



PHP Software Development Standard

Purpose

This document describes the Florida Department of Environmental Protection's (DEP) PHP Development Standard. This document also references additional guidance and supporting standards necessary to comply with this standard.

Scope

This standard applies to all PHP software development projects at DEP.

Standard

1. All source code shall be maintained at DEP, using the [Gitlab](#) code versioning repository. The project name shall be the base url of the application.
2. All projects shall submit an email request to: Service Desk (servicedesk@dep.state.fl.us) to set up a new project in the DEP GitLab repository.
3. All projects must complete a one-time setup on the Development, Beta, and Production environments by sending a Service Desk request to: Service Desk (Service Desk (service.desk@dep.state.fl.us), copying Middle Tier (MiddleTierOracle@dep.state.fl.us). Use the latest template available, available upon request.
4. All Production application migrations occur on Thursday evenings and require an email request to schedule the Production migration several days prior to the move. This is performed by sending a Service Desk request to: Change Request (Change.Request@dep.state.fl.us), copying Middle Tier (MiddleTierOracle@dep.state.fl.us) and the DBA team (DBA@dep.state.fl.us). A Production migration template is available upon request, detailing additional metadata needed for the Production deployment.
5. All PHP applications must use the [phpkickstart](#) as a baseline.
6. All PHP applications shall leverage the [CodeIgniter](#) framework(of at least version 3.1.16), to enable standardization and leverage existing libraries.
7. All projects shall use the latest version of the [depsecurity](#) PHP library(currently v3.0.2.) for authentication via DepPortal. User roles shall be maintained in [DepSec](#).
8. All projects shall develop code to prevent SQL injection. There are to be no SQL statements generated via string concatenation. You must use prepared statements.

9. All projects shall develop code to prevent data concurrency (eg row locking) issues while interacting with the database.
10. All projects shall sort data inside of the database via SQL or PI/SQL.
11. Execution timeout of PHP scripts is 2 minutes (120 seconds) across all environments. Therefore, every page shall execute inside of this time limit or be considered deficient. With FDEP approval, exceptions may be granted for command line execution based on need.
12. Applications must utilize [Composer](#) for dependency management. Under no circumstances should third-party libraries be committed to application source repositories.
13. All dependencies shall be based on a release greater than or equal to 1.0.
14. All applications shall be developed to operate in the **IT Infrastructure Environment Specification** (FL Dept. of Environmental Protection, 2010)
15. All projects utilize the DEP standard look & feel layout for banners, headers, footers, font, layout and other interface components, as dictated by the DEP communications office. This is provided in the [phpkickstart](#).
16. All applications shall leverage the Center for Medicare & Medicaid Services [Assets](#) framework. This framework enforces Section 508 compliance, enables responsive design, and grants access to leverage an enormous amount of libraries to quickly create functionality. This is provided as a Composer dependency.
17. All applications shall comply with PSR-1 and PSR-2.
18. All PHP files must declare strict types via the `declare(strict_types=1);` directive. Functions shall have a return type. Function parameters shall have a declared type.
19. PHP variables and properties should be declared and not implicitly created.
20. All projects shall leverage existing DEP libraries, prior to developing new libraries.
21. All projects shall have a complete PHPdoc.
22. All project code must not use any eval function.
23. Every program must work correctly on MS Windows and Linux environments.
24. All programs must log relevant debugging and error information.
25. Reports with large resultsets should utilize pagination for better performance and user experience.
26. Reports should have an export to CSV and/or Excel option.
27. Approval of libraries and PHP components will be needed prior to implementation, if not already implemented in the [phpkickstart](#). This is to help ensure standardization and maintain licensing (where needed).
28. All application contexts/Base URL (application names) shall be lowercase with no underscores or dashes. Examples:
 - a. accountservice

b. phpkickstart

29. MVC file names should append “Model” to models (instead of using ‘_m’), and “View” to views (instead of using ‘_v’). Example file names:
 - a) Controller: InventoryReport
 - b) Model: InventoryReportModel
 - c) View: InventoryReportView
30. All projects shall follow the **Physical Data Modeling Standard** (FL Dept. of Environmental Protection, 2009).
31. All projects shall follow the **Logical Data Modeling Standard** (FL Dept. of Environmental Protection, 2007).
32. All projects containing location data shall comply with the **Location Data Standard** (FL Dept. of Environmental Protection, 2009).
33. All GIS components must comply with the **GIS Development Standard** (FL Dept of Environmental Protection, 2009).
34. All projects shall complete and submit an **Impact Assessment Summary** (FL Department of Environmental Protection, 2009).

Deviation from Use

Any deviation from this standard shall be documented in associated project and contract documentation. For contracts, deviation from standard shall be documented and approved by the DEP contract manager. For non-contract work, deviation from use shall be documented in the project plan/scope of work and approved by the project manager.

Bibliography

FL Dept. of Environmental Protection. (2010). *IT Infrastructure Environment Specification*. Tallahassee: FL DEP.

FL Dept. of Environmental Protection. (2009). *Physical Data Modeling Standard*. Tallahassee: FL DEP.

FL Dept. of Environmental Protection. (2007). *Logical Data Modeling Standard*. Tallahassee: FL DEP.

FL Dept. of Environmental Protection. (2009). *Location Data Standard*. Tallahassee: FL DEP.

FL Dept of Environmental Protection. (2009). *GIS Development Standard*. Tallahassee: FL DEP.

FL Department of Environmental Protection. (2009). *Impact Assessment Summary Template*. Tallahassee: FL DEP.

Approved by:

Chief Information Officer

Date