



WVDEP ESS Electronic Submission System

E-Permitting


&

Compliance Data



Scale of WVDEP – ESS system.

- 109 Application types (Permit Applications, Renewals, Discharge Monitoring Reports)
- 40,065 Submissions in 2018. 13,029 Submissions so far in 2019.

Feature	Pro	Con
CHOMERR compliance 	Compliance with Federal Rules.	Difficult and requires patience.
EPA Directive CIO 2150.4 & FISMA 	Compliance with Federal Rules.	Difficult and requires patience.
Minimization of Attachments IE Put data in forms as much as possible.	More Data in the forms easier to use in reports and use for searching.	
Correction process	Speeds permit applications up. Also identifies where time is spent waiting on industry.	
Versioning of Applications submitted 	Support legal needs and can review history for audit needs.	More storage needed.

FEATURE

PRO

CON

Versioning of Application forms.



Support legal needs and can review history for audit needs.
Allows pulling up applications several years old after changes.

More storage needed and more forms to migrate when changing versions of development.

Extensive form validation. Checks forms for completeness and some requirements.








Reduced timelines for permitting.

Workflow email. Notifies applicants or DEP staff of actions taken and next steps.



Reduced timelines for permitting.

Feature	Pro	Con
<p>Security for applicant's employees by applicant.</p> <p>Security for DEP employees done by DEP.</p> <p>Note: We chose to do this.</p>	<p>Reduces labor.</p> <p>Reduces liability of mistakes in security.</p> 	<p>More complex code.</p> <p>Support applicants not able to understand the security.</p>
<p>DEP manages security for everyone.</p>	<p>Simpler code.</p> 	<p>Increased labor to manage security for applicants.</p> <p>Increased liability for mistakes in managing security of applicants.</p>
<p>Hardware/infrastructure – think big, start bigger</p>  <p>Note: We use a Docker cluster with virtual servers.</p>	<p>You will always need more than you start with as your system grows.</p> <p>After the fact, down the road upgrading is always harder.</p>	<p>Highly costly at the onset. Cost is in labor and learning.</p>

Feature	Pro	Con
<p>Attached File Storage in File Server</p> <p>Note: We chose to use the file server.</p> 	<p>Good file-based backups.</p> <p>Files checked for viruses when new and at every scheduled scan.</p>	<p>Transactions can be broken. IE file update but no record update or vice versa.</p>
<p>Attached File Storage in Database.</p>	<p>Transactions preserved.</p> <p>Files checked for viruses on check-in and checkout.</p>	<p>Database backup become harder and more time consuming. Does not scale well.</p>
<p>Application Imaging Archiving.</p> 	<p>Allows virtual copies to be kept/stored</p> <p>Auditability/documentation is facilitated</p> <p>Good file-based backups.</p>	<p>Different languages propagate this differently, make sure an application 'prints' ideally</p> <p>May require use of third party tools/entities that might not always work in sync with your applications process.</p>

Feature

Storing data from forms/modules in a 'clob' system where the data is stored as an XML clob.

Note: We do this.



Pro

All ESS forms/modules can take advantage of a single set of tables for application infrastructure

Application data is easily trackable from the top down with a header record.

Allows fast development of forms.

Con

Changes in forms/modules will lead to retagging of data fields and 're-versioning' of an entire application (even if for just one new field in one module).

Tables can become very sizeable if ES submission volume is high.

May require use of a homegrown "application builder" APP to maintain application structures/flows, which would itself require development and maintenance



Questions?

WVDEP

<https://dep.wv.gov>

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