school, even if they have an "accountability=y" flag.

District aggregations should include the following school types: Public (P), College/University affiliated with district (C), Alternative school w/>50 % from within District (A), Special education school (S), Contract school (Z), Tribal compact (Q).

State aggregations should include all schools in district aggregation plus Institutions (I), Tribal school affiliated with District (T), Tribal school unaffiliated with District (Y), Alternative school w/ > 50% from outside the District (5), Re-engagement school (R.)

Student performance is presented by performance level and "met standard." For future reports met standard means meeting level three or above.

Performance levels vary depending on grade level. See OSPI Scale Scores State Assessments webpage for threshold scores.

Denominators must present 1. "of all students" 2. "among tested students" (proficiency)

Apply "ESSA denominator" rule to all proficiency rate calculations. (rule is to apply 95% or actual participation rate, whichever is higher)

Variables and Values

thing we report on	***variable name and relevant values* include real values**
which test did the student take?	resolvedtesttype
does the record go into the report card at all? Is the student expected to test for participation rate?	accountability='Y'
did the student test?	attempted
expected to test but didn't test?	IF ANY(attempted,'AU','BL','IC','IS','IV','IG','RF','NB')
student exempted from testing due to other factors?	IF ANY(attempted,'ME','NE','PE','NN')
type of school for aggregation rules	school type
Student's grade level when tested	reportinggrade
which subject	Course (ELA, Math Science)
student-level test exemption (exclude records)	not any(homebased,'1','2') and not any (private,'1','2') and isforeignexchange<>'Y'.
did the student meet standard?	metstandard
did the student meet standard in a previous year?	attempted='PP'
performance Level	level

Calculation elements and calculations:

	Performance on State ELA Assessment		**Regular**	**Reg**	**Alt**	**Alt**	**Total**	**Total**
			#	**%**	**#**	**%**	**#**	**%**
a	**Level 4**							
b	**Level 3**							
c	**Level 2**							
d	**Level 1**							
e	**No score**							
f	**Previously passed**							
g	**Exceptions/ exclusions**							

h	**Percent met standard including Previous pass**	**(a+b+f)/(a+b+c+d+e+f)**						
i	**Percent met standard among tested**	**(a+b)/(a+b+c+d)**						

Percent scoring at each level is number at that level divided by all students tested: a/a+b+c+d+e.

Percent with no score is "Other" which includes no booklet, enrolled but not tested, incomplete, insufficient, invalidated and tested out of grade divided by all expected to test: e/a+b+c+d+e

Percent meeting standard including Previous Pass: Students scoring in levels three and four plus previously passed divided by students scoring in all levels plus no score and previously passed.

Percent met standard among tested this year: Students scoring in levels three and four divided by students scoring in all levels.

ESSA denominator rule for accountability: the denominator for a proficiency rate must be the greater of: A) the number of students tested, or B) 95% of all students.

What fields to use as filters: State, ESD, district, School, non- district.

Subgroups displayed:

- major racial and ethnic groups (Asian, Black, Hispanic, American Indian/Native American, Pacific Islander, White, two or more)
- Low income and not low income
- Students with disabilities and students without disabilities
- English learners and non-English learners
- Gender
- Migrant and not migrant
- Homeless and not homeless
- foster care and not foster care
- parent is active duty armed forces and parent is not active duty armed forces
- 504 and not 504

Suppression rules: Current suppression rules apply

Number of places currently displayed

What does public see? Results of the Smarter Balanced assessments s are on Report Card, with percent meeting standard and changes over past three years for each grade on the summary page. Results by level and student subgroup are linked to the summary page results. Results are suppressed where appropriate. Proficiency rates are also published as part of the WSIF information but don't include results by level.

What do districts see? Same as public but results are not suppressed

Data Quality Procedures:

Application of business rules is cross checked by running them in two different systems. SI (Lucas) and IT (Doug) both create results using different processes/tools. These are compared to ensure the IT process correctly implements the business rules. Data can be checked by districts during a data preview window that occurs prior to posting the public results.

NEW PROCESS:

Overall Changes:

Since assessments measures are required by both state and federal law, OSPI chose to use the new Tableau process to display the data in time for the earlier state deadline of Sept 10. In effect this made the assessments measure a guinea pig for the other measures due in Dec. As a result the ETL process and the visual display went through more than the usual number of revisions. The final ETL process for assessment measures differs from the other measures since it is the IT staff (Enrico and Doug) who run parallel processes to produce the aggregated and suppressed data sets.

Additionally, the number and percent of students with the most significant cognitive disabilities who take an alternate assessment must be shown. This is a subset of the special Ed subgroup of students.

Data source:

CEDARS/ X-60 final score file in SQL 03

Business Rules:

The Business rules have not changed. They are the same as those shown above.

ETL:

After the assessment review process is complete the IT unit merges CEDARS and ORS data into the x-60/Final score File on SQL 03. From here Daniel stacks multiple years of x-60 files into a single table on Dev-tabsql01. This is the normed stacked file, part of the database Master Directory used by all three domains. (Also called the ODS, Operational Data Store). Then IT creates two data files, one aggregated and one aggregated and suppressed. They run spot checks between the two to find errors. Then the visual creator uses these two different sources of data to create two different "Tableau Data Sources" and build two vizualizations. Daniel promotes the unsuppressed visual to the Tableau secure site where it can be seen by Districts. Daniel promotes the suppressed visual to the Tableau public site where it links to Kramer's HTML web wrapper. The wrapper contains all the explanatory text, the navigation, the search engine and several other features.

Flow chart:

See appendix A

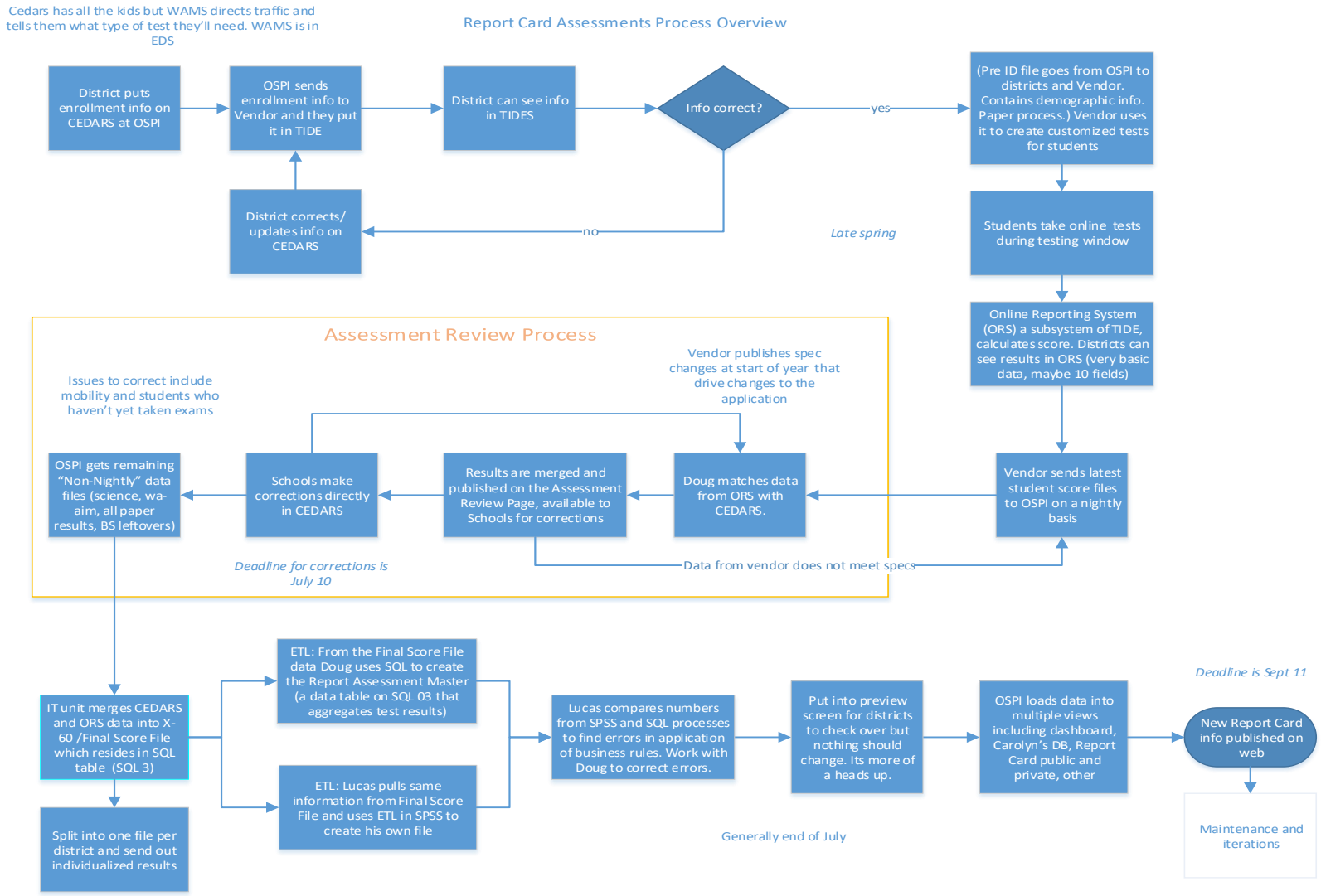
Pull date:

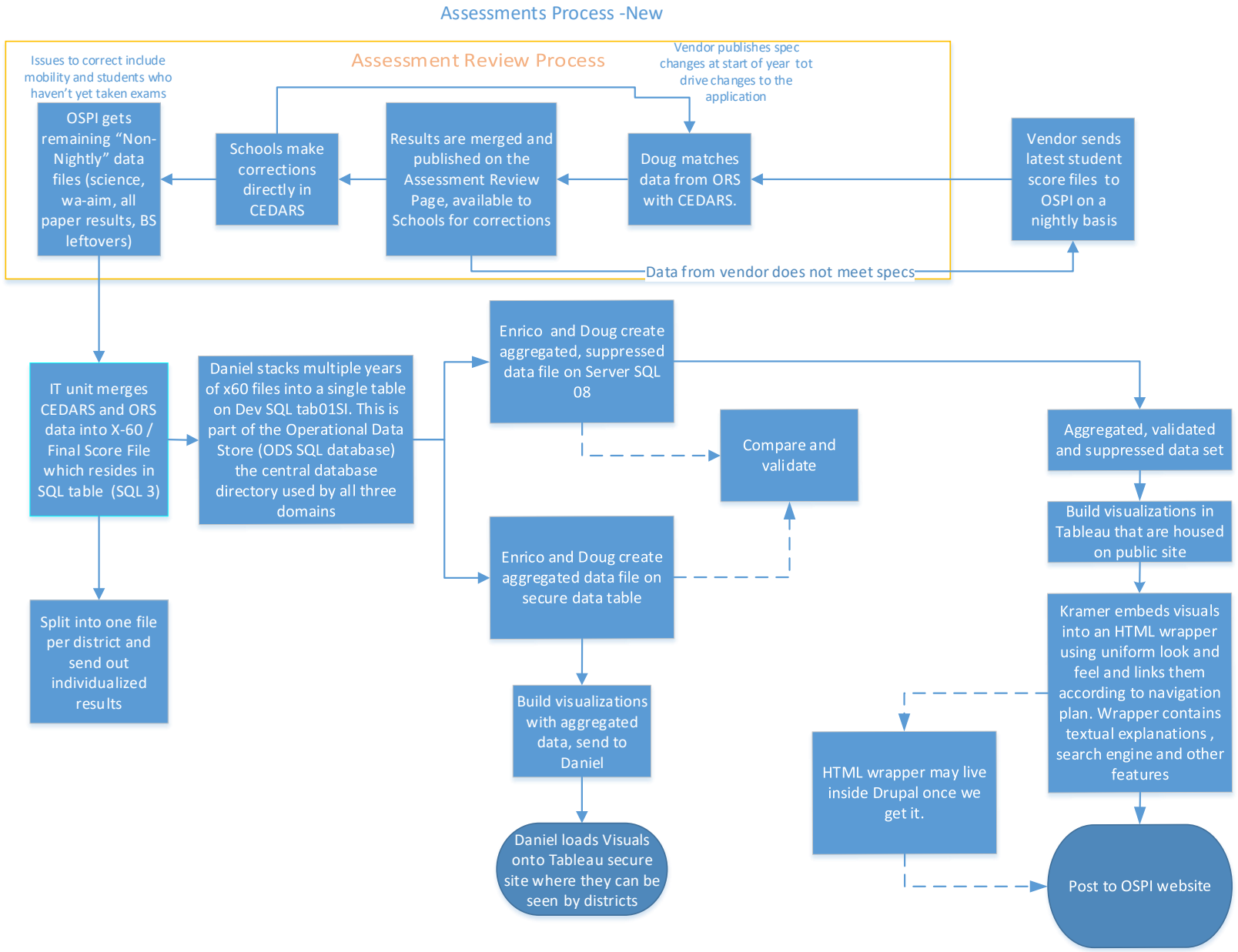
Mid July

Aggregation/Suppression:

Results are currently aggregated for the standard subgroups of students and filtered by schools, districts and the State. Results are suppressed on the Public site using the new standards.

Appendix A:


Cedars has all the kids but WAMS directs traffic and tells them what type of test they'll need. WAMS is in EDS
Report Card Assessments Process Overview
District puts enrollment info on CEDARS at OSPI
OSPI sends enrollment info to Vendor and they put it in TIDE
District can see info in TIDES
Info correct?
yes
no
District corrects/ updates info on CEDARS
(Pre ID file goes from OSPI to districts and Vendor. Contains demographic info. Paper process.) Vendor uses it to create customized tests for students
Late spring
Students take online tests during testing window
Online Reporting System (ORS) a subsystem of TIDE, calculates score. Districts can see results in ORS (very basic data, maybe 10 fields)
Assessment Review Process
Vendor publishes spec changes at start of year that drive changes to the application
Issues to correct include mobility and students who haven't yet taken exams
Vendor sends latest student score files to OSPI on a nightly basis
Doug matches data from ORS with CEDARS.
Results are merged and published on the Assessment Review Page, available to Schools for corrections
Schools make corrections directly in CEDARS
OSPI gets remaining "Non-Nightly" data files (science, wa-aim, all paper results, BS leftovers)
Deadline for corrections is July 10
Data from vendor does not meet specs
IT unit merges CEDARS and ORS data into X-60 /Final Score File which resides in SQL table (SQL 3)
Split into one file per district and send out individualized results
ETL: From the Final Score File data Doug uses SQL to create the Report Assessment Master (a data table on SQL 03 that aggregates test results)
ETL: Lucas pulls same information from Final Score File and uses ETL in SPSS to create his own file
Lucas compares numbers from SPSS and SQL processes to find errors in application of business rules. Work with Doug to correct errors.
Put into preview screen for districts to check over but nothing should change. Its more of a heads up.
Generally end of July
OSPI loads data into multiple views including dashboard, Carolyn's DB, Report Card public and private, other
Deadline is Sept 11
New Report Card info published on web
Maintenance and iterations


Assessments Process -New
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IT unit merges CEDARS and ORS data into X-60 / Final Score File which resides in SQL table (SQL 3)
Daniel stacks multiple years of x60 files into a single table on Dev SQL tab01SI. This is part of the Operational Data Store (ODS SQL database) the central database directory used by all three domains
Enrico and Doug create aggregated, suppressed data file on Server SQL 08
Compare and validate
Aggregated, validated and suppressed data set
Build visualizations in Tableau that are housed on public site
Kramer embeds visuals into an HTML wrapper using uniform look and feel and links them according to navigation plan. Wrapper contains textual explanations , search engine and other features
Split into one file per district and send out individualized results
Enrico and Doug create aggregated data file on secure data table
Build visualizations with aggregated data, send to Daniel
Daniel loads Visuals onto Tableau secure site where they can be seen by districts
HTML wrapper may live inside Drupal once we get it.
Post to OSPI website